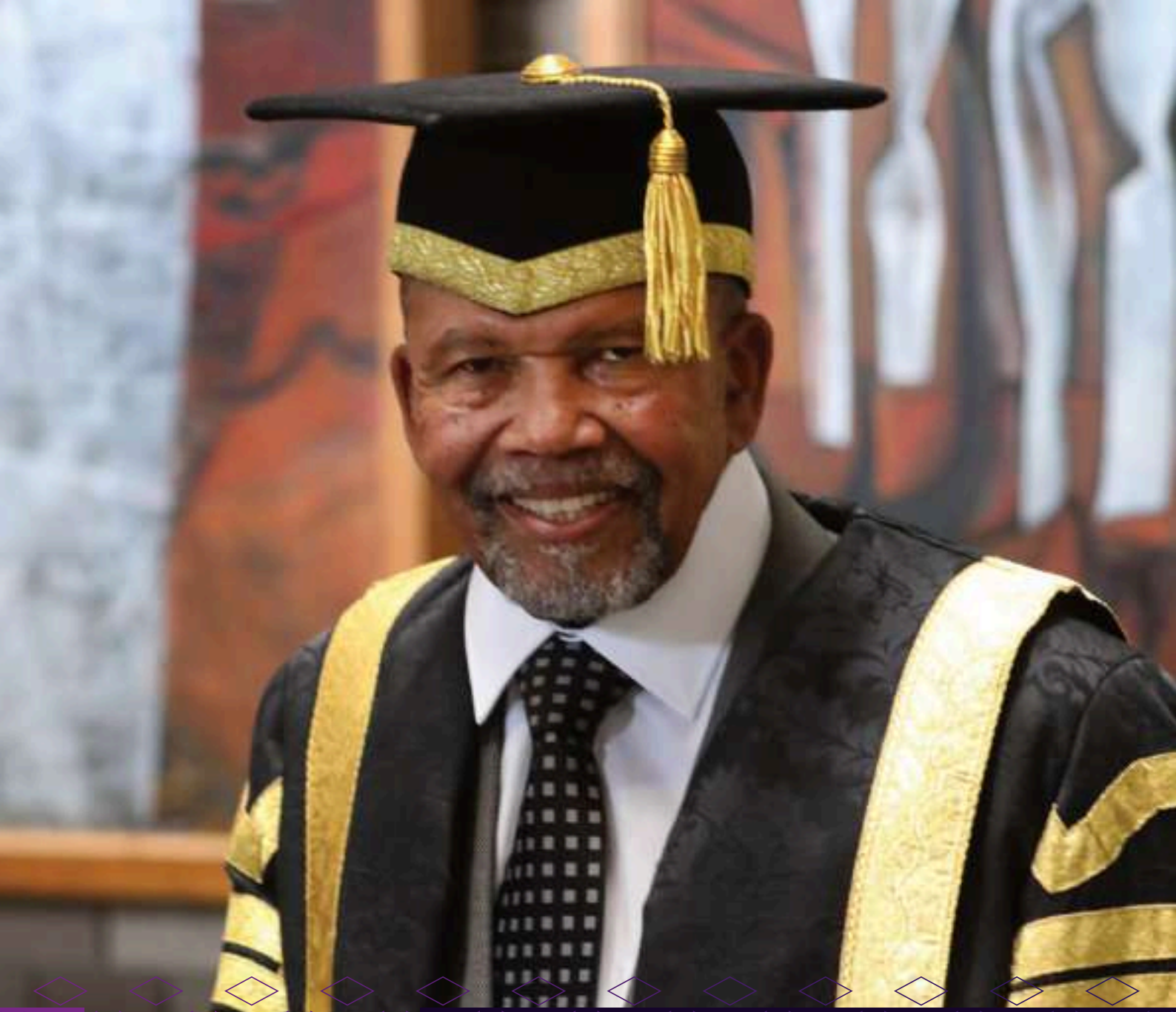


RHODES UNIVERSITY
Where leaders learn

RHODES UNIVERSITY

Research Report

2024

RHODES UNIVERSITY

Where leaders learn

2024 RESEARCH REPORT

A publication of the Rhodes University Research Office, compiled and edited by **Jaine Roberts**, **Thumeka Mantolo** and **Anela Nzwanga.**

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The Honorable Justice Lex Mpati
Photo: Jackie Grove
Design: Sally Dore

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Vice-Chancellor's Foreword



Professor Sizwe Mabizela
Vice-Chancellor

The Honourable Justice Lex Mpati
Chancellor

Photo:Jackie Grove

This Research Report 2024 reflects the wide range and excellence of scholarship that define Rhodes University's research. The work presented across these pages demonstrates the intellectual curiosity, dedication, and impact that continue to position our institution as one of South Africa's leading research-intensive universities.

We begin by recognising our **Top 30 Researchers**, whose collective achievements underscore the strength of our research community and its commitment to advancing knowledge. The **Vice-Chancellor's Distinguished Research Awards** and **Book Award** further honour individuals whose sustained excellence and leadership have made outstanding contributions to their respective disciplines—namely, Professor Brad Ripley, Associate Professor Dane Brown, and Professor Alan Kirkaldy.



Dr Kwezi Mzilikazi

Deputy Vice-Chancellor: Research, Innovation and Strategic Partnerships

Photo:Jackie Grove

The report also showcases the vibrancy of research across our Faculties, Institutes, and Centres. We celebrate the upcoming 120th Anniversary of the Faculty of Law, and the Ten Year milestone of the nGAP Programme which features profiles on ten young scholars. From the **African Studies Centre** to the **Institute for Nanotechnology Innovation**, whose new building, the **Tebello Nyokong Institute for Nanotechnology Innovation** was formally opened in 2024, the featured work speaks to Rhodes University's interdisciplinary ethos and its commitment to addressing complex global and local challenges.

Profiles of individual researchers provide a deeper insight into the diversity of scholarly endeavour at Rhodes University, ranging from environmental restoration and agricultural economics to cultural diversity and psychology. Each feature represents a unique contribution to the collective pursuit of knowledge and societal advancement. Collectively, these profiles illustrate the university's commitment to addressing societal challenges, advancing knowledge, and nurturing the next generation of scholars.

As this report illustrates, research at Rhodes University is not confined to laboratories and libraries; our research extends into communities, and into public discourse. Through their work, our researchers continue to exemplify excellence, integrity, and purpose, values that remain central to Rhodes University's mission.

Publications from the Vice-Chancellorate

Peer Reviewed Subsidy-Earning Journal Research Publications

Monnapula-Mapesela, M.

Monnapula-Mapesela, M (2024) Enabling and Constraining Causal Powers for Research and Innovation in The South African Higher Education. *South African Journal of Higher Education.* 38 (2). p.1-19.

Nnadozie, R.C.

Nnadozie, R.C. (2024) Monitoring and evaluation implications of the 2014 regulations for reporting by public higher education institutions in South Africa. *Cogent Education.* 11 (1). p.1-13.

Nnadozie, R.C. and **Chinomona, P.**

Nnadozie, R.C. and **Chinomona, P.** (2024) Work systems framework for teaching workload model deployment at universities in South Africa. *South African Journal of Higher Education.* 38 (3). p.1-13.

2024 Top 30 Researchers

Rhodes University acknowledges and congratulates the following for their accredited research outputs (Journal Publications, Books & Chapters, and Masters/Doctoral students graduated) in 2024:

1. **Distinguished Professor Tebello Nyokong**
   Department of Chemistry, Rhodes/DST Institute for Nanotechnology Innovation
2. **Distinguished Professor Heila Lotz-Sisitka**
   Faculty of Education, Department of Secondary and Post-School Education
3. **Dr Kealeboga Aiseng**
   School of Journalism and Media Studies
4. **Associate Professor Clement Simuja**
   Faculty of Education, Department of Secondary and Post-School Education
5. **Professor Makaiko Liwiro Chithambo**
   Department of Physics
6. **Professor Ruth Simbao**
   Department of Fine Art
7. **Distinguished Professor Catriona Macleod**
   Department of Psychology
8. **Distinguished Professor Charlie Shackleton**
   Department of Environmental Science
9. **Professor Özlem Tastan Bishop**
   Department of Biochemistry Microbiology & Bioinformatics
10. **Professor Sioux McKenna**
    Centre for Postgraduate Studies
11. **Distinguished Professor Martin Hill**
    Department of Zoology & Entomology
12. **Professor Nelson Odume**
    Institute for Water Research
13. **Professor Mellony Graven**
    Faculty of Education, Department of Primary and Early Childhood Education
14. **Professor Julie Coetzee**
    Department of Zoology and Entomology
15. **Dr Chikezie Uzuegbunam**
    School of Journalism and Media Studies
16. **Associate Professor Boudina McConnachie**
    Department of Music and Musicology
17. **Professor Eureta Rosenberg**
    Faculty of Education, Department of Secondary and Post-School Education
18. **Associate Professor Sheunesu Ruwanza**
    Department of Environmental Science
19. **Associate Professor Liezille Jacobs**
    Department of Psychology
20. **Professor Roman Tandlich**
    Faculty of Pharmacy
21. **Professor Matshediso Mohapeloa**
    Rhodes Business School
22. **Dr Chika Nnadozie**
    Institute for Water Research
23. **Professor Anthea Garman**
    School of Journalism and Media Studies
24. **Dr Duane Booysen**
    Department of Psychology
25. **Professor Rosemary Dorrington**
    Department of Biochemistry, Microbiology & Bioinformatics
26. **Associate Professor Dane Brown**
    Department of Computer Science
27. **Associate Professor Sally Matthews**
    Department of Political and International Studies
28. **Associate Professor Siphokazi Magadla**
    Department of Political and International Studies
29. **Professor Carolyn Grant**
    Faculty of Education, Department of Primary and Early Childhood Education
30. **Dr Lee Watkins**
    International Library of African Music (ILAM)

2024
PhD Graduates



Distinguished Professor Tebello Nyokong speaking at the 2024 Launch of the new building for the Tebello Nyokong Institute for Nanotechnology Innovation. Distinguished Professor Nyokong, despite two broken ankles in 2024, remained the No. 1 Researcher at Rhodes University.

Faculty of Commerce (8 PhDs)

Degree of Doctor of Philospohy

AKUAMOAH BOATENG, Irene, Dip (Education) (Azare), MBA (Maiduguri), MEd (Valley View), in Management, in the Rhodes Business School. Degree by thesis. Thesis: *The impact of Ghana's entrepreneurial ecosystem on women's entrepreneurial performance: The moderating role of entrepreneurial identity.*

Supervisor: Professor MME Mohapeloa.

Co-supervisor: Dr MM Mtotywa.

CUTHBERT, Carol Elaine, BAHons (UP), MBA (Rhodes), in Management, in the Rhodes Business School. Degree by thesis. Thesis: *Leveraging visualizations with systems for operational and strategic decision-making.*

Supervisor: Professor NJ Pearse.

Co-supervisor: Professor KL Bradshaw.

MTOTYWA, Matolwandile Mzuvukile, PhD (NMU), MBL (Unisa), in Management, in the Rhodes Business School. Degree by thesis. Thesis: *Managing operational uncertainty in manufacturing with industry 4.0 and 5.0 technologies: A modified neo-configurational perspective.*

Supervisor: Professor MME Mohapeloa.

MALIMBA, Nwabisa, BComHons (WSU), MCom (NMU), in Economics, in the Department of Economics and Economic History. Degree by thesis. Thesis: *Absorptive capacity and growth nexus in the South African pharmaceutical sector: An intra-industry trade perspective.*

Supervisor: Professor TE Mutambara.

Co-supervisor: Professor J Marire (Birmingham).

NAMIREMBE, Hudah Bawonga, MHRM (Makerere), in Social and Economic Policy, in the Institute of Social and Economic Research. Degree by thesis. Thesis: *A Framework of the value creation process in Public-Private Partnerships (PPPs): A perspective of Ugandan projects*

Supervisor: Professor C Mbatha.

Co-supervisor: Professor PD Rwelamila (UNISA).

NCUBE, Lethukuthula, MCom (UP), in Management, in the Department of Management. Degree by thesis. Thesis: *The quality of Environmental, 34 Social and Corporate Governance information reported by South African listed companies.*

Supervisor: Professor M Bunting.

NZIMANDE, Nqobile, MCom (Rhodes), in Economics, in the Department of Economics and Economic History. Degree by thesis. Thesis: *Social mobility in post-apartheid South Africa: A multidimensional analysis of structural, intergenerational and intragenerational change.*

Supervisor: Professor MJ Rogan.



Distinguished Professor Heila Lotz-Sisitka (ELRC)
Photo: Jackie Grove

ZHOU, Channel, BScHons (Midlands State), MSc (Unisa), in Information Systems, in the Department of Information Systems. Degree by thesis. Thesis: *Responsible data implementation and use in digital citizen engagement for youth sexual reproductive health services in Southern Africa.*

Supervisor: Professor IG Siebörger.

Co-supervisor: Professor C Khene (IDS).

Faculty of Education (19 PhDs)

Degree of Doctor of Philospohy

CYSTER, Grant Alexander, MA (UWC), in Education, in the Centre for Higher Education, Research, Teaching and Learning. Degree by thesis. Thesis: *Taking on or leaving behind a doctoral identity: Analysing narratives of attrition in South African doctoral education.*

Supervisor: Dr S Clarence.

Co-supervisor: Dr K Wilmot.

DLAMINI, Sibongile Melody, BEd (UFH), BEdHons (NWU), MEd (Rhodes), in Education, in the Institute for the Study of the Englishes of Africa. Degree by thesis. Thesis: *Investigating pre-service teachers' preparation for meaningful and critical poetry teaching in English: A case of BEd and PGCE teacher educators and students.*

Supervisor: Professor M Mbelani.

KEMM-STOLS, Lyndall Elizabeth, BTech (DUT), MEd (UKZN), in Education, in the Centre for Higher Education Research, Teaching and Learning. Degree by thesis. Thesis: *Three decades of change: Exploring colonial legacies and shifts within processes of admission at South African Universities of Technology.*

Supervisor: Dr R ChiappaBaros.

Co-Supervisor: Professor S McKenna.

KNOETZE, Retha, MA (UP), in Education, in the Centre for Higher Education Research, Teaching and Learning. Degree by thesis. Thesis: *Investigating the basis of legitimation of English literary studies: A case study of a curriculum at a South African University.*

Supervisor: Professor S McKenna.

Co-Supervisor: Dr T Njovane.

MAYANA, Xolani Justice, Dip (Education) (UFH), MEd (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Bridging cultures in science education: leveraging lesson study approach for indigenous knowledge integration in a township school.*

Supervisor: Professor K Ngcoza.

Co-Supervisors: Mrs JD Sewry and Professor K Chikamori.

MAPFUMO, Alfred Khumbulani, Dip (Education) (Zimbabwe), MEd (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Enhancing Grade 12 Physical Sciences Teachers' Pedagogical Content Knowledge to Teach Work, Energy, and Power Bilingually in the Eastern Cape.*

Supervisor: Professor K Ngcoza.

Co-Supervisor: Professor D Nkomo.

MIKA, Rauha Tufilonghenda, MEd (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Cultivating culturally responsive teaching: Leveraging indigenous technological practices in Namibian Secondary School Science.*

Supervisor: Professor Emeritus KM Ngcoza.

Co-supervisor: Dr C Mutanho.

MNYANDA, Lutho, BSocSciHons, MEd, PGCert (Education) (Rhodes), in Education, in the Institute for the Study of the Englishes of Africa. Degree by thesis. Thesis: *Exploring English First Additional Language pre-service teachers' academic writing development in an undergraduate research module.*

Supervisor: Professor M Mbelani.

MXALISA, Asiphe, MA (NMU), in Education, in the Centre for Higher Education, Research, Teaching and Learning. Degree by thesis. Thesis: *Students' experiences of gender in higher education post #MustFall movements and during the Covid19 era.*

Supervisor: Dr K Wilmot.

Co-supervisor: Professor S McKenna.

NEPEMBE, Victoria, BEd (UNAM), PGDip (Business Administration) (UNAM), MBA (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Evolution of instructors' technological pedagogical content knowledge in vocational training centres: Multi-case study.*

Supervisor: Professor C Simuja.

Co-supervisor: Professor N Mpofu (Stell).

NKOSI, Nkosikhona Sean, MEd (Wits), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Ligotshwa Lise Manzi: Uncovering colonial legacies and possibilities for spatial justice in the productions of space in primary schools in Makhanda.*

Supervisor: Professor E Rosenberg.

Co-supervisor: Distinguished Professor H Lotz-Sisitka.

NTWASA, Simbongile, MSocSci (UFH), PGDipHE (Rhodes), in Education, in the Centre for Higher Education, Research, Teaching and Learning. Degree by thesis. Thesis: *Student development programmes at historically black universities in South Africa.*

Supervisor: Professor S McKenna.

Co-supervisors: Professor Emeritus CM Boughey and Dr T Moyo.

PEREIRA-KAPLAN, Taryn Leigh, BScHons (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Scholar-activist transdisciplinary research praxis for blue justice in South Africa: Perspectives from the South African Coastal Justice Network scholar-activist archive.*

Supervisor: Distinguished Professor H Lotz-Sisitka.

Co-Supervisor: Professor K Erwin.

STEENKAMP, Sanet Lentrud, MEd (Rhodes), in Education, in the Department of Primary and Early Childhood Education. Degree by thesis. Thesis: *Expanding the leadership of learning support teachers in resource schools: A formative intervention study in Namibia.*

Supervisor: Professor C Grant.

STEYN, Ronel Louise, BA (Stell), BAHons (Rhodes), PGDipHE (Unisa), MBA (Durham), in Education, in the Centre for Higher Education, Research, Teaching and Learning. Degree by thesis. Thesis: *A social realist account of the emergence of the first higher education structures in South Africa.*

Supervisor: Professor S McKenna.

SOUZA, Ben, BEd (Malawi), MEd (Rhodes), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Investigating the Mainstreaming of Inclusive Education in Teacher Education Practice for Pedagogical Proficiency through Education for Sustainable Development Change Projects in Southern Africa.*

Supervisor: Distinguished Professor H Lotz-Sisitka.

THIFHULUFHELWI, Reuben, BEnvSciHons (Univen), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *An exploration and expansion of learning and agency in Ecosystem Restoration Practice: A case of Natural Resource Management Programmes in the Blyde Catchment, South Africa.*

Supervisor: Distinguished Professor H Lotz-Sisitka.

THWALA, Mmaphefo Doreen, MBA (TUT), MSc (UP), in Education, in the Department of Secondary and Post School Education. Degree by thesis. Thesis: *Exploring organisational learning in water resource protection: Activity system analysis of social learning among resource directed measures role-players in South Africa.*

Supervisor: Professor E Rosenberg.

WEST, Janét, PGDipHE (UJ), MCom (NWU), in Education, in the Centre for Higher Education Research, Teaching and Learning. Degree by thesis. Thesis: *Creating access to powerful knowledge in 15 Accounting Education: A case study of pedagogies used in an Accountancy Diploma.*

Supervisor: Dr S Clarence.

Co-Supervisors: Dr K Wilmot and Professor S McKenna

Faculty of Humanities (25 PhDs)

Degree of Doctor of Philosphy

ALEXANDER, Tarryn Linda, BCom (Stell), MSocSci (Rhodes), in Sociology, in the Department of Sociology. Degree by thesis. Thesis: *The oppositional unity between careerism and critical public engagement: A reflexive ethnography of sociologists in neoliberalising universities in the Eastern Cape, South Africa.*

Supervisor: Professor Emeritus KD Helliker.

BARURE, Walter Kudzai, BAHons (Midlands State), MA (UFS), in English, in the Department of Literary Studies in

English. Degree by thesis. Thesis: *Representations of everyday life in post-2000 Zimbabwean short fiction.*

Supervisor: Professor LG Spencer.

BENAYO, Xolela, MA (Rhodes), in African Language Studies, in the School of Languages and Literatures. Degree by thesis. Thesis: *Umntu ngumntu ngabantu - Uhlalutyo nzulu lwefilosofi yobuntu kuluncwadi lukaJ.J.R. Jolobe, uJ. Solilo noW.W. Gqoba (A critical analysis of the Ubuntu – Umntu ngumntu ngabantu philosophy in the literary works of J.J.R Jolobe, J. Solilo and W.W. Gqoba).*

Supervisor: Professor N Saule.

Co-supervisor: Professor LL Kwatsha.

BOMBI, Thandi, BJourn (Rhodes), MA (Rhodes), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: *Listening otherwise in the face of genderbased violence in South Africa - A critical exploration of the listening deficiencies in public narratives and a listening-based framework for healing and social change.*

Supervisor: Professor AC Garman.

CHATIKOBO, Tatenda, MA, PGDip (Media Management) (Rhodes), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: *Digital colonialism in the global south: Experiences from a marginalised community in South Africa.*

Supervisor: Professor L Dalvit.

DLAMINI, Thulisile Gcinile, PGCert (Education) (Swaziland), MPhil (Stell), in English Language & Linguistics, in the Department of Linguistics and Applied Language Studies. Degree by thesis. Thesis: *Vowel epenthesis in syllable structures containing syllabic consonants in Swati English.*

Supervisor: Professor W Bennett.

GAMEDZE, Ayanda, MA (Rhodes), in Sociology, in the Department of Sociology. Degree by thesis. Thesis: *A sociological exploration of men's experiences of hegemonic masculinity and its role in the 2016 #RUReferenceList at Rhodes University.*

Supervisor: Professor MD Drewett.

KAPIRI, Francis, BA (Malawi), MA (Rhodes), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: *An investigation of the role of radio listener clubs in facilitating audience participation in discussion of issues that are of relevance to the public good - A Malawian case study.*

Supervisor: Dr J du Toit.

KITCHEN, Tracy Lee, MA (Rhodes), in Linguistics & Applied Language Studies, in the Department of Linguistics and Applied Language Studies. Degree by thesis. Thesis: *A critical microethnographic investigation of anomalies in a Grade 4 reading comprehension activity.*

Supervisor: Professor R Adendorff.

KUMAR, Rakesh, BPA (Rajasthan), MA (Limerick), in Music, in the Department of Music and Musicology. Degree by thesis. Thesis: *Liminality and states of being in the contemporary music performances of Goma-Dhamal among Afro-Indian (Siddi) performers in Gujarat, India.*

Supervisor: Dr L Watkins.

LINDERS, Raphaela Cosima Thandeka, BJourn (Rhodes), MFA (Rhodes), in Fine Art, in the Department of Fine Art. Degree by thesis. Thesis: *Heart! ♡3.0: exploring the relationship between memory/loss, (re)presentation and place/lessness through a transnational family's visual archive.*

Supervisor: Professor M de Jager.

Co-supervisor: Professor PA Boshoff

MADIBA, Elijah Moleseng, BMus (NMMU), MMus (Rhodes), in Music, in the Department of Music and Musicology. Degree by thesis. Thesis: *Enculturation and adaptation: A practice-led investigation into the history and contemporary transformation of the Bahananwa Harepa.*

Supervisor: Dr L Watkins.

Co-supervisor: Professor B McConnachie.

MAHEVE, Neil Batsirai, MA (Zimbabwe), in Political & International Studies, in the Department of Political and International Studies. Degree by thesis. Thesis: Rethinking development in postcolonial Zimbabwe: The case of the CAMPFIRE Programme in Kanyemba.

Supervisor: Professor S Matthews.

Co-supervisor: Professor A Ziai (Kassel).

MAWONGA, Sisonke, MA (Rhodes), in African Language Studies, in the School of Languages and Literatures. Degree by thesis. Thesis: *Translanguaging for epistemic access in a South African university classroom: An exploratory study.*

Supervisor: Professor D Nkomo.

Co-supervisor: Professor P Maseko.

MOLUBO, Rendani Gabriela, MA (Rhodes), in African Language Studies, in the School of Languages and Literatures. Degree by thesis. Thesis: *Beyond Feminism: Women characters operating as subliminal agents of patriarchal culture in various IsiXhosa literary texts.*

Supervisor: Dr N Mazwi.

MOSTERT, Carla, MA (Rhodes), in Drama, in the Department of Drama. Degree by thesis. Thesis: *Performing whiteness: Everyday whiteness and its relationship to racism in South Africa.*

Supervisor: Dr A Halligey (Wits).

Co-supervisors: Dr D Santos, Dr D McGarry and Professor A Krueger.

MOYO, Vuyelwa O'Lacy, MMus (Rhodes), in Music, in the Department of Music and Musicology. Degree by thesis. Thesis: *Sacred spaces as living archives: Utilising sonic ecosystems and soundscapes as a link to remember Heritage practices in Hamburg, Eastern Cape, South Africa.*

Supervisor: Professor B McConnachie.

MUKURUNGE, Tawanda, BA (ZOU), Dip (Education), Dip (Media and Communication Studies, MA (Zimbabwe), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: *Digital*

media and political change: A critical exploration of youth online activism in Zimbabwe.

Supervisor: Professor L Dalvit.

MWILU, Lwanga Racheal, Dip (Journalism) (Evelyn), MA (Rhodes), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: *From tribe to Neo-Tribe: Exploring the role of social media in the 2021 Zambian elections.*

Supervisor: Professor L Dalvit.

NTIKINCA, Kanyiso Lungani, MSocSci (Rhodes), in Sociology, in the Department of Sociology. Degree by thesis. Thesis: *Farmers and farmworkers in the Global Apple Value Chain: A study of selected commercial apple farms in the Langkloof Valley of the Eastern Cape, 2018 - 2022.*

Supervisor: Professor GG Klerck.

ODUNTAN, Rachel Oluwayemisi, BPsych (Limpopo), MSocSci (UKZN), in Psychology, in the Department of Psychology. Degree by thesis. Thesis: *Black girls' natural hair journey and identity formation: Narrative comparisons of independent and "township" school learners.*

Supervisor: Professor L Jacobs.

REUVERS, Megan Joanne, BComHons (RAU), in Psychology, in the Department of Psychology. Degree by thesis. Thesis: *Is this pregnancy legitimate because it is (un)intended and (un)affordable? An intersectional analysis of pregnancy "supportability".*

Supervisor: Distinguished Professor CI MacLeod.

VON WITT, Nathalia Jane, MA (Rhodes), in African Language Studies, in the School of Languages and Literatures. Degree by thesis. Thesis: *Filling the language gap: The feasibility of communication resources used in the provision of healthcare for HIV/AIDS and Tuberculosis in the Eastern Cape, South Africa.*

Supervisor: Dr BB Nosilela.

Co-supervisor: Professor P Luyten (Leuven).

WESTERN, Natalie Anne, MFA (Wits), in English, in the Department of Literary Studies in English. Degree by thesis. Thesis: *A practitioner's guide to faking it: Authenticity, sincerity and value in experiential South African visual culture.*

Supervisor: Dr D Seddon.

WYNNE, Donovan, MMus (Rhodes), in Music, in the Department of Music and Musicology. Degree by thesis. Thesis: *Productive piano pedagogy: Towards a compositional approach to piano lessons in a South African primary school in Makhanda, Eastern Cape.*

Supervisor: Professor B McConnachie.

Faculty of Pharmacy (2)

Degree of Doctor of Philosophy

BENNETT, Alyson Sebastiane, BSc (Cornell), MSc (Rutgers), in Pharmaceutics, in the Faculty of Pharmacy. Degree by thesis. Thesis: *An Evaluation of Commercially Available and Extemporaneously Prepared Topical Cannabidiol Products Within the Context of the South African Regulatory Framework.*

Supervisor: Professor RB Walker.

CHIWANZA, Farisai, MPharm (Rhodes), in Pharmacy, in the Faculty of Pharmacy. Degree by thesis. Thesis: *Coping strategies in patients with Type-2 Diabetes in public primary care settings: A Salutogenic Approach.*

Supervisor: Associate Professor Emeritus R Dowse.

Faculty of Science (34 PhDs)

Degree of Doctor of Philosophy

BANNATYNE, Laura Joan, MSc (Rhodes), in Geography, in the Department of Geography. Degree by thesis. Thesis: *The implications of the uncertainty associated with suspended sediment load and yield estimates for catchment management decision-making in data and resource-scarce regions.*

Supervisor: Professor Emeritus KM Rowntree.

Co-supervisors: Dr B Van Der Waal and Professor I Foster (Northampton).

BEBEY, Reine Deborah, MSc (UCAD), in Bioinformatics, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Exploring the effects of pH, dimerization and disufide bonding on the dynamics of Wt and artemisinin-resistant mutants of Plasmodium falciparum kelch 13.*

Supervisor: Dr O Sheik Amamuddy.

Co-supervisor: Professor Ö Tastan Bishop.

BENNETT, Tahnee Tashia, MSc (Rhodes), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *The isolation, identification, and characterisation of novel insect viruses for the control of emerging and existing agricultural pests.*

Supervisor: Distinguished Professor MP Hill.

Co-supervisors: Professor S Moore (CRI) and Dr M Jukes.

CHAMBOKO, Chiratidzo Respina, MSc (Rhodes), in Bioinformatics, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Pharmacogenomics of Cyp2d6: A study of Cyp2d6 and its allelic variants using in silico approaches.*

Supervisor: Professor Ö Tastan Bishop.

COBBING, Kathleen Margaret, MSc (Rhodes), PG Cert (Education) (Rhodes), in Physics, in the Department of Physics and Electronics. Degree by thesis. Thesis: *Developing the behaviours that we value in physics knowers through implementing aspects of the Investigative Science Learning Environment (ISLE) approach in a South African high school.*

Supervisor: Dr JA Williams.

Co-supervisor: Mrs JD Sewry.

DAUB, Chantal Désirée, MSc (Rhodes), in Biochemistry, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Exploring the therapeutic potential of fucoidan and sodium alginate from South African brown seaweeds.*

Supervisor: Professor BI Pletschke.

Co-supervisor: Professor AL Edkins.

GITHAE, Michael Mathenge, MSc (Nairobi), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *Enhancing the effectiveness of the Thaumatotibia Leucotreta (Lepidoptera: Tortricidae) sterile insect technique release programme.*

Supervisor: Distinguished Professor MP Hill.

Co-supervisors: Professor S Moore (CRI), Dr C Coombes and Dr R Mutamiswa.

IZALLY, Sharkay Ruwade, MSc (Rhodes), in Mathematical Statistics, in the Department of Statistics. Degree by thesis. Thesis: *Bayesian inference for Cronbach's alpha.*

Supervisor: Professor L Raubenheimer.

Co-supervisor: Professor AJ van der Merwe (UFS).

KANKONDI, Sebbi Lenga Agarob, MSc (Rhodes), in Marine Biology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *Deeper into the Dip: Probing the ecophysiological implications of metabolic rate suppression in pulmonate limpets.*

Supervisor: Distinguished Professor CD McQuaid.

Co-supervisor: Dr C Monaco.





Front Row: Ms Kaisano Tauyakhale (PhD), Ms Paballo Matseletsele (MSc), Ms Amanda Seshane (MSc)

Second Row: Ms Zine Gwaji (MSc), Ms Liyema Makeleni (MSc), Ms Gail Cobus, Ms Pertunia Macigane (MSc – with distinction). Ms Kamogelo Hlabangwane (MSc – with distinction), Distinguished Professor Tebello Nyokong, Dr Siphumelele Mkhondwane (PhD), Professor Philani Mashazi.

Back Row: Mr Isaac Mulaudzi (PhD), Professor John Mack, Dr Jonathan Britton. Photos: Jackie Grove

KAPAMBWE, Mirriam Chishala, BScHons (Zambia), MSc (London), in Microbiology, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Validation of the Dnak-DnajGrpe chaperone complex as a drug target in Mycobacterium tuberculosis.*

Supervisor: Dr GL Abrahams.

Co-supervisor: Professor AL Edkins.

KENENI, Dele Abdissa, MSc (Jimma), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: *Metabolomics-guided isolation and characterization of bioactive natural products from marine macrofauna endemic to the Southern Africa coastline.*

Supervisor: Professor RA Dorrington.

KHAMBULE, Nondumiso Venessia, BScHons (UFS), MSc (Rhodes), in Microbiology, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Truffles - South Africa's hidden treasure.*

Supervisor: Professor JF Dames.

KIPANDULA, Wakisa, BSc (Malawi), MSc (Nairobi), MPhil (St Andrews), in Microbiology, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Mining bacterial communities from Antarctic and the Sub-Antarctic Marion Island as a source of novel antibiotics.*

Supervisor: Professor RA Dorrington.

Co-supervisor: Dr G Matcher.

KIRIGIN, Elisa, MSc (Rhodes), in Biochemistry, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Molecular insights into the Hop-Pkm2 Partnership: A novel regulator of Kaposi's Sarcoma-associated Herpesvirus infection*.

Supervisor: Professor AL Edkins.

KIRKALDY, Benjamin Puleng, MSc (Rhodes), in Zoology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *Systematics and palaeo-biogeography of the sub-Saharan Neoperla Needham Stoneflies (Plecoptera, Perlidae).*

Supervisor: Professor MH Villet.

Co-supervisors: Dr HM Barber-James (NMNI) and Professor N Richoux.

LEGODI, Portia Potasi, BSc (Limpopo), BScHons (UCT), MSc (Rhodes), in Physics, in the Department of Physics and Electronics. Degree by thesis. Thesis: *New insights on classical radio galaxies from MeerKAT and uGMRT.*

Supervisor: Distinguished Professor OM Smirnov.

Co-supervisor: Dr T Venturi (IRA).

MARTINS, Vusumzi, MSc (UFS), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: *Bushmeat hunting and use by rural communities living adjacent to indigenous forests in the Eastern Cape province, South Africa.*

Supervisor: Distinguished Professor CM Shackleton.

Co-supervisor: Professor A De Vos (Stell).

MATTISON, Miriam Christina, MSc, PGDip (Education) (Rhodes), in Human Kinetics & Ergonomics, in the Department of Human Kinetics and Ergonomics. Degree by thesis. Thesis: *An investigation into the effects of changes in muscle force and muscle length on localised muscle fatigue.*

Supervisor: Dr S Wells.

McCAFFERTY, James Ross, MSc (Rhodes), in Fisheries Science, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: *After the dust has settled: A large dam project and its impact on fish and fisheries in the Lesotho Highlands.*

Supervisor: Professor WM Potts.

Co-supervisor: Dr C Bova.

MINUTI, Gianmarco, BSc (Milan), MSc (Vrije, Brussels), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *FOLLOW THE YELLOW FLAG ROAD. Advancing the biological control of a global wetland invader, and a case study on ecosystem recovery.*

Supervisor: Professor JA Coetzee.

Co-supervisor: Dr I Stiers (Vrije).

MKHONDWANE, Siphumelele Thandokwazi, MSc (UNIZULU), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: *A porphyrin and phthalo-cyanines conjugated to graphitic carbon nitride and manganese ferrites nanoparticles and supported on electrospun nanofibres for photosono-degradation of organic pollutants.*

Supervisor: Distinguished Professor T Nyokong.

MNCIVA, Siyasanga Tracy, BScHons (UFH), MSc (Rhodes), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *Integrated control of water hyacinth (Pontederia crassipes (Mart.) Solms. (Pontederiaceae) interactions between the biological control agent, Megamelus scutellaris Berg (Hemiptera: Delphacidae), and selected sublethal glyphosate-based herbicide applications, South Africa.*

Supervisor: Professor JA Coetzee.

Co-supervisor: Distinguished Professor MP Hill.

MUTUMBI, Uzziah, BScHons (Midlands State), MSc (Rhodes), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: *Barriers to household level solar PV adoption across an income and stakeholder gradient in South Africa.*

Supervisor: Professor G Thondhlana.

Co-supervisor: Professor S Ruwanza.

NOMXEGO, Lungelwa Cordelia, BScHons (UWC), MPhil (UiB), in Fisheries Science, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: *An update on the reproductive biology of the Merluccius capensis (shallow water hake) in the South coast of South Africa.*

Supervisor: Professor WHH Sauer.

Co-supervisors: Professor M Lipinski and Dr O Kjesbu (IMR).

OYIM, James Omondi, BScHons (MOI), MSc (Nairobi), in Chemistry, in the Department of Chemistry. Degree by

thesis. Thesis: *Indium (III) porphyrins immobilized on carbon-based supports for the remediation of organic contaminants and bactericidal activity in water.*

Supervisor: Distinguished Professor T Nyokong.

Co-supervisor: Dr EK Amuhaya (USIU-Africa).

POKWANA, Sihle, BScAgric (Hons) (UFH), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: *Evaluating social effects of arable field abandonment in communal areas of South Africa.*

Supervisor: Distinguished Professor CM Shackleton.

RAJAK, Sauleha, BScHons (UKZN), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: *An assessment of the significance of sacred forest status in maintaining forest condition and integrity: A biocultural perspective.*

Supervisor: Distinguished Professor CM Shackleton.

Co-supervisors: Professor ML Dold Cocks and Professor A de Vos (Stell).

RALEKHETLA, Mateboho Mary, BSc (Lesotho), MSc (Rhodes), in Water Resource Science, in the Institute for Water Research. Degree by thesis. Thesis: *Exploring the framing and meaning of participation: A question of Epistemic (In)Justice?*

Supervisor: Professor Emeritus CG Palmer.

Co-supervisor: Dr L Kelland.

ROBERT, Nnenna, B.MLS (EBSU), MSc (Dundee), in Microbiology, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Analysis of the role of Polyphosphate Kinase 1 in the physiology of Mycobacterium smegmatis and Mycobacterium tuberculosis as a promising drug target for the treatment of Tuberculosis.*

Supervisor: Dr GL Abrahams.

Co-supervisor: Professor AL Edkins.

SEBOLA, Keneilwe Mmule, MSc (Med) (Wits), in Entomology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: *Management of water hyacinth (Pontederia crassipes) on the Hartbeespoort Dam in the North West, South Africa: An impact assessment*.

Supervisor: Professor JA Coetzee.

Co-supervisor: Distinguished Professor MP Hill.

SIBIYA, Bongiwe, BScHons (Rhodes), MSc (Wits), in Biochemistry, in the Department of Biochemistry, Microbiology and Bioinformatics. Degree by thesis. Thesis: *Analysis of the role of Hop/Stip1 in anchorage-independent growth of cancer cells.*

Supervisor: Professor AL Edkins.

SINGINI, Edith Joana, MSc (Wits), in Botany, in the Department of Botany. Degree by thesis. Thesis: *Physiological responses of savanna grasses, encroaching, and non-encroaching tree saplings to changing water availability and elevated atmospheric CO2*.

Supervisor: Professor BS Ripley.

Co-supervisors: Dr C Osborne (Sheffield) and Professor S Archibald (Wits).

YIMAM, Hailu Mazengia, MSc (AAU), DVM (AAU), in Fisheries Science, in the Department of Ichthyology and Fisheries Science. Degree by thesis. Thesis: *Use of bioindicators and biomarkers to assess aquatic environmental contamination in wetlands of Lake Tana, Ethiopia.*

Supervisor: Professor H Kaiser.

Co-supervisor: Dr M Mingist.

XOXO, Beauten Sinetemba, MSc (Rhodes), in Hydrology, in the Institute for Water Research. Degree by thesis. Thesis: *Mainstreaming equitable decision-making under uncertainty at the Water User Association level using a reallocation model in the Western Cape, South Africa.*

Supervisor: Dr J Tanner.

Co-supervisor: Professor SK Mantel.

Vice-Chancellor's Distinguished Senior Research Award



Plants and Rising Carbon

Professor Brad Ripley
Department of Botany

By Julienne du Toit
Photo: Chris Marias

How do African crops, grasses and trees react in a climate changing world? Plant ecophysiologist Professor Brad Ripley's research is focused on the response of vegetation to rising levels of carbon dioxide. In 2024, he received the Vice-Chancellor's Distinguished Senior Research Award.

A short drive from Rhodes University's Botany Department is a large field with 16 pod-like open-top chambers (OTCs), a little like greenhouses. Inside are hundreds of young trees and grasses, all in pots.

This is currently the only place in Africa where academics are studying what might happen to various plants – grasses, crops and trees – as carbon dioxide levels on the planet increase. They are expected to double to 800 parts per million by 2100.

"When I started doing photosynthesis measurements in the 1980s, we were at 330 parts per million. We're already at 410, the highest it has been in millions of years," according to Botany Professor Brad Ripley.

His passion is plant eco-physiology – how the environment affects plant forms and function, and vice-versa.

Professor Ripley's questions about climate change and plants led to this high-tech installation, built in 2015.

Every pod has pipes feeding in carbon dioxide and water, and each is connected to a control centre monitoring gas levels, temperatures and humidities. Another system controls the drip irrigation, which can also be switched to mist.

These OTCs and Professor Ripley's research give us an idea of what will happen to African plants and crops in a world with rising levels of CO_2.

European countries have done their own tests, and the results are in. But Africa has very particular conditions, ecosystems and priority plants – and it is far more water-limited than the north.

"People are always tempted to superimpose European knowledge on Africa and African contexts, but that is completely inappropriate."

The Trees Seem to be Winning

Savannahs – those sweeping grasslands dotted by trees – are the backdrop to human evolution. It is among grasses that we humans began to stand upright. Grasses have fed us, in the form of barley, wheat, oats, sorghum and maize. Grasses also sustain our livestock and the plains of wild game.

But savannahs are inherently unstable systems, says Professor Ripley. Various factors affect them over the long term – fires, herbivory, drought, and carbon dioxide levels. These result in slow motion competitive interaction between grasses and trees.

At the moment, the trees are winning.

Trees typically use a photosynthesis method called C3. This refers to the fact that the first carbon compound produced after carbon dioxide fixation is a 3-carbon molecule, 3-phosphoglycerate. It is produced by the enzyme ribulose-bisphosphate carboxylase oxygenase (Rubisco) and works best in cooler conditions.

Grasses mostly favour C4 photosynthesis. This involves a two-step process where CO_2 is initially fixed into a 4-carbon molecule (malate or aspartate) in mesophyll cells, then transported and released in bundle sheath cells.

This is a highly effective way to absorb carbon dioxide and increase plant performance during periods such as the last glacial maximum when atmospheric CO_2 concentrations were particularly low. C4 plants can typically survive heat and water stress better than C3 plants.

"Generally speaking, trees respond strongly to increased levels of carbon dioxide, and the grasses do not. So across the savannah ecosystems, there is a trend of 'woody thickening', or encroachment. Basically, we are losing grassland savannahs at a rate of between 0.05% and 0.2% a year."

Interestingly, grasslands are at least as good as tropical forests when it comes to taking up carbon, notes Professor Ripley.

Elephants, Herbivores and Fires

"Worldwide, grasslands are being replaced by woodlands. Except where there are elephants. There, the woodlands are shrinking, and grasslands are growing."

Herbivory and fire, though, can alter the fate of grasses and trees. Seedlings are vulnerable in the first few years. Nibbling grazers and too many hot fires are bottlenecks to their survival, as is frost in high altitudes.

But given that increased carbon dioxide seems to have a galvanising effect on most plants – in terms of growth and water efficiency – some may wonder why botanists are so concerned.

High Carbon

In fact, plants are remarkably resilient and adaptable when it comes to surviving fluctuating CO_2 levels.

In the Ordovician period, 450 million years ago, carbon dioxide levels were at a staggering 6 000 parts per million. This was a very hot and humid time, entirely without polar ice. The landmasses were green and wet. Plants were primitive, and mostly looked like mosses.

These were later joined by horsetails, ferns, cycads and conifers. In those high carbon dioxide times (driven up by volcanic venting), plants did not need much in the way of leaves. Their pore-like stomata, which inhale carbon dioxide so the plant can turn it into energy, were minimal, and mostly along their stems.

In a world awash with sunlight and carbon dioxide, there was no need for more.

"It was only when leaves evolved later that the atmospheric levels of CO_2 began to decrease," says Professor Ripley.

Low Carbon

During glacial periods about eight to 25 million years ago, levels of carbon dioxide sank to 180 parts per million. The cold and ice trapped carbon dioxide in the frozen oceans, which pulled back from old shorelines, leaving vast littoral areas exposed. This happened repeatedly. The most recent glacial maximum was 170 000 years ago, coinciding with modern humans going through a survival bottleneck.

How did plants respond to the low levels of carbon dioxide? Professor Ripley designed some experiments to find out, using a cunning invention to lower carbon dioxide for plants growing in controlled spaces.

"We used fish tank pumps and atmospheric air, passing one part of the air through soda lime, which removed the carbon dioxide. Then we blended those two airstreams together to flow into a growth chamber

"One of the most interesting experiments we tested was on Oxalis. Their bulbs were thought to have formed an important part of the hunter-gatherer diet of early



Professor Brad Ripley
Photo: Chris Marais

This is **currently the only place in Africa where academics are studying what might happen to various plants** – grasses, crops and trees – as carbon dioxide levels on the planet increase. They are expected to double to 800 parts per million by 2100.

humans, for example those living at Pinnacle Point near Mossel Bay 170 000 years ago. We found that the low levels of CO_2 meant that the plants did not form bulbs, so humans must have been far more reliant on eating animals and seafood to consume enough calories for survival than originally thought."

Unforeseen Consequences

But increased carbon dioxide levels can have startling results.

Higher levels of carbon dioxide create great growing conditions for maize, as it does with all grasses. Because they are so effective at concentrating carbon dioxide, more of it enables them to close their stomata and conserve soil water, to prolong their growing season, says Professor Ripley.

"But the quality of the seed goes down because of the higher carbon, lower nitrogen story. Basically, when you give plants high CO_2, they don't need as many enzymes, and don't make as many enzymes. And all the nutrients sit in the enzymes."

The change in nitrogen and carbon levels in plants also affects insects, which are crucial to the health and function of ecosystems worldwide.

"We've run a few experiments with the Centre for Biological Control, mostly on insects that eat aquatic plants, like water hyacinth. Their fecundity goes down. They decrease in size. Sucking insects aren't as badly affected because they're targeting the sugars in the phloem. But chewing insects have got to chew through everything, and the lower nitrogen affects them."

One of Professor Ripley's students confirmed that increased carbon dioxide levels even resulted in lower levels of lycopene – a beneficial antioxidant for humans – in tomatoes.

Groundwater in the Sky

There is another, even more worrying result of carbon dioxide stimulating woody plant growth.

"All our water comes from savannahs, from grassy ecosystems that allow rainwater to sink in, form seeps and wetlands, and feed underground aquifers.

"But that's not the case with forests and woodlands. Trees take up water and transpire it into the atmosphere. So this could change everything.

"If you're affecting primary productivity and plant performance, you affect everything downstream. People run around worrying about specific animal species, but you know, it's the plants that are the drivers of the whole system, of life on Earth, oxygen, water, everything. It's all down to plants. This is so important, but it is so hard to get people to appreciate.

"In terms of climate change and elevated carbon dioxide, plants won't care too much. Life on Earth would carry on. The problem is the temperature. That will be the thing that gets us."

Harvesting an Experiment

Researching the effects of carbon dioxide on African plants is a painstaking and very expensive process.

Since 2016, grants and funding has mainly come from the Department of Science and Innovation, the National Ecological Research Council in the UK, Global Change Biology, the Small Grains Research Institute and Grains SA.

"For some experiments we deprive the plants of water, or starve them of nutrients. The reason we've got so many chambers is so that we can do all these interactions.

"It's always the interactions that are the most interesting – how they will respond to drought or fire or things like that. Hence the number of OTCs. It's a factorial kind of design. Every time you add another factor, the number of pots goes up, by a lot."

Experiments are generally done over two years, involving 700 pots filled with plants. Harvest time delivers the all-important findings.

"First we do a whole lot of physiological measurements. Then we harvest the above-ground biomass, separating it into leaves, thorns and stems. These all go to get dried and processed.

"Then we use a high-lift jack to push the whole soil core out of the pot, cut it in slices and wash the soil out of each of those slices, so that we know what's happening to the root distribution down the pot.

"And then we pick out all the nitrogen-fixing nodules on the root. It's all sent to the Botany Department and is dried in big ovens. Then it all has to be weighed and packaged and sent away, some of it to other universities, to Europe and all over the show.

"So harvesting an experiment is a massive logistical job. It takes 20 people at least a month and a half."

A Fitting and Turning Kind of Mind

The first open-top chamber came from Belgium in 2014. It had been used there for experiments and was no longer needed.

"We bought it for one euro. But we had to cover the costs of transport."

It wasn't ideal. The see-through walls were made of plexiglass, which filters out ultraviolet light, resulting in unwanted fungal diseases among plants.

"So we redesigned and rebuilt it with a kind of plastic sheeting that lets through 94% of all light wavelengths. Funding came through from NRF's National Equipment Programme to build more."

Brad Ripley had grown up in Westville, near Durban, the son and grandson of two intensely practical nature-lovers. Brad's grandfather was an entomologist and his father was a neurophysiologist with a fascination for mountains. Most of his time as a child was spent outdoors, climbing mountains and flyfishing, or with his family at game parks and Kruger National Park.

"We had a microscope at home, and would look at pond water and those kinds of things. It was just part of my growing up. My dad was very knowledgeable about everything.

"He was very good with his hands, so he could fit and turn. And I have those skills too. I think that's been really important as an eco-physiologist, because a lot of the stuff we use in our profession, you've got to make or design yourself.

"I think those qualities have been lost. People just want to order up the machine that goes ping."

A Sense of Purpose

Professor Ripley says he has never chased the numbers game when it comes to research.

"I've always focused on trying to produce the best quality research that I can. And I've had quite a few high-impact journal articles that influence people. We've had good collaborations and we're doing important work, I think, in terms of African savannahs. People are interested in it. The students and I have seen politicians come and be influenced by it.

"I loved doing my early doctoral research on coastal vegetation, but it never really gave me the sense of purpose I have now. Working on climate change, seeing the impacts and understanding it has a lot of traction for me, and also for the students.

"They feel like they're part of something that's important. And it is."

Vice-Chancellor's Distinguished Research Award



Teach a Computer to Fish

Associate Professor Dane Brown
Department of Computer Science

By Julienne du Toit
Photo: Chris Marais

How does a computer recognise certain animals through a webcam, and can it possibly count them accurately? Can it analyse certain repetitive hand or body movements? Or recognise the sounds of an ancient instrument playing in a crowded market?

These are some of the issues that preoccupy the mind and time of Associate Professor Dane Brown from the Department of Computer Science, who was awarded the Vice-Chancellor's Distinguished Research Award for 2024.

"Imagine what a computer sees through a webcam. At any one second, it is processing millions of coloured pixels. Unlike the compulsively sense-making human eye, a webcam does not see patterns, unless the computer it is attached to is instructed to seek them.

This is the domain of Computer Vision, a key field within Artificial Intelligence (AI) where Machine Learning (ML) models are taught pattern recognition, though the

process can require the use of hundreds of thousands of images."

In fact, this is the major issue facing anyone programming AI systems at the moment: where to get enough data, footage or images to train scalable ML models? Most do it by scraping the Internet. But many images are not ideal, are incorrect, or are difficult to access.

A fortuitous collaboration between the Computer Science Department and the SA Institute for Aquatic Biodiversity (SAIAB) in 2022 has proven to be immensely valuable in this regard. SAIAB has vast amounts of photographs and footage of fish underwater and has made them available to Dane Brown and his students.

Together, they have made great progress in linking computer vision to images and footage of fish, performing object detection, counting, tracking and classification. One day, this information may become a valuable conservation tool that could give fishermen the facts they need to avoid overfishing or taking out undersized fish via a camera-linked app.

A Scalable Project

During this project, Associate Professor Brown's team has been creating scalable AI solutions. By using a technique called Transfer Learning, these models can be adapted for a wide range of domains.

Networking, machine learning and computer vision have been Dane Brown's favourite subjects since his undergraduate years at the University of the Western Cape (UWC). It is part of the reason he is one of the most productive researchers at Rhodes University.

Fuelled by curiosity, a dogged love for solving puzzles and five large cups of morning coffee, Dane Brown is working on a number of projects simultaneously.

Under the Water

"So traditionally, to detect objects like fish, we have used horizontal bounding boxes. These algorithms have been around for a very long time now – 15 or 20 years.

"But more recently we've programmed improved implementation of several computer vision algorithms, such as the localisation of fish by tweaking the way oriented bounding boxes work. We're basically modifying the bounding box regression algorithm. This helps with finding the coordinates of fish even under occluded conditions. Say a fish swims behind something or is in a crowded area, we can still register it.

"The computer has learnt what that fish looks like from various angles, and it knows which way it's swimming. This is despite the fact that underwater conditions can be really adversarial. It's incredibly hard because of the murkiness, salt, debris and stuff."

A Penguin in a Tree

His next challenge is recognising aquatic species in vastly different habitats.

And this is why Dane Brown's laptop and hard drives are full of very strange penguin images – penguins in trees, penguins in the Sahara, penguins posing with jaguars in the rainforest.

It all started in 2024, when Dane was approached by SANParks with a very specific challenge: was it possible for webcam-linked tiny computers to count penguins?

To humans, penguins are immediately recognisable. But a computer has to be taught that this finned, beaked creature can lie horizontally or stand vertically, and occur in a variety of habitats – underwater and on land, on beaches, in ice, on rocky shores, and even on grass or within man-made environments like zoos.

If you're including the African penguins of Boulders Beach, a webcam might even capture one crossing a road, or nesting in a suburban garden.

"So along with learning how a penguin looks, the machine learning model must learn not to rely on the context or background. Before receiving the major tranche of penguin images from SANParks, I went ahead and tried training the computer with what I could find."

Dane Brown managed to round up five hundred (500) penguin images. That's not nearly enough. Thousands of images are needed for teaching machine learning models to be accurate under adversarial conditions. Also, most of the photographs showed penguins from South America and Antarctica – rockhoppers, chinstrap penguins, emperor and king penguins and the like.

And this is why he began the counter-intuitive activity of cutting and pasting various penguins into all kinds of clearly 'incorrect' contexts and backgrounds.

Adversarial Learning

"I know. It's very weird, right?" Brown says. "On one level, this is a powerful form of data augmentation—generated synthetic training data to make the model robust. But there's a deeper principle at play, which is adversarial learning.

"The core idea is to act as an adversary to your own model: to identify its lazy assumptions and create examples that specifically attack those weaknesses. The model's potential weakness was assuming penguins are always near water or ice. Our pasted images are 'adversarial examples' designed to break that reliance on context."

This forces the model to learn the intrinsic features of a penguin, strengthening it dramatically, according to Associate Professor Brown.

"I didn't give it any images of penguins being in the vicinity of water at all, yet it could still detect penguins in water afterwards.

"So as with the fish, we're tackling complex backgrounds, occlusions, swimming behind things, penguins being behind different objects, different sizes. And of course dynamic lighting has been the biggest historical problem since forever."

The whole project is somewhat reminiscent of Leif Penguinson, a fiendishly difficult puzzle first created by



Photo: Department of Computer Science

A fortuitous collaboration between the Computer Science Department and the SA Institute for Aquatic Biodiversity (SAIAB) in 2022 has proven to be immensely valuable. SAIAB has vast amounts of photographs and footage of fish underwater and has made them available to Dane Brown and his students.

Nature Magazine during Covid. Readers were invited to find a tiny image of a penguin cut and pasted into a cave, a forest, within a zebra migration, a coral reef, among swamp cypress trees and even on the Moon.

“Actually I tried it out. I could never see the penguin. But the computer did.”

Tossing Neurons

Another way of forcing computers to learn faster, to generalise instead of clinging onto precise memories, is to randomly throw away some of what is being learnt. Just like the penguin in the tree, this sounds counter-intuitive to a non-computer scientist.

“It does sound mad, but many modern algorithms use this. During training, we randomly set the output of some neurons to zero for a single pass. This process is handled by what’s called a ‘dropout layer’. It prevents the network from becoming too dependent on any one pathway, forcing it to learn more general and robust features – to generalise instead of just memorising the training data.”

Sign Language: A Non-Trivial Task

While doing his Masters at the University of Western Cape (UWC), Dane Brown was part of a study group on South African Sign Language. The idea was to get a computer to recognise the typical hand gestures of sign language and turn them into text. It was highly ambitious and innovative.

The students used a machine learning model on a Graphics Processing Unit (GPU), but the ambitious project foundered for sheer lack of sufficient data and parallel processing capability, which a modern GPU is now well-equipped to handle. This emphasises the technical bottleneck of the time.

“The sign language project is a bit like the object detection we’ve been working on with the fish and penguins, but of course it is much more complex. Did you know that there are up to 19 different ways to sign ‘afternoon’ in South Africa alone? In this country, we have at least nine distinct sign language dialects.

“Back at UWC, my contribution was getting it to work in real time. So as I moved, a robot humanoid would also move and do the exact same action as me. We could even shout a phrase at it, like ‘get a doctor’ and it would immediately sign the words back at us.”

Technology and cameras have now improved to the extent that picking up this project is potentially viable again, according to Associate Professor Brown. He has also worked on biometrics, which contributes helpful methods via pose estimation.







Examples of various pasted (augmented) penguins in all kinds of clearly 'incorrect' contexts and backgrounds, in order to test the model through adversarial learning.

Photo: Department of Computer Science

"It's about making an AI system that can actually interpret these things. This is a non-trivial task. So maybe it was a good thing that we ran out of data back in 2012, because I don't think it would ever have been possible in that time period."

Sign Language into Speech or Text

Now one of Professor Brown's Postgraduate students, Marc Marais, is working on the project.

Theoretically, one day we could record a sentence into an app and have it translate that into sign language, or vice versa. Or even more remarkably, it would recognise and translate sign language into speech or text in real-time.

Wonderful as that sounds, it could be controversial.

"There is a fear that if we create the system, it would universalise sign language. There is a hypothesis that if this takes off in the next five years, then it could actually change the way sign language works across the world. Dialects will start decreasing. Languages will start to overlap too."

The sign language project is not necessarily about detecting objects. "But I did start off with getting the computer to isolate the hand, and from there, whatever the gesture of the hand would be.

"It seems like I just keep jumping between things, but everything has become so interrelated. Code is becoming common to various functions too."

Detecting Plant Disease

It's not only objects that computers can detect. It can also see (thanks to drone cameras, improving all the time), patterns in crops. This is particularly useful for early detection of diseases.

One of Associate Professor Brown's PhD students has found a way of finding the wheat mosaic virus, which has devastated crops in Brazil, and now possibly in South Africa.

"This can wipe out an entire farm. Once you can see it with the human eye it's almost too late already. Testing in the lab takes another two days.

"Basically, we modified a standard DSLR camera by removing and swapping the internal filters. This allows it to capture near-infrared wavelengths of light, which are invisible to the human eye. This technique mimics a much more expensive multispectral camera and significantly improves early disease detection."

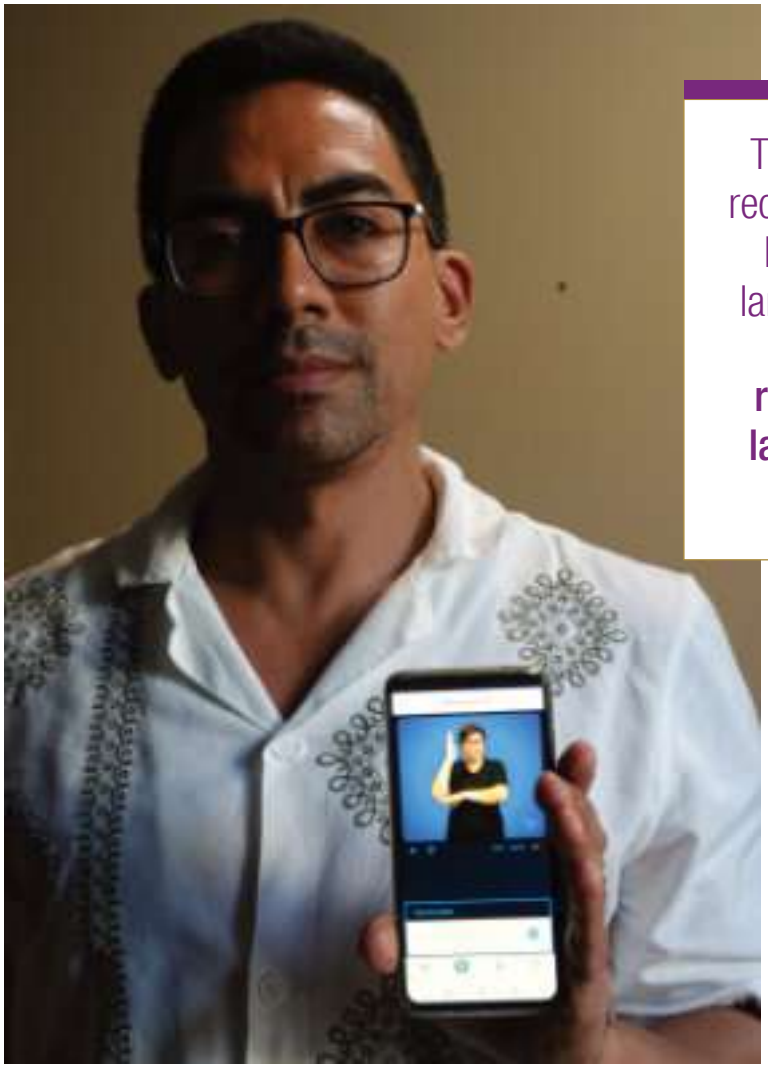
One of the biggest problems was getting the camera to focus on the wheat, a very thin plant. Tomato blight is far easier to detect, as is rust on floricultural crops like marigolds, snapdragons and carnations.

Machines Can Hear Music

One of Associate Professor Brown's students is in the Humanities, studying music and in particular, a traditional stringed Xhosa instrument called the *Uhadi*.

Could the computer detect and correctly identify the sound?

"When you play the Uhadi, it's not just the instrument because typically someone would be singing while they're playing it and there's a whole village ambient noise behind the thing. And so every single song that's created is different.



Theoretically, one day we could record a sentence into an app and have it translate that into sign language, or vice versa. **Or even more remarkably, it would recognise and translate sign language** into speech or text in real-time.

Associate Professor Dane Brown holding a mobile phone displaying the Sign Language into Text or Speech Project app currently in development, by PhD candidate Mark Marais.

Photo: Chris Marais

"We made it even harder for ourselves by doing it in adversarial conditions: we put forest sounds in the background, we put all kinds of sounds, we tried everything and at the beginning the accuracy dropped dramatically to like 60 percent and then we applied the same transfer learning with augmentation idea and we got back up to 90 odd percent.

"So all of these things are related, even though that's not computer vision at all. It's machine learning and data science modelling, right? At the end of the day it's still data whether it's pixels or sound waves."

Shockingly Good

Machine learning is something that continues to fascinate Dane Brown, although he concedes that the speed at which it is developing leaves him a little overwhelmed at times.

He recently interacted with a new AI app that will take a PowerPoint presentation and turn it into a kind of podcast.

"From a technical perspective it's shockingly good. It almost does a better summary of my own stuff than I do. That is scary. Slides are generally not there for students to study from, right? It's typically there to help the lecturer convey the message well in class and they should actually take notes down themselves.

"But this thing takes the slide information and adds stuff that's missing – what it thinks should be there. And it's almost always correct. It adds in the stuff I would have said in my lecture, and for me, that's crazy.

"Look, there are some glass ceilings that we're reaching. Large language models have now been trained on most of the usable data on the internet. Then again, every time we retrain it, you have to go back and retrain it again, because it grows that fast."

Vice-Chancellor's Book Award



Everyday Communists in South Africa's Liberation Struggle: The Lives of Ivan and Lesley Schermbrucker

Professor Alan Kirkaldy
Department of History

By Chris Marais
Photo: Chris Marais

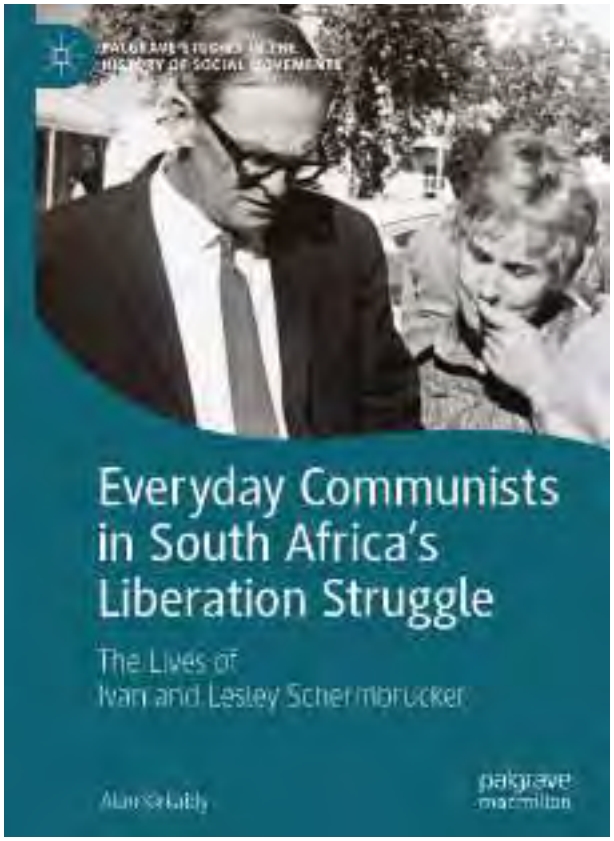
Professor Alan Kirkaldy, retired Rhodes University History HOD, has written a ground-breaking book which puts a human face on the anti-apartheid liberation world of the mid-1900s.

Collecting money for the South African Communist Party (SACP) in the 1950s was a tricky business. However, a lanky, forceful Eastern Cape man called Ivan Schermbrucker delighted in his mission.

A seasoned domestic traveller, he took to fundraising in the cities and platteland of South Africa and became a solid contributor to the coffers of the Party and its liberation struggle against the apartheid regime.

Ivan was one of the background players in national politics, initially keeping well below the security radar as he chugged across South Africa, visiting little shops whose owners (many of them Indian) might be sympathetic to the cause.

He raised subscriptions for the *Guardian* newspaper, print mouthpiece of the SACP, and gathered substantial amounts of money from the sales of Christmas hampers.



Lesley Schermbrucker

Taking an occasional pittance for his efforts, Ivan Schermbrucker went about his business knowing that his wife Lesley was keeping the home fires burning back in Johannesburg. She ran a profitable fitness studio and looked after their children, Peter and Jill.

Some years later, it would be Lesley's turn to work for the Party, as she became part of the 'underground railroad' that gave safe haven and smooth exit passage to activists on the run from the security establishment.

Picture the scene.

In the early 1960s, upmarket white South Africa liked shopping at the massive John Orr's department store in the Johannesburg CBD. Within its confines, one found the famous John Orr's tea room, a rich woman's sanctuary from the noisy streets outside.

The décor was soft and the lights dimmed for ambience, wood surfaces were polished and the porcelain was delicate. The armchairs were plush, the teas freshly brewed and accompanied by warm scones, jam and clotted cream. Spending time with friends in the hallowed confines of the John Orr's tea room was a special, treasured ritual for a woman of means in those days.

Now pan across to the women's cloakroom, no less elegant than the rest of the establishment. Some clandestine discussions are taking place, with Lesley at the centre of a group of women. They're working out how to channel Party funds and where to move high-profile activists like Bram Fischer next.

The husbands of most of the group (including Ivan Schermbrucker) are in jail, and now the women are stepping up in a big way. And they're doing so with a certain degree of style.

Ivan's Childhood

Ivan was the great-grandson of an illustrious German soldier, adventurer, newspaper editor and politician called Colonel Friedrich Xavier Schermbrucker. After service as a British mercenary during the Crimean War, he came out to South Africa in the late 1850s and settled in what was to become the Eastern Cape Province.

In the early 1900s, the rural trading stores of the Eastern Cape and Natal (now KwaZulu-Natal) became a much-valued commercial and social link between the African clans and the mostly-white retailers living in their midst. Raw tobacco, animal hides and crafts were traded for a wide range of household essentials initially bought from wholesalers in bigger centres.

Ivan's parents were traders in the old Transkei, so as a young boy his peers were Xhosa village children. He played with them, he learned to speak isiXhosa fluently and, of equal importance, he developed a deep respect for the Xhosa culture.

Like many Eastern Cape men to this day, Ivan excelled at sport and loved to go fishing from the rocks along the remarkable Wild Coast. But even at school, he stood apart from most of his classmates because of his early ties with the Xhosa nation and his moral conviction against racial segregation.

Lesley's Childhood

Lesley Williams' parents had a trading store and house at the *Kwa Magwaza* mission station in the middle of a Northern Zululand 'Native Reserve'.

The Williams family were poor, but then so were the Zulu and Afrikaner families of Lesley's childhood days. She thought nothing of her crude wattle-and-daub home, her hand-me-down clothes or the cold water she had to wash in during winter season.

When the family eventually managed to raise the loans to buy a sugar farm, their fortunes remained marginal. During both the trading store and farming periods of the Williams family, Lesley became fluent in isiZulu. She, like Ivan down in the Eastern Cape, also developed an awareness of the plight of the downtrodden in her midst, both poor Zulu and poor Afrikaner.

In 1944, young Lesley went to Johannesburg to study physical education, eventually landing a job as a physical education teacher at the Johannesburg Welfare Department. Although she went out socially, Lesley had a serious side to her and joined the Young Communist League.

On the other hand, it was his military service in World War II that seemed to have radicalised Ivan Schermbrucker. He developed a hatred for totalitarianism and despised the institutionalised racism back in his home country. Ivan also firmly believed that the Russian military efforts had swung the war in the favour of the Allies, whereas many of his peers gave the credit to the American forces.

In many ways, Lesley and Ivan had so much in common that meeting and marrying each other was almost written in the stars. And in the decades to follow, their political adventures within the SACP and the harsh push-back from the authorities would eventually test their resolve to its limits.

Because of the Schermbruckers' relatively low profile in a Struggle world full of Slovos, Mandelas, Sisulus and Fischers, their story would not be told for more than 50 years. Until a professor from Rhodes University with a passion for 'history from below' (micro-history) heard about them and set about researching and writing a book titled *Everyday Communists in South Africa's Liberation Struggle: The Lives of Ivan and Lesley Schermbrucker*.

Beginning of the Book

Alan Kirkaldy, occasional wearer of Scottish clan kilts, martial artist, and maker of fine knives at the forge, is also in the top echelon of South African non-fiction writers who specialise in micro-history.

One glance at this retired history professor's CV will reveal decades of fieldwork: time spent with the hard-bitten fishermen of Kalk Bay, on-site research of the activities of the Berlin Mission Society among the *Vhavenda* people of Limpopo Province, studies on Venda witchcraft practices and a deep commitment to "the African bush" – his environmental side.

As an ANC activist, he was also detained for three months under the Suppression of Communism Act and charged with treason. Kirkaldy was, however, freed shortly after the release of Nelson Mandela early in 1990.

One Friday night back in 2010, Professor Kirkaldy took some students out for a drink at a local pub. One of the students' friends was a young man called Ben Schermbrucker.

In the course of the evening, Ben approached Kirkaldy and asked:

"Did you ever hear about my grandparents, Ivan and Lesley Schermbrucker?" The history professor said no, he had no knowledge of them.

"That question sparked my interest, and I asked Ben to tell me more," said Professor Kirkaldy.

The Research

Because both Ivan and Lesley were arrested and charged under various provisions of the Suppression of Communism Act (he in 1964, she a year later), Professor Kirkaldy could access the official court files and capture the actual back-and-forth between accusers, accused and the presiding judge. That would later make for interesting reading in the book.

Initially, he could not trace the records. Then he discovered them at the Rhodes University Cory Library.

"But that wasn't enough," he said. "I first interviewed Ivan's sister, Agnes, in East London. That was invaluable material when it came to writing about his childhood. She idolised her brother.

"Then I did a field trip to Gauteng, interviewing all the old Communists from that era. Of course, I interviewed Lesley. In fact, I stayed with her for a while. I spoke to Ivan's lawyer from the trial and also some of his prison mates.

"The story grew more and more interesting. At first, I was only going to write an article for the *SA Historical Journal*. But after the interviews, I decided it would be great book material.

"And it wasn't going to be like the other books on famous South African Communists. This was different. Ivan and Lesley, although they were backroom people, were part of the actual driving force of the Struggle."

Professor Kirkaldy was taken with the idea that the anti-apartheid liberation movements (in this case, the SACP) were often run by people he eventually described as "everyday".

"My working title for the book was *'Ordinary Communists,'* he said. "I was not going to go for the Hero of the Struggle thing, because they were not that. The Schermbruckers were also totally committed to stay put in South Africa while many of their colleagues fled the country.

"One day, Lesley said to me:

'But we weren't very ordinary.'

I replied:

'But that's the nub of this book.'

"But we settled on *Everyday Communists* instead."

Professor Kirkaldy said Ivan and Lesley's family members were very generous to him, open to interviews, giving him access to their photographic albums and letting him write the book his way.

A Couple in Love

"Lesley recalls that their first meeting (between her and Ivan) was at a dance at the Wanderers (today Johannesburg Station)," writes Kirkaldy.

"Ivan came up to her and said: 'I believe you go to those meetings, those Communist Party meetings,' and I said 'Yes', and he said 'Well, let's go together' sort of style.

"They were married in February, 1947."

Further on, he writes:

"It will become increasingly clear that Ivan's immersion in fundraising for the struggle meant that he did not draw a real salary of his own – the family depended largely on Lesley to act as the breadwinner."

At Ivan's funeral many years later, his trial lawyer, Denis Kuny, paid tribute to the couple's relationship:

"They were married for 34 years and of all the marriages that I know, this was probably one of the best. He and Lesley complemented and supported one another magnificently and through all the very hard times that they endured, either together or apart when each one

was in goal, they remained steadfast in their believe [sic] that what they were doing is right and each one always knew that he or she had the support of the other."

Alan Kirkaldy added that Ivan and Lesley's passion for South Africa, all of it, also bonded the couple.

"In other circumstances, I'm not sure if they would have been Marxists or Communists," he said. "They saw it as the most effective way to oppose injustice. They saw South Africa for what it really was, and loved it dearly. They were, in the purest sense of the word, true patriots. They wanted an equal society where everyone was valued.

"Struggle-era relationships were often rocky. This one was solid."

Party Animals

As the years went by and the family fortunes rose, the Schermbruckers fell into a schizoid routine of clandestine political activities balanced by the trappings of white South African suburbia.

"In common with many of their fellow white activists, they would end up owning a house with a tennis court and a swimming pool," writes Kirkaldy. "Their children would go to private schools."

Lesley Schermbrucker summed their lives up in this manner:

"From Monday to Friday lunchtime was the revolution. Friday night to Sunday night you had parties."

By all accounts, the activists' weekend gatherings at the homes of Party luminaries that included Benjamin Turok, Eli Weinberg, Bram Fischer and Joe Slovo, were colourful and uninhibited.

However, those who had infiltrated their social circle would trot out all manner of 'licentious' details of these parties during the infamous trial to follow in later years. This was obviously pounced on by the Press in attendance and broadcast far and wide.

The 'Disgraceful Decade'

"In describing the 1960s in her autobiography, Helen Joseph wrote that while she was living under house arrest, this became a disgraceful decade of repressive legislation," writes Alan Kirkaldy.

She said:

"Sadistic incarcerations, even torture by the security police to extract information from helpless victims, was the order of the day. South Africa was following the barbaric example of Nazi Germany and had learnt its lessons well."

Kirkaldy adds:

"With Verwoerd as Prime Minister, Vorster as Minister of Police and Hendrik van den Bergh as Head of the Special Branch, South Africa was being governed by a triumvirate of evil."

On the other side, the ANC's *Umhkonto we Sizwe* (MK) launched a sabotage campaign, targeting buildings and installations rather than people.

"The PAC (Pan Africanist Congress) formed *Poqo*, which was its underground military wing in 1961. In Helen Joseph's opinion, unlike MK, *Poqo* did not confine its violence to attacks on installations but also planned and carried out violent physical reprisals on individuals, black and white, leading to injuries and death, sometimes in a kind of mindless violence," writes Kirkaldy.

There was also a tightening of apartheid legislation, including an amendment of the Suppression of Communism Act of 1950 and the Riotous Assemblies Act of the 1956. The ANC and PAC were immediately declared unlawful.

The 90-day detention law involved interrogation and occasional torture, a kind of 'softening-up' process before the detainee (if he or she survived) was either charged or became a state witness.

And Ivan Schermbrucker was now becoming a target.

Ivan in the Spotlight

"While he was good at 'flying under the radar', Ivan's increasing profile did not go entirely unnoticed by the Special Branch," writes Alan Kirkaldy. "He was served with banning orders in October 1963, when he was manager of Arnold's Christmas Club (the hamper project)."

Later, he continues:

"By May/June of 1964, it was clear that Ivan was facing imminent arrest. Some days before his arrest, Ivan was visiting their friends Izzy and Bertha Rosenberg when the police came looking for him. Ivan and Izzy hid themselves in the small room housing the filter for the swimming pool while the Special Branch searched the house and garden. They could hear the police walking around and talking in the garden and Bertha saying: 'No, there's nobody here, there's nobody here'. They were not discovered but 'it was the closest he got to being taken in before he was actually arrested.'"

On July 24, 1964, Ivan Schermbrucker was arrested at his newspaper offices by the Special Branch. They followed him home. Lesley told Alan Kirkaldy:

"The police rushed in, thinking they would catch us hiding incriminating material. However, we had tried to be one jump ahead and had all sorts of secret places known only to the two of us: the hem of curtains, behind the bathroom mirror, inside books, under flooring boards, in the cellar; the Special Branch didn't discover any of these. They spent over three hours pawing through the whole house – it was awful, we watched stony-faced, not letting them out of our sight in case they planted something on us."

The details of Ivan's two-year detention period, torture, trial, conviction and five years in jail were painstakingly re-created by Alan Kirkaldy. One passage, in particular, springs to mind:

"On the night of the last day of their trial, when the non-politicals, who had been listening to them singing all the old political folk songs every evening, planned a special event for them. Apparently the non-politicals had been practising the songs in secret, while they were away in court, and performed a special concert for them, as a tribute to the courage and compassion of these political prisoners."

Denis Kuny said the following about Ivan's prison persona:

"Speaking of Ivan's courage which was coupled with a kind of blunt, forthright but respectful quality, the time he spent in jail was an inspiration to his fellow prisoners.

"The example which he set and the leadership qualities which he displayed will always be remembered and spoken about. He was never afraid to take up issues on his own and on their behalf, to act as a spokesman or to take responsibility, and in this way he achieved a great deal on behalf of all of them.

"I can remember seeing Ivan in the Fort in 1964 and 1965 quietly, respectfully, tactfully and diplomatically dealing with prison officials and warders in such a manner that he established an outstanding communication and relationship between the officials and the prisoners who were, by the very nature of their charges, not particularly popular prisoners."

Lesley's Arrest

On November 11, 1965, Bram Fischer was arrested in Oaklands, Johannesburg. A week later, Lesley was arrested while leading an exercise class and detained. After her trial and conviction, she was first sentenced to 300 days' solitary incarceration at the Fort Prison in Johannesburg and then one year of jail time in Barberton Prison in the Eastern Transvaal (now Mpumalanga). It was the maximum sentence provided for under Section 212 of the Criminal Code.

"Things were tough for Lesley," writes Kirkaldy. "Upon reflection she saw that her arrest showed just how stupid they had been to underestimate the power and efficiency of the Special Branch."

When Lesley was transferred to Barberton, it was a comparatively welcome break from her 300 days in solitary. She was in the general population, where she had contact with friends from her activist days.

"But conditions were extremely hard there," Kirkaldy continues. "In addition to the restrictions imposed by the prison authorities, there were no breaks from living in constant close proximity to comrades.

"This brought tensions, as did the fact that Lesley and some of the others had begun to re-think the nature of struggle and their role in it. Others were just as rigid in their beliefs in Communism as they had been before. In fact, it was as if the restrictions of prison made them even more doctrinaire."

After Prison

Lesley was released from prison in November, 1968, and immediately banned for five years and placed under house arrest. She was then banned once more in 1973.

Ivan came out in April 1970 and was also served banning orders. Be that as it may, the Schermbrucker family was together once more.

"After his release from prison, in the years leading to his death, the external wing of the Party saw his role as an activist as being over," writes Alan Kirkaldy.

"Only then did he allow his growing frustration and disillusionment with what he saw as their theoretical hair-splitting, their slavish bowing to diktats from Moscow and party structures to erupt into vitriolic criticism (although still not public).

"His focus shifted to the plight of those still in prison at home. Ivan and Lesley's lives also show how very ordinary people could be drawn into the movement, rise above the constraints of their backgrounds and play significant roles based on stances more rooted in common decency and morality than in the writings of Marx and Lenin."

Conclusion

Tom Lodge's review of *Everyday Communists* sums up the unique quality of the book:

> *"Kirkaldy's moving biography is about 'everyday' lives in a different sense from the ordinary. It is about the private and the personal, not just the political and the public actions of his protagonists.*
>
> *"Supported by his access to a generous family archive, Kirkaldy illuminates Lesley's and Ivan's everyday experience: their residences; their bill paying; their child rearing; the friendships they made and broke and kept; the ways they enjoyed themselves; and of course their love and confidence in each other, for it is very much a book about a marriage.*
>
> *"His heroes may be ordinary enough people, but in the way they lived their lives, they achieved "a triumph of the everyday".*

Alan Kirkaldy's Everyday Communists has won the Rhodes University Vice-Chancellor's Book Award for 2024.



A Fine Legal Legacy

On the brink of celebrating its 120th year of existence, the Rhodes University Faculty of Law still punches above its weight and produces some of the finest LLB graduates in Africa.

Nearly 120 years ago, **Professor WA Macfadyen** arrived in Grahamstown to head up the new Rhodes University College Law Department. He was also, incidentally, South Africa's first full-time academic Professor of Law. Rhodes University College itself had opened its doors the year before, in 1904.

In the decades to come, Professor Macfadyen would be followed by a colourful cast of legal characters who were also veteran soldiers, sportsmen, multi-linguists, poets, German Shepherd Dog trainers, authors and community activists.

Each Dean brought a specialised knowledge of South African legal matters, from African customary law to contracts, family law to criminal procedure, delict and constitutional law.

Professor AJ Kerr's historical account of the now-faculty, titled *Legal Education at Rhodes University 1904-2000*, had this to say about Professor Macfadyen:

By Chris Marais

Photo: Professor Graham Glover

"A man of infectious enthusiasm, Macfadyen could see a great complex of sports fields (now the Ally Weakley Great Field) in what was then a piece of waste land." He says others saw it simply as a "dismal quagmire". Professor Macfadyen later also promoted librarianship, a faculty of music and hostels for students, wrote Professor Kerr.

Closing Arguments and Classical Historians

Macfadyen was succeeded in 1911 by **Professor HG Lewis**, well known for his courtroom skills that included closing arguments that "could not be surpassed".

In 1927, **Professor Grant McKerron** took up the headship of the Rhodes University College law department and held it until he retired at the end of 1944. He had been a specialist in the Law of Delict and was known to be "generous, courteous, tactful and sympathetic not only in his relationships with his colleagues, but also in his dealings with his students."

Then came a wave of academic leaders who were also World War II veterans. **Professor Ben Beinart**, a lover of classical history who had spent his North Africa campaign time well by learning Arabic and perfecting his French and Italian, was the first.

He became Head of Department and was also Dean of the Faculty of Law of the University of South Africa, of which Rhodes was a constituent college. After four years at Rhodes, Professor Beinart would go on to teach Roman and Comparative Law at the University of Cape Town (UCT) for 25 years, and was known to be an expert scholar in legal history. He was also a noted human rights activist as a founding member of the Liberal Party in South Africa. It was in 1951, during Professor Beinart's term, that Rhodes University College became the independent Rhodes University, and the Law Faculty was established.

Rugby Blues and the Law of Delict

Professor Beinart was succeeded as Dean by **Advocate HF Sampson**, who had first studied at Rhodes and then became a Rhodes Scholar at Oxford, where he was also a Rugby Blue. During his four-year tenure at Rhodes, he was known for his lecturing talents and his outstanding poetry.

In 1955, **Professor Robin McKerron**, who had been encouraged by his cousin Grant to come out to South Africa from the UK, was appointed to the chair. He was expert in both Constitutional Law and the Law of Delict. His book The Law of Delict, which ran to seven editions, would become a standard work.

Professor Ron Beuthin, who succeeded Professor Robin McKerron in 1968, was an expert in company law and wrote an important book on the subject after the company law reforms of the 1970s. He was instrumental in moving the Faculty from the central campus to a building on St Peter's Campus, which had formerly been part of the Grahamstown Teachers' Training College. This was a big step up for the Faculty, which had previously been housed on the first floor of the main university building, with the Law Library occupying a small space in a corner of the main University library. He also secured sponsorship to build a lecture complex that included a mock court room (the Moot Room). Beuthin was an expert trainer of German Shepherd dogs. His dogs used to accompany him to the office and lie at his door. The rumour was that the more the dogs liked a student the better the marks the student got – and vice versa!

The Great Professor

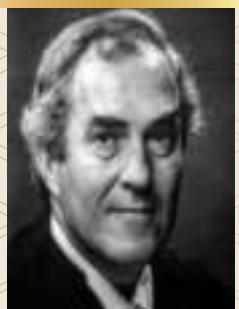
Next to take up the Deanship was **Professor AJ Kerr**. After completing his LLB degree at the University of the Witwatersrand, he spent six years in the then-Department of Native Affairs, notably as Assistant Native Commissioner at Keiskammahoek, Eastern Cape. He was the Head of Department from 1984 to 1987, and Dean of Law from 1984 to 1990.

He became known as one of South Africa's leading legal scholars and an authority in the Law of Contract and Customary Law. He published over 120 academic articles and seven books, most of which ran to several editions, in a prolific career.

At his Inaugural Address as Professor in 2022, Professor Graham Glover, who has been on the staff for more than 25 years, described Professor Kerr as "the greatest professor in the history of the faculty".

"For many years, he was the heart and soul of the Faculty," said Professor Glover. He continued after retirement to write and publish, retaining an office for this purpose, until he was 89. The Law Library in the Faculty is named after him.

Alumni who became Judges



The Hon. Justice JG Foxcroft



The Hon. Justice TD Cloete



The Hon. Justice FC Kirk Cohen



The Hon. Justice IS Kirby



Photo: Chris Marais

> "For many years, he was the heart and soul of the Faculty," said Professor Glover. He continued after retirement to write and publish, retaining an office for this purpose, until he was 89."

In 1993, Professor Kerr was officially granted letters patent as Senior Counsel for his contribution to legal scholarship in South Africa. He was one of only eleven (11) academics in South African history to be accorded this status.

After Kerr's retirement, **Professor Ross Harker** took up the Deanship. Harker was a prominent scholar in the law of property and the law of contract, and a demanding lecturer who used to terrify his classes with his photographic memory of case law.

The Head of Department at the same time was **Professor Ivan Schäfer**, a longstanding servant of the Faculty, and who was an expert in family law. His doctoral thesis on the idea of a Family Advocate was so influential that Parliament passed legislation to introduce a Family Advocates' Office for family matters, which has played a significant role ever since in protecting the interests of especially children in South Africa. He was the founding author of South Africa's leading encyclopaedic work on family law, the *Family Law Service*. Both Harker and Schäfer moved from academia into successful professional careers as attorneys from the mid-1990s.

Professor John Grogan followed a similar trajectory. A former journalist, he developed a stellar reputation as a scholar of Labour Law, a field of law which developed enormously in conjunction with the political changes in South Africa in the 1980s and 1990s. Grogan published prolifically in the field and continued to do so after leaving the Faculty, where he became one of South Africa's leading independent labour consultants and, occasionally, a judge of the Labour Courts and the High Court.

The Midgley Era

Professor Rob Midgley took over a unified single office of Dean of Law (including the role of Head of Department) in 1995. As had been the case with other previous Deans and Heads of Departments, Midgley was a Delict scholar



The Hon. Justice S Anwyl, QC



The Hon. Justice MS Rugunanan



The Hon. Justice RWN Brooks



The Hon. Justice A Govindjee

of renown, publishing many journal articles and, ultimately, two (2) books on the subject. During his tenure, the Faculty strengthened its focus on constitutional law, human rights and social justice, reflecting the country's transition from apartheid to a democratic state. His tenure also saw the Faculty increase significantly in terms of student numbers and staff size as Law became a popular study choice in the constitutional era.

A man of tremendous energy, he drove the curricular changes involving the introduction of the nationally mandated four-year undergraduate degree from 1999. Although he understood the socio-economic reasons for the popularity of the four-year degree, he also believed in the value of students studying a formative degree before specialising, and so for many years, at his behest, Rhodes has offered both a four-year LLB and a two-degree five-year route to an LLB.

For a short period from 2000 to 2002 Midgley was succeeded as Dean by **Professor Richman Mqeke**, Rhodes's first black South African Dean of a Faculty. Professor Mqeke had been the Registrar at Fort Hare but was always an academic at heart. Colleagues remember with fondness visiting him in hospital after an operation to find him in bed with his nose buried in a law report! He had a close relationship with Professor Kerr, and was one of South Africa's leading scholars in African customary law (particularly of the isiXhosa people). He published two (2) books on the subject and was a leading member of a South African Law Reform Commission project on traditional leadership.

Professor Midgley returned for a second term as Dean from 2003 to 2008, after which his career in academia took him in an executive direction to Deputy Vice-Chancellorships at Fort Hare and Zululand, and, ultimately, the Vice-Chancellorship of Walter Sisulu University.

The 2010s

Midgley was succeeded by **Professor Jonathan Campbell**, who was seconded from the Law Clinic as Dean (and about which more will be said below). His deanship was a period of consolidation before the tumultuous period later in the decade. This lot would fall to **Professor Rosaan Krüger**, the Faculty's first female Dean, whose field of expertise is in constitutional law and human rights.

Her tenure as Dean would coincide with three of the most significant challenges that the Faculty has ever faced. The first was the Council on Higher Education's national review of LLB programmes, which was an intense and public evaluation of Rhodes's LLB programme from 2015 to 2018. The second was the student *#FeesMustFall* protests of 2015-16 that created enormous upheaval in the academic sector. And the third was the academic consequences of the international lockdown imposed as a result of the coronavirus pandemic. It is a testament to Professor Kruger's calm and positive leadership that the Faculty was able to pivot and adapt to these three challenges and to emerge successfully out of them.

"Something Fresh, Something African"

Professor Laurence Juma was appointed the acting Dean of the Law Faculty in mid-2020 and served until mid-2024. Originally from Kenya, his teaching focus is on Public International Law, Property Law and International Human Rights and Humanitarian Law.

His research spanned subjects like reconciling African customary law with international human rights standards, Africa's interaction with the International Criminal Court (ICC), the protection of internally displaced people and refugees in Africa and the regulation of private military and security companies, also in Africa.

One of the tasks facing Professor Juma and the Faculty teaching staff has been to decolonise the curriculum in the aftermath of the student protests while still graduating lawyers of good standing and quality Postgraduate students.

"The vision and mission of the Law Faculty and the University are clear," he said. "To be a well-respected academic centre, play a productive role in local and regional development and to produce top-quality graduates who eventually become leaders in their chosen fields."

Professor Juma has said that one of the most significant benefits of transformation within the Faculty was diversity and the general acknowledgment of differences inherent in South African society.

"A new development, like bringing more young lecturers into the department, has made a great difference to the student body," he said. "This generation of students, most of whom did not personally experience Apartheid,


The Hon. Justice AR Erasmus


The Hon. Justice L Mpati


The Hon. Justice CM Plasket


The Hon. Justice G Bloem

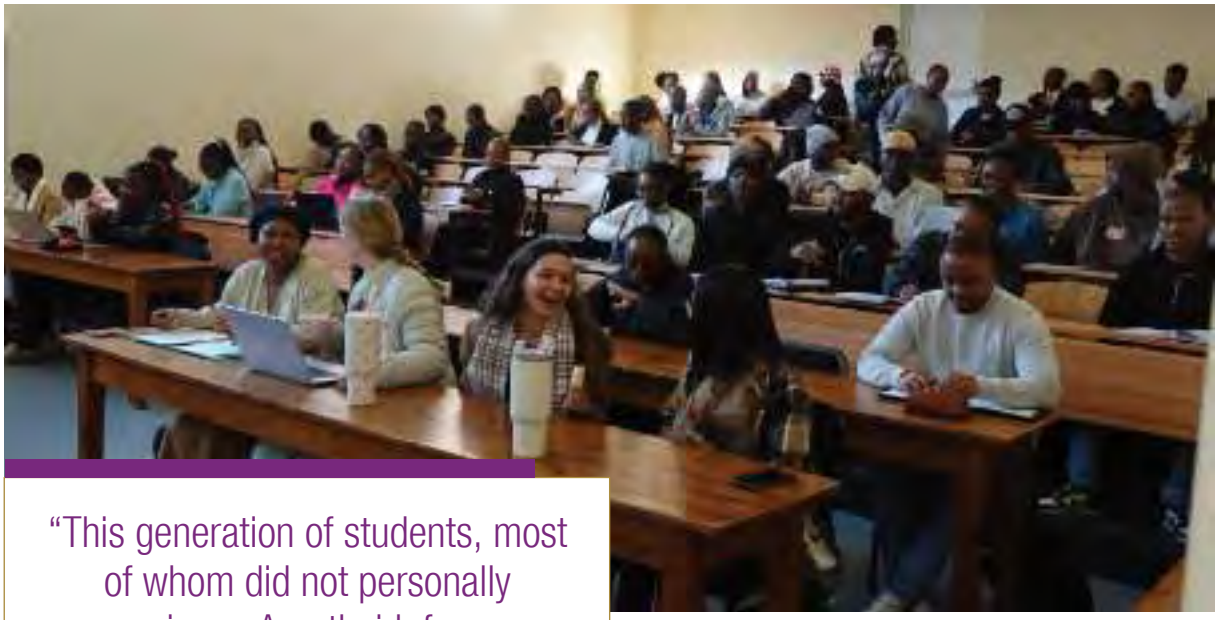


Photo: Chris Marais

> "This generation of students, most of whom did not personally experience Apartheid, faces a different set of challenges. And their **hunger is for something new, something fresh**, something African."

faces a different set of challenges. And their hunger is for something new, something fresh, something African."

Research Awards

Over and above the various heads of department and deans described above, the Faculty has had many other long-serving staff who have contributed to the Faculty's research reputation. Early recipients of research awards – first introduced in the 1990s – were **Associate Professor Brigitte Clark**, who was an acknowledged international expert in family law and child law, and **Associate Professor Riekie Meintjes-Van der Walt**, who was an expert in forensic evidence.

The research award was resuscitated in the late 2010s. Recent members of staff who have won the award include **Professor Graham Glover** for his work in contract law, **Professor Helen Kruuse** for her work in the field of legal ethics, **Professor Helena van Coller** for her work in law and its interface with religion, and **Professor Charlene Lubaale** for her work in women, children and international criminal law.

A Small, A Student-Centred Faculty

The Faculty is rightfully proud of its achievements, which go beyond the productivity of the staff to its students, whose education places its graduates on a path to be successful in the working world. The Law Faculty has always been the smallest in South Africa, graduating a handful of students compared to national total figures. Up to the 1960s LLB classes were in the single figures, and only got to about 20 in the early 1980s. This rose to the 40s in the 1990s, and have settled at about 80 final-year LLBs in the 2020s. This smallness has its advantages. Professor Van Coller, Acting Dean of the Faculty in 2025, says:

"As a faculty that offers a professional degree, our main emphasis is to produce the best undergraduate LLB degree in South Africa. We're a small faculty, but we do



The Hon. Justice LS Melunsky



The Hon. Justice SS Mainga



The Hon. Justice RJW Jones



The Hon. Justice JI Cloete



Professor Graham Glover
Photo: Chris Marais



Professor Helena van Coller
Photo: Chris Marais

very well against the larger universities in, for instance, the regular Moot competitions.

"There is great diversity in terms of our lecturing staff and we have the all-important open-door policy. You don't have to stand in a queue to make an appointment to see a member of staff here.

"We're also proud of the fact that at the Rhodes University Law Faculty not a single lecture is offered online. It all happens live, in the lecture rooms. The big law firms that hire graduates are looking for agility, a variety of abilities that include courtroom prowess, not just academic performance. Our Moot competitions and student experience at the Rhodes University Law Clinic in downtown Makhanda supply that extra real-time experience."

Students go through two legal simulations, mock trials and Moot Court. Mock trials simulate proceedings in the lower courts, mirroring actual trials as close as possible. Complete with opening statements, presentation of evidence and closing arguments, the main purpose of a mock trial is to teach students the ins and outs of a courtroom: procedures, etiquette, prosecuting and defending clients.

A Moot Court simulates Appeal Court procedures, in which students step into the roles of advocates arguing their case before a panel of judges. In Moot Court, a student learns how to research, write legal briefs, and make oral arguments.

The Rhodes University Faculty of Law has a very good Moot Court reputation, on a national and global stage. The various Rhodes University teams have won a raft of awards in Moot Court competitions from South Africa to other African countries and as far afield as Geneva, Switzerland.

Alumni

The Faculty has graduated many alumni who have gone on to become prominent attorneys, advocates and academics all over South Africa and overseas. The alumni impact has not been exclusively in the legal profession, though: for example, the current CEO of Standard Bank, Sim Shabalala, is a Rhodes LLB graduate. But perhaps the Faculty's biggest professional impact has been in the number of past students who have become High Court judges, both in South Africa and other countries (thirty-eight (38) at current count), and who have influenced the development and of the law from the bench. Two significant examples are worthy of mention.



The Hon. Justice
AN Siopis



The Hon. Justice
MR Madlanga



The Hon. Justice
NB Locke



The Hon. Justice
LG Lever

A Star Pupil

Lex Mpati was raised in the Fort Beaufort – Makhanda area, matriculating from Mary Waters High School in 1967. During the decade that followed, he worked a variety of jobs that included being a filling station attendant, a barman and a furniture salesman.

In 1979, he enrolled at Rhodes University, finally earning his BA LLB in 1984. Mpati did his articles and then began to practise as an attorney in Grahamstown (now Makhanda), often representing marginalised communities in the province.

In 1997, President Nelson Mandela appointed him as a judge of the Eastern Cape Division of the High Court. Two years later, he was acting as a Judge of Appeal in the Supreme Court of Appeal (SCA), a post which soon became permanent.

By 2008, Justice Mpati was appointed President of the SCA, and in 2013, he became Chancellor of Rhodes University. Since that time he has been a proud and effective ambassador for the University.

Student Becomes Mentor

Mbuyiseli Madlanga grew up in the Mount Frere region of the Eastern Cape. He attained his BJuris degree at the University of Transkei (now Walter Sisulu University) in 1983 and then enrolled for his LLB at Rhodes University, completing the degree in 1986.

In the years to follow, Madlanga secured his LLM in Human Rights and Constitutional Law from the University of Notre Dame in the USA and then interned with Amnesty International in Washington, DC.

An expert on human rights and legal reform, Madlanga had a career as an advocate, ultimately a Senior Counsel, and then also served as a Judge in several courts, including in the latter part of his career as a Justice (and, ultimately, the Acting Deputy Chief Justice) of the Constitutional Court, making him the most senior old Rhodian judge in history.

Words of Wisdom

In August 2024, visiting Professor and retired Judge of Appeal Azhar Cachalia came to Rhodes University to deliver a public lecture, addressing future generation of legal professionals in the room. He finished his talk thus:



Professor Michelle Karels
Photo: Jackie Grove

"I ask Rhodes University and the graduates from its iconic Law Faculty to be vigilant—to speak out and not look the other way."

Perhaps one could add to that the eternal words of the legendary Professor Kerr:

"The Faculty's mission is to produce high-quality graduates who are capable of becoming leaders both in the practice of law and in other areas, such as commerce, industry, politics and academia.

"Our aim is to inculcate a sense of justice, fairness and equity in all our students, irrespective of courses they follow. Regarding the LLB degree in particular, our aim is to conduct sound teaching and research so that our graduates will be effective and ethical practitioners who are capable of being instruments for just social change."

It is the perpetuation of this task that faces the next Dean, **Professor Michelle Karels**, who took up office in July 2024. Professor Karels is the first Dean appointed from outside the Faculty since Professor Beuthin in 1968, and brings with her a fresh eye on how to take the Faculty forward. Her immediate focus has been on redesigning a single LLB in the interests of a growing Faculty and its student body, and boosting the Postgraduate programme in the Faculty.



The Hon. Justice
JE Smith



The Hon. Justice
JCR Fieldsend



The Hon. Justice
WA MacFadyen



The Hon. Justice
Ben Beinart

Faculty of Law

Deans



Professor Harry Sampson
(1951-1954)



Professor Robin McKerron
(1955-1968)



Professor Ron Beuthin
(1968-1984)



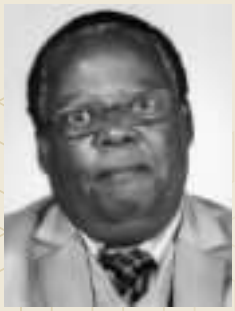
Professor Alastair Kerr, SC
(1984-1990)



Professor Ross Harker
(1991-1995)



Professor JR Midgley
(1996-2000 & 2004 - 2008)



Professor Richman Mqeke
(2001-2003)



Associate Professor Jonathan Campbell
(2009 - 2014)



Professor Rosaan Kruger
(2015 - June 2020)



Professor Laurence Juma
Acting Dean (July 2020 - June 2024)



Professor Michelle Karels
(July 2024 - Present)



Rhodes University Law Clinic

By Chris Marais

The Rhodes University Law Clinic is situated in a heritage house in New Street, down-town Makhanda.

This is where students and staff of Rhodes University's Faculty of Law meet the indigent people of the region who have legal problems or questions but lack the funds needed to engage the commercial services of a law firm.

It's very clear that the Faculty has established a win-win situation here: about 80 students in their penultimate LLB year get months of invaluable hands-on experience dealing with real people and real cases – and the community benefits from the free legal service.

Jonathan Campbell, former long-time director of the Law Clinic, made the decision many years ago to leave the regular world of lawyering.

"When I got into legal practice, I realised it was 'money first and people second'", he said. "It just didn't feel right for me. So that's why I came here in 1994, and took up the post as Director of the RU Law Clinic. This job has brought me great happiness."

Professor Campbell described the Clinic as a "law laboratory".

"People come by appointment or off the street, and they're looking for some kind of legal intervention, be it a problem with a will or a title deed, a contract or a matrimonial matter," he said. "And as long as they pass the means test (in a household that collectively earns less than R8 500 a month), we try to help them.

"The free legal aid is a huge thing in our community, especially for indigent people, because only a very small percentage of our population can afford private legal representation.



> "Legal aid is an essential component of access to justice. It is **critical in our communities** to ensure equal access despite economic circumstances."

Professor Jonathan Campbell
Photo: Chris Marais

"At the same time, our students are getting invaluable practical experience, hands-on exposure to real-life legal situations. We give our students the basic skills they need in order to be able to to act as trainee lawyers under close supervision of the attorneys at the Law Clinic. So this, then, becomes a very important bridge towards practice."

Sean Bergover is the new director of the RU Law Clinic. He said the client pool for the clinic comprised of domestic workers, people in retail, security guards and various people connected to Rhodes University.

"They can be cleaners, maintenance people gardeners or even the students themselves," he said.

On a typical day at the Clinic, a client would arrive, a student would be assigned to them, a file would be opened and a statement would be written down.

"After the student has heard the facts, they excuse themselves and see their attorney-supervisor, who would give them advice and then send them back to the client."

There are also more than forty (40) paralegal advice offices dotted around the Eastern Cape, which are assisted by the RU Law Clinic. These paralegals offer invaluable services to the communities where they live.

"A semester spent working at the Law Clinic with the perfect practical training to give them a good idea of how they would cope in the real world of law," he said.



Reconfiguring African Studies at Rhodes University

The Rhodes University African Studies Centre (RASC) is a unique scholarly entity at Rhodes University with scholars from four (4) of the six (6) faculties of the institution – the Faculty of Humanities, Science, Education and Law. Its primary base is the University's Faculty of Humanities under the Directorship of Professor Enocent Msindo. A success story of note, the Centre prides itself for promoting interdisciplinary research, not only at Rhodes University but as an integral part of a large network of African Studies Scholars, namely *Africa Multiple Cluster of Excellence*.

Under the Directorship of the outgoing Dean of Humanities, **Professor Enocent Msindo**, RASC is part of the Africa Multiple Cluster of Excellence network, comprising the University of Bayreuth (Germany), Moi University in Kenya, University of Lagos in Nigeria and the University of Joseph Ki Zerbo in Burkina Faso.

"Connected to our partners are several cooperating partners across the continent and elsewhere, including South America," said Professor Msindo. "The research approach at the Centre is distinguished by strong interdisciplinary grounding, focussing on African-led perspectives and addressing real-world challenges in and beyond the continent."

By Chris Marais

Photo: Chris Marais



Caprivi, Nambia
Photo: Chris Marais

"The research approach at the Centre is distinguished by strong interdisciplinary grounding, focussing on African-led perspectives and addressing real-world challenges in and beyond the continent."

The Centre's diverse research areas are fascinating. They vary, from fresh insights into South Africa's dramatic shipwreck history, to introducing African music to this country's universities, from survival tactics of marginalised communities to ancestral beliefs in ocean spirituality, from studies in Francophone African literature to the novel concept of 'artivism', from dancehall music in both Jamaica and Zimbabwe, artivism and social change, to the pressing issues of water, environment, climate change as well as medical humanities.

In October 2019, Rhodes University was awarded a University of Bayreuth (UBT) African Cluster Centre (ACC). This is a part of the German Research Excellence Strategy initiative.

University scholars and researchers around the world are known to work closely in their (silo-like) disciplinary environments, often with little idea of what other departments on campus are researching. This ACC initiative breaks the boundaries of academic silos by encouraging collaborative research within the campus, the continent of Africa and beyond.

Within that framework, the stated aims of the RASC projects are to:

- Build sustainable partnerships with continental and global African studies entities;
- Stimulate original scholarship and theory-building that evolves past colonial paradigms;
- Promote mobility, joint degrees, and collaborative grants within and beyond Africa;
- Reimagine African knowledge systems, arts, and cultural expressions.

At a gathering of some of the fifteen (15) -odd RASC-associated academics, Professor Msindo introduced each individual to the interviewers and said:

"There is a great diversity of studies and interests in this group. We have young PhD students, Postdoctoral fellows, Heads of Departments and other senior academics, involved in subjects like fine arts, musicology, environmental studies, literary studies, gender studies, education, law, anthropology, history, and others.

"We identify sets of critical issues that we need to study about Africa, and break them down into research themes. Our main aim is to reconfigure African studies. Our people are collaborating with others all the time, viewing issues from all different angles, everything to do with Africa."

Professor Enocent Msindo

Although Professor Enocent Msindo has an administrative portfolio in his dual roles as Dean of Humanities and Director of the RASC, he is also an accomplished scholar who specialises in a number of research themes, mainly social and political history, which led him into fields that straddle studies of socio-political identities, media and information policy, social history of medicine, leadership and political culture in Africa, and others.

Looking at pre-colonial, colonial and post-colonial eras of Zimbabwe, for instance, Professor Msindo studies themes that include ethnicity, nationalism, chieftaincy and marginalisation.

Part of his work involves studies of fragile 'borderland' communities who get little attention from their central governments. He examines how these groups establish sophisticated cross-border goods smuggling networks;



Professor Enocent Msindo
Photo: Chris Marais



Associate Professor Boundina McConnachie
Photo: Chris Marais

have illegal border-jumping and human trafficking syndicates; engage in organised poaching; illegal mining; self-provisioning of land; illicit weapon acquisition and trade; tax evasions; sustain a network of religious, ritualistic and ethnic solidarities that know no state boundaries. Some resort to alternative forms of banking and use of foreign currencies from across the border in response to economic collapse.

He argues, "Communities tend to reproduce certain practices, turning them into the heartbeat of their 'everyday', yet such practices are malleable as they are constantly reworked and perfected due to changing realities facing those communities".

"When communities keep reinventing themselves, it becomes difficult for the state to insert itself and regulate certain practices, especially in areas where state control is weak, and the grassroots resolve too strong."

Professor Msindo, who completed his Doctor of Philosophy degree at the University of Cambridge in the United Kingdom, focussed his PhD studies on the Kalanga and Ndebele speaking people of Matabeleland in south-western Zimbabwe.

"I was comparing Kalanga and Ndebele to find out, over the years, what political, social and economic process impacted on the way they defined and understood themselves," he said. His monograph on the subject was titled *Ethnicity in Zimbabwe: Transformation in Kalanga and Ndebele Societies: 1860 – 1990* (Rochester University Press, 2012).

Referring to the ongoing work at RASC, Professor Msindo said:

"One of the projects we're working on is called the Digital Research Environment (DRE), building a central shared space that contains all our research data, even in raw form, so we can access it for future work." He believes that the intention is to ensure that research data, obtained as a result of financial support from public funds, become available and usable for future research. Ethically, it is not supposed to be the mere secret preserve of the researcher alone, to live with it and die with it.

Associate Professor Boudina McConnachie

As Head of Department of Music and Musicology at Rhodes University, **Associate Professor Boudina McConnachie** is also a Principal Investigator for RASC.

Her academic focus is on indigenous musical arts, storytelling, indigenous knowledge systems, sound-scapes and eco-musicology.

Associate Professor McConnachie's role at RASC involves projects that centre around African indigenous music traditions, both as cultural and living practices, promoting transformational learning and global scholarship grounded in African sonic knowledge.

"Our projects are based at the International Library of African Music (ILAM), which is more of a living archive," she said. "We call it that because our students use the archive to create, recreate and perform musical styles from all around Africa. It's also a space that has a huge repository of traditional indigenous and contemporary African music styles, going right back to 1918."

The project associate Professor McConnachie and her collaborators are working on, is called *African Approaches to Sonic Pedagogy.*

"And here, we're looking at integrating African music into universities," she said. "Music in Africa is taught conservatively at our universities. However, I managed to find eight partners from different universities on the continent who are teaching or integrating traditional and indigenous musical styles into proper teaching and learning.



Dr Dominique Santos
Photo: Chris Marais



Dr Thando Njovane
Photo: Chris Marais

"At Rhodes University you can do a BMus in African music styles, which is not on offer at any other South African university. My hope is that in the next RASC research phase, we will build on this project and answer the questions of how to keep the knowledge here and how do we stop relying on what's happening outside the continent and show the world what's really coming out of Africa."

Dr Dominique Santos

The work of **Dr Santos**, a Senior Lecturer in Anthropology at Rhodes University, explores the intersections of music, play, dreaming and heritage practices, with a focus on intimate experiences of self, space and social change.

As a member of the RASC team, she is working on a project involving the shipwreck history of the Eastern Cape coastline, as it faces the Indian Ocean.

"We want to scrutinise the existing shipwreck narratives from this time in an attempt to destabilise some of the binary ideas we have about who was on board the ships and what happened to them after they were wrecked," she said.

"The common story is that when people were shipwrecked in the 16th and 17th centuries, they would attempt to return to so-called 'civilisation'. Our work found out that, firstly, these were not all European vessels. Shipboard society at that time was also incredibly diverse and cosmopolitan, with crew members drawn from Africa, Asia and Europe.

"We also discovered that many of the ships were slavers carrying enslaved cargo. At this point, the Indian Ocean slave route was key, so there were slaves from places like East Africa, South Asia, Indonesia, Java and Japan coming past here.

"What our research showed was that in the aftermath of shipwrecks, many enslaved people and marginal crew from all over the world would find new lives with indigenous communities in this area. And we've begun to track their stories.

"In the next phase of research, we will be working with the East London Museum to reinterpret the collections in the Maritime and Anthropology Galleries. They are the custodians of some very interesting shipwreck artefacts, which, because of increased storm surges along the coast, are appearing more often these days.

"We are also working with traditional healers and diviners from this region. They would know how indigenous communities might have understood and interpreted the spiritual powers of shipwreck survivors, many of whom were made rainmakers.

"These stories unsettle many of our ideas about our origins as South Africans, as Africans, as Europeans. They unsettle some of the certainties around purity and separateness. And we'd love to see these stories told to the world at large."

Dr Thando Njovane

Dr Njovane previously served as the RASC Gender and Diversity officer. She is now the RASC Early Career Officer in addition to her primary responsibility as Senior Lecturer in the Department of Literary Studies in English.

Dr Njovane has done considerable research into Trauma Theory, Memory and Childhood Studies, and Transformation, Race and Power.

At RASC, Dr Njovane is shaping contemporary discourse on African literature, trauma studies and an ongoing project on transforming higher education. She is also the co-director of the trans-continental inter-disciplinary platform, *Finding Africa*.

"As Gender and Diversity Officer during the first phase of RASC research, I focused on promoting black women's knowledge production within higher education spaces," she said. "As Early Career Officer for Rhodes University,



Professor Laurence Juma
Photo: Chris Marais



Professor Ruth Simbao
Photo: Chris Marais

the idea was to develop networks between our PhDs and Postdoctoral Fellows and those of other universities. This has involved writing retreats and working through what it means to be a PhD scholar. It is our mission to promote a nurturing and safe space for early career scholars to thrive. For this reason, RASC has had considerable success rates of its funded PhD students and Postdoctoral Fellows.

"As to the research, I am co-supervising an Anthropology student who is looking at whitened spaces in Cape Town, and it has been very interesting looking at the subject through an anthropological lens. I am also working on a book about re-theorising trauma theory."

Professor Laurence Juma

Professor Laurence Juma, who once served as the Dean of the Faculty of Law at Rhodes University, teaches Public International Law, Property Law and International Human Rights and Humanitarian Law.

He also co-ordinates Postgraduate studies and external moot court programmes at the Law Faculty.

"I am putting together an inter-disciplinary project on forced migration," he said. "We'll be looking at the issues of immigration, refugees, internal displacement and all aspects of how to protect persons who are no longer within their homes.

"It's a very interesting subject – immigration has become a big issue around the world. Here in South Africa, as well as globally, countries have become very insular. Thus the question of protection of refugees is gaining new ground. People are also questioning their involvement in earlier normative orders, such as the 1951 Refugee Convention, that guaranteed a number of rights for refugees.

"Apart from that, the responsibility of taking care of persons within borders is becoming increasingly burdensome, and questions are beginning to rise as to how we shoulder that burden locally. We know that international aid is diminishing.

"I fully believe that this (RASC) is an area where we researchers and academics can try to help governments and policy-makers look at other ways in which they could distribute responsibility for refugees, immigrants and people who are displaced. Displacement is not just about war, it's also about climate change."

Professor Juma said he was putting together a group of like-minded researchers from various disciplines, such as sociology, history and law, to study the issue of responsibility sharing.

Professor Ruth Simbao

At both the Fine Art Department and the Africa Studies Centre at Rhodes University, **Professor Ruth Simbao** works and researches at the intersection of art, geopolitics and social justice in Africa.

She reflects and promotes the role of art in activism, knowledge production and resistance.

"We are looking at the arts of Africa," she said. "And one thing that I think is particularly important about the African Studies Centre here and the importance of all the centres around Africa is that our collaborations are not coming from the global North generally – we are directing our own research.

"It's how the African continent positions its work, how African artists want to talk about their work and generate knowledge our way."

Much of her research work has focused on artistic responses to xenophobia, China-Africa relations in the arts, cultural festivals, live art performance, site-situational art and the performance of heritage, especially in Zambia. And here, she has worked with Dr Rachel Baasch, a former student of hers.



Professor Patrice Mwepu
Photo: Chris Marais



Ms Vuyelwa Moyo
Photo: Chris Marais

"We are also concentrating on micro histories and micro narratives of how people interact as a way of subtly pushing back against the bigger kind of government-driven top-down stories," she said.

Professor Patrice Mwepu

Apart from being the Director of the Rhodes Confucius Institute, **Professor Patrice Mwepu's** research focus is on French and Francophone African Literature, and it is this wealth of knowledge that he brings to the RASC.

One of the interesting aspects of his research through RASC has been a series of interviews with Francophone African writers to find out where their artistic inspiration comes from.

"Most of the writers I spoke to told me something I didn't know before," he said. "They said their inspiration came in the form of messages from what they called 'the beyond world', sometimes from dead relatives and sometimes from dreams. And I often, upon seeing a work of art, cannot fathom that its creator took their inspiration from the world around us. There is more to it.

"In Zimbabwe, for instance, there is this group of Rastafarian fine artists who work mainly in moments of silence. As a group, they sometimes chatter about the work together, and they discourage outsiders from coming close during that moment. A writer from Senegal told me that the inspiration for his book came from nights spent sleeping by the seaside and taking messages from the ocean. I think unless we are able to capture the essence of African spirituality in our understanding of African studies, we will be missing the story by a mile."

Vuyelwa Moyo

As a PhD candidate focusing in a new research niche called Ecomusicology at Rhodes University, **Vuyelwa Moyo** is also a member of the RASC group. She researches African music, culture and the environment.

"Apart from funding my PhD studies, the Centre has enabled me to collaborate with other African students from all over the continent," she said. "I also get the opportunity to present my research here and get so much invaluable feedback.

"I also enjoy being seminar co-ordinator for RASC, because project management is my passion. The various writing retreats have also been inspiring, especially during a time of writer's block."

Her PhD research theme is Sacred Spaces as Living Archives, using sonic soundscapes to understand cultural heritage.

Dr Walter Barure

A former doctoral candidate at the Department of Literary Studies in English, and now a Postdoctoral Fellow in the same department, **Walter Barure's** RASC work is centred on African literature, culture, politics and history. His ongoing research spans digital humanities, disruptive technologies, popular culture, autobiography, politics, and speculative archives.

"Part of my research is to find out how people use their learned indigenous knowledge systems to preserve their environment," said. "That involves a fair diversity of topics. Some of the students working on this project do water research, others work with archives, but what really binds them together is that they are doing research in and of Africa."

Tanesha Gibbs

The Jamaican-born **Tanesha Gibbs** is researching cultural links between her Caribbean region and Zimbabwe.

"I found there was a strong connection between Jamaica and Zimbabwe that had nothing to do with common ancestry," she said. "The main link is the music, the



Dr Walter Barure
Photo: Chris Marais



Ms Tanesha Gibbs
Photo: Chris Marais

history and the stories in the music. While in Zimbabwe, I was listening to the music around me, music of the people. It's called Dancehall Music, and both Zimbabwe and Jamaica play it.

"Back home in Jamaica, there's an expression called 'slackness', referring to a kind of resistance against mainstream culture, which means acting in a way that mainstream culture would deem to be loose or immoral. Slackness is evident in the way one dresses, the way one talks and the way one dances. And the music was called 'Dancehall'. Now Zimbabwe has its own version of that, called 'Zimdancehall'."

She was also fascinated by the Zimbabwean use of English phrases as their first names.

"I thought it strange at first, but each name carried a back-story," said Tanesha. "If you were called Unfaithful, then a parent had been unfaithful. If you were called Millenium, then you were born in the year 2000."

In Closing

"It is a really good time to be doing research in and of Africa," said Professor Msindo. "The rest of the world is ageing fast, while Africa has a very young demographic. The future for Africans in Africa and in the diaspora is very promising. And that's why the RASC is a very dynamic space to work in. Our combination of very senior scholars, Visiting Fellows, Postdoctoral Fellows and PhD students places us in the pole space to promote not only cutting edge research but to sustain generation of scholars for now and for the future."



Mozambique
Photo: Chris Marais



The Big Impact of Tiny Materials

Distinguished Professor Tebello Nyokong
Department of Chemistry

South Africa is often short on good news stories. But the country's progress in nanotechnology is a good news story – much of it is centred on Rhodes University's new Tebello Nyokong Institute for Nanotechnology Innovation (INI).

Nanotechnology – the study of matter at molecular and atomic level – holds enormous benefits for South Africa and the world, specifically in the fields of biomedical health, energy and water purification.

It is used in sensors for the early detection of disease. It can make cancer treatment safe. It can dramatically improve solar energy output. It can even destroy harmful bacteria in water.

A Tiny Seed Grew

Nanotechnology at Rhodes University began thirty (30) years ago, with Distinguished Professor Tebello Nyokong and a solitary Postgraduate student in the Department of Chemistry.

Slowly, word spread and more students signed up to join Professor Nyokong's laboratory.

In 2003, nanotechnology research became a critical research priority for South Africa.

As one of the country's leading researchers in this field, Distinguished Professor Nyokong was called upon for input early in the process.

By Julienne du Toit
Photo: Chris Marais



Professor Philani Mashazi
Photo: Chris Marais

"I had to advise them of the nanotechnology needs of the country, draw up a list of all the problems and all the research equipment needed to solve them. It is nano in size, but it needs huge pieces of research equipment."

"The South African Government is visionary in its attempts to grow the knowledge economy via the country's research drive," says Professor Nyokong, sitting in the sunny corner office of the institute that bears her name.

Building a Team

By 2006, the Department of Science and Technology (DST) had established two (2) Nanotechnology Innovation Centres (NICs): one (1) at Mintek, and the other at the Council for Scientific and Industrial Research (CSIR).

In addition, the National Research Foundation (NRF), as custodian of research funding in South Africa, was roped in to facilitate and establish programs that would support a nanotechnology strategy. The NRF also set up National Nanotechnology Equipment Programme (NNEP) and National Equipment Programme (NEP) to enable the acquisition of highly specialised research equipment.

Rhodes University became part of DST-Mintek NIC research node. Rhodes University benefitted from the various NRF pushes to acquire the highly specialised pieces of research equipment needed to develop nanotechnology.

In 2006, Distinguished Professor Nyokong became the first to be awarded a newly established South African Research Chairs Initiative (SARChI), set up by the National Research Foundation to strengthen science and innovation among the country's universities.

"I used some of that SARChI funding to help us acquire some more of the equipment we needed."

Rhodes University became part of DST-Mintek NIC research node. Rhodes University benefitted from the various NRF pushes to acquire the **highly specialised pieces of research equipment** needed to develop nanotechnology.

First, A Brick Fell

Pharmacy and Chemistry have been housed in the same four-storey building since 1969.

From the 1990s onwards, thanks to Professor Nyokong, the building began to accommodate more and more highly specialised pieces of nanotechnology equipment, in increasingly cramped spaces.

Because it had grown organically within the Chemistry Department, Nanotechnology was spread between several floors, with much of the most expensive equipment in the only available space – the basement area.

When a brick fell from the ceiling June 2018, narrowly missing a highly sensitive piece of research equipment, it was clear something had to be done. Then, as Makhanda's water problems grew, so did the damage to the building's infrastructure. Water would be shut off, then return with force, bursting pipes.

The laser equipment was badly affected by water and had to be repaired. The power distribution board had to be covered in a plastic sleeve to protect it from water flowing over it.

And right through it all, the highly specialised nano-technology equipment had to be kept on, or risk malfunction and the loss of millions of rand in investment.

The Chemistry and Pharmacy building was long overdue for renovations.

Groundbreaking and Cutting Edge

When early consultations on the Chemistry and Pharmacy building renovations started, it soon became clear that the continued presence of the Institute for Nanotechnology Innovation within the building was effectively mission impossible.

Professor Nyokong says: “We really must thank Dr Iain L’Ange, who was Rhodes University’s Executive Director of Infrastructure Operations and Finance. He realised how vulnerable the highly sensitive pieces of research equipment would be if the renovations proceeded. So he went to the Department of Higher Education and Training (DHET) seeking funding for a separate building to house the Institute.

“Because of him, this building worth R90 million rand was constructed and it now accommodates specialised laboratories and highly sensitive research equipment worth in excess of R250 million,” says Professor Nyokong.

The new building, between the Departments of Chemistry – Pharmacy and the Biological Sciences buildings, is purpose-built, with a groundbreaking structure. It houses cutting-edge research, students and staff offices, laboratories and equipment rooms.

“The construction of the new building was a momentous task and required highly specialised skills.” says Professor Mashazi.

Mission Impossible

But how would they move those delicate, sensitive pieces of research equipment, designed to analyse the nature of molecules and atoms?

Right from the beginning, the manufacturers had always had one major stipulation for operation: this equipment could never be switched off.

In addition, the equipment could not be exposed to vibrations, static electricity, dust or temperatures outside of a fairly narrow operational range. All of which were inevitable when it came to construction and renovation, let alone transferring to a new building.

“I think all my grey hairs are due to the move,” confesses the Institute of Nanotechnology Innovation’s Deputy Director, Professor Mashazi. He led the team that planned and executed the momentous task of moving the research equipment.

During the planning stages, the first task was to talk to the equipment manufacturers and explain the situation. They flatly refused to help.

“They said, if you want to move it, sorry, we're not going to do that. We do not recommend that for you. Leave the equipment where it is,” recounts Professor Mashazi. “But of course, that was impossible.”

After much back and forth, a compromise was eventually reached with the equipment manufacturers. Insurance brokers were called in, and after the initial surprise at finding state-of-the-art research equipment worth hundreds of millions in this comparative backwater of South Africa, they committed to covering any potential loss or malfunction.



Dr Jonathan Britton with the X-Ray Photoelectron Spectroscopy (XPS)

Photo: Chris Marais

There was one condition: the manufacturers had to be the ones to switch off, disassemble, reassemble and recalibrate. With persuasion from Professor Mashazi, the equipment manufacturers finally agreed.

There were other considerations. One of the bigger pieces of equipment was for Electron Paramagnetic Resonance Spectroscopy (EPR), with a 10-metre diameter magnetism dome. Its strong magnet could fatally compromise other pieces of research equipment if they came too close.

Chillers, Cranes and Choppers

Then there were the chillers, each weighing 1.5 tonnes, needed to keep certain pieces of research equipment at optimally cool temperatures.

A crane would have been ideal to move them between the two buildings.

“Our movers, Northfield Engineering, had booked one, but we then found it had been redeployed to install wind turbines. And the only other crane in the Eastern Cape was broken.”

There was one alternative: a helicopter. So on a fine, breezy day in March 2024, the mission was accomplished, the heavy chillers swinging beneath the chopper in two nerve-wracking trips.



From L to R: Professor John Mack, Ms Gail Cobus, Professor Philani Mashazi, Distinguished Professor Tebello Nyokong and Dr Jonathan Britton. Photo: Chris Marais

"It was a great spectacle for the University and the town," says Professor Philani Mashazi. "And I think it aged me by ten years."

In the end, there was minimal damage to any of the research instrument. One piece of research equipment suffered minor damages and was sent to Germany for repairs.

Professor Mashazi says the job could not have been done without a great team, and various organisations working together alongside the INI's Postgraduate students.

"Also, thank you to the internal team of consultants who were hands-on with the execution of this project".

The INI is World Class

The INI building was officially opened in December 2024, and is considered one of South Africa's most extraordinary technology centres.

"I am brave to say it, but I've been all over the world, and INI is tops," says Distinguished Professor Nyokong. "Nowhere else will you find all these pieces of research equipment under one roof. In Europe, they are scattered about. What happens in many countries like France is that one university will have this piece of equipment. Another city will have that.

"We have it all together. You do not have to travel.

"We have students from South Africa, Nigeria, Ethiopia, the Democratic Republic of Congo, Poland and Belgium. I tell my students: You better be good citizens. You better produce. You are advantaged when you are here.

"I've had many ministers and dignitaries visit us here. They all say: this is happening in the middle of nowhere, and we didn't know about it! I say, you concentrate on the big cities and that's the problem. The big cities are leading you to believe nothing is happening elsewhere."

"I was recently at the World Science Forum, which hosts ministers of science and technology from all over the world," adds Professor Nyokong. "Speaker after speaker said: 'We don't know where South Africa came from, but it has surpassed many countries in terms of research productivity.

"Yet we look down on ourselves. At this stage, I'm sorry, I do not even want to hear about historical disadvantage. If you're not lazy in South Africa, you can make it."

Creating New Knowledge

Professor Nyokong fights fiercely to prioritise research and knowledge generation at the university.

"Teaching is subjective. Anyone can teach, badly or well. But universities are for the creation of new knowledge. When you are a good researcher, you're on the cutting edge of knowledge and are pioneering. You give the students something new, something for the future.

"We are working on creating products with nano-technology, but we have what is called an innovation chasm in South Africa, where your research ends up on the shelves. That's because as universities we cannot actually develop products on our own.



Professor Philani Mashazi in the lab. Photo: Chris Marais

"South Africa benefited and would still have benefited from the Technical Universities (Technikons) which invested in skills development for industry applications. Technical Universities are and were rightly placed to bridge the innovation chasm.

"But we will continue to work hard to interest industry in prototyping, scaling up materials, and product development."

Brilliant Young People

Is the Institute the fulfilment of a dream for Professor Nyokong?

"Not really. I am not much of a dreamer. I am a very simple person. I just work."

What drives Professor Nyokong is her students.

"They are brilliant young people. I could stay at home, but students need to see you, need to feel the motherly part of you."

Professor Nyokong recently announced a scholarship trust of R4 million for the Institute – money she has saved from various awards she has won, and carefully invested.

"We must also remember that these pieces of research instruments will need to be maintained and upgraded. Money must be set aside for that too. Otherwise they become white elephants."

Bright Lights

Nanotechnology has powerful implications for South Africa's development. More of its potential uses are coming to the fore all the time.

"We recently worked with the Armaments Corporation of South Africa SOC Ltd (Armscor) on creating thin films using dye materials to coat onto eyewear lenses or cockpit glass," says Professor Mashazi.

"This can protect the eyes from high intense lasers or even the bright lights reflecting off glasses from residential areas surround airbases like Waterkloof. The coating absorbs and disperses the intense light.

"You can imagine the danger of blinding a pilot, even momentarily, during take-off or landing. It can cause airplanes to crash."

The Wonder Dyes

The Institute for Nanotechnology Innovation now has its major research activities planned for the next few years, thanks to recent sizable research grants from the South Africa Medical Research Council (SAMRC), the Department of Science, Technology and Innovation (DSTI) and Technology Innovation Agency (TIA).

They will be developing protocols and products using photosensitiser dyes (a class of dyes known for their bright fluorescence).

These dyes and their nanomaterial composites will be investigated for their applications as anti-cancer drugs, transducer materials for sensor applications, dyes in dye-sensitised solar cells, materials with antimicrobial and antifungal properties, optical limiters or non-linear optical materials, and photocatalysts in the degradation of pollutants in wastewater.

The Catalytic Power of Gold

Gold was one of the first metals to be explored at the molecular level. As most people know, it is an attractive yellow metal that is heavy, inert, and does not rust.

It can be hammered into extremely thin foil or gold leaf, often used in medieval decorative arts such as old European castles and more recently, the White House's Oval Office.

But examine gold in a far, far smaller state, a thousand times thinner than a human hair, and its properties change completely. It becomes soluble in water. It allows light to pass through it.

According to Professor Mashazi, gold turns blue when in solution (atomic gold) and if heated further with some other compounds, it turns ruby-red as it becomes nanosized.

For Nanotechnology, the most valuable characteristic is that gold at under 100 nanometres in size becomes catalytic. It speeds up chemical reactions from days to minutes.

Gold has no negative effects on the human body, and helps keep photosensitiser drugs in cancer cells, thus killing them. This in turn makes cancer treatment using light (Photodynamic Therapy) far more effective, and potentially far safer than chemotherapy and radiation.



Distinguished Professor Tebello Nyokong
Photo: Chris Marais

"In terms of cancer treatment, nanomaterials allow for the drugs to be directed to the cancerous cells and diseased tissue. It allows for the drug to stay longer in the affected area, so they can be more active and effective for longer."

Apart from gold, the INI has also been looking at the properties of other metals on the periodic table – palladium, platinum, ruthenium, osmium, and of course, silver. They are contemplating analysing the medical compounds in medicinal plants.

As Professor Nyokong says: Curiosity is the key.



The Colour Blue

Associate Professor John Mack

Tebello Nyokong Institute for Nanotechnology Innovation

Why are plants so green? Why is blood so red? What secret powers lie within the colour of blue jeans?

Associate Professor John Mack of the Tebello Nyokong Institute for Nanotechnology Innovation at Rhodes University has spent an academic lifetime studying porphyrins and phthalocyanines.

These are complex organic molecules with vibrant colours and crucial properties. Think of green chlorophyll. It transforms sunlight into energy that can be used by plants. Red heme in blood is another porphyrin. It is an oxygen transport agent.

Deep blue phthalocyanine, created artificially and used to dye millions of pair of jeans over 80 years, also has startling powers.

If activated by visible light, phthalocyanines can potentially eliminate certain cancer tumours, make cheaper solar panels, purify polluted water, and kill antibiotic-resistant superbugs.

Blue Rock Oil

Phthalocyanines were first characterised in Grangemouth, Scotland in the late 1920s, at the Scottish Dyes factory (later ICI), leading to their widespread use in industrial pigments and dyes. The first scientist to investigate the structures and properties – and to name them 'phthalocyanines' – was Sir Patrick Linstead. Naphtha means 'rock oil', while cyanine refers to the colour blue.

By Julienne du Toit

Photo: Chris Marais

Initially, phthalocyanines were only valued as pigments and colourants. They were vibrant, stable, and the addition of a little copper gave the blue an agreeable greenish tint.

Apart from being used to dye jeans and other textiles, their use expanded into inks, paints and plastics.

Over time, scientists and corporations explored more uses. These pigments proved useful in catalysis, photodynamic therapy, photovoltaics, electronics and more.

They are readily coordinated by metal ions and their properties can be changed or 'tuned' by adding peripheral functionality through various chemical reactions.

Because they glow brightly under certain wavelengths, they can be used for medical imaging.

Phthalocyanines have an intricate ring structure, detectable with the appropriate spectroscopic equipment.

They are chemically and thermally stable, and interact with light and energy at the molecular level. When they are photosensitised, they trigger the generation of 'reactive oxygen species'.

A Doctorate in Canada

This field of chemistry fascinated Associate Professor John Mack when he first encountered it at the University of Western Ontario in Canada.

John had moved there in 1988 for Postgraduate studies after a BSc from Aberdeen University in Scotland. He grew up a few miles from Grangemouth, where phthalocyanines were first properly investigated, and regularly passed by the old Scottish Dyes factory on his way to visit his grandparents.

"I think almost nobody who graduated in chemistry from Scotland that year got a job in chemistry in the UK. It was the worst of the Thatcher years. I had relatives in Canada, and I'd spent a summer before in London, Ontario, so I was able to move to the University of Western Ontario for my PhD studies. I graduated with a first-class Honours degree, so I could get a fee waiver."

John's doctoral supervisor was Martin Stillman, who had also supervised Distinguished Professor Tebello Nyokong's PhD thesis the year before.

"In order to study the structure of phthalocyanines, one of the techniques used is called magnetic circular dichroism spectroscopy. My PhD studies were looking at how that technique can be used to understand what happens when an electron is added to the dye molecule. Professor Nyokong's PhD looked at what happens when you take an electron out of the dye molecule."

They never actually met, but Nyokong's and Mack's paths would cross again, many years later.

Shaken in Japan

In 2004, Dr Mack headed off to Japan's Tohoku University, to study alongside Professor Nagao Kobayashi, one of the world's leading experts on phthalocyanine chemistry. Professor Kobayashi had carried out his Postdoctoral studies at York University in Canada with Professor Barry Lever, one of Sir Patrick Linstead's former PhD students.

Again, Tebello Nyokong had preceded John, doing collaborative work at this laboratory in Sendai, Japan. The two laboratories subsequently worked together through a South Africa – Japan project funded in part by South Africa's National Research Foundation.

John Mack stayed at Tohoku University until 2012.

"I was there during the earthquake the previous year. It was kind of an interesting experience, shall we say. I was ten stories up and the building was shaking like you wouldn't believe. That's not why I left though."

By then, John wanted to find a way of applying his knowledge in a more practical way. He visited Rhodes University and Professor Nyokong's Nanotechnology research centre in the Chemistry & Pharmaceutical Sciences Building several times between 2009 and 2011.

"So, you know, I often get asked the question: Why did you come to South Africa? But in my case, South Africa was one of the best places to be, to carry out the studies I wanted to do.

From Pure to Applied Science

"I had come to the point where I was doing a lot of research, which was very sort of academically focused, and might be read by 20 people around the world at some point. Then I had the opportunity to come here, where the research is more applications-focused and trying to do something that is hopefully of benefit to society.

"I could see there was an opportunity to do a type of research that's more practical. The Institute here has a very high calibre of scientists, and all the equipment you would need to carry out research at a world-class level.

"There are not too many places in the world where you can walk in the door and have all these pieces of equipment here, readily available. The students here sometimes don't realise how lucky they are. Occasionally we're able to send them overseas and then they realise the grass isn't always greener on the other side of the fence."

Of all the pieces of equipment Professor Mack uses at Institute, he favours lasers the most, using them to probe the properties of the phthalocyanine related molecules that are being synthesised.

"I can also see how efficient they are at generating the reactive oxygen species that can destroy the cancer cells, or deactivate the bacteria, or degrade the pollutants in the water supply."

Within the Human Body

The methodology of getting phthalocyanines and porphyrins into the body, where it would be encouraged

to selectively accumulate in cancer cells, is still in the test phase in various parts of the world.

John Mack explains: “If the dye absorbs a photon of light, it can generate reactive species by transferring its energy to oxygen molecules. And those reactive species can destroy the cancer tumour.

“Essentially, once it’s accumulated into the cancer cells, we shine a light at the dye molecule. This means that we can only treat cancers and tumours that are close to the skin’s surface.

“At this point, with the excitation of the molecule, it can transfer its excess energy to oxygen molecules, which are present within the tumour and its cells. The reactive oxygen species that are generated in this manner can start to destroy cancer cells effectively. But at that point, you don't want to be affecting healthy cells, which is one of the potential drawbacks of this technique.”

The tendency of phthalocyanines to conjugate with metal nanoparticles like gold and silver increases their efficacy.

“Cancer cells tend to be disordered in terms of their structure, but nanomaterials like gold can make it easier for the phthalocyanines to enter the cancer cells. And once they’re there, they tend to stay.”

Adding gold or other metal nanoparticles increases their effectiveness across a range of applications.

“Nanoparticle conjugation is how we can most usefully deploy a dye molecule for the applications I’ve been talking about, like antibacterial and anti-cancer photodynamic therapy, and wastewater treatment. The nanomaterial dye conjugates can be embedded into polymer nanofibres in the context of wastewater treatment.

“If we attach a dye molecule to a magnetic nanoparticle, we can use a magnet to retrieve the nanomaterials and reuse them.”

Photodynamic Therapy in SA

Most of Professor John Mack’s time of late has been focused on Photodynamic Therapy.

“We’ve recently obtained a major grant from the Medical Research Council (MRC) to carry out collaborative research with scientists in Glasgow, Scotland, on gold nanoparticle conjugates.

“They have ways to image the PDT process as it’s happening in real time. So we’re hoping to develop nanoparticle conjugates which could, in about three years’ time, start the process of being commercialised. That’s not so easy to do. But you know, that’s the goal – to take something to the point where we’ve got something potentially worthy of commercialisation. And that’s kind of what motivates me.

“I think it is only a matter of time before Photodynamic Therapy (PDT) will be happening in South Africa. PDT was pioneered to a significant extent in the former Soviet Union and has been used clinically for some time there. They tried to bring what they were doing to South Africa, but the application process was not successful, unfortunately. I am sure it will happen in future.

The Future of Colour

Professor John Mack relishes being able to mentor the third year and Postgraduate students coming through the Department of Chemistry and the INI.

“I tend to focus as well on working with students in generating novel dye molecules and then conjugating them to nanomaterials for the various applications.”

Students who graduate from the INI mostly find good jobs in academia or industry, he says.

His work is often a collaboration with other researchers.

The roughly two hundred (200) journal papers he has published since moving to South Africa have had high readership and citation numbers.

“I am very motivated by my research and work long hours – sometimes 70 or 80 hours a week. But I do enjoy travelling when I can. While I was in Japan, I explored the country on long trips. I have returned to Canada often. And I’ve also travelled around South Africa a bit too.”

John Mack thinks South Africans tend to be too negative about their country.

“Not to say South Africa doesn’t have problems, but there are good things happening here too. If you’re going to grow your economy, you need to push ahead with high technology, like India and China are doing. South Africa’s pushing it too.”



Traumatic Stress: from Psychological Science to Community Implementation

Dr Duane Booysen
Department of Psychology

Rhodes University Psychology Department Senior Lecturer and clinical researcher Duane D. Booysen works in two worlds: that of a real-time clinical psychologist and that of the clinical researcher, investigating the effectiveness, feasibility, and acceptability of evidence-based trauma-focused treatments for Post-Traumatic Stress Disorder (PTSD) in a South African context.

Growing up in the Eastern Cape town of Uitenhage (now Kariega), Duane Booysen's teacher-parents raised their four sons in a disciplined, education-focussed, environment.

"Then, when I was in Grade Ten, my elder brother was already studying law at Nelson Mandela University (NMU) in Port Elizabeth (now Gqeberha)," said Duane. "He told me all about a psychology course he had done at NMU, and I was intrigued. So intrigued, in fact, that I actually telephoned the Psychology Department at that young age of 16 and asked about the course and how to become a psychologist. They said the entrance requirements were very strict. But even at 16, I had already decided to try my luck with Psychology."

When Duane reached his Matric year, his father tried to persuade him to consider other, and more familiar, professions instead of psychology. He later learned that his dad's reluctance to have him enrol in psychology was partly linked to the complex socio-political history of psychology in South Africa.

By Chris Marais
Photo: Chris Marais

"But I stuck to my guns and signed on for Psychology. Not long into my first year in 2006, I realised I would have to work very hard here, to get ahead. I would have to be very focused"

At the end of his undergraduate years in 2009, he took a six-month internship at the NMU South Campus Counselling Centre, where he heard that the School of Accounting was looking for a student counsellor.

"And that was how I started my first job as a student counsellor at NMU in 2010," he said. He appreciated the work experience he gained as a student counsellor, but quickly realised that he wanted to further grow in psychology, so he enrolled for an MA (Psychology).

Duane later moved back to Uitenhage to work at a technical (TVET) college as a student liaison officer in 2011, which was a difficult work environment but also a growing experience. However, he kept up his NMU studies and completed his Master of Arts (Psychology) degree in 2012, graduating in the following year, knowing that his continuous academic objectives would eventually get him to where he wanted to be.

In 2012, he applied to the Rhodes University Psychology Department to train as a clinical psychologist, but his application was unsuccessful, which was a difficult experience, yet also instrumental in how he had to bounce back from this career setback. As difficult as it was at the time not to be offered a position on the clinical programme, he had to find meaning in the adversity he encountered and muster up the grit to carry on.

The next year, Duane Booysen was offered a place on the clinical psychology programme at Stellenbosch University, which also exposed him to training as a clinical psychologist in community settings. He completed an internship at Lentegeur Psychiatric Hospital, nearby in Mitchell's Plain. He remembered being fascinated and excited about the experience.

"I wasn't nervous at all, because this was something I had wanted to pursue since I was a teenager," he said.

"There, I worked in different wards: The Child and Family Unit, the Intellectual Disability Ward and the Adult Therapeutic Ward." For his community service year, he went to work at the Dora Nginza Hospital in Port Elizabeth (now Gqeberha) in an Acute Psychiatric Ward, which is where he deepened his clinical skills and knowledge in psychopathology.

Once qualified as a clinical psychologist in 2017, he moved back to Cape Town and Stellenbosch and joined Community Keepers as a consultant clinical psychologist, an organisation that partners with different primary schools and high schools to set up offices that offer mental health services on site. During this period, Duane registered for his PhD because by then he knew he wanted to become an academic.

Duane Booysen was employed at the Rhodes University Psychology Department in January 2018.

"I was in the middle of my PhD," he said. "With the support of the department and the Research Office, I was lucky enough to get funding from the National Research Foundation (NRF) for the 18 months it took to complete my PhD degree. Considering the nature of trauma exposure and limited access to evidence-based mental healthcare, especially at a community level, his PhD explored the effectiveness, feasibility, and acceptability of a brief trauma therapy in a community setting, which he managed to finish at the end of 2020.

He said the world had a much greater awareness of trauma and PTSD than before.

"At the same time, however, we run the risk of things becoming superficial and watered down and applied and understood in a way that's not accurate," he said. "Not everything is trauma. There are difficulties in life, and there are adversities in life. If you keep defining all these things as trauma, you undermine human resilience at the same time."

"I was working with trauma survivors and asking the question: Can a brief trauma-focused exposure result in improved symptoms of PTSD? The other question was whether such an intervention would be feasible within a community trauma clinic in Cape Town, and if trauma survivors would experience and perceive a brief intervention as an acceptable treatment for PTSD"

"The therapy model I was studying for this is called Prolonged Exposure Therapy (PE), which is part of the broader family of Cognitive Behavioural Therapies (CBT).

Ultimately, his PhD focused on how to implement an evidence-based treatment, PE, for PTSD in a real-world setting and to determine if PE can be an effective, feasible, and acceptable treatment for PTSD.

Evidence-based Practice in Clinical Psychology

During his training as a clinical psychologist at Stellenbosch University, he read an article that questioned the scientific credence of clinical psychology in South Africa. The author, who would later on become his PhD supervisor, was arguing for a scientific and evidence-based approach in South African clinical psychology; these sentiments resonated with him as a psychologist in training.

Notwithstanding that the study of human psychology can be found across various disciplines of the Humanities, which he appreciates, Duane's scholarly stance, ontologically and epistemologically, is rooted within a broader paradigm of psychological science (i.e., empirical rationalism, universalism, naturalism, etc.) and how questions of the human mind – specifically those related to psychopathology - can be investigated and understood via rational and experimental methods.

Duane was introduced to Prolonged Exposure Therapy by his PhD supervisor, and it piqued his interest because it was an empirically supported trauma-focused psycho-therapy for PTSD.



Survivors experience a process in Prolonged Exposure Therapy that is **empowering as they realise that they can overcome the fear**, and learn adaptive and meaningful insights about themselves and their environment.

Dr Duane Booysen at the Rhodes University Psychology Centre.
Photo: Chris Marais

"In Exposure Therapy, you're treating people who are haunted by the memory of the trauma or traumas, and they don't generally want to feel anything associated with it, and so they avoid talking about it, which in itself is one massive component that perpetuates post-traumatic stress," he said.

"In addition to that, their ways of thinking begin to change. They start to question their own self-efficacy, and grapple with issues of blame and guilt, shame, and anger. Their world becomes a darker, more hopeless and more cynical place. In this form of therapy, we don't literally go back to the hijacking, the rape, the murder or the abuse – that's impossible. We go back to the memory of it. We approach the memory to enable emotional processing. PE, fundamentally, is about systematically approaching and engaging the difficult emotions and beliefs associated with traumatic experience.

"The Exposure Therapy model I use has been developed and tested over the past 35 years, and has four components. First, psychoeducation about what post-traumatic stress disorder is crucial, as some trauma survivors either do not understand or misunderstand their experiences of traumatic stress. Second, Imaginal Exposure, is the retelling of the trauma memory. This is done repeatedly and systematically until the trauma survivors experience and perceive their ability to overcome the associated emotions, such as fear.

Survivors experience a process in PE that is empowering as they realise that they can overcome the fear, and learn adaptive and meaningful insights about themselves and their environment, but also engage the difficult emotions and beliefs about themselves and the world in a more adaptive way. It's a process of reclaiming certain aspects of your life.

"Third, In Vivo Exposure is just a more practical way of approaching avoided places, people, and objects in a safe and controlled manner, like being in a crowded space or specific aspects that remind one of the trauma, such as a clothing item, a specific sound or a smell. With trauma, your life and your world can become smaller and smaller; you don't do certain things anymore." He says that PE is based on a broader and general wisdom, which is to face your fears. Dr Edna B. Foa, the developer of PE, has taken this concept and has designed and developed a psychotherapy in which it is systematically applied to treat PTSD, and it works.

The Psychology Clinic

Dr Booysen, when not doing research on PE and PTSD, works out of the Rhodes University Psychology Clinic, where MA in clinical psychology and MA in counselling psychology students undergo professional training to become registered psychologists. Admission to one of the professional programmes is highly competitive and has limited space; we only offer six (6) positions on the clinical programme and six (6) on the counselling programme, and we receive about a combined total of ±500 applications annually, which is reflective of the quality of our programmes. He primarily teaches cognitive behaviour therapy and public mental health on the MA programmes, and psychopathology on the Honours programme.

"This is where they learn to become professional psychologists," said Dr Booysen. "They spend one full

year in this clinic, and then the Clinical Psychology students go off to Fort England (the Makhanda-based psychiatric hospital) the following year. The counselling students go off to the counselling centre.

“The students also go to the Assumption Development Centre in Joza area and perform similar psychological services – the only difference is that in Joza, it’s a walk-in service. For the students, this is a unique opportunity to work in a very different environment, a resource-constrained space.”

The Psychology Clinic offers psychological assessment and psychotherapy for emotional, behavioural and cognitive problems.

The kinds of problems dealt with include occupational and academic difficulties, interpersonal conflicts, conduct problems in children, adolescents and adults, anxiety, depression, suicidal thoughts and self-harming behaviours, trauma-related disorders, and problems related to the use of drugs and alcohol.

“Part of the training a Psychology student undergoes involves a process of self-awareness,” said Dr Booysen. “Because you’re working with people, chances are you’ll see bits and pieces of your own life appear from time to time. How do you make sense of that? How do you make sense of yourself? The focus on the self in training can be quite overwhelming at times, but it's necessary to become a reflective and competent professional psychologist.”

The Research

Dr Booysen is passionate about research and how research provides a never-ending process of exploration.

Since joining Rhodes University in January 2018, he has supervised and graduated several students on various projects related primarily to PE for PTSD and broader topics in clinical psychology. He has also co-published with several of his students, which he believes is a necessary step for students, and to disseminate the work within the broader scholarly community.

He states that grant funding, although competitive to obtain, is the fuel for enabling a more productive research agenda. He has obtained various funding grants from the NRF and the South African Medical Research Council, which have exposed him to a different side of research, but he recognises how funding enables one’s ability to grow one’s research, especially applied research. He is also an NRF Y-2-rated researcher, which is a testament to his growth as an early-career researcher.

Since the completion of his PhD in 2020, he has actively and strategically attended international conferences in PTSD to stay connected to current developments, but also to network and build collaborations, and it's crucial to work with people smarter and more experienced than yourself; it enables growth. Some of his most important collaborators are based in South Africa and the USA.

Duane’s current research portfolio consists of several medium-to-large-scale intervention studies on PE for PTSD in the Eastern Cape and Western Cape and in broader Africa. A key focus at this stage is to understand implementation and scalable methods of PE for PTSD in various settings to improve access to effective treatments for PTSD in South Africa. Yet, he continues to explore questions related to the basic science of PE and PTSD, for example, his research focus also explores neurobiological markers of PTSD by using neuroimaging instruments such as functional near-infrared spectroscopy, which can improve our understanding of the neurobiological mechanisms in treating PTSD. Ultimately, his research continues to oscillate between basic psychological science and implementation science in treating PTSD.

Looking forward

“The great thing about research is that there will always be questions to explore, some old and some new. So, it’s crucial to remain diligent and to be guided by the data, as it informs what the next steps are.”

Dr Booysen said that a great deal of work has been done over the last four decades in developing effective psychological interventions, such as PE, for PTSD. Yet, more questions remain unclear and still need to be studied.

Considering the global transitions in technology (i.e., artificial intelligence) and geopolitics, among others, he wonders how the field of traumatic stress can continue to understand the nature of trauma, PTSD, and its treatment. More importantly, he is eager to continue his work to further develop the psychological science of effective and accessible trauma-focused treatments for PTSD in South Africa and beyond.



Many Cultures in Me

Professor Arthur Mukenge

School of Languages and Literatures, French and Francophone Studies

The continent of Africa holds no fewer than twenty-six (26) French-speaking countries, and Professor Arthur Mukenge, Head of French and Francophone Studies at Rhodes University, has visited and studied all of them closely.

Born in a small mining town in the Democratic Republic of Congo, Arthur Mukenge developed a deep love for French literature, the French language and the literary culture of the Francophone world, from Africa and Europe, to the Caribbean and beyond.

The way French is spoken in the Congo is very different to the way it is spoken in, say, Madagascar. Each Francophone country seems to add a colloquial spin to the language of its former colonists, accompanied by a raft of cultural interpretations.

Arthur Mukenge, however, first learnt textbook French, because of the comparatively privileged circumstances of his childhood.

“I was born in Kambove in Katanga Province of the DRC,” he said. “My father had a very good position with the Union Minière du Haut-Katanga mine, and so I went to a Belgian school, Ecole Belge de Kambove.”

The Rich Province

Katanga, in the south-east of the DRC, is one of the most mineral-rich regions in the world, known for its great deposits of copper, uranium and cobalt. For many decades, proceeds from the mining in this province

By Chris Marais

Photo: Chris Marais

enriched the national coffers of colonial Belgium, apparently without great benefit to the local population as a whole.

When Congo became independent in 1960, the Belgian miners remained.

With natural wealth came ongoing conflict for ownership, leading to a breakaway attempt (supported by mining interests) that was swiftly put down by UN-backed forces. To this day, Katanga continues to be plagued by often-vicious armed groups, literally competing for buried treasure.

Kambove Town

Arthur Mukenge's home town, Kambove, is famous for its copper and cobalt yields. When he was born in 1963, Union Minière du Haut-Katanga still managed the premier mines in the area, and the town was a blend of Congolese and Belgian cultural and architectural influences.

A state-owned company called Gécamines then took over the Kambove operation, but environmental damage (like water pollution and soil contamination), fluctuating commodity prices and persisting wealth disparities have persisted into modern times.

While low-level indigenous workers struggled to make ends meet, Belgians and senior Congolese employees (like Arthur's father) enjoyed easeful after-work lives in good houses, with ready access to doctors, hospitals and an excellent education, with French as the common language.

"In this district, the two official languages were French and Swahili," said Professor Mukenge. "I was sent to a Belgian school in Kambove, so French was my mother tongue. I learnt to speak Swahili later, and then Lingala, English and Arabic.

"We were the only black Africans staying on the street where I grew up. I was literally born into the French language. The French I learnt at school was the true French from France.

"We Congolese were generally exposed to French as it was spoken, not written. The problem with learning a language like French via a local dialect is that you will pick up the local accent. It will invariably spoil your future pronunciation of proper French."

Horizons Open Up

When Arthur's father was sent east to Belgium for training, his family came along, and the young man began university studies at Notre Dame College in the Belgian city of Liege.

"And when we returned to Congo, I went to study at the University of Lubumbashi," he said.

Now qualified as a teacher, Arthur Mukenge was hired back in Kambove, teaching French to the children of the Congolese workers employed by the mining company, then in Lubumbashi (formerly Elizabethville) at Institut Maadini for the same mining, now called La Gécamines.

His upbringing and the 12 years he spent teaching back in Kambove and Lubumbashi all contributed to an intense interest in factors like identity, culture and language. Reading the works of African Francophone authors, he later developed an academic appreciation for their differing approaches and story themes.

At the urging of a former professor and mentor, Arthur Mukenge decided to complete his Master's degree at the University of Cape Town (UCT), in the French Department.

He went on to a job at the University of Natal (now UKZN), where a new Centre for African Literary Studies (CALS) had just been built. In the meantime, he was called to reorganise the French Section at Saint Charles College in Pietermaritzburg.

"So I started working at CALS, both at the French Department and the Language Centre," he said. "They wanted to employ someone who could teach both French and Francophone studies in an African context. I was completely qualified for that.

"For my Master's degree, I studied a selection of African writers, in terms of various themes," Professor Mukenge said. "For my PhD, I studied an expanded selection of these writers in terms of pre- and post-colonisation themes. These authors include the likes of Paul Lomami Tchibamba, Pius Ngandu Nkashama, René Maran, Mongo Beti, Ferdinand Oyono and Aimé Césaire.

"I wanted to learn about conditions (via the writers) in both eras, and whether the lot of Africans had improved significantly after colonial rule had been dispersed with.

"Francophone writers tend to reflect the times they live in, so it was a good way to learn what life was like in their communities, at certain periods. They write about the situation at ground level.

"I found that the common people were still living in depressed conditions, separated from the smaller elite group that always seems to benefit. It's the story of the world, no?"

The Two Faces of Colonisation

Many years later, the above subject would result in a book by Professor Mukenge, entitled *Les deux faces de la colonisation* (The Two Faces of Colonisation) and published in 2015,

In it, he studies how Francophone African literature reflects the continent's colonial past and post-independence socio-political struggles.

A central theme in the book is the contrast between two types of individuals shaped by colonial rule: the *évolué* (assimilated African) and the *tshitanshi* (diamond traders exploiting local populations).

Arthur Mukenge presents these figures as symbolic of the broader struggle between conformity and resistance, showing how colonial structures continued to shape African societies even after independence.

"When I was growing up, Congolese would call my family *évolué*," he said. "That's because we had been assimilated into the European environment of the mining company. I once went to a Congolese school to see what they were learning there, but I was not welcomed. They said I did not belong with them."

How the Francophone Studies Work

"So firstly, when one teaches Francophone Studies, it's through the literature that is being produced by Francophone authors," said Professor Mukenge.

"We explore such an author's book with the students, and there are many angles we can take. We can start with the author himself: who is this person, and why is he or she writing?

"We often find that the authors were not practised writers, but the situation in their countries forced them into writing about conditions there.

"Then we look at their style. Then the subjects they cover. Do they write about social, cultural or political themes? Also very important is the time frame within which the writer is working. And finally, we ask the students what they think the benefit of this book is. This is how we encourage them to engage in critical thinking.

"Francophone language studies give you a whole range of insights into African life, history, culture, state of mind and general philosophy."

The Cruel City

Professor Mukenge cited the example of the content of *Ville Cruelle*, written by Cameroon author Mongo Beti. Published in 1954, it is viewed as one of the classics of African literature, a critique on colonialism and how it affected the people of Cameroon.

The central character in *Ville Cruelle* is a young man called Banda, who loses his cocoa farming business to European colonials and has to survive in a social landscape of exploitation, corruption and violence.

Banda, in fact, stands for every African who lived through a period of colonialism and now has to deal with new realities as the country of origin undergoes its democratic growing pains away from its former masters.

Gender Studies

Another book project by Professor Mukenge is *Les larmes du silence* (The Tears of Silence), which came about after a chance meeting with a woman from the capital of Benin, Cotonou.

"This young woman told me a very sad story," he said. "Her hardships came as a result of her many marriages. Her first husband ran away and there was a divorce.

"She then married again and ended up living with in-laws that did not like her. She divorced once more, went into a third marriage and got divorced again.

Professor Mukenge emphasised that Francophone African literature's significance extends beyond national boundaries and engages with global audiences.

"I found her in the street of Cotonou, Avenue du Général de Gaulle de Cotonou, and she was very depressed. I gave her a little something to help out, listened to her story and then asked if I could perhaps write something about it. She said fine, as long as I didn't use her real name. And so I turned it into a work of 'fiction' called *Les larmes du silence*."

The flyleaf information on this book reads:

"Clémentine (a false name) has never known any peace. From Cotonou to Abidjan, in the family, in schools, in the conjugal home, everywhere it endures exclusion, ill-treatment and violence of all kinds. The pathetic path of this pariah gives the narrator the opportunity to revisit old myths, to resort to beautiful metaphors to highlight the martyrdom of the young Clementine."

His upcoming book, *Clémentine ou le bien-fondé d'être femme ?* (Clémentine, or The Well-Founded Nature of Being a Woman), also continues his exploration of women's experiences in African contexts.

Inaugural Lecture

After joining Rhodes University in 2007 as a Junior Lecturer, Professor Arthur Mukenge delivered his inaugural lecture (as a full Professor) in 2024.

Titled *Literary Criticism in an African Context: A Francophone African Literature Perspective*, Professor Mukenge concentrated on the cultural richness of Africa and the critical importance of different and diverse narratives in academic discussions.

"Professor Mukenge also emphasised that Francophone African literature's significance extends beyond national boundaries and engages with global audiences," as stated in a Rhodes University tribute to the highly regarded academic.

"He highlighted the need to look beyond established authors and explore the work of emerging writers, fostering a broader and more inclusive literary landscape. This, he argued, can be achieved through promoting diverse narratives, supporting emerging voices, and leveraging interdisciplinary methods and digital platforms to ensure that underrepresented voices are heard. Such efforts contribute to a more nuanced understanding of human experiences.

"His academic career is an example of the value of interdisciplinary approaches. His research has examined a range of texts, including *Une si Longue lettre* and *Chant Écarlate* by Mariama Ba, which shed light on women's experiences in West Africa and the importance of questioning societal norms. He has also explored the concept of *littérature à deux vitesses* (literature of two speeds), distinguishing between diaspora literature and national literature."

Negritude Movement

Professor Mukenge also referred to the international Negritude movement and its impact on modern African literature. He urged his audience to explore the ever-growing body of writing being produced currently by African creatives, calling for a "broader and more inclusive literary landscape".

The Negritude Literary Movement took root in the 1930s with key figures : Aimé Césaire (Martinican), Léon-Gontran Damas (French Guiana) and Léopold Sédar (Senegal). This initiative aimed at re-defining Black identity, in the main context of colonial oppression. Francophone African and Caribbean writers were united in the cause of moving away from Eurocentric portrayals of Africa and its diaspora.

Negritude literature was a deep exploration of the colonial system, its ills and lasting after-effects. It also fostered a concept called Pan-Africanism, encouraging solidarity in the cultural and political arenas.

It was also extremely 'roots-oriented', examining Africa and its peoples before the time of the colonists by way of heritage, traditions and myths.

The Student Body

Professor Mukenge said that there were sixty-two (62) students signed up for French I for the 2025 academic year, nineteen (19) in French II and nine (9) in French III.

"The syllabus caters for the culture, history and literature of France, as well as that of the Francophone countries, especially the African ones," he said.

"They must know everything around France and the Francophone world, because they must know where and how the language was born. And we take care to keep political studies separate from social studies. Of course, you can't judge an entire nation by its political elite."

As far as teaching and supervision (Masters and PhD) go, his duties include: French Language, French Literature, Francophone Literature, French for Tourism, French Culture, and Translation.

When I asked Professor Mukenge with which country he identified the most, he replied:

"There are many cultures in me. We can start with Belgium, then move on to France, where I also spent a lot of time. Then my home country, Congo. But most of all, I am of Africa. Francophone Africa."



Restoring Life in Degraded Lands

What happens to old agricultural fields once farming is stopped? Does the original vegetation ever return without intervention? If not, what can be done to help the process? Professor Sheunesu Ruwanza has spent most of his academic life seeking the answers.

Professor Shuenesu Ruwanza
Department of Environmental Science

It may look grey and monotonous to the non-botanical eye, but renosterveld is one of the most biodiverse parts of the endemic-rich Cape Floristic Kingdom.

No one seems sure whether renosterveld is named for the rhinos that once favoured this habitat, or whether it is for the greyish colour of the dominant plant, renosterbos (*Dicerothamnus rhinocerotis*).

This vegetation type is perfectly adapted to long, hot summers and cool wet winters, with annuals and bulbs that flower profusely in spring. Its soils are fine and fertile.

All these conditions are also perfect for wheat farming. And this is why barely 5% of this biodiversity-rich ecosystem remains.

Between Wellington and Wolsely in the Western Cape lies Elandsberg Nature Reserve, which conserves two of the largest intact pieces of renosterveld and fynbos. In an area of only 4 000 hectares, there are 840 species of plants.

By Julienne du Toit
Photo: Chris Marais



Professor Sheunesu Ruwanza walking along a road lined with the invasive 'thirty' Eucalyptus species.

Photo: Chris Marais

But from the 1970s, wheat was planted in certain sections here, and the scars of the old agricultural fields still remain. The big issues regarding them were: will the renosterveld ever return? Did it need human intervention and if so, what?

These were the questions that Professor Sheunesu Ruwanza confronted when he started work as a graduate student at the South African National Biodiversity Institute in 2007, the year before Elandsberg was proclaimed a provincial nature reserve.

Sheunesu was working on a Masters degree in Conservation Ecology with Stellenbosch University, specifically focussing on the ecological restoration of old agricultural fields, and later on, river systems for his PhD.

This was his second Masters degree. The first had been from the University of Zimbabwe, specifically focused on changes in vegetation cover around Kadoma, following land resettlement.

Alien Invasives

In Elandsberg, where wheat had once been grown, grasses had taken over, thriving on the heightened levels of nutrients in the soils from previous fertilisers. Renosterveld has a rich grass diversity that historically supported high numbers of plains game animals, but many of the grasses growing on the old fields were alien invasives.

These fields had been lying fallow for up to 20 years, some for double that. But not one fynbos or renosterveld plant from the Cape Floral Kingdom recolonised the old fields.

"There are two models we were looking at. The first was to simply leave the land to recover on its own (passive restoration model) – which is naturally the cheapest option. But it's a very slow recovery, because you are dependent on seeds from either close by, or wind-blown.

"It's also dependent on whether there is native vegetation nearby, that is intact. If the old field is surrounded by nature, there's a greater chance. Seeds can easily come from wind or birds. But if it's surrounded by towns, roads or other cultivated fields, then it might take 100 years or even more."

Just Add Sugar

The other model was to intervene (active restoration model). Since the soils were artificially enriched by fertilisers, and the renosterveld is not suited to such high nutrient levels, it did not recolonise the fields.

How to reduce the nutrient level, then?

"You can assist the restoration by means of manipulating or fertilising the soil, or by planting seedlings. Inevitably, this is an option that would involve costs. If you're looking at many hectares, this might become unaffordable. That's why a lot of people don't take active restoration Model 2."

So Sheunesu Ruwanza looked at innovative and low-cost ways to change conditions in a way that favoured the renosterveld plants.

"We wanted to see if we can lower soil nitrogen. If you lower it, maybe fynbos and renosterveld species would come back in, rather than the alien grass dominating.

"One of the methods we use was to add sugar to the soil, the same sugar we use for tea. The reasoning is that the sugar technically activates bacterial activity in the soil, and that in turn uses up the nitrogen, thus lowering it."

Once that was done, would planted seedlings survive and begin a community of indigenous plants?

For two years, Sheunesu tried tactics that essentially proved what would not work.

Back to the Drawing Board

In another experiment, he removed the topsoil.

"That allows you to remove the grasses and the soil that is high in nutrients."

Then seedlings and plants were brought in and planted in this nitrogen-poor soil. Alas, they faced two near-insurmountable challenges.

"Some plants germinate, but they struggled to survive. And one of the reasons which is linked to my later PhD, is that they cannot survive the long summer drought of the Western Cape. So after 12 months, you have nothing to show in terms of vegetation recovery.

"The second problem, which was unforeseen, was that the fields were not fenced off, and the eland, ostriches and zebras that were still wandering around on an old farm on the edge of Elandsberg came and ate most of the plants. The few seedlings that survived did not make it through the long dry summer."

Blue Gums and the Berg River

Sheunesu began his doctoral studies in 2010, this time focusing on alien invasive plants like Eucalypts growing along the banks of the Berg River.

Additional funding for his PhD came via Working for Water (WfW), which had been working to remove these large, thirsty trees.

"But the question posed for my PhD was this: If we cut and remove the eucalypts, is there a way to make sure that native plants come back in? So a big part of my study was to set up a lot of experiments to check on the types of soils, how to restore them, and how to bring back the relevant and appropriate plant species.

"Essentially it was looking at opportunities and constraints of restoring areas that have been cleared of woody alien invasive plants. So, what were the soils like? If we plant seedlings what happens to them? If we broadcast seeds, do they survive and grow, or not? And of course, if we just leave it, which was the other model, what happens?"

It soon became clear that simply removing the invasive trees and leaving the riverbanks bare was not a desirable option.

"What happens is that you create another problem. The native vegetation does not recover and you create the conditions for a secondary invasion. These are species that may not be eucalypts, but they are also alien invasives, taking advantage of a biological system that has now been opened up.

"Of course, this has cost implications for government funding and Working for Water. It costs billions to remove the original invaders, like the blue gums. But there is no funding or action mechanism to remove the secondary invaders. And that also costs billions."

Re-establishing native vegetation faces a new set of issues, including the fact that secondary invaders out-compete and choke the indigenous seedlings.

"Then summer comes. Those indigenous seedlings or wild olive (Olea) cuttings that have managed to survive the choking competition seldom survive the hot dry spell that is coming, just as I showed in my Masters."

Hope Lies in Seeds

But it wasn't all a dispiriting sequence of negative results.

"What is interesting from a restoration point of view is that if I broadcast 500 seeds, and although there are these challenges of choking and summer drought, a small percentage of plants do survive.

"Even if five survive, that's a good result for me. I know that after ten years, I have five native trees that can start the whole process of recolonising the damaged land.

"So mass release of seeds is the most viable option. You just leave them in the soil, and hopefully something survives. From a restoration point of view, small benefits are important.

"These become centres of restoration. In this instance, birds are your greatest allies. Birds come in and feed, and leave droppings, which actually spread the seeds. So over time, maybe 20, 30 or 40 years, the few species that remain have managed to kickstart the process."

But do the few native trees that grew from seed survive in the long run?

"In 2018, I did a follow up to my area of study along the Berg River, and the few seeds that grew into trees are still there."

The Social Aspects of Invasive Plants

Once Sheunesu Ruwanza graduated with a PhD in Botany from Stellenbosch in 2012, he was offered a Postdoctoral Fellowship at Rhodes University's Department of Environmental Science the following year.

This added a whole new paradigm to the work Sheunesu had been doing in the Western Cape.

"Over three years, I worked a lot with Distinguished Professor Charlie Shackleton, NRF-SARChI Chair in Interdisciplinary Science in Land and Natural Resource Use for Sustainable Livelihoods. I had been aware of the

social aspect of my work, but had not really pursued it to any extent before I came to Rhodes.

“In terms of invasive plants, we also have to give thought to whether people are using these plants, and what for? What are the implications of removing them? For example, blue gum is used for timber and roofing, but it’s also very important for bee-keepers. The bees thrive on the flowers. And the leaves are used for medicinal purposes, usually for people with colds and flu. Eucalyptus oil can help clear mucus and ease breathing.”

Sheunesu Ruwanza also looks at other native species like *Vachellia karroo* (previously *Acacia karroo*). This has aggressive invasive tendencies and tends to spread and encroach old fields. But it is prized for its firewood.

“People depend on it, so its removal to reduce encroachment becomes a problem. I think in terms of a decision to remove or not, you have to put the social and economic aspects together, the costs and the benefits.

“In future we need to do some economic evaluation to measure the social benefits, the ecological benefits and the economic value before a decision is made regarding removal of the plants.

“At this stage, control is just about saying these are problematic species, let’s remove them, but there is no detailed understanding of the various species and their uses. Decisions must be made from that angle, species by species.

“For example, Lantana is not used for anything, and it is extremely invasive. That is something that should just be removed.”

Overgrazing and Ploughed Lands

Which is the easiest to restore? Would it be lands that were once ploughed for crops? Or land that has been grazed by livestock?

“Well, when it comes to grazing or overgrazing, it’s all about the intensity. They are both agricultural systems. If it wasn’t too heavily damaged by goats, sheep or cattle, the land can possibly recover on its own, while the land that was cultivated would be more difficult.

“The intensity of the degradation would inform what interventions we make for restoration purposes, and what the trajectory is likely to be. If the intensity is very high – whether it is cultivation or goats grazing, mining damage, or even alien plants that have invaded an area, we can see that by the disappearance of seed banks and the alteration of soil nutrients.

“That system, regardless of what degrader caused the damage, would take a long time to recover, and it needs assistance. Your model would then be finance-informed.”

The Edge Effect

After his Postdoctoral Fellowship, Professor Sheunesu Ruwanza found a job as a Senior Lecturer in School of Environmental Science at the University of Venda. He stayed for nearly two years, but missed doing research.

When he saw a job as a Senior Lecturer advertised at Rhodes University’s Department of Environmental Science, he immediately applied and was accepted.

His studies of late have focused on soil composition before and after *Eucalyptus grandis* have been removed; people’s perceptions and uses of the invasive common guava (*Psidium guajava*) in and around Vhembe Biosphere Reserve in Limpopo; and the effects of *Solanum mauritianum scopoli* (bugweed) on soil and vegetation.

In old agricultural fields in the Eastern Cape, Professor Ruwanza found that *Vachellia karroo* was encroaching and taking over. His feelings about this indigenous thorny tree that encroaches on disturbed soil are mixed.

“It has some positives. It fixes nitrogen in the soil, which is good for other plants. And it can act as a nurse plant, which can spur vegetation recovery. Socially, as we have mentioned, it is useful as woodlot. Kudus, other browsers and monkeys thrive because of it.”

On the other hand, *Acacia mearnsii* (black wattle), which is also nitrogen-fixing, is a truly problematic woody invader, originally imported from Australia for the tannins in its barks, used for treating leather.

He is also examining ‘the edge effect’. If natural vegetation has been left alongside agricultural fields, the rate of restoration is dramatically improved.

“Proximity to the boundary allows species to be dispersed more effectively into the old fields. Hopefully they will eventually take over the whole agricultural field. You can calculate how quickly this could happen by doing an inventory of which species are close to the edge.

“A seed bank is the most effective tool in restoration.”

Professor Ruwanza was awarded an NRF-Thuthuka grant to examine social and ecological effects of *Lantana camara* invasion in the Vhembe Biosphere in the province of Limpopo.

He is a National Research Foundation Rated scientist (C2 rating) and a core team member with the Centre for Invasion Biology. The NRF-C2 rating is awarded to researchers who are established in their field and have sustained, high-quality research output.



Raising the nGAP Family

Dr Mandy Hlengwa

New Generation Academics Programme (nGAP) Coordinator

In response to the urgent need for academic transformation, the Department of Higher Education and Training (DHET) established the new Generation Academic Programme (nGAP) as a flagship initiative under the Staffing South Africa's Universities Framework (SSAUF). This visionary program addresses the critical need to transform the academic profile of South African higher education while developing strong early and mid-career academics to ensure a sustainable future for our institutions.

When the Department of Higher Education and Training (DHET) launched the New Generation of Academics Programme (nGAP) in 2015, Rhodes University threw its full weight behind the project.

The stated aim of the programme was a "systemic intervention to transform the demographic profiles of academic staff at South African universities."

Since 2015, Rhodes University has secured forty-three (43) nGAP positions across thirty-two (32) departments spanning all six (6) faculties. Under the coordination of Dr Mandy Hlengwa, the nGAP project has strategically aligned each post with departmental academic priorities and staffing needs, working closely with department heads, deans, and the university HR division.

The program's commitment to transformation is evident: 100% of nGAP posts are held by academics from

By Chris Marais

Photo: Chris Marais

designated groups, with 56% occupied by Black, Coloured, or Indian women. The university is particularly proud of its enviable retention rate—colleagues not only successfully complete the 6-year program but continue their careers at Rhodes, with many attaining formal leadership positions and promotions through the university's academic advancement process.

The cornerstone of nGAP success has been comprehensive institutional support across all divisions. From the Vice-Chancellor's office to departmental mentors, Rhodes has created an ecosystem where nGAP scholars are valued not merely as additional teaching capacity, but as future academic leaders whose voices reshape the institution.

The achievements speak volumes: twenty (20) participants have completed their doctorates, five (5) are at examination stage, and others are making significant progress. Yet beyond these metrics lies something even more powerful—through writing retreats, symposia, and collective reflection, a scholarly community has emerged where truly transformative ideas flourish, redefining academic identity for a new generation.

The initiative builds on the Programme for Accelerated Development (PAD), which was pioneered at Rhodes University between 2001 and 2015 with funding from the Andrew W. Mellon and Kresge Foundations. These earlier programmes laid crucial groundwork by experimenting with models of academic support, mentorship, and demographic transformation.

The nGAP Experience at Rhodes

The success of nGAP at Rhodes University stems from a carefully designed support system that addresses the multifaceted needs of early career academics. Mentorship forms the backbone of the Rhodes nGAP experience, with coordinated mentor-mentee relationships spanning the first four years, followed by a gradual transition to independence in the final two years. Participants receive guidance in teaching, research, and institutional culture navigation, while the support extends beyond academic guidance to include emotional and strategic mentoring that helps scholars develop career planning skills, promotion readiness, and institutional adaptation strategies.

The programme features reduced teaching loads—starting at 20% for those without a PhD and 50% for those with doctoral qualifications—creating essential space for research focus and doctoral completion. This strategic approach has contributed significantly to the high success rate in PhD completions among participants.

Rhodes University's particular historical context drives a strong commitment to transformation. The nGAP cohort reflects this priority, with all participants from designated groups, prioritizing women and ensuring representation across racial demographics to foster a more inclusive academic environment. The program recognises that effective mentoring requires intentional design and ongoing support, with Dr Mandy Hlengwa noting that "having a mentor isn't a 'nice to have'—it's a requirement." The program facilitates formal mentorship within departments while encouraging cross-departmental relationships that broaden perspectives and networks.

Mentorship relationships are understood as dynamic partnerships that must work for both parties, and when relationships aren't functioning effectively, Dr Hlengwa is instrumental in providing mechanisms for change and support. Dr Hlengwa emphasizes the importance of visible departmental presence for new academics, "I often tell the colleagues that while I'm available for support, advice, and mentoring, both as someone who's been through a similar programme a while back, and now coordinates this one, I'm not in the same position as they are at this early stage of their academic careers.

That's why I strongly encourage peer mentoring as a vital complement to the other forms of support offered in the programme. Their shared experiences put them in the best position to help each other navigate and grapple with the real, day-to-day challenges of being early career academics at this institution".

Building Community Through Writing Retreats

A distinctive feature of the Rhodes nGAP experience is the carefully structured writing retreats that have become central to building scholarly community.

"The writing retreats create dedicated space for focused work away from daily campus interruptions," explains Dr Hlengwa. These four-day intensive sessions begin with participants setting individual goals and conclude with progress assessment and problem-solving sessions that address both academic and personal challenges."

The retreats utilize the Pomodoro time management system, working in focused bursts with strategic breaks. Beyond productivity, they prioritize holistic well-being through walks, games, and moments of renewal to balance writing intensity.

Recognising diverse life circumstances, the retreats accommodate nursing mothers by welcoming babies and caregivers—a practice that emerged through participant advocacy and demonstrates Dr Hlengwa's commitment to supporting academics' full identities.

"We don't want anyone to choose between being a good parent and being a good academic," notes Dr Hlengwa. This philosophy reflects the program's broader understanding that academic excellence emerges from supporting scholars as whole persons.

Regular term dinners and active WhatsApp groups extend community building beyond formal retreats, creating ongoing networks of mutual support and professional development.

Dr Hlengwa's Family

Dr Hlengwa grew up in Ulundi, KwaZulu-Natal, shaped by a remarkable lineage of women who understood the

transformative power of education and community building.

Her mother, Thandi Hlengwa, exemplified this legacy when she was appointed principal of a school in a rural area just outside Ulundi. The "school" initially consisted of little more than a large tree, but Thandi rallied with the community—primarily knowledgeable and creative housewives whose husbands worked in the Johannesburg mines—and secured government subsidies to build a proper primary school. Working alongside women armed with incredible indigenous knowledge of building sturdy mud bricks, and with just one semi-professional builder, they constructed an entire school from the ground up.

Her late grandmother, Nontsikelelo Merriett Hlengwa, was also a teacher who taught Mandy to read and write from a very early age, instilling in her a love of learning and the written word.

Mandy comes from a strong line of matriarchs—women who never shied away from hard work, carried sharp wit like a birthright, and made things happen, often against the odds. Some were formally educated and became professionals: nurses, administrators, town planners. Others, like her late Aunt Fikile, carved their legacy in different but no less powerful ways. Though Aunt Fikile didn't pursue formal education, she worked tirelessly across various jobs and used her hard-earned income to secure the family home in Umlazi for her mother and siblings. She was also the only one who physically built her own home, which still stands today on the land she owned in Embumbulu, south of Durban.

These are the stories and legacies that shaped Mandy's understanding of what it means to build institutions, support communities, and create opportunities for others to thrive.

From Privilege Perception to Family Recognition

Early program implementation faced challenges around perception. Initial views of nGAP participants as "privileged" rather than "real academics" required active intervention to establish their legitimate status as full academic colleagues.

"It took time across the system for staff to understand that while some appointees are young and may have 'grown up in front of you', they are now colleagues, not students," Dr Hlengwa recalls from earlier program years.

This challenge has evolved into one of the program's greatest strengths: the emergence of the "nGAP Family"—a cohort characterized by strong solidarity and mutual support.

Within this family structure, scholars share experiences and provide peer guidance for career navigation. This peer mentorship complements formal mentoring relationships, offering unique insights from shared experience.

"Nobody else on campus knows what it's like to have that kind of support, and having a spotlight consistently on you," observes Dr Hlengwa. This ecosystem of support, accountability, and shared experience creates a distinctive culture of mutual recognition and growth.

The Right Fit

"What's the right fit?" she asked. "The first question is: can you teach in your chosen discipline? And if you're going to be teaching there, what new knowledge do you bring?

"Generally, people who come from traditional universities will gravitate towards other traditional universities. Every now and again, you get a nice twist where somebody from a university of technology or comprehensive university comes through with a different way of thinking. So you have to figure out whether or not that's going to be beneficial to a particular department."

Other Strings to the Bow

Apart from running the nGAP programme at Rhodes University (the Vice-Chancellor, Professor Sizwe Mabizela, calls her the 'Mother of the nGAP'), Dr Hlengwa also coordinates the Nurturing Emerging Scholars Programme (NESP), and the Rhodes Mentoring Programme.

She is a Senior Lecturer at the Centre for Higher Education, Research, Teaching and Learning (CHERTL), a passionate researcher and social impact specialist with a proven track record in developing and mentoring early-career researchers at institutional, national, and international levels. Her career is defined by a deep commitment to fostering the next generation of scholars through structured programs, strategic mentorship, and evidence-based interventions in higher education.

Dr Hlengwa holds a Masters in Education from the University of Melbourne, specialising in curriculum development and policy, and a PhD in Higher Education from Rhodes University.

At the national level, she has been instrumental in two (2) flagship programs of the Department of Higher Education and Training (DHET) designed to expand and transform the academic pipeline. For a decade, she has managed the New Generation of Academics Programme (nGAP) at Rhodes University, ensuring that early-career academics develop both their research and teaching identities within a structured framework. Her leadership in this space led to national recognition, culminating in the Ministry of Higher Education commissioning her to conduct research across all twenty-six (26) South African universities and provide recommendations on best practices for program implementation.

Building on this expertise, Dr Hlengwa was appointed the first national project manager (2020–2024) for the Nurturing Emerging Scholars Programme (NESP)—a DHET initiative designed to develop future academics through targeted mentorship, postgraduate funding, and international exposure.

Beyond South Africa, Dr Hlengwa's commitment to mentorship extends to international collaborations. She served as a consultant for the Netherlands Organisation for International Cooperation in Higher Education (NUFFIC)-funded EnGEndering Mentorship (e-GEM) program at Maseno University, Kenya. In this role, she co-designed a mentorship framework to strengthen the capacity of academic mentors and student counsellors.

Her work also includes key contributions to European and Swedish-funded initiatives aimed at advancing sustainability in higher education. She was a collaborator on EU-funded projects focused on enhancing Postgraduate education, and through the Swedish-funded MESA program, she facilitated curriculum transformation workshops across eight (8) African countries, equipping academics with tools to integrate sustainability into their teaching and research.

She is an active member of the Erasmus-funded Enhancing Doctoral Education program, which focuses on policy innovation and strengthening doctoral education systems at institutional, national, and regional levels.

Dr Hlengwa is widely respected for her ability to translate complex higher education challenges into clear, actionable strategies. Whether curating and facilitating researcher development initiatives, engaging with stakeholders, or producing high-level reports, her expertise continues to shape the landscape of academic mentorship and capacity-building.

Her leadership in developing supportive ecosystems for emerging scholars makes her a sought-after expert in researcher development and academic career progression.

Why Rhodes for nGAP?

Rhodes University's success with nGAP reflects broader institutional characteristics that create an enabling environment for academic development.

The university's "open door policy" ensures accessibility from the Vice-Chancellor to departmental heads, creating an environment where scholars can engage directly with leadership without bureaucratic barriers.

"We pride ourselves on being openly critical of our own practices," notes Dr Hlengwa. This culture of constructive self-reflection extends to community engagement, as demonstrated through the university's response to Makhanda's water challenges and its interwoven relationship with the broader community.

This openness to critique and improvement creates an environment where nGAP scholars can engage meaningfully with institutional transformation rather than simply fitting into existing structures.

The Admin Team

The program's success depends critically on administrative excellence. **Nomfundo Siqwede** and **Lavern Sias** serve as the program's administrative backbone, providing essential support that enables academic focus.

Their guidance ranges from passport and visa applications for first international conferences to complex travel arrangements. These seemingly operational tasks represent crucial rites of passage in academic development, building confidence and professional networks.

"It often happens that when people complete their time in nGAP, they bring our admin staff flowers and say thank you," observes Dr Hlengwa. This recognition reflects the program's understanding that transformation requires both intellectual and practical support systems.

Measuring Success

The 2024 promotion cycle provided significant validation of the program's effectiveness. Every nGAP academic who applied for promotion was successful, with all advancing to Senior Lectureships.

"The best part of coordinating this program is tracking our scholars' success," reflects Dr Hlengwa. "From first interviews through to seeing them confident and accomplished in their roles as senior academics—the transformation is remarkable."

A Decade of Transformation

"Coordinating this program for a decade has provided me with unique insights into the power of structured support for academic development," reflects Dr Hlengwa. "Witnessing colleagues transition from their first permanent academic positions to becoming accomplished scholars has been incredibly rewarding.

"The nGAP at Rhodes demonstrates that demographic transformation and academic excellence are not competing priorities but complementary goals that strengthen institutions and advance knowledge production. Through careful design, responsive leadership, and unwavering commitment to supporting scholars as whole persons, we've created a model for sustainable academic development that serves both individual careers and institutional transformation.

"It has been my profound privilege to coordinate this remarkable program. These achievements represent not just individual success but institutional transformation in action."



A Fresh Focus on Education

An Education lecturer with a mission to bridge the gap between school learners, their teachers and the community around them.

Sean Nkosi's academic, after-hours and community life all revolve around Rhodes University and the greater Makhanda City. As a Lecturer at the university's Department of Education, a graduate of the Next Generation of Academics Programme (nGAP), coordinator of the Postgraduate Certificate in Education (PGCE) programme and a residence head, Sean Nkosi's PhD research also involves teachers, students and parents in the township community of Makhanda.

All of which is a far cry from the day in 2017, when he arrived to begin his early-career nGAP studies, telephoned his girlfriend back in Springs and told her he would call her again once he'd done a tour of Makhanda Central.

"That tour took all of 15 minutes," he said with a laugh. "I remember my nGAP interview, when I was asked if I could cope with small town life and I said of course yes, I come from Springs. I discovered that central Makhanda was so much smaller but then, when I ventured further, I found a much larger settlement. That's why I always tell my students to see and experience all the parts of this city. There's much more to it than High Street and campus."

Early Inspirations

Sean Nkosi was born in a township of eSikhawini in KwaZulu-Natal. Then they moved to Daveyton in Gauteng, where his father, Dan Nkosi ("One of the wisest men I know") was an English, History, and later Business Economics teacher at Rivoni High School and later appointed Rector of Tlamoha Technical College in Kwa-Thema (now part of Ekurhuleni East TVET College). He later became the principal and CEO of South west

Dr Sean Nkosi
Faculty of Education

By Chris Marais
Photo: Chris Marais

Gauteng colleges (SWGC) TVET colleges up in Gauteng.

“Initially, I was reluctant to follow in his tracks, but I felt the calling to be a teacher. I am passionate about education.”

He signed on at the University of the Witwatersrand (Wits) in 2010, majoring in English and Information Technology (IT). Sean had by now developed a love for the English language because, in his own words, it was “broad enough to allow a teacher to teach not only content, but also critical skills, attitudes and values.”

But there was much more to his Johannesburg life than just being a student.

“I also landed a job with the Institute of Digital Education Africa (IDEA), where they asked me to design some of their curricula for online teaching,” he said. “This was very exciting, because we were reimagining teaching throughout Africa, using all the technology available at the time. It had a very strong social justice component in terms of making technologies available in places where they were not before.”

Just to add to his workload, Sean Nkosi was also a consultant at the Wits Writing Centre, teaching students the tricky process of learning academic writing.

His Masters thesis at Wits centred on re-conceptualising classroom dynamics, working with a Grade Six group in a selected township school in Springs.

“The question was: what would it look like, if Grade Six learners were to design their own classrooms? How would learning take place? Even from my Honours year, I had realised that school pupils often felt like strangers in a classroom that they occupied more than staff members did. Teachers moved around, from class to class. Learners stayed put in their classroom.

“So they re-designed their classroom, arranging the desks in a double U-shape so they could all see the teacher and each other. They chose the colour of the paint and decided which posters to stick up. The teachers initially thought I had been the one to change the setup, and were amazed to find out it had been their pupils’ initiative.

“Our research showed that the children were now more at home, more interactive, more critical and generally in a place where they felt an increased sense of belonging. It was interesting to see them responding differently in a place where they all had agency. By the time I left for Makhanda, most of the classrooms in that school had been re-designed by learners.”

Rhodes University

When he first heard about the nGAP programme at Rhodes University and applied for it, Sean Nkosi did not seriously think he would be selected.

“I remember thinking that if I was lucky enough to get shortlisted, I would at least experience a bit of the Eastern Cape, a province I had not been to before, and provide the panel with some food for thought” he said. “My interview presentation had a lot to do with what I had been researching for my Masters degree.

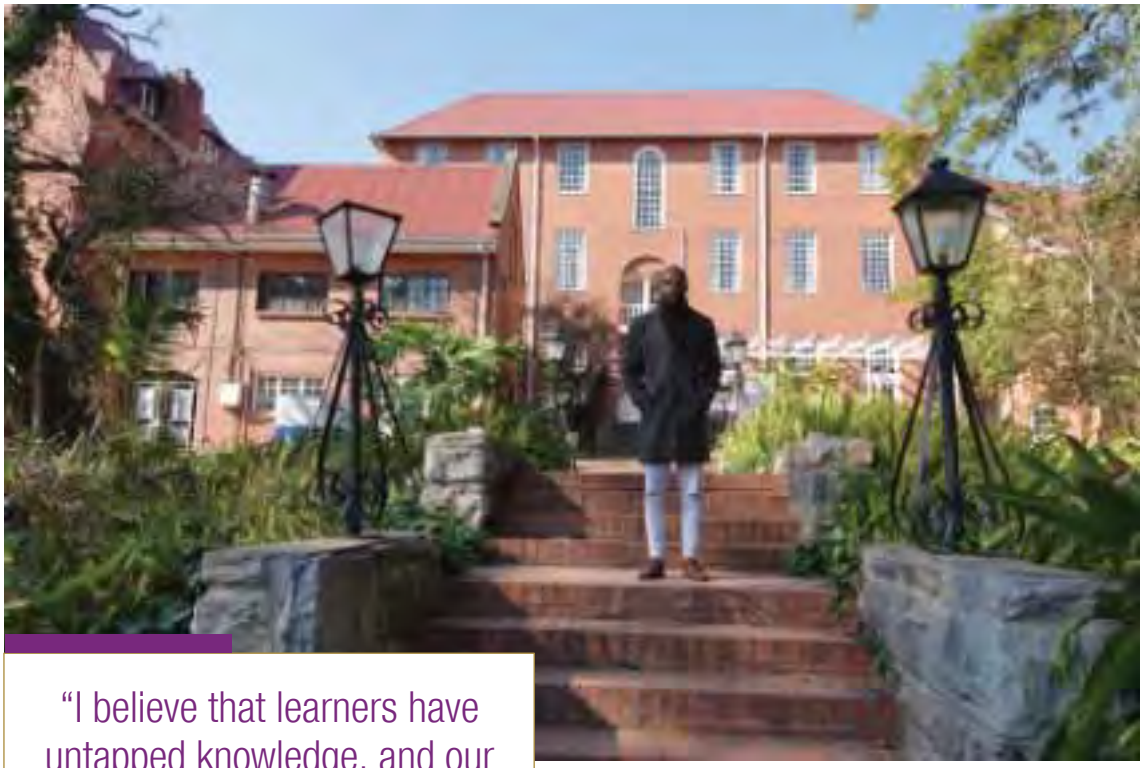
“Afterwards, I had second thoughts about leaving my comfort zone up north and letting go of all the things that were familiar to me. After prayer and counsel I proceeded with the opportunity. I was told that the settling in process takes about six months, and all would be fine. I think I took a lot longer, but I eventually settled in.”

Part of the ‘settling in’ was beginning work on his PhD degree, an extension of both his Honours and Masters research. It explores existing and new relationships across schools and communities that can foster socially and spatially meaningful school experiences for both teachers and learners.

“I was now looking at three schools and how they were embedded in their communities,” he said. “I wanted to know how students spent their time, in the classroom and outside, in a bid to understand how they produce and are produced by the spaces they occupied and traversed.

“I spent a week with the selected students in the classroom, and then I would travel with them after school to see how they behaved in the various settings they were in. Learners in a classroom can be very different when they are in other environments. I wanted to find out how those settings moulded them.

“I believe that learners have untapped knowledge, and our schooling is not used to valuing what they bring. The learners were astounded when I told them they would be re-designing their own classrooms, where they could have their discussions, ideas and opinions taken into consideration.”



"I believe that learners have untapped knowledge, and our schooling is not used to valuing what they bring."

Dr Sean Nkosi
Photo: Chris Marais

Sean likes to define education as a series of 'Aha' moments that turn out to be beneficial to both student and teacher. Bringing new ideas and fresh information to the teaching sphere and seeing it being absorbed and eventually adopted is what feeds his passion for education.

Discussing his nGAP years, Sean Nkosi said the community of fellow students on the programme was comforting.

"It was good to share the various challenges we faced, including the fact that everything seemed different in this city," he said. "Most of us who did not do their undergraduate degrees at Rhodes University knew nothing about Makhanda. I am Swati and speak isiZulu, so I also had to learn fluency in isiXhosa – without it, one could be excluded.

He also had high praise for the nGAP coordinator, Dr Mandy Hlengwa.

"She sees us not just as students, but as people," he said.

Nowadays, Sean Nkosi enjoys the quiet country life that the Eastern Cape offers. Residing in Makhanda with his wife Tulutshelo and two daughters Zoe Thendo and Shalom Nonkazimulo, he is now steeped in the principles of educational transformation and social justice.

He plays lots of sport, "anything to keep me moving" and still prefers to look at the world through his own lens.

"Throughout my life, the poem that has most resonated with me has been *The Road Not Taken* by Robert Frost. If I'm going to do something, I'm determined to do it in a different way."



The Economics of Agriculture

Smallholder farms supply up to 60% of fresh produce consumed in rural areas. During her Masters and Doctoral degrees, Dr Sandile Phakathi saw the hidden wealth potential in a sector often referred to as subsistence agriculture.

Sandile Phakathi grew up in the semi-rural setting of Uitval, near Ladysmith in KwaZulu-Natal.

At Sigweji High School, she studied Agriculture as one of her subjects, and always excelled at it.

“It just resonated with me.”

She was in Grade 10 and doing well with all her subjects when disaster struck. Her father died. He had always been the breadwinner in the family. It had always been assumed that Sandile would go to University and he would pay the fees.

Now nothing was certain, and with two (2) years to Matric, it became clear to her that much depended on obtaining good marks.

“The teachers used to tell us: just work hard, there is funding in terms of bursaries, and the only key is your result.”

Sandile’s Physical Science teacher was Mr Benjamin Awiri, formerly of Ghana.

“I think he noticed that I was a very focused kind of student. The strange thing for me was that he would discipline me twice as hard as the learners. I didn’t understand at the time.”

Because of Mr Awiri, other teachers and Sandile’s efforts, she finished top of her 2008 Matric class, with marks good enough to get into University. She went to sign up for a BSc at the University of KwaZulu-Natal (UKZN).

Dr Sandile Phakathi
Department of Economics and Economic History

By Julienne du Toit
Photo: Chris Marais

To her distress, she found she did not have enough money to cover the registration fee.

“I had to go back home, and that was so painful.”

Mr A and Hope

Sandile then signed up for a bursary-subsidised computer course in Newcastle, but she was feeling directionless until the day Mr Awiri contacted her. He asked why she had not gone ahead with her University studies, since her marks had been so good.

“I explained how things were and he told me to apply again the following year at UKZN. He said: ‘I know you are a hard worker, you are disciplined, so I am going to assist you to get into the university. There is government funding for the fees, just make sure that you pass the first semester.’”

So for the first semester of her BSc at UKZN, Sandie went to the registration office every day, to see whether there was an opening for NSFAS funding. Finally, there was good news.

“They said to me: ‘Fortunately for you today, there’s a student who got a bursary, and they can’t have a bursary plus NSFAS, so just take this form and apply’.”

Sandile did well in her first year, so much so that she was awarded a bursary from the Department of Agricultural and Rural Reform. Mr Awiri’s faith had paid off.

“His family is part of my family now. I’m forever grateful to Mr A.”

When Sandile graduated with a BSc in Agricultural Economics, Mr Awiri was there too.

She went on to her Honours, and by the time Sandile signed up for a Masters degree, she had become fascinated by smallholder farmers.

Smallholder Farmers and Dependencies

Her studies focused on smallholder irrigation farmers within irrigation schemes in KwaZulu-Natal and the Eastern Cape. While focusing on small-scale water productivity, Sandile’s studies also centred on farmers’ dependency on government.

“It was essentially about psychological capital and where we are coming from with our history. Government has really been supporting them, subsidising them and all that. But this has also developed into a dependency syndrome, where they have to wait for Government every time. They don’t take up full ownership.



Sandile Phakathi with Mr Benjamin Awiri (Physical Science high school teacher) and her mother at graduation from Rhodes University

Photo: Dr Sandile Phakathi

“My Masters was just questioning that. Maybe we can still provide financial aid, but how can we also help the farmers change their perspective so they don’t develop this dependency?

“It’s something that we have to move away from, even us as academics. Sometimes in our research, we tend to suggest Government should do this and that. We push everything onto Government. We need to change and say: farmers, this is your land now, you must take full ownership and do things as if it is your own investment.”

In the last year of her Masters, Sandile was offered an internship at Sappi Forestry. She completed her degree and worked for Sappi for a year before Professor Edilegnaw Wale of UKZN’s

Department of Agricultural Economics contacted her.

"I think Professor Wale really released the academic in me. He told me about nGAP and how I could study for my doctorate while working. I applied, was accepted and came to Rhodes University's Department of Economics in January 2017."

nGAP at Rhodes

The New Generation of Academics (nGAP) was a godsend for Sandile, in many ways.

"I really appreciated the financial support that comes with nGAP. You can go for writing retreats and attend conferences.

"But my main interest was going into the field, interacting and engaging with farmers. You need funds for that. Collecting primary data is costly."

Sandile also enjoyed access to mentorship, "someone who could tell you, okay, this is where you need to be, these are the pillars you must concentrate on."

It wasn't only the academic side of things that Sandile appreciated.

"Having Mandy Hlengwa as our nGAP manager has been really great, because you feel that support. Grahamstown is so small. You can easily get isolated. But with nGAP we had our get-togethers, our Fridays, we could share with each other. We realised others are going through the same problems. And there was also the WhatsApp group. That was great."

Innovation on Farms

Sandile's doctoral research expanded on the theme she had studied for her Masters.

"It was on institutional innovations for improved water security among smallholder farmers. I was looking at farmer-led institutions, how they changed policies and the way they have been running the schemes in Mooi River and the Tugela Ferry Irrigation Scheme in KwaZulu-Natal, as well as the Qamata and Zanyokwe Irrigation Scheme in the Eastern Cape.

"Farmers are the ones who actually understand what they are dealing with, and how they would like to change things. They don't always need government to tell them what to do, because they are really heterogeneous in nature. They face different challenges. So now if you're going to take one policy and feed it into every context, it will not work.

"I was finding out whether they are taking any lead to change things, how innovative they are, and whether that translates into outcomes such as productivity, water security, food security, and so forth."

> "Her passion for Agricultural Economics has inspired several Postgraduate students who are working towards their Masters and PhDs with Dr Phakathi as supervisor."

Dr Phakathi has seen first-hand the potential of agriculture to lift people out of poverty in rural areas – and even urban ones – and how smallholder farmers can innovate.

"They create their own pesticides using chillies and other ingredients, they develop their own way of storing perishable produce, and in some cases they are really changing the rules of the game."

The Farm Gate

Typically, the smallholder properties and farms that Dr Phakathi studied are 0.5 hectares or smaller, are used for growing vegetables and local crops, and farmers face enormous logistical problems when getting their goods to market.

This is where information, connection and social media suss – or the lack of it – can make or break a farming family.

"Many just sell at the farm gate during harvest season, and those who want to buy come around with their bakkies. But it's so sad sometimes, because the buyers pay as little as R6 a cabbage, and then you'll find cabbage selling for R15 or R20 in the supermarkets."

Many smallholder farmers are over 50 years of age, and are unfamiliar with using social media to find markets. At times, says Dr Phakathi, a big

buyer will come along, put in an order and come to pick it up at harvest time, only to find that the farmer, driven by poverty and an urgent need for quick cash, has sold his crop to someone else.

“So there are a lot of issues, but it also comes back to how we can incentivise the youth to rejoin agriculture. They are familiar with finding markets and payment options like Snapscan. The few I came across were really successful.

“I found one farmer who decided to plant butternuts. But he first went to find out what the market preferred. Smaller butternuts, or bigger ones with seed? He made R80 000 in six months.”

Dr Phakathi recognises the urgent need for a supportive and trustworthy intermediary—someone who can train farmers, provide bridging finance during difficult periods (such as in January), ensure timely access to seeds and fertilisers, and facilitate storage and market access.

“This role must not be exploitative, but instead guided by a vision and mission to restore hope and demonstrate that agriculture remains a viable and sustainable livelihood.”

Her passion for Agricultural Economics has inspired several Postgraduate students who are working towards their Masters and PhDs with Dr Phakathi as supervisor.

With the support of the nGAP programme, the Rhodes Research Office, and the Department of Economics, Dr Sandie Phakathi received the Faculty of Commerce Researcher of the Year Award in 2023. Her research development as an emerging scholar spans journal articles, book chapters, policy briefs, and newspaper contributions, alongside participation in five (5) consultation-based research projects.

She has successfully supervised and co-supervised a total of five (5) Masters and fourteen Honours (14) students to completion. Currently, she serves as the main supervisor for two (2) PhDs and one (1) Masters candidate and co-supervises two (2) PhDs and two (2) Masters students. Since joining Rhodes University, she has presented at four (4) local conferences and attended five (5) international conferences. She has also served as an examiner for theses across several universities and manuscripts for various academic journals, thereby strengthening her professional and scholarly networks.

“That’s another thing. I really appreciate the way Economics Department structures the workload to balance teaching with research. And there really is a lot of interest in this field.”



Dr Melusi Dlamini
Department of Anthropology

Masculinities

Dr Melusi Dlamini, a lecturer in the Department of Anthropology at Rhodes University, has done ground-breaking work on masculinities and health in marginalised communities of South Africa.

Growing up in KwaMashu, Durban, young **Melusi Dlamini** was lured into legal studies by the storylines and characters of popular US television shows he grew up watching.

A few hours into a court observation exercise at the local Magistrates Court quickly convinced him otherwise, however.

"The proceedings were dry and boring," he said. "But later, when I was introduced to medical anthropology, I came alive."

The online journal *Science Direct* describes medical anthropology as:

"A sub-field of anthropology that uses social, cultural, biological, and linguistic anthropology to understand the factors that influence health and well-being, the experience and distribution of illness, the prevention and treatment of sickness, healing processes, the social relations of therapy management, and the cultural importance and utilization of pluralistic medical systems.

"It also examines health disorders that may be self-defined or community-defined, including those not recognized by mainstream biomedical knowledge."

For his Master's degree at Howard College, University of KwaZulu-Natal (UKZN), Melusi Dlamini ventured into the nearby Kenneth Gardens community.

"I found out that Kenneth Gardens was part of a pre-1994 programme to house poor residents in flats," he said. "About 8 000 people were

By Chris Marais
Photo: Chris Marais

crammed in there. There was a stark contrast between conditions at Kenneth Gardens and leafy suburbia around it.

"The young men I worked with in Kenneth Gardens were mainly unemployed, and many were abusing drugs. I wanted to find out what experiences were shaping their 'unruly' behaviour, and why they were said to be terrorising the neighbourhood.

"From the outside looking in, it seemed they were a group of rowdy young men. But when I managed to hang around them and build some kind of rapport, I started to understand that many of them were lost causes in their own families, had difficult times growing up and were unable to go to school. They could see Howard College in the distance, and perhaps they wanted to go to university. But they didn't have the grades or the money to do so."

In his Master's thesis, titled *Exploring constructions of masculinity among young men in the context of poverty: A case study of Kenneth Gardens, Durban*, Melusi Dlamini writes about how he won the group's confidence by plying them with cigarettes for months on end.

"One of the important lessons I teach my students is how to think about establishing meaningful rapport with interlocutors," said Dr Dlamini.

The abstract for his Master's thesis reads:

"This study explored how young masculinities are constructed and enacted in the context of poverty, unemployment and violence. It sought to understand how poverty shaped young men's identities, and how they navigated the salient challenges in their lives.

"The study draws from ethnographic data collected in Kenneth Gardens in Durban, which focused on a group of unemployed men aged between 19 and 30. The study concerns itself with how young masculinities are shaped by social and economic dynamics that unfold in the lives of the young men.

"This study used the concept of structural violence and adopted a constructionist approach in order to interpret the data collected in the field. The participants' narratives suggested a dissonance between the young men's personal circumstances and their aspirations, which demonstrated limited agency."

Melusi Dlamini then joined the Durban University of Technology (DUT).

"At DUT, I began working on a project of devising various ways to ensure that young people coming to study from the rural areas were not falling prey to the challenges and social ills of city life," he said. "I was also asked to start teaching courses related to issues of social justice."

In 2017, he joined the AIDS Foundation of South Africa.

"There I was working on sexual and reproductive health rights as an advocacy specialist," he said. "Initially, I worked in southern Africa. In Malawi, the issue was child marriages. In Lesotho, it was disability rights. In Angola, their tardy HIV response.

"In all my travels, working within those kinds of programmes, I saw that whenever the focus was on men, there were danger signals. And when we focussed on women, it was to create safe spaces for them.

"Men were invariably seen as the perpetrators, often with good reason. But what about those men in need of safe spaces, in need of emotional support? What I would often see in the course of my work here was that many of those who were committing the violence, they were only allowed to feel anger."

For his doctoral research, Melusi Dlamini looked at the various ways of how young men navigate love and intimate relationships in the township space.

"I was interested in the ways young township men leverage their relationships to find their way through life," he said. "Most people in the townships of South Africa are in the poor working class who depend heavily on their relationships to get by.

"My early research told me young black men wanted to get into relationships for the sexual intercourse, and to exercise power over women. But then I came across young men who were imagining a future with their partners, and holding back on sex initially.

"I also learned that those men were often ashamed to tell their friends and peers they were not sexually active. They were concerned they would lose face."

A paper emanating from his Doctoral research was titled *Show Her My Feelings: Young Black Men and the Doing of Love in a South African Township.*



Dr Melusi Dlamini outside the Department of Anthropology
Photo: Chris Marais

> "Part of this process is working out how we can transform young lecturers of colour into rigorous academics, contributing to knowledge, empowering students and creating engaged citizens."

"Drawing on empirical findings generated from interviews with 34 young men between the ages of 16 and 21, the article shows how love and the young men's emerging masculinities were experienced as mutually constitutive," reads part of the relevant abstract.

"There's one story that really, really stuck out for me," said Dr Dlamini. "There was this young man who was in trouble with his community, and he was invited by one of his friends to go play his PlayStation. It broke, and his friend's father demanded he pay to fix it – a sum of R500.

"But he was poor, and his mom could not help, and it was just post-COVID, so things were just grim. His girlfriend, however, paid over the money to fix the PlayStation.

"The young man was astounded, because no one had ever done something like that for him. He told me the story with such tenderness, revealing a side to his personality that was seldom seen."

Melusi Dlamini then joined Rhodes University's New Generation of Academics Programme (nGAP), and by 2024 was in his fifth year of his six year term.

"The programme has allowed me to focus on my studies," he said. "Colleagues within nGAP also support each other where it is needed.

"One of the most exciting projects I'm working on is with the waste pickers of Makhanda. When I first came to this city, I could not wrap my head around the amount of waste it generated.

"I take my students to the landfill, where they would meet the pickers and interact with them. We would learn exactly how they sorted the mountains of trash out, preparing it for collection by the local recycling company.

"Part of building rapport with the pickers was to get them into a classroom and talking to the students, like true experts in their field – which they really are. They are, in fact, the unsung heroes of Makhanda."

Another paper Dr Dlamini worked on was the township high school initiation culture of *ukufikisana* – 'becoming fully a boy'.

"Senior boys assert dominance through violence and intimidation over the junior boys, shaping two distinct masculine identities," he wrote.

"The findings demonstrate how *ukufikisana* reinforces hierarchical gender relations and normalises violence as a means of navigating power and identity among boys. These insights underline the urgent need for gender-transformative and non-violent interventions to challenge harmful masculinities and foster equitable school environments."

Then there was the issue of social media and sexuality in the township youth groups, which became the focus of a one-day conference.

"In this one-day conference, we opened up debate, discussions, and dialogue on the dynamic interplay between gender, sexuality, and digital connections among young people based in South Africa," said Dr Dlamini.

"These (social media) connections serve as crucial spaces for expressing gender and sexuality, exploring sexual curiosities, and developing new intimacies and relationships.

"However, online surfing is also entangled with normative understandings of gender and sexuality, violence, harassment, and abuse, posing a significant threat to young people's emerging sexualities, especially affecting young women and girls."

Dr Dlamini is also part of the Higher Education Learning and Teaching Association of Southern Africa (HELTASA).

"I'm part of the National Interest Group in de-coloniality," he said.

"I've really found interesting how Rhodes University has embraced nGAP – it's a sign that they're really paying attention to the idea of decoloniality and transformation, and putting it into practice.

"Part of this process is working out how we can transform young lecturers of colour into rigorous academics, contributing to knowledge, empowering students and creating engaged citizens."



A Human Geographer in the World

The first cohort of young scientists arrived at Rhodes University ten years ago, ready to join the new Generation of Academics Programme. Among the three was Sinenhlanhla Memela, of Harding in KwaZulu-Natal.

Geography is a discipline with two distinct faces. One side is hard science, the study of land masses and Earth systems – also called Physical Geography.

Complementing it is Human Geography which covers how people use the land, how they interact with the planet's systems and how they make themselves at home on it.

The latter was what captivated Sinenhlanhla Memela, or Sine for short.

In a 2021 interview with the Research Office, she said that her parents had encouraged her to aim at professions like nursing, social work or teaching.

"But even though I had not taken high school Geography as a subject, that's really what I wanted to study at university. So they said: OK, you can have one year on us."

Starting from Scratch

Sine signed up at the University of KwaZulu-Natal for Political Science, Sociology, Geography and Environmental Management. It was not an easy year.

"Sometimes I would phone home and complain about how hard the Geography was, because the subject was new to me. My mom would say: What did I tell you? But the longer I spent in the world out there beyond Harding, the more my passion for human geography grew."

Dr Sinenhlanhla Memela
Department of Geography

By Chris Marais
Photo: Chris Marais

Next came her Honours and Masters at UKZN, the latter under the supervision of Professor Brij Maharaj, who became a lifelong mentor in Sine's life. Then she left academia for a job in the Planning Branch at the Office of the Premier in Limpopo.

"I was hired as the Geographic Information Systems (GIS) Officer," she says. "One of the highlights was working with the Lephalale municipal GIS team and also being part of a task team discussing development of Lephalale town into a city."

Lephalale used to be called Ellisras, a once-quiet Bushveld town near the Botswana border. In 2006, national energy supplier Eskom announced plans to construct the massive Medupi coal power station near Lephalale.

But before long, Professor Maharaj contacted Sine about a post available at Rhodes University's Geography Department.

"He told me it was time to get back to the academic life."

The nGAP Years

Sine has very fond memories of her six years as an nGAP scholar.

"I'd just come from having a job, so I felt like a student again when I came to Rhodes for my doctorate. I loved it.

The theme of her doctorate was *"Land Use Decision-Making on Residential Plots in Fingo Village"*. Her supervisor was Rhodes University's Visiting Professor, Thembela Kepe.

"My study critiqued the economist point of view that if you owned land, it would generate a livelihood strategy that would automatically make you prosperous. This economist perspective presents a narrow view of what influences of land use decisions, especially in developing countries where people who hold land have limited economic opportunities to increase its value or generate income from it" she says.

The academic side of things was amply supported, but with this return to being a scholar came with inevitable personal feelings of apprehension and anxiety.

Having a mentor within and outside the department, as well as the support of nGAP manager Dr Amanda Hlengwa, made all the difference.

> "I feel more established now, more confident than I was four years ago, in research and teaching."

Mentorship and Support

"It was a lot for me, coming from KZN and then Limpopo, to a different environment, to this small town. I was alone. No family, just me here. And I think for me, the nGAP mentorship about what it takes to be an academic was invaluable.

"Our nGAP manager, Mandy Hlengwa, was more than just a manager. She became our sister. I received complete backing from her, and from this Department.

"My supervisor, Professor Kepe, completely understood where I was coming from too. He was so supportive. He even invited me to the University of Toronto to write the last chapter of my PhD, and he is still there for me. We recently published a paper on political ecology, and are working together on the next one.

"So I have enjoyed being at Rhodes. It has been a welcoming environment."

The nGAP bonds that began then are still strong now, says Sine. They have an active WhatsApp group and regular gatherings.

"And Mandy will always be our sister. I am so happy I took a chance in going for my doctorate at Rhodes through nGAP, and that I used my opportunities.

"When you start as an academic you sometimes get confused, you're not sure of your niche, and you can't produce, in terms of research. But later you find your rhythm and then you start working."

Ten Years at Rhodes

Sine, now a Senior Lecturer, and having benefited so much from mentorship, is now on the Rhodes University Mentorship Programme. She has also acted as supportive 'sister' to younger nGAP scholars.

"I have been able to draw on my feelings and experiences of being a new academic ten years ago. It remember it being hard at the time, but I

see now that nGAP was a real privilege, and for me, that privilege was time. Yes, funding was nice, but I was able to succeed because I was given enough time, and was able to pick up the full academic workload slowly."

In the four years since graduating with her PhD in Human Geography, Dr Memela feels she has grown in her discipline, and in academia. She is contributing to respected journals every year, and is thoroughly enjoying her field.

"Thanks to support from the Research Office. I've been able to travel to many countries for conferences.

"I feel more established now, more confident than I was four years ago, in research and teaching. I am now teaching from first year to Honours, I am supervising three PhDs. One of them was a Masters student I also supervised."

Humans, History and Culture

Sine lights up when talking about her current fields of research.

"I am still very much a human geographer, but I think I'm focusing more on the use of space, the production of space. For example, at the moment, I'm looking at how township houses, those RDP houses, and their impact on cultural utilisation. So it's social and cultural geography too.

"I've also focussed on rural areas. One study I did was looking at the concept of the rondavel, specifically in the Mbhashe area of the Eastern Cape, the way they were and are built, how the style is changing, and how it impacts on the cultural use of space."

Dr Memela has travelled to India, specifically to study the Madubhani paintings on Hindu dwellings.

"They will paint when there is a ceremony, like a wedding, or when they are praising their gods. Long ago, they used the mud walls to create those paintings. But because of architectural changes, they now have to paint on cement walls.

"I've been looking at that transformation, that change in style and material that is used, and how it impacts on their cultural practices."

Dr Memela is also very interested in how history is portrayed and understood in public spaces, most recently Makhanda's Egazini Memorial, erected in 2001 by the Department of Arts & Culture to commemorate the many amaXhosa warriors who died in the Battle of Grahamstown (1819).

Its mosaic plinths were created by local artists and included Xhosa proverbs. Despite its evocative position atop a hill close to Fort England Hospital, this memorial has been neglected and vandalised.

"We want to find ways to understand and help, to inform future planning."

Dr Sinenhlanhla Memela also represents South Africa internationally. She serves as Secretary of NRF South African National Committee for International Geographical Union and the Executive Steering committee of the International Geographic Union's Young and Early Career Group as well as being a member of IGU's Commission on Global Change and Human Mobility.



Dr Yolani Ndamase
Faculty of Law

Level the Playing Field

Finding ways to unlock the economic power of everyday South Africans is the academic mission of Dr Yolani Ndamase, a former nGAP Lecturer who is now on the staff of the Rhodes University Faculty of Law.

In the final year of her six-year stint in the New Generation of Academics Programme (nGAP), **Dr Yolani Ndamase** was on a Fulbright Visiting Fellowship at the State University of New York in Buffalo. She was completing her Research Fellowship in Competition Law.

"I went to find out about the Sherman Act (Antitrust) in the USA," she said. "What we call Competition Law here in South Africa. I wanted to see what normative frameworks influenced their antitrust legislation."

Competition Law, its aims and ramifications, are a specific passion for Dr Ndamase. Despite the existence of a Competition Act and a Competition Commission, small black businesses in South Africa still face high barriers to market entry.

Looking for a Better Way

Those include 'predator-pricing', in which a large firm sells goods or services below cost, often colluding with similar companies to keep out the smaller players. Then there are high start-up costs, market concentration in areas like banking, and the requirements for Broad-Based Black Economic Empowerment (BBEE), which can involve prohibitive compliance fees.

"Right now in South Africa, we have a concentrated market run by a handful of people who own different companies and sit on each other's boards," said Dr Ndamase. "Initially, I thought that seeing as how we had anti-monopoly legislation in South Africa, why do we still have these conglomerates? Why aren't there more

By Chris Marais
Photo: Chris Marais

historically disadvantaged people owning these various companies?

"So I was looking at the normative framework that would help judges adjudicate matters in Competition Law. You might have the relevant legislation, but if you are influenced by a certain framework or school of thought, you will always reach the same conclusion.

"So my argument was that we have to look at competition legislation that tries to help black businesses merge into the formal economy."

She advocates for competition policies that balance economic efficiency with social justice, aligning with South Africa's constitutional and legislative mandates.

Dr Ndamase found that the antitrust laws in the USA differed from those in South Africa in one major aspect.

"They do not prioritise the inclusion of a certain demographic that was formerly excluded," she said. "I did find out, however, that the German antitrust model held better lessons for us. It's a more liberal model.

"After all this study, I realised that South Africa has to take note of all the different Competition Law models out there, and come up with a home-grown version to suit the needs of this country."

Growing Up

Yolani Ndamase grew up in the Mthatha area of the Eastern Cape. Her father is a politician and her mother a teacher.

"At school, I was more interested in economics than law," she said. She completed a four-year LLB course at the University of Fort Hare, with distinctions.

"In my final year at Fort Hare, I started to enjoy Competition Law, which was becoming a specialty course at the University. I went on to do my Master's degree at the University of Cape Town and then, in 2019, I registered for my PhD on the nGAP programme at Rhodes University."

Yolani's PhD supervisor (through UCT) was Judge Dennis Davis, a specialist in Competition Law.

"I could not have had a better supervisor," she said.

The nGAP Experience

Having completed her six-year nGAP stint and been ensconced in the Rhodes University Faculty of Law as a fully-fledged Lecturer, Dr Ndamase says she misses her nGAP days.

"South Africa has to take note of all the different Competition Law models out there, and come up with a home-grown version to suit the needs of this country."

"I really enjoyed the community of first generation black academics like myself," she said. "We went on writing retreats all over the country and I learned so much from the senior nGAP Lecturers who had been on the programme for four or five years and had a lot to teach me.

"They would be busy with the final drafts of their PhDs and I would then see them doing great things, going up in the ranks of the University. That made it all seem possible for me to achieve, and it was very encouraging. The whole nGAP period felt like a safe cocoon I could grow in."

Growing Pains

She said her first lecture in the Faculty of Law had been daunting.

"There I was, at 25, lecturing about 400 first year students," she said. "One of them was busy with her cell phone during the lecture and I asked her to put it away. After the lecture, the student came to me and she was very upset about being singled out in the class. She quoted mental health issues and threatened to report me to the Dean of the Faculty. I told her she was welcome to do that. Although she later apologised to me by e-mail, I still went home crying that day."

Despite the rather rocky start, Dr Ndamase took to face-to-face lecturing. However, she also enjoyed compiling her remote Zoom lectures during the Covid-19 year of 2020.

"Being a younger person more accustomed to technology, I applied all sorts of apps and online teaching methods to those sessions, and it was a lot of fun," she said.

"I also like being a researcher. That's why I enjoyed going over to the USA on the Fulbright Scholarship, where I could just read and learn."

She has also been a legal researcher at the Supreme Court of Appeal and legal reporter for SAFLII and UCT's Centre for Law and Society.

Easing the Barriers

Asked what kind of examples she used when teaching Competition Law to her students, Dr Ndamase cites a real-life experience she once had.

"I wanted to be treated by a certain doctor, who told me I had to remain with my last doctor because they had an agreement. Surely I, as a patient, had the right to choose my primary care practitioner? So I reported them to the Competition Commission for collusion. It also fell under the definition of dividing the market.

"You find that same situation with, say, supermarkets who collude on prices. I try to teach my students the value of citizen advocacy because, after all, as a consumer it's your hard-earned money that is being wasted."

Collusion also throws up barriers to new entrants to a particular market.

"What if I was a black doctor wanting to practise in a place where the established doctors had divided the market and were colluding?

"Another example of a barrier to entry is when two supermarkets establish themselves on either end of a shopping mall, with no one else being allowed to set up a supermarket in the complex."

Possible Solutions

In her PhD thesis, titled *Reforming the models of competition law and addressing intersectional discrimination in South Africa*, Dr Ndamase argues that while South Africa's Competition Act of 1998, and its 2018 amendments, were designed as transformative tools to dismantle apartheid-era economic exclusion, the law has not fully succeeded in achieving meaningful economic transformation.

The Act's public interest provisions explicitly aim to promote competition and economic participation by historically disadvantaged individuals (HDIs), yet the law's practical impact has been limited by its continued reliance on traditional competition law models, particularly those derived from the various US schools of economic thought.

Her suggested 'tweaks' to the Competition Law of SA include more targeted remedies and support measures, a recognition of the compounded disadvantages faced by black women entrepreneurs, more frequent market enquiries, proactive interventions and market restructuring, which goes beyond fines and penalties.

Other suggestions would be more financial inclusion for HDIs, technical assistance, legal support, simplifying various regulatory processes and penalties for dominant firms that use their market power to suppress black business participation.

"It's the small businesses that should make up the economy and offer the consumers more choice of where to spend their hard-earned money," she said. "It would also make the bigger players not get too comfortable in their markets."



A Mind for Maths

Topology is one of the most challenging fields in Pure Mathematics. For Dr Mbekezeli Nxumalo, this study of shapes and forms is an ever-changing and fascinating puzzle.

Imagine first encountering trigonometry days before you write an important exam on the subject.

This was the prospect facing **Mbekezeli Nxumalo** at the beginning of Grade 11 at a school in Ntumbane, Pongola, KwaZulu-Natal. A bright boy, he'd already skipped a grade and was coasting through his subjects without much effort. But the year before Matric, Mbekezeli had fallen in love with Mathematics, thanks to a patient teacher, Mr Mandlakayise Dube.

He'd received a mark of 100% for a recent test in the subject. Now Mbekezeli faced failure, through no fault of his own.

"I don't know why my school hadn't taught us Trigonometry, but I cared a lot about maths. I went to my eldest sister, Wendy, for help. We worked together until 3am the next morning. I wrote the test, and got 78%. The next highest mark in the class was 10%.

"That was the start of me and Mathematics."

The Dream of a Red Gown

Mbekezeli was the third of seven children. Their parents struggled for income. Their mother chopped wood on a nearby mountain to sell for firewood, and sometimes worked in other people's maize fields. Their father did piece work and sold snuff. They also received child grants from the Government.

"In terms of having financial support school-wise, I was lucky enough that certain teachers really saw some potential in me. They would buy me school shoes and some of my clothes.

Dr Mbekezeli Nxumalo
Department of Mathematics (Pure and Applied)

By Julienne du Toit
Photo: Chris Marais

"When I look back now, it seems impossible that we managed to get through it. Because when I look at pictures of that time, I ask myself, how did I make it out of that situation? It still doesn't make sense."

Mbekezeli went on to get Matric distinctions in Mathematics, Life Orientation and IsiZulu, with high marks in his other subjects. It was the first time his school was able to boast of a Mathematics distinction. A teacher told him he should study medicine and Mbekezeli began to dream of graduating in a red gown.

Maths Adjacent

With a university pass in his hand and the promise of NSFAS funding, he headed to Johannesburg. But for a number of reasons, including misinformation, misunderstandings, a late application and a string of unlikely coincidences, Mbekezeli ended up studying Homeopathy.

"But eventually I realised I really wanted a maths-oriented degree."

After two years, he applied to do electrical engineering at the University of Cape Town (UCT) or mathematical statistics at the University of the Western Cape (UWC). Neither of those options came through, but in 2012, Mbekezeli was able to sign up for Physics at UWC, with an elective course in Mathematics for three years. His costs were covered by bursaries.

He went on to do an Honours in Physics and a Masters degree in Mathematics, graduating *Cum Laude* in both. In 2019 Mbekezeli signed up at UNISA for his doctoral degree in Mathematics, with Professor Themba Dube as his supervisor.

A few months later, a friend sent him an email advertising a post in Pure Mathematics at Rhodes University for an nGAP academic.

Rubber Sheet Geometry

"I knew someone at another university who was on nGAP, so I understood the programme and immediately applied. The interview at Rhodes was in September 2020. In November, I was wandering around a hardware store when I got a call from Rhodes University to say congratulations, you've been appointed.

"I felt my life was about to change for the better. I also felt I couldn't waste any more time."

Immediately, Mbekezeli began to plan how he could complete his PhD in two years. His chosen field of Mathematics was Topology, the study of unusual shapes. While Geometry is the study of two-dimensional shapes, and Trigonometry focuses on angles, Topology is something else entirely.

> "When I think of my time at Rhodes University so far, I just think the soil is fertile here. There is so much potential for growth."

According to Wikipedia:

"Topology is the branch of mathematics concerned with the properties of a geometric object that are preserved under continuous deformations, such as stretching, twisting, crumpling, and bending; that is, without closing holes, opening holes, tearing, gluing, or passing through itself."

A nickname for Topology is 'Rubber Sheet Geometry'.

Another way of explaining it would be say it describes mathematical spaces, some of them extremely strange – think of bowls, but also trees or even animals.

It can be used in a number of ways:

- *In Biology*, to untangle the DNA and predict the growth of organs and body parts;
- *In Cosmology*, to determine the shape of the Universe;
- *In Computer Science*, to reveal the large-scale structure of data sets;
- *In Robotics*, in planning a robot's limbs in relation to dimensions and arm joints;
- *In Physics*, as a guide to quantum field theory and string theory.

Finding a Path

As soon as he was in Makhanda, Mbekezeli Nxumalo started work on his proposal, based on a research outline his supervisor Professor Themba Dube had given him.

"At our nGAP group's first writing retreat in March 2021, I completed my proposal. In my research, there are two areas – one called general topology,

and the other, called point-free topology. I was moving from one to the other, so I needed a definition that was going to work in this new setting.

“That was the main part of my thesis.”

Normally, there would be emails exchanged between doctoral student and supervisor. With Professor Dube, that was not the case.

“uDube much preferred it if we met physically. So I ended up doing most of the work without any comments from him until much later that year.”

Finally, the Red Gown

Mbekezeli worked hard – almost obsessively – on his PhD. In the first half of 2022 he was travelling to Pretoria twice a month to see Professor Dube. By September he had written the first draft.

It wasn’t just a question of handing in the polished version. First, the proposal itself had to be approved by the Higher Degrees Committee, then the thesis. And before it could be considered, two doctoral papers had to be submitted. Even with these hurdles, Dr Mbekezeli Nxumalo’s thesis was accepted within two years and three months.

Graduation was an extremely proud moment for the Nxumalo family. Dr Mbekezeli Nxumalo was finally able to wear the red gown.

“I remember how my parents cried. Two of my sisters and my younger brother were also there. My eldest sister is doing her Masters degree in Computer Science, and one of my brothers is a Maths teacher. The last born is doing Actuarial Science. So we are a Mathematics kind of a family now.”

Plunging into Research and Teaching

Dr Nxumalo began teaching Topology in 2023 to second and third year students. He soon had a couple of Honours students too, and began supervising a Masters and a PhD student. He enjoyed teaching small groups, up to fifty (50) at a time.

“I had an open door policy with the students.”

But soon, he also had to face teaching two hundred and forty (240) first year students – a completely different scenario. The workload was staggering.

“The first semester was rough. I wasn’t used to teaching that many. I do enjoy teaching though, but it really made me miss research.

“When I think of my time at Rhodes University so far, I just think the soil is fertile here. There is so much potential for growth.”



Dr Alyssa Shawntay Williams
Department of Management

In Business and Beyond

Dr Alyssa Shawntay Williams, Lecturer in the Department of Management at Rhodes University, speaks of her experience on the New Generation Academic Programme (nGAP) as a time of academic and personal growth.

When Alyssa Williams first arrived at Rhodes University in 2011, she had what pundits call a 'Goldilocks Moment'.

"I initially signed up for BCom Law, but moved on to Psychology," she said. "I soon changed courses to Humanities, discovered that wasn't for me either and then, finally, I found my home, in Management."

Today, Alyssa Williams holds the following academic qualifications:

- BSocSc (Bachelor of Social Science)
- BSocSc (Honours) with distinction in Management
- BCom (Honours) with distinction in Information Systems
- MCom (Master of Commerce) in Management
- PhD in Management (conferred in 2024)

Why would students want to do a Management course, we asked her in an interview.

"A completed Management course helps you if you own a business, work for someone else, manage a project or simply deal with people in your everyday working life," she said. "It gives you a career foundation that you take with you in whatever direction you choose. I currently teach Management 101, and the student cohort comes from all over. Not only do we have our commerce students, we have pharmacy, law, and humanities students, who make up more than 600 in total, which I have to divide into two classes."

By Chris Marais
Photo: Chris Marais

The Rhodes University Department of Management curriculum is impressive when broken down into its working parts. Subjects include strategic management, human resources, supply chain, marketing, finance, project management, and intertwined in all subjects is business ethics and the use of information technology in the management functions.

The ultimate aim of Management studies at Rhodes University is to produce well-rounded graduates who have both strategic and practical skills to succeed in business and beyond. Students who succeed in these studies often become successful leaders in their organisations. They can think critically and solve complex business and personnel problems, making ethical decisions along the way.

Alyssa Williams chose to concentrate on customer relationship marketing in her studies.

“When writing papers or working on a thesis, I would put myself in the place of a customer,” she said. “You add value by trying to understand what satisfies a customer, so it’s not just about profits.”

Her studies in Information Systems dovetailed well with customer relationship marketing.

“Times have changed,” she said. “Business is no longer just about trying to get customers into your shop. Customers are evolving in their purchasing decisions and there are a host of new platforms emerging all the time, a kind of a digital word of mouth that goes beyond Facebook and WhatsApp ground.”

Dr Williams’ research and teaching practices are notable for blending theoretical studies with practical, innovative educational methods. She has been described as a “strong advocate of transformative teaching, by harnessing digital and blended learning” at Rhodes University.

Alyssa and the nGAP

“Just after I finished my Honours degree, a lecturing post came up in the Department of Management,” she said. “I applied for it and remember being very excited about the prospect. But I didn’t get it, and as a result, I became disheartened.

“Then, after my Masters, I heard about the nGAP programme, and found out it specifically offered a post in Management. I was about to begin my PhD studies, so this support would be of great benefit.

> “It sounded brilliant when I read up on the programme. It would give me a taste of top academia while supporting me, not only financially. ”

“It sounded brilliant when I read up on the programme. It would give me a taste of top academia while supporting me, not only financially. The funding was, however, crucial, because up to this point I had been working little jobs all over campus so I could get rebates on my tuition fees. Also, I now know why I was not successful for the first post, because this programme was made for me”

The best part of nGAP, said Alyssa, is the academic and social community that went with it.

“They come from all over this University and others,” she said. “They are people you never would have met otherwise. And they’re going through the same process as me, trying to manage work and family life.”

“Being in the nGAP programme is like being in a safe space. I think the Rhodes University nGAP system is one of the best in the country. The coordinator, Dr Mandy Hlengwa, really cares about the people on the programme – she is the glue that holds this together.”

“The other things I love about the programme is that I didn’t have to worry about running my data collection or analysis, or having to come up with travel expenses to see an out-of-town statistician.”

Alyssa found the nGAP writing retreats particularly valuable.

“They’re very structured,” she said. “Firstly, your whole department knows you’re going to be away and must, if possible, not be disturbed unless it’s something crucial.”

“Then from 8am to sometimes as late as 6pm, you’re in a controlled venue and you’re working on whatever project you set yourself before.

You're all working together in one space, but each of you is busy with a specific piece of writing."

"When you're back in the office, it's hard to fit in a writing with all the daily interruptions, enquiries and admin issues. So the writing retreat keeps the distractions down to a minimum."

But the writing retreats weren't all work and no play.

"After 6pm, it's normally bonding time," said Alyssa. "We'd take walks, play board games and share the day with each other. I'm a natural introvert, so being in this environment helped me get out of my shell. It helped me become more confident, both as an academic and as a person. At times, when I was perhaps a bit demotivated about my studies, I was able to talk to someone else on the programme, someone who might be a couple of years ahead of me, and get sound advice. There was a lot of one-on-one time with Mandy Hlengwa to iron out various issues, be that work or life-related. You always feel she has your back."

But the writing retreats came with a certain responsibility to perform. Dr Hlengwa would ask the retreatants beforehand for details on what they planned to achieve during that time and allocate each one an accountability partner to track progress. And after the retreat, she would want to know what development had taken place.

When asked what her biggest challenge on the nGAP programme was, Dr Williams replied:

"When I first came to this department, it was as a student, so the staff saw me through a certain lens. And now that I was on staff, I had to change that lens. And it's really all about taking up your own space. Keep moving, keep doing your own thing and do not be concerned about others' view of you."

"People tend to introduce you as 'the nGAP lecturer', but it's more accurate to say you're a 'Lecturer on the nGAP programme'. So changing the outside mind frame about the actual programme is a very big deal."

Dr Williams is not teaching her research speciality subjects as the Lecturer and course coordinator for Management 101.

"At first I was a bit thrown by only teaching at the first year level, as I see myself as a marketing specialist," she admits. "Then I became determined to make a huge success of it. I realised I was the best person to teach this crucial foundational material, and loved my students who are transitioning into higher education; therefore, I have a huge responsibility in my hands. And teaching these large classes has done wonders for my confidence."

Dr Williams' successful and innovative teaching practices were cemented by being twice nominated for the Rhodes University Commerce Faculty Teaching Award and being awarded the Teaching Award in 2024. She has also been nominated for the Rhodes University Vice Chancellor's Distinguished Teaching Award in 2025.



Philosophical Studies in Violence

As a Lecturer in the Department of Philosophy at Rhodes University, Sabelo Ndwandwe is one of a new generation of scholars casting fresh eyes on social ontology, the philosophy of race and Black Male Studies.

The Scottish port of Aberdeen is known as the 'Granite City' because of its impressive stone architecture. It is this feature that resonates most with Rhodes University nGAP lecturer **Sabelo Ndwandwe**, who is based there while completing his PhD research.

"I tell people Aberdeen is Makhanda by the sea," he laughs, referring to the classic 1820 Settler building styles of the former Grahamstown.

"But the weather up here in Aberdeen is something else," he says. "Brutal winters."

However, ancient architecture and cold winters are not what exercise Sabelo Ndwandwe's mind during his research work at the University of Aberdeen's School of Divinity, History, Philosophy & Art History.

Violence and South Africa

The young Philosophy Lecturer is trying to understand and attempt to address the systemic reasons for the continued prevalence of violence (especially sexual violence) in his home country, South Africa.

"There is a tendency to think of contemporary forms of violence and its articulation through race, gender, and sex, as abstracted from the histories of slavery, colonialism and apartheid in South Africa," he said. "While on the other hand, there is a lot of discussion about the question, for instance, of rape having its roots in our violent history.

Mr Sabelo Ndwandwe
Department of Philosophy

By Julienne du Toit
Photo: Chris Marais

"My conviction is that understanding the nature of [sexual] violence at a philosophical level would put us in a better shape to deal with it various manifestations in the afterlife of colonial-apartheid. I worry that the prevailing 'consensus' among self-conceived progressives in these debates may be neglecting the most fundamental aspect of this phenomenon."

In a study submitted for a Masters dissertation at Goldsmiths, University of London titled *Discourse on Violence: Race, Gender and Black Maleness (2020)*, Ndwandwe observes with frustration how much:

"Phobias of the Black Male deviant rooted in the 19th Century racist caricatures have been allowed to drive theory and general public opinion about Black men's violent nature in contemporary South Africa.

"While the histories of colonialism and slavery have framed Blackness not only in terms of racial aberrance, but also sexual deviance – Black maleness has been targeted in contemporary (gender) theory and analysis as the actualization of these pathologies.

"This is because, despite the violently un-gendering of Blackness under slavery and colonialism, contemporary theories of patriarchy assign gender intuitively upon all sexed bodies and claim Black men's lack of corresponding social position as the reason for his (sexual) deviance.

"From this myth – widely embraced as theory – Black men's existence is driven primarily by envy for white men's power and possessions. We are told he aspires to white patriarchy's power to control economic and political resources and gain cultural recognition.

"However, since this is an unattainable dream, he is believed to then resort to what he knows better – brute force, physical power, and sexual conquest: all things savagery, to secure a semblance of white masculinity's power.

"In other words, the centuries-old caricature of Black male deviance and primitive sexual obsession is theorised in contemporary times as a product of his incompleteness—his lack of true manhood."

In a later interview, he added:

"I only realised in later years that the question of violence has always haunted me. Formerly, I had just accepted it as part of life.

"I hope to develop an alternative conception of human rights, grounded in African ethical norms and customary practices,"

"During the Covid-19 year of 2020, I was thinking about the state-sanctioned slaughtering of poor Black men in Marikana as something to write about for my dissertation. I was also thinking about the scourge of gender-based violence that was at an all-time high or at least reported daily on our screens. I guess, I was always thinking about the intersection of violence with race, gender and class.

"That's where I began to consider the representation of the Black male. The figure of a Black male is often a personification of that violence, and I wanted to engage with this issue to understand what was going on there."

Background

Sabelo Ndwandwe received his early training at the University of Zululand, where he completed his Bachelor's degree in Philosophy and Psychology, and an Honours degree in Philosophy and Applied Ethics (with distinction). Sabelo then moved to the University of Fort Hare in the Eastern Cape for his Master's studies in Philosophy.

"I was interested in African Philosophy and the question of human dignity," he said. "I was exploring the perceived clash between traditional African social norms and customs and the Western conceptions of human rights. Was there an African Philosophy of Rights?"

He wrote a thesis that sets out an argument that rejects dominant approaches to human rights in African political philosophy, which ground rights on ontological attributes of human personhood. Instead, his work showed how rights follow from implicit normative principles recognized in traditional, living African customs and social practices.

"I hope to develop an alternative conception of human rights, grounded in African ethical norms and customary practices," he wrote.

In a recent interview, Ndwandwe said:

"South Africa has, in theory, the best constitution in the world. In practice, however, it presides over a broken social fabric. My aim was to find a home-grown synergy between legally codified principles and the corresponding normative conduct that could give us a cohesive society in reality."

During his time at Fort Hare University, Sabelo Ndwandwe was awarded the prestigious Commonwealth scholarship for Postgraduate studies at Goldsmiths, University of London, where he turned his focus on Race & Cultural Studies. While in London, he applied for the Rhodes University's nGAP position.

"I submitted my Master's thesis at Goldsmiths just before midnight on the deadline day. But I was also preparing for my nGAP interview on Zoom the next morning," he said. "I drank coffee and energy drinks all night to stay awake – I was afraid I would sleep through my scheduled Zoom session."

He was successful and joined the nGAP programme in 2021.

By 2023, however, Sabelo left to take on PhD studies at the University of Aberdeen, under the supervision of a renowned expert in his field of studies: Professor Tommy J. Curry.

Professor Curry is an American philosopher and scholar who holds a Chair in Africana Philosophy and Black Male Studies at the University of Edinburgh. His landmark book, published in 2017, was titled *The Man-Not: Race, Class, Genre and the Dilemmas of Black Manhood.*

Ndwandwe wanted to work with Professor Curry since 2021/22 but was not able to secure funding that would work with the arrangement that best fit both the demands of his nGAP duties in South Africa and full-time studentship residency, a requirement for PhD funding and Visa sponsorship at the University of Edinburgh. However, he managed to secure a slightly flexible studentship at the University of Aberdeen which enables him to bring in Professor Curry to his supervision composition in addition to two other professors based in the University of Aberdeen.

"He's a serious scholar who stands by the empirical verifiability of his research and pushes for a very rigorous approach to the study of violence in Black communities," he said. "What attracted me as well was seeing the fearlessness and the scholarly rigour with which he confronts the nature of racism in the prevailing theoretical frameworks used to study Black communities."

"Having my study co-supervised across two institutions gives me the opportunity to work both in Aberdeen and Edinburgh," said Sabelo Ndwandwe.

"I went to Scotland to get a global perspective of looking at systemic violence affecting Black people," he said. "In South Africa we need to study problems not as exceptional to our context but as connected with struggles around the world. The timing is ripe especially now when transformational programmes like the nGAP are still supported at our universities. Our thinking too should undergo the transformation if we're going to survive the political climate that is sweeping the so-called Global North."

When asked what the working title of his PhD research is, Sabelo answered:

"I like that you call it a 'working title', because it changes from time to time. Currently, it is *Sexual Vulnerability: A Study of Race, Gender and Violence in the Afterlife of Colonial Apartheid.*"



Dr Karabelo Ramosala
Department of Psychology

Building Resilience

Karabelo Ramosala has become an integral cog in the Rhodes University Psychology Department as a practising counselling psychologist, an nGAP Lecturer and a researcher focussed on the subject of first-generation student resilience.

Karabelo Ramosala's work is critical in the current South African tertiary education realm. Studies reveal that there is a high level of depression in first-year students facing the social and academic pressures of university life.

Many students come from economically stressed communities and families with no generational knowledge of what it takes to be on campus, maintain social and academic composure and eventually attain a degree.

The task of guiding new students through their time at university means being cognisant of stress elements like various forms of trauma, an ongoing financial juggling act, the pressure of examinations and a general feeling of exclusion, not fitting in.

Students who come from impoverished backgrounds and lack adequate financial support, are often forced to balance studies with part-time work, and struggle with basic needs like food, accommodation, transport, and internet access, which all affect their academic focus and persistence.

First-generation students frequently feel isolated and alienated due to differences in cultural background and limited familiarity with the university environment. They often lack family members with university experience, which compounds difficulties in understanding academic requirements and accessing support services.

By Chris Marais
Photo: Chris Marais

Early Days, Early Influences

Tsakane, where Karabelo Ramosala was raised, is a large township within the Ekurhuleni Metro in Gauteng Province. It is a mix of middle-class and underprivileged residents. Although Tsakane suffers from the kind of hardships found in most South African townships, it is also a vibrant community, full of social initiatives, a humming night life and a range of retail outlets, from malls to corner shops.

In a podcast interview, Karabelo spoke about her childhood and the way her family supported her studies, from school to university.

“Whether I was staying with my sister, my mother or my grandmother in Tsakane, it seems my whole life was centred on education,” she said. “When my grandmother visited the local old age home, I would often accompany her and listen to the stories of the elderly residents. That experience shaped my interest in people, their lives and their resilience.”

In a recent interview, she added:

“However, most people in my community were not able to go to university, even though they might aspire to,” she said. “So the study of first-year university students for my Masters thesis came naturally from having been such a person myself. I wanted to see what which resilience factors could actually help students who are prone to depression, to succeed at university.

“South Africa is still structured in such a way that in order to make something of yourself, you need to perform well academically. Many first-generation students have quite a lot of academic pressure, but also pressure from home because they are seen as that beacon of hope to make a difference in their families’ economic status.”

Ironically enough, in a country where rebuilding a flagging infrastructure demands a wide range of artisanal skills, young South Africans still see academic qualifications in their future.

“I think the issue begins at high school level, when students are choosing subjects linked to their career field, technical careers and professions aren’t given as much spotlight as your more traditional careers, which involve a university degree,” Karabelo Ramosala said.

“Already at that stage, children have some sort of stigma against these technical fields. This is sad, because many students who don’t perform well academically (and could flourish in a technical skill) still feel pressured to endure.”

Building Resilience

The solution seems to lie in building student resilience.

“And in this field, we work with the PR6 Scale,” she said.

The Predictive Resilience Scale, also known as the PR6 or Predictive 6-Factor Resilience Scale, is a holistic, forward-looking psychometric measurement tool designed to assess crucial life skills that lead to wellbeing and personal success.

It is based on a peer-reviewed, neuroscience-backed framework that identifies six domains of resilience, each representing an aspect of resilience that can be learned and improved through directed effort.

The six domains of the Predictive Resilience Scale include qualities like Vision (self-belief, clear goal orientation), Composure (regulating emotions while being proactive), Reasoning (creativity, innovative problem-solving, anticipation and being change-fit), Tenacity (persistence, learning from mistakes and realistic optimism), Collaboration (working with a talented, supportive group) and Health (exercise, nutrition and a good night’s sleep).

The Master’s Degree

Karabelo’s studies began at the University of Pretoria, culminating with a Masters degree in Psychology, titled *Depressive Symptomatology*

> “The Nine-Tenths Mentorship programme, aims at improving access and success in higher education. The objective is to understand how mentorship contributes to resilience and academic success in a vulnerable student group.”

and Resilience Profiles Among University Students, and was submitted in March, 2021.

Her Masters work included a review of rising suicidal behaviour in tertiary settings. By approaching these issues through a resilience lens, Ramosala positioned interventions not merely as crisis responses but as systems of support that can be built into everyday campus life. Her paper concluded that an integrated approach to fostering resilience in universities was essential, given the high demand and limited resources in student mental health services.

"And for my internship, I was at the Counselling and Assessment Centre at Epworth Children's Home in Germiston," she said. "I worked quite intensely with vulnerable children in the welfare system, with surrounding schools and neighborhoods."

Epworth Children's Home was a therapeutic community focused on rehabilitating and supporting distressed children, including those who were abused, neglected or emotionally disturbed.

It had a multi-disciplinary team consisting of social workers, psychologists, and occupational therapists who run residential therapeutic programs and community outreach projects for children. Their services included psychological assessments, therapy, occupational therapy, and support for education and reintegration into families or communities.

The village also provided parenting workshops, social work services, and career guidance within a caring environment tailored to help children overcome trauma and improve development outcomes.

Unfortunately, due to lack of funds, the 105-year-old children's home was forced to close in May, 2024.

Taking the nGAP

Karabelo Ramosala applied for the nGAP programme in 2021, was selected and began her time at Rhodes University the following year.

"I joined the staff at the Psychology Department, but it was only in 2023 that I applied for my PhD," she said. "I was lecturing both undergraduates and Postgraduates. I also lectured on the Masters programme, teaching Masters students on mental health and well-being, as well as resilience and adjustment.

"I'm very grateful for the nGAP programme. It was a great transition to come from being a full-time student to going into the world of work as a Lecturer, even on the reduced workload basis.

"The nGAP coordinator, Dr Mandy Hlengwa, has been the greatest support, even outside of the programme. She has helped me to settle many of my own anxieties, and she has made sure I found my own community."

Her ongoing PhD studies revolve around the academic resilience of first-generation university students involved in the Nine-Tenths Mentorship programme, which aims at improving access and success in higher education. The objective is to understand how mentorship contributes to resilience and academic success in a vulnerable student group.

Media and Public Engagement

Karabelo has managed to find a good working combination of real-world practice and academia.

"I do some public engagement, usually speaking to high school students in Makhanda about leadership and mental health," she said.

"The reason why I still practise is because it informs my teaching. And the best way to have that real-life experience or that real life practice is by continuously engaging with clients or with the community just so that my teaching is still relevant and responsive to the community that I exist in.

My practice and my community engagement work inform my teaching and vice versa. I work with people from Makhanda, the townships and some of the schools. I don't counsel Rhodes University students in my practice – they make contact with the Counselling Centre if they need psychological services."

A Fulbright Scholar

In 2023, Karabelo applied for a Fulbright Visiting Researcher Scholarship, was selected and arrangements were made for her to take it up at the beginning of 2025 at the City University of New York in the Department of Educational Psychology.

"I am hoping it will be a great opportunity to experience a university outside of my country, and see how a different institution delivers lectures, and do their research," she said.



Snapshots from the Cenozoic

From the time dinosaurs were wiped out to present day, conditions on Earth have been reshaped repeatedly, and so have the creatures on it – including us humans. Silindokuhle Mavuso is captivated by the evolutionary secrets and lessons that lie hidden within the planet's rock layers.

Around 56 million years ago, climate change began to devastate life on Earth. Carbon dioxide and methane was pouring out of oceanic vents and volcanoes. The planet's average temperatures shot up by five to eight degrees Celsius. The seas became acidic. Marine micro-organisms were wiped out. Many mammals on land survived by becoming dwarfs.

Geologists call this eventful time in Earth's history the Paleogene Eocene Temporal Maximum, or PETM. It was a geologically short (200 000 years) epoch that intrigues **Silindokuhle Mavuso**, an nGAP Lecturer and doctoral scholar at Rhodes University.

"Nature recycles tragedies. There is so much to learn from this period. But actually, the whole Cenozoic era, from just after the dinosaurs were wiped out 66 million years ago until the present, is absolutely fascinating."

The Cenozoic heralds the evolution of an Earth we recognise, full of flowering plants, insects, birds and mammals.

Life on the Farm

The influence of environmental change on evolution in animals and humans has interested Silindokuhle since his childhood. His father's farm outside Newcastle in KwaZulu-Natal was a favourite weekend destination.

Dr Silindokuhle Mavuso
Department of Geology

By Julienne du Toit
Photo: Chris Marais

"I was quite an outdoorsy kid, very much into animals. It was fascinating to see how different they are from us, and how they function. Apart from cattle, pigs and other livestock, we could sometimes see monkeys, snakes, and in the distance, buffaloes in a neighbouring nature reserve.

"After rains, my two younger brothers and I loved to follow the river and see how it had carved up the landscape. I would wonder about the rocks, and why they were there. At home, our favourite television channels were *Animal Planet* and *Discovery*."

He also sang in the choir, played the piano and violin, and enjoyed presenting experiments that blended science and music.

Good marks at school, an interest in living beings and the environment, and a mother who was a clinician made Silindokuhle think about becoming a doctor.

"But I soon realised that I'm not so interested in saving lives. I am more interested in finding out why people exist."

Everything Aligns

Silindokuhle chose to study Geology at the University of Cape Town (UCT).

"I figured that at least I'd be able to get a job in a mine."

But he didn't foresee how interesting he would find Human Evolution, an elective he picked up in second year.

"I was like, mind blown."

He triple-majored in Geology, Geography and Archaeology. In third year, Silindokuhle received a scholarship via Harvard and George Washington Universities to go to an archaeological dig near Lake Turkana in Kenya, where some of humanity's oldest *hominin* remains have been found.

"It was part of the Koobi Fora Field School. Everything seemed to be aligning at the same time. There were archaeologists, palaeo-anthropologists and biologists working there, but the year I went, there were no geologists. I could see my geology and my archaeology coming together. That helped me decide the direction I wanted to take in my academic career."

He signed up for a dual Honours in Geology and Palaeontology at the University of the Witwatersrand under the supervision of Distinguished Professor Bruce Rubidge.

"So in addition to those two to five million year old fossils I worked on in Kenya, I got to work on Karoo fossils as well, which are 300 million years old. I really enjoyed that. But I still wanted to work on human remains."

Caves are Time Capsules

Being close to the Cradle of Humankind enabled Silindokuhle to examine the deposits in Sterkfontein Caves for his Masters degree. But since cave geology is not something that is taught in South Africa, part of his area of study was in France – thanks to the Mobility Erasmus Mundus Scholarship.

His dissertation was on the sedimentology of the Jacovec Cavern within the Sterkfontein complex.

Caves can become repositories of extraordinary fossils. But, says Silindokuhle, these 'snapshots', are very complicated to study and decipher.

"They are worthy of study because they can tell us so much about resilience of humans and other animals and how they adapt in times of environmental stress."

Occasionally dead or dying creatures wash into the caves and are preserved. These are gifts to palaeontologists and geologists. And with these repositiories, there are speleothems – flowstones, stalactites and stalacmites – that help tell the story. They carry clear markers of timing and environmental conditions, a bit like calendar dates or tree rings, explains Silindokuhle.

"A cave becomes a kind of time capsule. But what is the timing and punctuation of these time capsules? We need to understand the geological processes because that informs so much of what we actually say about these fossils."

Back to the Turkana Basin

In 2020, Silindokuhle began planning his PhD. His doctoral studies would focus on the sequence stratigraphy of the upper Koobi Fora Formation in the Turkana Basin, specifically the Hominid habitat and geographic controls in the Pleistocene era of eastern Africa.

It was then that he first heard of an nGAP position at Rhodes University's Department of Geology for a sedimentologist.

"I listened to the advice of one of my supervisors, Dr Robyn Pickering of UCT. She said this was a perfect opportunity for me to combine research and an initially low teaching load that would help me grow as an academic in South Africa.

"I went for the interview, and later heard I was accepted. It's been great, because I could really focus on my research, and the people here have been so incredibly nice and accommodating."

Fossil Greats

Silindokuhle is convinced that South Africa is the most fortunate country when it comes to palaeontological, geological and archaeological wealth.

"We easily, in my opinion, have the best fossil record of all time. We have the first photo-synthesising bacteria in Mpumalanga, right up to the first tetrapods that left the oceans onto land just outside Makhanda.

"We have the most extraordinary record of mammal-like reptiles. We can actually see the first evidence of hair, and the first bony palate, which eventually differentiated reptiles from mammals. We have the first record where we diverge from those ancestors. We even have tracks embedded in rocks, helping us to understand how they moved.

"Before the start of the Cenozoic Era 66 million years ago, the dinosaurs become extinct, but you have our ancestors, the creatures that would eventually become mammals, just slipping through. They were small in size, but they carried on.

"Then later you get the PETM, with its global spike in temperature. That's when reptiles do well, but mammals don't. Only the strongest and smallest survive.

"After that, you have the Oligocene, about 35 to 25 million years ago, when you see these really big animals arising: huge rhinos, the first elephants, the first horses. Mammals start taking over. They flourish, they start migrating and exploring new environments outside the tropics and they evolve different feeding strategies, like ruminants – the ancestors of sheep and cows, which have four stomachs to digest rough vegetation.

African Bears and Giant Apes

"And we have some cool stuff from the Miocene 23 to 5 million years ago, which was a really interesting time period for mammals. You can see it in the West Coast Fossil Park. Africa actually had bears!

"We have places where there are so many apex predators in a small amount of space. Clearly the food webs looked very, very different from the ones we know today.

Then comes the Plio Pleistocene era, started about five million years ago. Apes start doing really well. Around 2 million years ago, one kind of ape grows to three metres tall – the *Gigantopithecus*.

Other members of the ape species decide to leave the crowded forest to explore the drier, more open places. That's when we see things like bipedalism, which opens everything up. Brains get bigger. Protein becomes a priority.

"This is the game-changer. We see early humans evolving, using stone tools for the first time. A million and a half years ago, we start using fire, processing food outside of our bodies, which means we can access much more energy – and more time.

"That in turn means building social group dynamics. This is when archaic societies start."

A Worthy Human Endeavour

"We are a product of our environment. And it's such an interesting, personal story. The way we use our environments, the things we do, moving outside of Africa, populating the rest of the world, the changes in skin colour and how unimportant that is, how cooperation helped us survive.

"We are the product of the efforts of so many other organisms that came before us.

"And, of course, about 60 or 70% of the world's *hominin* remains are found in South Africa, within the Cradle of Humankind. And then there are the caves and overhangs that preserve the traces of actual *hominin* and human behaviour, like Boomplaas in the Klein Karoo, like Sibudu in KZN, other places in Limpopo, and some places in the Kalahari.

"And we have that snapshot. It's quite beautiful."

Silindokuhle is devoted to promoting heritage-based education by leading the National Geographic-funded Umsuka Public Palaeo-anthropology Project. He also works with the Eastern Cape Provincial Heritage Resources Authority.

"I love it that I can use my skills and my science to tell and preserve these stories of evolution and culture. I think it is a worthy human endeavour."



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Departments

Centre for Higher Education Research, Teaching and Learning (CHERTL)

Introduction

The Centre for Higher Education Research, Teaching and Learning (CHERTL) contributes to the academic project of Rhodes University through offering a range of staff and student development programmes. In addition, CHERTL staff supervise Postgraduate scholars whose projects focus on critical issues in the field of Higher Education. Centre staff conduct research in the fields of academic staff development, educational technologies, knowledge in the curriculum, social justice in higher education, and student access to knowledge practices in higher education.



Professor Jo-Anne Vorster
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

Doctoral graduations:

Dr Anthea Adams
A social-realist analysis of the professional identity formation of lecturers emerging from completing professional development at a South African research-intensive university.

Dr Valindawo M Dwayi
A social-realist account of the way academic leaders and managers exercise agency in promoting and monitoring students' academic success in South African higher education.

Dr Carina Mwatunga
A capabilities analysis: Degree mobility and the impact of returning South African alumni on their home countries' sustainable development.



Enjoying at chat a tea-time during the Higher Education Close-Up 11 Conference: Olebogeng Mokgantshang (WSU), Janèt West (UJ), Lyndall Kemm-Stols (DUT) Simbongile Ntwasa (SUN), Kiveshni Rammanhor (DUT).

Photo: CHERTL

The Centre for Higher Education Research, Teaching and Learning contributes to the academic project of Rhodes University through offering a **range of staff and student development programmes**.

Dr Linus Nekondo
The role of academic literacy courses in students' disciplinary knowledge-building: a case study of a Namibian university.

Dr Annelie Nghikembua
The role of students in internal quality assurance: A case study of Namibian institutions of higher education.

Master's graduation

Mr Siyanda Manqele
Exploring academics' experiences of the research ethical clearance process: A case study of a South Africa.

Postgraduate Diploma in Higher Education (PGDip) (HE)

In 2024, eighteen (18) scholars completed the PGDip (HE) successfully. Seventeen (17) completed the course for academic developers, seven (7) with distinction, while one (1) candidate completed the course for lecturers.

Distinguished Visitors / International Visits

Professors Sarah Eaton from the University of Calgary, Dr Ann-Marie Houghton and Professor Jan McArthur from Lancaster University, Mikateko Mathebula from the University of the Free State, Professor Wai Sze (Grace) Leung from the University of Johannesburg and Professor Emerita Chrissie Boughey all contributed to CHERTL's Doc Weeks of 2024.

Significant Research Aligned Events

The Centre for Higher Education Research, Teaching and Learning (CHERTL) and the Centre for Postgraduate Studies (CPGS) hosted the 11th Higher Education Close-Up Conference from 3-5 July 2024. This biennial conference alternates between the University of Lancaster in England and South African universities (University of Cape Town or Rhodes University), attracting academics and academic developers focused on fine-grained higher education research.

The 2024 conference explored the theme of trust in higher education, encouraging participants to reflect on higher education's purpose, relationships with students and communities, and knowledge creation and dissemination that serves the public good. The theme also prompted consideration of how higher education can "nurture ethical ways of being." Keynote speakers included Professor Sarah Eaton (University of Calgary), Associate Professor Siphokazi Magadla (Rhodes University's Department of Political and International Studies), and Professor Mikateko Mathebula (University of the Free State). Fifty-five (55) papers were presented by eighty-seven (87) academics from twenty-seven (27) institutions across nine (9) countries: Australia, Chile, Denmark, Kenya, Malaysia, Namibia, the Netherlands, the UK, and the USA.

In October 2024, CHERTL organized a Teaching and Learning Showcase with seventeen (17) papers and two (2) workshops on the scholarship of teaching and learning (SoTL), presented by thirty (30) Rhodes University academics. Professor Wai Sze (Grace) Leung from the University of Johannesburg delivered the keynote address, *Down the bewildering AI rabbit hole: Guiding learning and teaching in a digital wonderland.*

Centre for Higher Education Research, Teaching and Learning Publications



PGDip (HE) and Doctoral Graduates, and their supervisors at the CHERTL graduation celebration.
Photo: CHERTL

Books/Chapters/Monographs

Bozalek, V.G.

Bozalek, V.G. (2024) *Decentering Epistemologies and Challenging Privilege: Critical Care Ethics*. New Brunswick, NJ: Rutgers University Press. ISBN: 9781978835030.

Bozalek, V.G. (2024) *The Routledge International handbook of feminisms in social work*. New York: Routledge: Taylor and Francis. ISBN: 9781032327600.

Bozalek, V.G. (2024) *Post-foundational Approaches to Qualitative Inquiry*. New York: Routledge: Taylor and Francis. ISBN: 9781032287881.

Bozalek, V.G. (2024) *Working with Theories of Refusal and Decolonization in Higher Education*. New York: Routledge: Taylor and Francis. ISBN: 9781032434384.

Shefer, T., **Bozalek, V.G.** and Romanovsky, V.E. (2024) *Hydrofeminist Thinking with Oceans*. New York: Routledge: Taylor and Francis. ISBN: 9781003355199.

Shefer, T., **Bozalek, V.G.** and Romano, N. (ed.) (2024) *Hydrofeminist Thinking with Oceans: Political & Scholarly Possibilities*. New York: Routledge: Taylor and Francis. ISBN: 9781032408972.

Shefer, T., **Bozalek, V.G.** and Romano, N. (2024) Hydrofeminist scholarship and activisms in/on/with South African oceans and shores. In: Shefer, T., Bozalek, V. and Romano, N. (eds.). *Hydrofeminist Thinking with Oceans: Political & Scholarly Possibilities*. New York: Routledge: Taylor and Francis. p.1-14. ISBN: 9781032408972.

Chiappa Baros, R.P.

Stein, S. and **Chiappa Baros, R.P.** (2024) Southern Students in the House of Western/Northern Academia. In: da Silva, K.A. and Pereira, L.S.M. (eds.). *Decolonizing the Internationalization of Higher Education in the Global South*. London: Routledge. p.142-162. ISBN: 9781003409205.

Clarence, S. and Wilmot, K.

Clarence, S. and **Wilmot, K.** (2024) Navigating co-supervision: Creating supportive relationships between peers in supervision teams. In: Rolph, C. (ed.). *Supervising Doctoral Candidates: Surviving and Thriving in Academia*. UK: Emerald Group Publishing Limited. p.61-74. ISBN: 9781837970513.

Dana, Z.

Magadla, S., **Dana, Z.** and **Nkomo, D.** (2024) Multilingual teaching and assessment: Towards an endogenous Political and International Studies at a South African university. In: Vogt, K. and Antia, B.E. (eds.). *Multilingual Assessment-Finding the Nexus?* Berlin: Peter Lang. p.185-220. ISBN: 97836 31861592.

Hlengwa, A.

Njovane, T. and **Hlengwa, A.** (2024) Transformation beyond the Surface: Race, Power and Young Academics after #RhodesMustFall. In: Schramm, K. and Ndlovu-Gatsheni, S.J. (eds.). *Knowing - Unknowing African Studies at the Crossroads.* Leiden: Brill. p.158-170. ISBN: 9789004701441.

Pallitt, N.

Pallitt, N. (2024). Hopes and Values for the Next Generation of Educational Design Research. In: Christensen, I.F., Markauskaite, L., Bonderup Dohn, N.; Ripley, D. and Hachmann, R (eds.). *Creating Design Knowledge in Educational Innovation: Theory, Methods, and Practice*. London: Routledge. p. 1-8. ISBN 9781003391432.

Pallitt, N., Gachago, D. and Bali, M. (2024). Chapter 9 Embracing Change: Journeys to Learning Design. In: Eds. D. Conrad & W. Archer (eds.). *Portraits of Academic Life in Higher Education: From Hiring to Retiring*. Leiden, The Netherlands: Brill.

Creative Writing

Adams, A., **Booi, M.**, **Mawonga, S. and Vorster, J**
Adams, A., **Booi, M.**, **Mawonga, S.**, **Nkomo, D.**, **Nosilela, B.** And **Vorster, J.** (2024) (eds.).
Embedding multilingualism in the curriculum: Using language as a resource for teaching and learning. Grahamstown: Rhodes University.

Mawonga, S.
Mawonga, S. and Williams, A.S. (2024) Using translation to foster epistemic access in Management 1 and Management 1F. In: Adams, A., Booi, M., Mawonga, S., Nkomo, D., Nosilela, B. and Vorster, J. (eds.). *Embedding multilingualism in the curriculum: Using language as a resource for teaching and learning*. Grahamstown: Rhodes University.

Non- Peer Reviewed Subsidy-Earning Journal Research Publications

Mawonga, S.
Mawonga, S., Phakathi, S., Malimba, N. and Marire, J. (2024). Multilingual Pedagogies in Introductory Economics. In: Adams, A., Booi, M., Mawonga, S., Nkomo, D., Nosilela, B. and Vorster, J. (eds.). *Embedding multilingualism in the curriculum: Using language as a resource for teaching and learning.* Grahamstown: Rhodes University.

Peer Reviewed Subsidy-Earning Journal Research Publications

Adams, A.
Williams, S., **Adams, A.**, Geduld-Van Wyk, C. and Muhuro, P. (2024) Holding a mirror up to Academic Development through the HELTASA (un)conferencing methodology. *Critical Studies in Teaching and Learning (CriSTal)*. 12 (1). p.99-116.

Blackie, M.A.L.
Blackie, M.A.L. (2024) ChatGPT is a game changer: detection and eradication is not the way forward. *Teaching in Higher Education*. 29 (4). p.1109-1116.
Blackie, M.A.L. (2024) Indigenous knowledge systems and science education. *South African Journal of Science*. 120 (5/6). p.1-4.
Yucel, R. and **Blackie, M.A.L.** (2024) Constructing assessment practices for knowledge building in science. *Teaching in Higher Education*. 2024 (3). p.1-17.

Blackie, M.A.L. and Luckett, K.
Blackie, M.A.L. and **Luckett, K.** (2024) Embodiment Matters in Knowledge Building. *Science & Education*. 1 (1). p.1-14.

Blackie, M.A.L., Kramm, N. and Pallitt, N.
Blackie, M.A.L., McKenna, S., **Kramm, N.** and **Pallit, N.** (2024). Interrogating assessment in the age of Generative AI. *African Journal of Inter/Multidisciplinary Studies*. 6(1), pp. 1–11.

Bozalek, V.G.
Kuby, C.R. and **Bozalek, V.G.** (2024) Opening commentary to the special issue "becoming 'bad researchers': putting affect theories to work as ethical processes of disruption". *International Journal of Qualitative Studies in Education*. 37 (3). p.1-5.
Fathalizadeh, R., Koro, M., Taylor, C.A., Murris, K., Kuby, C.R., **Bozalek, V.G.** and Dopierala, A. (2024) Teaching Post qualitatively. *Qualitative Inquiry*. 2024 (2024). p.1-11.
Osgood, J. and **Bozalek, V.G.** (2024) "This thing that we do": in pursuit of hope-full renewals through hydrofeminist scholarly praxis. *Gender and Education*. 36 (8). p.1013-1032.
Bozalek, V.G., Shefer, T. and Romano, N. (2024) Wild Sea Swimming as a Slow Intimacy: Towards Reconfiguring Scholarship. *Feminist Encounters: A Journal of Critical Studies in Culture and Politics*. 8 (1). p.1-12.
Manning, E. and **Bozalek, V.G.** (2024) In Conversation with Erin Manning: A Refusal of Neurotypicality Through Attunements to Learning Otherwise. *Qualitative Inquiry*. 2024 (2024). p.1-17.
Shefer, T., **Bozalek, V.G.** and Romano, N. (2024) Affective Oceanic Sea swimming and Encounters for Care-Full Environmental Communication. *Environmental Communication*. 19 (1). p.45-59.
Bozalek, V.G., van Hove, G. and Romano, N. (2024) Doing Academia Differently: In Conversation with Neuroatypicality. *Qualitative Inquiry*. 2024 (2024). p.1-6.

Knowles, C.R.
Knowles, C.R. (2024) Pushing against conventions: an African Feminist contribution to knowledge-making. *Gender and Education*. 36 (6). p.633-647.

Luckett, K.
Luckett, K. (2024) Racial discourses and colonial education policy: The discursive construction of education development at a historically white South African university. *Arts and Humanities in Higher Education*. 24 (1). p.3-22.
Luckett, K. and Bhatt, I. (2024) Getting critical about critique in higher education: provocations on the meanings of Critical Perspectives? *Teaching in Higher Education.* 29 (6). p.1690-1703.
Connell, R. and **Luckett, K.** (2024) Good universities and critique. *Teaching in Higher Education*. 1 (2024). p.1-9.

Ndabula, Y.
Young, C., **Ndabula, Y.** and **Macleod, C.I.** (2024) Employing Reflexivity in Sexuality Socialisation Research: A Methodological Contribution from Psychosocial Studies. *Qualitative Report*. 29 (7). p.1-24.
Ndabula, Y., **Macleod, C.I.**, **Du Plessis, U.** and **Moore, S.** (2024) South African government responses to Trump's Global Gag Rule: Silence, ignorance, and avoidance. *Critical Social Policy*. 45 (1). p.72-293.

Wilmot, K.
Wilmot, K. (2024) Structured doctoral programmes for developing the scholar and the scholarship: Lessons from practice. *Critical Studies in Teaching and Learning (CriSTal)*. 12 (1). p.1-21.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Luckett, K. and Hlengwa, A.
Luckett, K. and **Hlengwa, A.** Collaborative Teaching: A relational pedagogy built on trustworthiness. *Higher Education Close-Up 11*. Rhodes University, Makhanda. South Africa. July 2024.

Centre for Postgraduate Studies (CPGS)

Introduction

The Centre for Postgraduate Studies (CPGS) is central to Rhodes University's aspiration to strengthen its standing as a research-intensive and Postgraduate-oriented institution. Guided by Goal 4 of the Institutional Development Plan (IDP), *Umkhombandlela*, CPGS designs and implements activities aimed at developing and nurturing the research skills of Postgraduate students.



Professor Sioux McKenna

Director (January - May 2024)

Photo: Jackie Grove

To achieve its goals, CPGS works in close collaboration with institutional partners, faculties, and departments. These partnerships enable CPGS to draw on and leverage the resources and expertise of faculties, institutes, and departments to support Postgraduate students. The Centre also benefits from national and international partnerships that contribute to advancing Postgraduate education.

Distinguished Visitors / International Visits

In January 2024, staff from the Centre for Postgraduate Studies (CPGS) travelled to Amsterdam to join a grant-writing team that developed a proposal for a project focused on enhancing doctoral education. The project, which brings together universities from South Africa, Kenya, Slovenia, and the Netherlands, along with their respective ministries and higher education councils, to explore and strengthen approaches to doctoral education, was awarded €1,112,722 by the European Union.



Associate Professor Sybert Mutereko

Director (June 2024 - Present)

Photo: Jackie Grove

In March 2024, CPGS hosted a delegation from ASSAf, including a visiting guest, Vice-Chancellor and Professorial Research Fellow from Edith Cowan University in Australia, Professor Loretta Baldassar, who gave a public lecture.

In June, staff from the Centre for Postgraduate Studies (CPGS) and the Centre for Higher Education Research, Teaching and Learning (CHERTL) accompanied nine (9) doctoral candidates to a summer school at Lancaster University in the UK. The visit formed part of the DHET-funded project, Social Justice and Quality in Higher Education.

In July 2024, the Centre for Postgraduate Studies (CPGS), in collaboration with the Centre for Higher Education Research, Teaching and Learning (CHERTL), hosted the international conference Higher Education Close Up. The conference brought together participants from around the world to explore and debate the meaning of trust in the academy.

In July 2024, in collaboration with CHERTL, the CPGS hosted the following distinguished visitors who conducted workshops for postgraduate scholars and supervisors at Rhodes University: Dr Ann-Marie Houghton (Lancaster University, UK), Professor Viv Bozalek (University of the Western Cape and Research Associate at Rhodes University, South Africa), Dr Roxana Chiappa (University of Tarapacá, Chile), Professor Sarah Elaine Eaton (University of Calgary, Canada), and Professor Mikateko Mathebula (University of the Free State, South Africa).

CPGS works in close collaboration with institutional partners, faculties, and departments, which enables CPGS to draw on and leverage the resources and expertise of faculties, institutes, and departments to **support Postgraduate students.**

In October 2024, Dr Mark Brigham, a Professor in the Biology Department at the University of Regina, Germany facilitated a workshop on writing for publication.

In June 2024, PhD scholar and CPGS staff member Asiphe Mxalisa presented a paper at the International Conference on Gender and Education in Australia, as well as at a seminar hosted by Lancaster University in the UK. In September 2024, she presented another paper at Griffith University in Australia.

In April 2024, Professor Sioux McKenna, a member of the CPGS team, co-presented a paper with Professor Burton at the Quality in Postgraduate Education conference in Adelaide, Australia. At the same conference, Professor McKenna also co-authored and presented a second paper with Professors Kisembe, Omondi, and Onyango, all from Kenya.

In July 2024, Professor McKenna facilitated a supervision development course for RSIF in Nairobi, attended by academics from across East and West Africa.

In September 2024, at the Consortium for Higher Education Research conference in Luxembourg, Professor McKenna presented a paper titled “Gaming Rankings in the Global South.”

In October 2024, she visited Vrije Universiteit Amsterdam to conclude the Creating Postgraduate Collaborations project and to conduct supervision sessions.

Significant Research Aligned Events

In February 2024, the Enabling Quality Postgraduate Education (EQPE) project—a national initiative managed by CPGS—was launched with an in-person colloquium that created a platform for dialogue on models of supervision and the cultivation of research-rich environments. Guest speakers included Professor Sioux McKenna (CPGS), Professor Stephanie Burton (Chair of USAf’s Community of Practice for Postgraduate

Education and Scholarship), and Dr Whitty Green (Chief Executive Officer of the Council on Higher Education).

In March 2024, CPGS, in partnership with the Student Representative Council (SRC), launched *Hey Postgrad, RU Plugged In?* —a multi-week induction programme designed to support new Postgraduate students and supervisors.

In September 2024, in collaboration with the Postgraduate Liaison Committee, CPGS hosted its Annual Postgraduate & Postdoctoral Research Conference under the theme "Building Bridges: Unleashing the Potential of Scholarship." The conference was attended by two hundred and thirteen (213) participants from thirty (30) departments across six (6) faculties and also featured the inaugural #3MT (Three-Minute Thesis) Competition.



Centre for Postgraduate Studies (CPGS) Publications

Books/Chapters/Monographs

Hwami, R.

Hwami, R. (2024) *Identity Construction as a Spatiotemporal Phenomenon within Doctoral Students' Intellectual and Academic Identities*. London: Routledge. ISBN: 9781032454498.

Mutereko, S.

Oladejo, O.M., **Mutereko, S.** and Mavunda, N.A. (2024) Local Governments' Roles in Sustainable Waste Management for a Green Economy. In: Ganiyu, I.O., Olarewaju, O.M. and Ige-Olaobaju, A.Y. (eds.). *Waste Management and Life Cycle Assessment for Sustainable Business Practice*. USA: IGI Global. p.221-240. ISBN: 979836 9348345.

Peer Reviewed Subsidy-Earning Journal Research Publications

Blackie, M.A.L., McKenna, S., Kramm, N. and Pallitt, N.M.

Blackie, M.A.L., McKenna, S., Kramm, N. and **Pallitt, N.M.** (2024) Interrogating Assessment in the Age of Generative AI. *African Journal of Inter/Multidisciplinary Studies*. 16 (S3). p.1-11.

Boughey, C.

Boughey, C. (2024) What have we been thinking about? Higher education as a knowledge field in the SAJS. *South African Journal of Science*. 120 (2024). p.1-7.

Boughey, C. (2024) Conditions constraining the potential of Educational Development to impact on the transformation of teaching and learning. *Critical Studies in Teaching and Learning (CriSTal)*. 12 (2). p.41-599.

McKenna, S.

McKenna, S. (2024) The resilience of rankings in the neoliberal academy. *Transformation in Higher Education*. 9 (415). p.1-17.

McKenna, S. and Thondhlana, M.

McKenna, S. and **Thondhlana, M.** (2024) Community engagement as a liminal space of translanguaging. *Critical Studies in Teaching and Learning (CriSTal)*. 12 (2). p.122-139.

Mxalisa, A.

Mxalisa, A. and Sonkosi, A. (2024) Book review "Blackness at the Intersection, Crenshaw, K., Andrews, K. & Wilson, K. (Eds.)." (2024): *Critical Studies in Teaching and Learning (CriSTal)*. 12 (1). p.127-130.

Mutereko, S.

Muringa, T.P. and **Mutereko, S.** (2024) Exploring Municipal Personnel Perspectives on the Viability of Shared Service Centres in South Africa's Underperforming Municipalities. *African Journal of Governance & Development*. 13 (2). p.1-27.

Community Engagement

Introduction

Research is the process of discovering new knowledge. This knowledge can be either the development of new concepts or the advancement of existing knowledge and theories, leading to a new understanding that was not previously known. However, research does not take place in a vacuum. Rather, research and research methodologies are influenced by and to a large extent perpetuate the dominant philosophical approach prevalent in a society at any given time.



Diana Hornby
Director

Photo: Jackie Grove

Western or traditional research methodologies are derived from the framework of positivism, regarded as a research strategy and approach rooted in the ontological principle and doctrine that truth and reality are free and independent of the viewer and observer (Aliyu, Bello, Kasim, & Martin, 2014). It is research which brings to bear, on any study of indigenous or local communities, a cultural orientation, a set of values, a different conceptualization of such things as time, space and subjectivity, highly specialized forms of language, and structures of power (Smith, 2013). For far too long traditional research methodologies have given power to academia to extract knowledge from communities without any benefits accruing to these communities from the research.

Engaged research, on the other hand, and specifically in the form of community based participatory research (CBPR), demands that community knowledge and voices be acknowledged and included in research and development.

CBPR has many of its origins in social movements and marginalized spaces specifically in the global South. Unlike traditional research, CBPR, with social change as its aim, is collaborative research, based on the principle of co-creation of knowledge and transformation of the local community (Hall, 2011). As a core function of higher education and the nexus between teaching and learning, and research, community engagement is manifested in the forms of engaged citizenry (volunteerism), service learning, engaged research and social innovation. Community engagement serves as the bridge between community and university, building and enabling community university partnership relationships for engaged research which in turn contributes to building knowledge in community engagement. Among other activities, engaged research at RUCE in 2024 was promoted through its online, open access, African Journal of Higher Education Community Engagement (AJHECE), annual conference and collaborative research initiatives. The engaged research programme has expanded its reach through national and international collaboration as a member Hub of the Knowledge for Change (K4C) International Consortium, coordinator of the K4C Southern Network and as key member of the K4C African Regional Centre, established at Gulu University in Uganda.

The Africa Regional K4C Centre

The UNESCO K4C International Programme established three (3) Regional Centres worldwide in 2024 and the African Regional Centre is located at Gulu University. Rhodes University together with Gulu University, North West University and the University of the Free State coordinate the regional training centre. Dr Oosthuizen was involved in the CBPR curriculum development and facilitation for the African Regional Centre and the training programme took place in mid- April in Uganda.

The face-to-face residency and official launch of the UNESCO K4C African Regional Centre happened mid-June in Gulu, attended by Emeritus Professor Budd Hall from the University of Victoria in Canada and Dr Rajesh Tandon, the founder and director of Participatory Research in Asia. Both Drs Budd and Tandon are the Co-chairs of the UNESCO Knowledge for Change Global Movement and remain very involved in the regionalisation of K4C.

Engaged Research Short Course

The Engaged Research course was conducted from 26 February to 29 March 2024 with participants from various departments within Rhodes University. The programme, designed to foster collaborative and participatory research approaches included academics and Honours and Masters students from diverse academic backgrounds and the following departments: Journalism and Media Studies; Centre for Critical Studies in Sexualities and Reproduction (Postdoctoral Fellow); Information Systems (Honours Student); Centre for Biological Control; Department of Economics & Economic History; Institute for the Study of the Englishes of Africa (ISEA); Journalism (Masters Student); Deputy Vice-Chancellor (DVC) Research, Innovation and Strategic Partnerships.

Community Based Participatory Research has many of its origins in social movements and marginalized spaces specifically in the global South.



Lindani Sifanele, a student volunteer in the 9/10s mentorship program presenting a poster on his Honours research at the 2024 Rhodes University Community Engagement Symposium. Photo: RUCE

Engaged Research Community of Practice (CoP)

The Engaged Research Community of Practice (CoP) held its planning meeting for 2024 on 24 January to strategise activities for the year. Term 1 concentrated on Dr Hall sharing profound insights into the UNESCO K4C programme worldwide, emphasizing Rhodes University's involvement. The second term focused on the roundtable discussion at the International Community Engagement May 2024 conference focusing on Ethics processes in higher education for engaged research, drawing on lessons learned and best practices from around the globe.

Dr Oosthuizen facilitated an engaged research session with Psychology Masters students, focusing on the application of CBPR in mental health within primary healthcare centres. The session proved to be insightful, with students actively engaging in discussions and activities. An Engaged Research support group for Masters, PhD and Postdoctoral participants who were unable to participate in the VC Education Initiative Research Group was formed and the term 1 seminar held on 18 March covered engaged research methodologies and provided students with valuable insights and tools for conducting engaged research.

Oxford Berlin Research Partnership Evidence Based Series of Seminars

Dr Oosthuizen was invited to facilitate a workshop on Community-Based Participatory Research (CBPR) as part of a series of Evidence-Based Society seminars hosted by Oxford Berlin Research Partnerships. The participants included Masters, PhD and Postdoctoral Fellows from both Oxford and Berlin University. The workshop aimed to familiarize participants with the principles of CBPR, provide practical guidance on incorporating engaged elements into existing research and equip participants with tools for connecting with communities and navigating barriers, including power dynamics and institutional obstacles.

Sound Postcard Exhibition

Thandi Matyobeni contributed to the creative output of a transdisciplinary engaged research project. Sound postcards were exhibited at the Rhodes University Library in February 2024.

Community Engagement Conference

As a contribution to the knowledge building process, RUCE hosted the international conference titled *Community Engagement and the trajectory of community-university-society relationship: past, present and future possibilities* on 14 to 16 May 2024 in Makhanda, with sub-themes covering conceptual, pedagogical, ethical and university social responsibility perspectives. The conference aimed to contribute to knowledge building on the history of community engagement (community-university-society relationship) in South Africa; the rest of Africa and the global South; foster and strengthen partnerships between academics and institutions in the Global North and South to enhance the global impact of community- university-society relationships; deepen the relationship with the hubs from the K4C international network to contribute to knowledge building on Community-Based Participatory Research and Social Responsibility for the Global South; and commemorate the 120th anniversary of Rhodes University by tracing the trajectory of the community-university-society relationship in Makhanda.

Ninety-four (94) abstracts were received which surpassed previous years and this necessitated a move of venue from AMAZWI to the National Arts Monument Building. The distinguished key note speakers at the conference were Professor Andre Keet, Deputy Vice Chancellor for Engagement and Transformation, Nelson Mandela University; Dr Nomakwezi Mzilikazi, Deputy Vice-Chancellor, Research, Innovation and Strategic Partnerships, Rhodes University; and Dr I Sooliman: Founder & CEO: Gift of the Givers whose inspiring talk on service and volunteerism afforded him a standing ovation at the end. The programme also comprised of three Dialogues with a number of impressive personnel from different higher education institutions, national bodies relevant to community engagement and a community organisation.

Dialogue 3 focused on engaged research ethics in South African higher education institutions and the prominent panel comprised of Emeritus Professor Peter Clayton, former Deputy Vice-Chancellor for Research & Innovation, Rhodes University; Dr Janet Hayward - Chairperson: Rhodes University Human Research Ethics Committee (HREC); Ms Monica Canca – Manager: The Learning Trust & Community Member serving on the HREC; Dr Martina Jordaan - Head: Community Engagement Research and Postgraduate Students, Mamelodi Campus, University of Pretoria; and Ms Jacqui Scheepers Searle - Manager: Service Learning and Civic Engagement Unit, Cape Peninsular University of Technology. This dialogue centred on the dynamic landscape of engaged research ethics within South African universities and offered diverse perspectives and insights into the critical intersections of ethics, community engagement, and academic research.

RUCE Community Engagement Writing Retreat

RUCE successfully hosted a Community Engagement Writing Retreat at the Assegai Hiking Trails from 25 to 27 November 2024. The retreat was aimed at providing dedicated time, resources, and support to enhance the RUCE team's ability to produce high-quality, publishable work that contributes to the scholarship of engagement. The retreat allowed for significant progress on various writing projects. Five RUCE staff attended the retreat, each bringing their expertise and ongoing projects. The writing retreat proved to be a valuable investment in professional development and knowledge production within the RUCE division. Several drafts are now in the final stages of revision. The retreat demonstrated the importance of structured, dedicated time for academic writing and collaboration, reinforcing RUCE's commitment to bridging scholarly research and societal impact. We are very grateful to the Research Office for

this opportunity. The following recommendation emanated from the writing retreat: i) similar retreats be organized annually to maintain momentum and support ongoing scholarly writing; ii) additional funding be secured to accommodate more participants and extend the retreat duration if needed; iii) continuous peer review sessions be implemented post-retreat to sustain engagement and progress.

Postgraduate Supervision and Graduation

Dr Maistry, RUCE's Research Associate, supervised Ms Nosipho Nkwinti in the Rhodes University Community Engagement division who graduated in 2024.

The African Journal of Higher Education Community Engagement

The focus of Vol 1 Issue 2 launched on December 2024 comprised of five (5) engaged research papers and two (2) thought pieces. The accreditation process of the journal with DHET will be initiated after the third issue of the Journal in May 2025. There is a growing interest in the Journal with the number of visitors viewing the Journal growing from 128 views in January to over 3000 in December 2024. We have also seen a steady increase in downloads over the past 12 months, moving from 59 downloads per month to 354 in December 2024. The geographical reach has been encouraging with visitors from seventy-eight (78) Countries accessing the Journal.

References

Aliyu, A. A., Bello, M. U., Kasim, R., and Martin, D. (2014). Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners. *Journal of Management and Sustainability*, *4 (3)*, 79-95.

Hall, B. (2011). Towards a knowledge democracy movement: Contemporary trends in community-university research partnerships. *Rizoma freireano*, (9), 1.

Smith, L. T. (2013). *Decolonizing methodologies: Research and indigenous peoples*. London: Zed Books Ltd.

For far too long traditional research methodologies have given power to academia to extract knowledge from communities **without any benefits accruing to these communities** from the research.



RUCE's Nosi Nkwinti and Joana Carlos Bezerra who are part of the Indigenous Peoples Observatory Network (IPON), in person meeting in Peru to share research findings. Photo: RUCE

Community Engagement Publications

Books/Chapters/Monographs

Maistry, S.
Maistry, S. (2024) Bridging the Knowledge Culture Gap between Early Childhood Development Practitioners and Academic Researchers: Experiences from the DUT K4C Hub, Durban, South Africa. In: Lepore, W., Hall, B.L. and Tandon, R. (eds.). *Bridging Knowledge Cultures Rebalancing Power in the Co-Construction of Knowledge.* Canada: Brill. p.1-311. ISBN: 9789004687752.

Maistry, S. (2024) Promoting Knowledge Democracy: Disrupting from within. In: Chitanand, N. (ed.). *Academic Staff Development: Disruptions, complexities and change (Envisioning new futures).* South Africa: African Sun Media. p.1-205. ISBN: 9781991260352.

Peer Reviewed Subsidy-Earning Journal Research Publications

Carlos Bezerra, J.
Pickering, T., Galappaththi, E., Ford, J., Pearce, T. and **Carlos Bezerra, J.** (2024) Fijis policy response to COVID-19 and the integration of Indigenous voices. *Environmental Science & Policy.* 158 (2024). p.1-13.

Nqowana, T. and Carlos Bezerra, J.
Nqowana, T., **Limson, J.L.**, **Fogel, R.** and **Carlos Bezerra, J.** (2024) Citizen science tools for engaged research: Water quality monitoring in remote communities. *South African Journal of Science.* 120 (9/10). p.56-64.

Oosthuizen, R.
Bayne, R.J., **Pyle, D.**, **Maguire, K.A.**, **Oosthuizen, R.** and **Tandlich, R.** (2024) Examining water quality and transport implications of alternative supply during a drought in a South African municipality. *Air and Water Components of the Environment.* 1 (2024). p.221-241.

Paphitis, S.A.
Kaul, A., Connell-Jones, L., **Paphitis, S.A.** and Oram, S. (2024) Prevalence and risk of sexual violence victimization among mental health service users: a systematic review and meta-analyses. *Social Psychiatry and Psychiatric Epidemiology.* 59 (8). p.1285-1297.

Jannesari, S., Damara, B., Witkin, R., Katona, C., Sit, Q., Dang, M., **Paphitis, S.A.** and *et al, a.l.* (2024) The Modern Slavery Core Outcome Set: A Survivor-Driven Consensus on Priority Outcomes for Recovery, Wellbeing, and Re-integration. *Trauma, Violence, and Abuse.* 25 (3). p.2377-2389.

Kaul, A., Saboor, L., Ahmad, A., Mannell, J., **Paphitis, S.A.** and Devakumar, D. (2024) What are the experiences and psychosocial needs of female survivors of domestic violence in Afghanistan? A qualitative interview study in three Afghan provinces. *BMJ Open.* 14 (6). p.1-11.

Carter, R., **Paphitis, S.A.**, Oram, S., McMullen, I. and Curtis, V. (2024) Analysis and evaluation of peer group support for doctors in postgraduate training following workplace violence and aggression. *BJPsych Bulletin.* 2024 (2024). p.1-8.

Talbot, A.L.P.
Talbot, A.L.P. and Barends, Z. (2024) Motor development: A precursor to support Grade-R Literacy learning Lessons from BuddingQ. *Reading & Writing.* 15 (1). p.1-10.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Maistry, S.
Maistry, S. Community Engagement: Past and Future. Does the Present remain an Intersection? *IARSCLE 2024 Conference.* University of San Diego, California. United States of America. August 2024.

Maistry, S. Community Engagement Then and Now: Continuities and Discontinuities. *Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present And Future Possibilities.* Rhodes University Community Engagement (RUCE), Makhanda. South Africa. May 2024.

Maistry, S. The Social Service Professions in South Africa: Professionalization of Community Development and the relationship between Social Work and Community Development in democratic South Africa. *Panorama of Social Work: Innovations and Inclusiveness in Social Development.* INPSWA & Department of Social Work Loyola College, Chennai, India, Chennai. India. February 2024.

Maistry, S. and Hornby, D.
Maistry, S. and **Hornby, D.** Universities as anchor institutions: integrating the element of trust for developing transformational community university partnerships. *Re-imagining Trust in Higher Education.* Rhodes University, Makhanda. South Africa. July 2024.

Hornby, D.
Hornby. D. May 2024. From 'ivory tower' to 'anchor institution': Rhodes University as a case study on conceptualizing universities as anchor institutions in South Africa. *Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities.* RUCE International CE Conference. RU, Makhanda. South Africa.

Matyobeni, T.
Pearse, N.J. and **Matyobeni, T.** Community engagement and structural holes theory. *2024 Community Engagement Conference: Community Engagement and The Trajectory Of Community-University-Society Relationship: Past, Present And Future Possibilities.* Settlers Monument, Makhanda. South Africa. May 2024.

Nkwinti, N.
Nkwinti, N. (2024). Ethical dilemmas in Academic Research: Challenging the Exploitative Dynamic of Community-University Partnerships. *Higher Education Teaching and Learning Association 2024 Conference.*

Nqowana, T.
Nqowana, T. (2024). Fostering Social Justice Through Service-Learning: A closer look at the Vulindlela Parent Engagement Program's Initiatives. *9th International Symposium on Service-Learning.* Symposium Proceedings. University of Indianapolis. Indiana. USA.

Nqowana, T., Limson, J., Fogel, R., Bezerra, J. C. and Paphitis, S. (2024). The impact of a citizen science project on citizen scientists: A case study of the water quality monitoring project at Amakhala Game Reserve. *International Higher Education Teaching and Learning Association Conference.* Nelson Mandela University.

Library Services

Introduction

The Library Research Report highlights the key research-related activities and events in 2024.

Postgraduates Support

The new Postgraduate Library Orientation Workshops started from January to April 2024. During this period, the library reached out to four hundred and thirty-five (435) first-year Postgraduate students. The workshop topics covered training on database search strategies, reference management systems, off-campus access, theses and dissertations and research libguides.



Nomawethu Danster

Director

Photo: Jackie Grove

Significant Research Aligned Events

Researcher Visibility & Reputation Management

Several Library activities endeavour to assist with research identity profiling, including assisting with registering and/or managing online research profile identities. As of 25 March 2024, Rhodes University joined the consortia of universities using Intembeko Hub for managing RU Researchers' ORCID profiles.

During 2024, the following ORCID profiles have been completed:

- **Dr Boudina McConnachie** (Music & Musicology)
- **Associate Professor Helen Kruuse** (Law)
- **Dr Tapiwa Madimu** (History)
- **Idah Mbengo** (Environmental Science)
- **Irene Akumoah Boateng** (Business School)
- **Donovan Wynne** (Music and Musicology).

The Intembeko ORCID Hub **connects researchers and students** with the organisations where they study, are employed, or from which they receive funding.

INTEMBEKO ORCID HUB

ORCID workshops and engagements:

An ORCID Workshop was delivered to a group of eleven (11) Faculty of Law staff. The Librarian: Scholarly Communication and Postgraduate Support was invited to present and talk about ORCID and researcher profiles at the Education Department research seminar meeting on 27 June 2024. The "ITOCA Introduction to ORCID" webinar held on 27 June 2024 was made available on the Library's ORCID LibGuide.

Rhodes Library Research Day

Rhodes University Library hosted a successful Library Research Day on October 23, 2024. The event, held both in-person and online, explored the theme "Research in the Digital Age: New Frontiers and Challenges". With a strong turnout of one hundred and four (104) attendees, the event provided a valuable platform for Postgraduate students, Postdoctoral Fellows, and emerging researchers to enhance their research skills. Attendees engaged with experts through informative sessions on topics such as *artificial intelligence, scholarly integrity, research data management, researcher identifiers, transformative agreements, and research intelligence*.





Significant Research Aligned Services

Rhodes Digital Commons (Repository)

The Rhodes Digital Commons (Repository) is the central institutional repository for articles, conference papers, occasional papers, inaugural lectures, theses and dissertations, etc., authored by Rhodes University researchers and Postgraduates. In 2024, the library recorded 3,683 uploads to the Rhodes repository.

The library has made considerable progress in advancing the deposits of Rhodes University-generated research articles and conference papers into the Rhodes Digital Commons (Repository).

The research output for academic staff who have published in the following journals/reports has been uploaded:

- African Entomology
- African Invertebrates
- African Zoology
- English in Africa
- Ostrich
- Rhodes Journalism Review
- Shakespeare Society in Southern Africa
- Tropical Zoology
- Water Research Commission reports

Research Data Repository

The central institutional repository for research datasets supports research reproducibility and outputs as authored by Rhodes University researchers and Postgraduate students. A total of eight hundred and twenty-six (826) research datasets were ingested and made available on the Rhodes Digital Commons (Research Data Management) platform (Figshare).

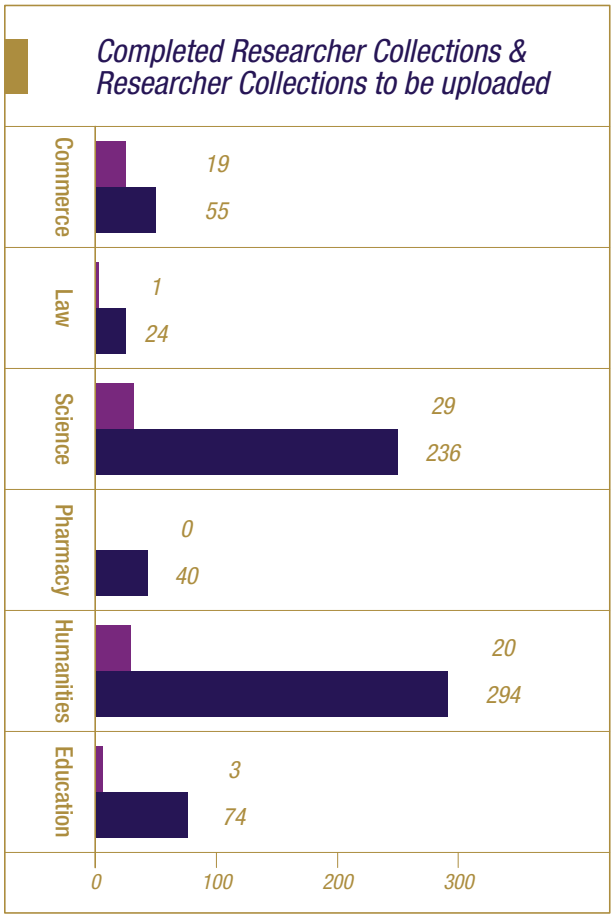


Table 1: Research Collections uploaded in 2024

The institutional research data repository continued to be used well beyond South Africa's borders. The image and chart below illustrate how the bulk of the usage is associated with the Global North, as shown in the table below.

The Data Repository usage statistics provide a valuable means to determine the extent to which the Rhodes research data is being accessed by academic peers. Of this collection, 2,918 downloads and 11,343 views were recorded in 2024.

The Data Repository usage statistics provide a valuable means to determine the extent to which the Rhodes research data is being accessed by academic peers. Of this collection, **2,918 downloads** and **11,343 views** were recorded in 2024.

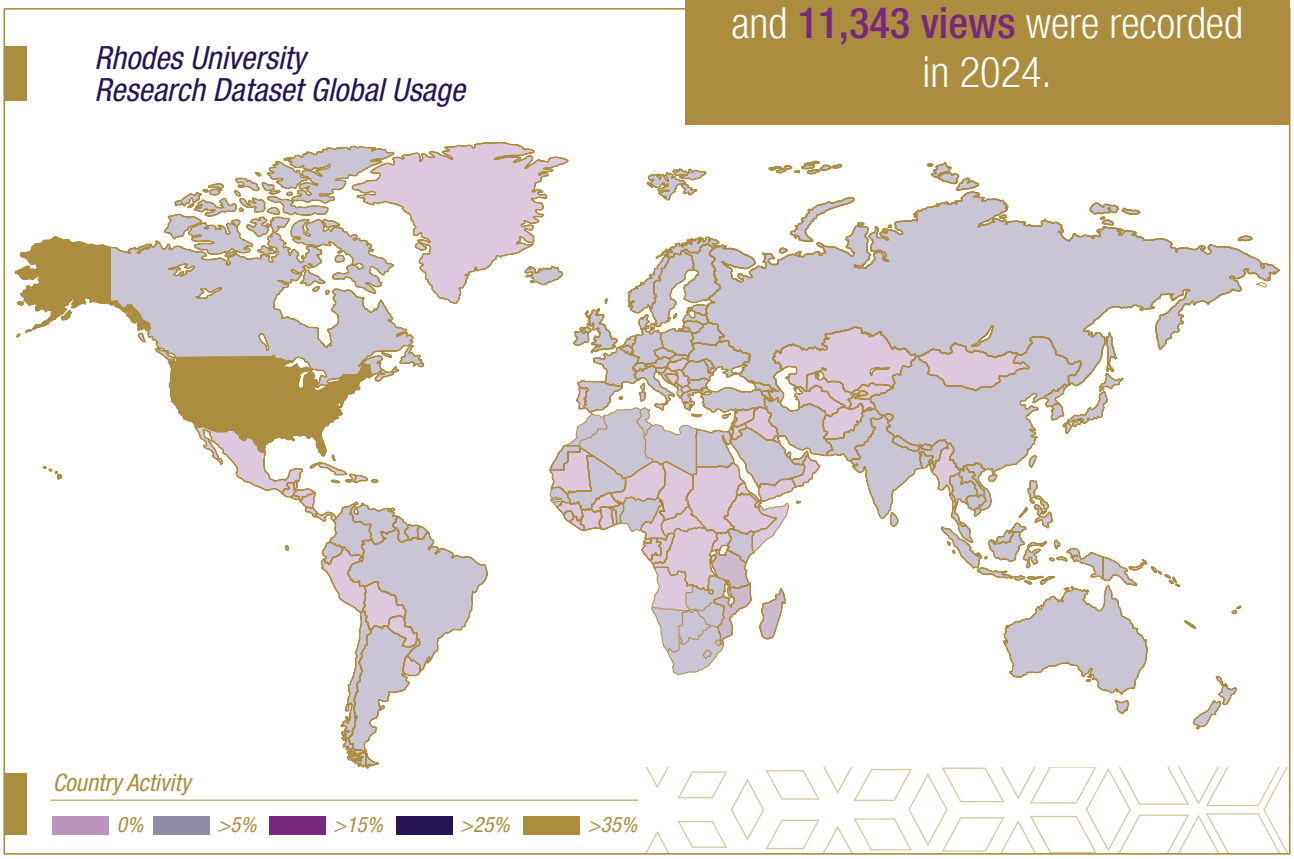


Figure 1: Usage of Rhodes research datasets across the globe



Rhodes Digital Commons (Rhodes Hosted Journals)

The Rhodes Hosted Journals is the central institutional repository for hosting journals published by Rhodes departments and newsletters published by entities supported by Rhodes, such as the Albany Historical Society. The table below illustrates the usage statistics by reflecting on the number of full-text article downloads from each of the respective journals in 2024.

Usage statistics reflects that **73,759 full-text articles were downloaded** across five (5) Rhodes Hosted Journals.

Journals Usage Statistics in 2024
(Full Text Article Downloads)

African Music

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
3 426	4 057	6 381	5 413	4 887	6 349	8 519	10 304	6 057	3 669	2 215	2 885	**62 162**

Coelacanth

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
74	111	164	80	99	112	70	129	93	95	68	38	**1 133**

Toposcope

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
76	123	164	135	153	268	138	188	194	181	152	137	**1 909**

SA JOG

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
155	346	308	335	290	373	538	998	360	150	1 360	111	**5 324**

AJHECE

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
59	65	30	91	96	104	79	75	98	101	79	354	**1 231**

TOTAL: 73 759

Table 2: Article downloads in 2024

Open Scholarship and Knowledge Repositories

Knowledge Repositories

There are numerous pockets of Departmental print or digital archives at Rhodes. One of the Library's strategic objectives is to incorporate these archives as digital libraries or knowledge repositories into the centralised Rhodes Digital Commons Repository system. Current collection uploads to the knowledge repositories A-Z are as follows:

- Environmental Learning Research Centre (ELRC)
- DST/NRF SARChI Interdisciplinary Science in Land and Natural Resource Use for Sustainable Livelihoods Centre for Biological Control (CBC)
- Department of Accounting
- Department of Anthropology
- GENAct archive

Open Scholarship
(Transformative Agreements)

The **Impact of Transformative Agreements and Article Processing Charges** (APCs) in 2024 has been quite significant. A total of ninety-six (96) research articles have been published via the Transformative Agreement route by seventy-nine (79) different researchers at Rhodes. The total estimated discount value associated with these publications is R 4,194,098 (up from R 2,765,876 in 2023), a year-over-year increase in savings of 51.63%.

The chart below displays a comparison of the number of Transformative Agreement publications across the University's different faculties. There is a disparity in the adoption of open access publishing across different faculties. While Science and Humanities appear to have embraced open access more readily during the course of the year, the other faculties seem to have lower levels of participation.

Sustainable Development Goals (SDGs) Portal

The Library's **Sustainable Development Goal (SDG) 2030** collection (4773 articles) is aligned with the University's sustainability goals. We have taken a multidisciplinary approach to developing a University SDG webpage. We aim to achieve the following:

- Provide access to information for each of the seventeen (17) United Nations Sustainable Development Goals.
- Advance the awareness of the SDGs
- Promote Rhodes University's multi-disciplinary SDG research Institutes/Centres and programmes
- Enhance the visibility and discoverability of the discipline-specific programmes and researchers
- Promote the publishers and partnerships that are committed to the SDGs.

The Library manages the **Rhodes University Sustainable Development Goals (2030)** multi-disciplinary collections. The collections are aligned with the Rhodes University Environmental Sustainability strategy, the SDG-categorised/listed articles, book chapters, books, and conference proceedings authored by Rhodes University researchers and published in the Web of Science.

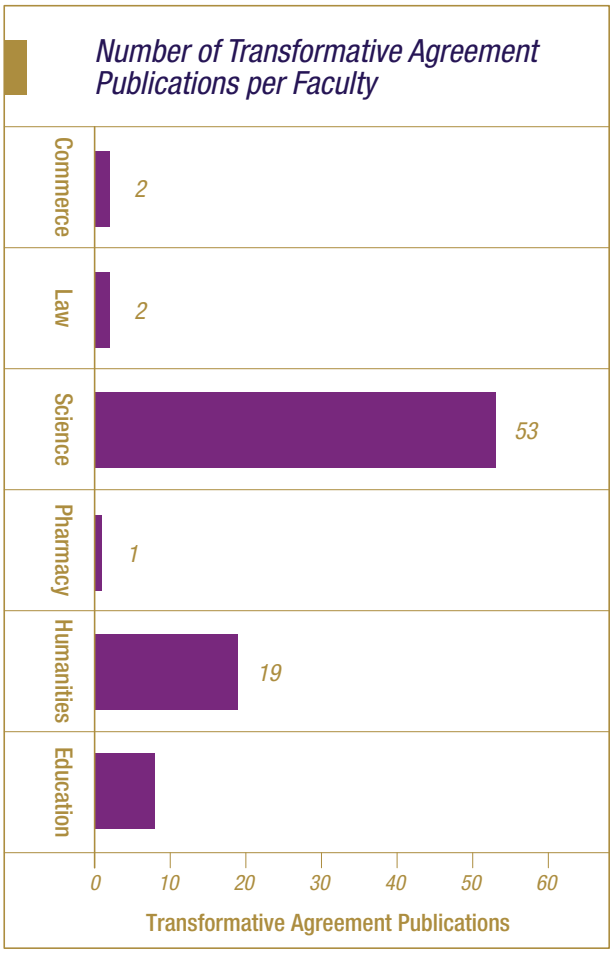


Table 2: Number of Transformative Agreement Publications per Faculty

Library Services Publications

Books/Chapters/Monographs

Simango, S.
Simango, S. (2024). A Brief Introduction to Research Data Management. Encyclopaedia of Libraries, Librarianship, and Information Science (4), 26–38.
https://doi.org/10.1016/B978-0- 323-95689-5.00087-0

Peer Reviewed Subsidy-Earning Journal Research Publications

Mthethwa, T.
Macleod, C.I. and **Mthethwa, T.** (2024) Refining out-of-school youth sexualities empowerment programmes using a sexual and reproductive citizenship lens: the Masizixhobise toolkit... *Sex Education*. 24 (6). p.1-17.
https://doi.org/10.1080/14681811.2024.2412666

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed proceedings)

Martindale, D.L.
Martindale, D.L. Driving visibility: The Library's strategic role in supporting Sustainable Development Goals at Rhodes University. *Environmental Sustainability Colloquium.* 21 May 2024. Rhodes University. Rhodes University, Makhanda. South Africa.

Mosia-Xaba, L.
Mosia-Xaba, L. and Amner, R. (2024). Leveraging 'leapfrog' technologies to mitigate the chronic underfunding of Eastern Cape Libraries. *Library and Information Association South Africa Conference.* Durban, KwaZulu-Natal, South Africa. 1 October 2024.

Mtshare, T.
Mtshare, T. (2024). Design and Synthesis of Novel benzoxazole-thiazolidinedione hybrid Compounds for anti-cancer Therapy. *57th Annual South African Society for Basic and Clinical Pharmacology (SASBCP) Conference.* Centurion, Gauteng, South Africa. 17 September 2024.

Simango, S.M.
Simango, S.M. Brain-Computer-Interfaces and Future Access to Library Collections. *Library 2.0. Worldwide Virtual Conference.* Online, San Jose. USA. 1 October 2024.

DEPARTMENT OF Accounting

Introduction

The primary research stream in the Department of Accounting remains the Master of Commerce degree, specialising in Taxation. On other research fronts, the Department had a quiet research year in 2024, due to the focus on the delivery of the South African Institute of Chartered Accountants (SAICA) endorsed professional program.



Edward Horn
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

Professor Lilla Stack continued her stellar record of supervising Postgraduate students. After the October 2024 graduation ceremony, Professor Stack had graduated one hundred and one (101) graduates in total, of which ninety-one (91) are Rhodes graduates.This translates into seventy-eight (78) Masters by coursework and thesis, five (5) full Masters and eight (8) PhDs.

Distinguished Visitors / International Visits

A collaboration was developed in which Auditing 3 students and their counterparts at Coventry University in the United Kingdom teamed up in a simulated international auditing environment made possible by technology. They worked on providing solutions to real-life scenarios. The feedback was overwhelmingly positive from students at both universities, and the collaboration continues.

Research Publications

Emeritus Associate Professor Jackie Arendse is the managing author of *Silke on Tax Administration*, a peer-reviewed, annually updated reference work on the administrative provisions of taxation legislation in South Africa. Widely used by professionals, academics and students, the book explains the investigation and audit powers of the South African Revenue Service (SARS), provides guidance on taxpayers' rights relating to taxation, and incorporates commentary and interpretation on a range of legislative items.

During 2024, Professor Arendse updated eight (8) chapters in the book as listed under publications.

Professor Arendse is also the author of the *Income Tax Reporter*. This LexisNexis online publication provides a six-weekly update of developments in South African taxation, including new case law judgments, new legislation, and new and updated documents issued by SARS.

The following editions were published during 2024:

Income Tax reporter Volume 63 2024, consisting of the following Parts:

Volume 63 Part 8 (21 pages)	
New Legislation	Kuwait protocol
Taxation Notes	SARS interest rates
	Tax statistics
	Tax-exempt institutions
	SARS guide on renewable energy incentives
	Taxation of collective investment schemes
Volume 63 Part 7 (60 pages)	
Recent Cases	The Thistle Trust v CSARS 2024 (12) BCLR 1563 (CC); [2024] ZACC 19
New Legislation	2024 Amendment Bills: SARS and National Treasury responses to submissions and release of final Bills
Taxation Notes	Interpretation Note 134 - Disposal of asset by a deceased person, deceased estate, and transfer of assets between spouses
	Regulation of tax practitioners
	SMME Connect Issue 9
	Tax-exempt institutions Connect Issue 6
	SARS Warning on crypto asset compliance
	Donations tax declaration form
Volume 63 Part 6 (39 pages)	
Recent Cases	Christoffel Hendrik Wiese and Others v CSARS (SCA)
	TALT v CSARS (SGHC)
Taxation Notes	2024 filling season for companies
	2024 trust filling season
	Third-party data submissions
	Employer interim reconciliations
	Interpretation Note 15 (Issue 6)
	Binding General Ruling 73
	Tax collections boost from the two-pot retirement system
	SARS system enhancements for the two-pot retirement system
	Warning for homeowner's associations
Volume 63 Part 5 (52 pages)	
Taxation Notes	Small Business Taxation
	OECD update
New Legislation	Draft Amendment Bills, 2024
Volume 63 Part 4 (41 pages)	
New Legislation	Revenue Laws Amendment Act, 2024
From the *Gazette*	Returns to be submitted for the 2024 year of assessment
Taxation Notes	New and updated SARS Rulings
	OECD Guidance on Country-by-Country Reporting
	e-Filing Taxpayer Profile Highjackings on the Increase: Legal Implications and Preventative Measures
Recent Cases	Poulter v CSARS (WCHC)
	Coronation Investment Management SA (Pty) Ltd v CSARS (CC)

Volume 63 Part 3 (48 pages)	
From the *Gazette*	Auto assessments
	Amendments to the regulations in terms of the s11D
	Amendments to the regulations in terms of s74(2) of the Value-Added Tax Act
Taxation Notes	Guide on the Solar Energy Tax Credit
	Estimated VAT Assessments
	SARS' Security Transfer Tax Guide
	SARS Rulings on VAT Apportionment
	Third-party Returns
	Dispute Resolution Enhancements for Trusts
Recent Cases	Capitec Bank Limited v Commissioner or the South African Revenue Service (CSARS)
	Enviroserve Waste Management (Pty) Limited v CSARS (Supreme Court of Appeal)
	Walter v CSARS (High Court)
	Unitrans Holdings Limited v CSARS (High Court)
	Dorking Africa (Pty) Ltd v CSARS (High Court)
	Bullion Star (Pty) Ltd v CSARS (High Court)
	Pather v CSARS (High Court)
	Ramharakh v CSARS (High Court)
	CSARS v J Company (High Court)
	ABD Limited v CSARS (Tax Court)

Silke on Tax Administration is widely used by professionals, academics and students. The book explains the investigation and audit powers of the South African Revenue Service (SARS), provides guidance on taxpayers' rights relating to taxation, and incorporates commentary and interpretation on a range of legislative items.

Volume 63 Part 2 (58 pages)	
Taxation Notes	2024 Budget
	2024 Budget Speech
	2024 Budget Review
Volume 63 Part 1 (55 pages)	
New Legislation	2023 Amendment Acts
	Rates and Monetary Amounts and Amendment of Revenue Laws Act No. 19 of 2023

Significant Research Aligned Events

Professor Jackie Arendse continued to share her expertise by presenting numerous tax webinars and seminars throughout the year to tax professionals, accountants and businesses around the country, totalling one hundred (100) hours. Each seminar and webinar counts for Continuous Professional Development (CPD) points for registered tax practitioners and members of professional bodies and institutes.

Department of Accounting Publications

Books/Chapters/Monographs

Arendse, J.A.

Arendse, J.A. (2024) Chapter 4: Registration, returns, assessments and records. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.4.1-4.61. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 5: Dispute resolution. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.5.1-5.72. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 6: Advance rulings. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.6.1-6.38. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 7: Administrative penalties. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.7.1-7.73. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 8: Audit, investigation, search, seizure and access to information. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.8.1-8.53. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 9: Payment of taxes, refunds and SARS' collection powers. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.9.1-9.91. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 10: Registration, returns, assessments and records. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.10.1-10.15. ISBN: 9780409059366.

Arendse, J.A. (2024) Chapter 11: Miscellaneous provisions. In: *Silke on Tax Administration.* 16th Ed. South Africa: Lexis Nexis (Pty) Ltd. p.11.1-11.62. ISBN: 9780409059366.



DEPARTMENT OF Anthropology

Introduction

The Rhodes University Department of Anthropology continued to advance its commitment to decolonial scholarship and transformative research throughout 2024. This year marked significant achievements in graduate education, with three (3) Masters students graduating with distinction, demonstrating the Department's excellence in Postgraduate supervision.



Dr Dominique De Carvalho E Azevedo Duarte Santos

Head of Department

Photo: Jackie Grove

Our faculty maintained active engagement in international collaborations, from UNESCO heritage fellowships to global sustainability initiatives, while pioneering innovative approaches to maritime heritage research through community-engaged methodologies.

The Department's research output reflects our dedication to Indigenous knowledge systems, pedagogical transformation, and collaborative scholarship that challenges conventional academic boundaries. These accomplishments underscore our position as a leading centre for critical anthropological research that addresses contemporary global challenges while honoring diverse ways of knowing.

Postgraduates / Graduations

Masters Students Graduated 2024

Three (3) exceptional Masters graduates achieved distinction in 2024:



Nicay Courtlynn Sysaar, Dr Gabriel Gyang Darong, and Lebogang Mothapo outside the graduation hall on their graduation day.

Lebogang Mothapo
Master of Social Science – Anthropology (Distinction)
Supervisor: Dr Gabriel Darong

Nicay Courtlynn Sysaar
Master of Social Science – Anthropology (Distinction)
Supervisor: Dr Gabriel Darong

Emma Dickson-Bow
Master of Social Science – Anthropology (Distinction)
Supervisor: Dr Dominique Santos

The achievement of distinction by all three graduates reflects the high academic standards maintained within the department and the quality of supervision provided by our academic staff.

Distinguished Visitors / International Visits

Dr Pascall Taruvinga - UNESCO Fellowship

The Department of Anthropology's Dr Pascall Taruvinga was appointed as the second fellow at the Sejong International Centre for the Interpretation and Presentation of World Heritage Sites (WHIPIC), a UNESCO Category 2 Centre in the Republic of Korea.

As part of this prestigious fellowship, Dr Taruvinga collaborated with Sejong-WHIPIC's stakeholders to enrich discussions on World Heritage from a uniquely African perspective. Dr Taruvinga focused on advancing the interpretation and presentation of World Heritage sites globally.

Fellowship Focus

Dr Taruvinga's fellowship, the first in 2024, centered on capacity-building efforts in heritage interpretation and presentation for the African region. Reflecting on his role, he shared: "My fellowship is focusing on building capacity on interpretation and presentation in the Africa region... I'm the chief editor of a book on the interpretation and presentation of World Heritage from the Africa region, which will be released in December 2025 or January 2026".

Expected Outcomes

- Capacity building in heritage interpretation and presentation across Africa
- Publication of landmark book on World Heritage interpretation from African perspectives
- Enhanced global understanding of African heritage methodologies
- Strengthened international collaborations in heritage studies.

Significant Research Aligned Events

Out of the Depths Project Workshop
Dr Dominique Santos (Principal Investigator)

East London Museum Collaboration at Chintsa Shipwreck Site

This significant fieldwork event brought together Rhodes Anthropology Department staff with East London Museum colleagues at the Chintsa shipwreck site in the Eastern Cape for collaborative research activities.

Key Objectives:

- Explore collaborative potential across knowledge systems to interpret and present recent shipwreck heritage finds through exhibition, installation, performance and public events that story fragments of shipwrecks from the early modern era.
- Foreground the entanglements between marginal crew, enslaved people and indigenous communities in the early modern era, exemplified in the instability and opportunities of the Portuguese slave shipwreck and its aftermath.

Rhodes Anthropology Departmental staff with East London Museum staff at shipwreck site Chintsa, Eastern Cape for Out of Depths Workshop. Photo: Department of Anthropology





Shipwreck fragment found at Chintsa, Eastern Cape. Out of Depths Workshop. Photo: Department of Anthropology

- Consider the global trajectories of people, objects, raw materials and natural resources as key to an interpretation and presentation practice which enhances understanding of movement between the human and other-than-human realms using social science, archaeological and indigenous knowledge methodologies, as they converge on the Southern Indian Ocean coastal area.
- Develop possibilities for funding applications to support exhibition/performance/public events.

Associate Professor Michelle Cocks
Active Research Initiatives

1. Reconceptualizing Well-being to Foster a Sustainable Society through Indigenous and Youth Perspectives from the Global South

International Collaborative Project

Associate Professor Cocks participates in this significant international collaboration involving:

- **Lead Institutions:** UNU-IAS (Tokyo, Japan) and UNU EHS (Germany)
- **Project Leaders:** Dr Juana Pastor and Dr Alexandros Gasparatos (UNU-IAS)
- **International Partners:**

  Dr Himangana Gupta (UNU-IAS) - India case studies

  Dr Juliana Mercon (University of Veracruz) - Mexico case studies

  Associate Professor Michelle Cocks (Rhodes University) - South Africa case studies

Project Objectives:

- Explore indigenous world views on well-being and sustainability challenges across four (4) research regions
- Map indigenous ontologies to understand inclusiveness of resilience parameters in well-being
- Engage Indigenous peoples and youth to develop nature-inclusive well-being indicators for sustainable societies worldwide

Timeline:

South African fieldwork scheduled for March 2025.

2. Beyond Siloes: Worldviews and Pathways Towards Transformative Sustainable Heritage Futures in Southern Africa

SARA Funded Project (2025-2027)

Associate Professor Cocks leads this transformative three-year project funded by the Southern African Resilience Academy (SARA).

Key Investigators:

- Dr Vanessa Masterson (Stockholm Resilience Centre, Stockholm)
- Dr Shashi Cook (Sustainability Research Unit, Nelson Mandela University)
- Dr Pascall Taruvinga (Anthropology Department, Rhodes University)
- Professor Bagele Chilisa (Post Graduate Research and Evaluation Programme, University of Botswana)

Project Scope: Multi-country research spanning South Africa, Zimbabwe, Malawi, Zambia, and Botswana, focusing on natural and cultural heritage sites.

Methodological Approach: Decolonial knowledge co-production bringing together diverse expertise including:

- Heritage management
- Sustainability science
- Biocultural approaches
- Fine arts
- Critical education
- Indigenous and local knowledge stewardship

Expected Outcomes:

- Comprehensive collation of southern African indigenous ontologies informing human-nature relations
- Holistic policy implications connecting previously siloed policy spheres (conservation and heritage management)
- Transformative pathways to sustainability through indigenous ontological understandings
- Contribution to pluralistic futures embracing social justice principles

Dr Melusi Dlamini

Dr Melusi Dlamini was awarded NRF Thuthuka Funding (2025 - 2027), for a project called “Developing healthy masculinities and caring relationships among young men in KwaZulu-Natal”.

Conferences: One (1) international and one (1) regional

2024: “Living through waste? Everyday precarity and waste picking on a landfill” WAU Congress, 11 - 15 November 2024, Johannesburg, South Africa.

2024: “Young men’s narratives on caring practices and healthy masculinities in intimate relationships” Anthropology Southern Africa Conference, 6 - 8 November 2024, Johannesburg, South Africa.

Department of Anthropology Publications

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Santos, P. and May, T.Q.
Santos, P. and **May, T.Q.** (2024) "The academic space is not a safe space to be an indigenous person? Responding to the Trauma of the Settler-Colonial University Through African Indigenous Knowledge System (AIKS)-Informed Pedagogy". *Teaching Anthropology.* 13 (2). p.53-62.

Peer Reviewed Subsidy-Earning Journal Research Publications

Aswani, S.
Aswani, S. and **Matanzima, J.** (2024) Human-crocodile interactions in the western Solomon Islands: the importance of local data for reducing attacks on people. *ORYX.* 58 (3). p.344-346.

Brodie, L.P., Caballero, S.V., Ojea, E., Taylor, S.F.W., Roberts, M., Vianello, P., Jiddawi, N., **Aswani, S.** and Bueno, J. (2024) A new framework on climate-induced food-security risk for small-scale fishing communities in Tanzania. *Food Security.* 16 (5). p.1125-1145.

Aswani, S. and Coupland, J.C.
Queiros, A.M., Talbot, E., Msuya, F.E., Kuguru, B., Jiddawi, N., Mahongo, S., Shaghude, Y., Muhando, C., **Aswani, S.** and **Coupland, J.C.** (2024) A sustainable blue economy may not be possible in Tanzania without cutting emissions. *Science of the Total Environment.* 947 (15). p.1-16.

Darong, G.G.
Kgari-Masondo, M.C., **Chingwanangwana, B.**, **Umejei, A.L.**, **Zulu, S.P.**, **Zondi, B.C.**, **Darong, G.G**. and **Out, M.** 2024. A reflective study of supervisors in Higher Education on humanistic strategies of working with 'difficult' students during COVID-19: *Umuntu Akalahlwa* supervisory style. *Social Sciences and Education Research Review*. 11(2), pp.304-311.

Owen, J.
Owen, J., Juries, I. and Mokoena, M. (2024) Beyond Migration Categories: Amity, Conviviality and Mutuality in South Africa. *Journal of Asian and African Studies.* 59 (7). p. 2154-2169.

The Department's research output reflects our dedication to **Indigenous knowledge systems**, pedagogical transformation, and collaborative scholarship that challenges conventional academic boundaries.



Photo: Chris Marais

DEPARTMENT OF

Biochemistry, Microbiology & Bioinformatics

Introduction

The Biochemistry, Microbiology and Bioinformatics (BMB) Department is home to eleven (11) academic staff members, fourteen (14) support staff members, seventeen (17) Postdoctoral Fellows and fifty-nine (59) Postgraduate students, carrying out research in three (3) disciplines, namely Biochemistry, Microbiology and Bioinformatics.



Professor Jo De La Mare

Head of Department

Photo: Jackie Grove

The Department hosts two (2) research units, the Biomedical Biotechnology Research Unit (BioBRU), led by **Professor Adrienne Edkins**, who also holds a DST/NRF SARChI Chair in the Molecular and Cellular Biology of the Eukaryotic Stress Response, and the Research Unit in Bioinformatics (RUBi), under the directorship of **Professor Özlem Tastan Bishop**. All staff members are actively engaged in research supported by prestigious local national and international grants, including the South African National Research Foundation (SA-NRF), Medical Research Council (SA-MRC), Department of Science, Innovation and Technology (SA-DSIT) and Technology Innovation Agency (SA-TIA) and the Gates Foundation, United Kingdom Newton Fund, Swiss Medicines for Malaria Venture and pharmaceutical companies Novartis and GlaxoSmithKline.

This engagement in research is reflected in the number of research outputs outlined below, in terms of peer-reviewed journal publications, conference presentations and Postgraduate student graduations. Research conducted by the various research groups covers diverse topics and sub-disciplines. Fundamental biomedical research projects include



Graduates of the Department from the Rhodes University Bioinformatics (RUBi) group at the October Graduation Ceremony.

From left: Dr Mokgerwa Monama, Dr Lilian Mbaisi Ang'ang'o, Professor Özlem Tastan Bishop, Ms Queenie Mondile and Ms Rabelani Ramahala.

Photo: Department of Biochemistry, Microbiology and Bioinformatics

natural product and synthetic chemistry drug discovery programmes using computational and laboratory-based methods aimed at communicable (pathogenic bacteria, HIV, SARS-CoV2) and non-communicable (cancer, diabetes and obesity) diseases of national and regional importance.

It further includes research into the stress response machinery of cancer cells, as well its role in Kaposi's sarcoma-associated herpesvirus biology and the interaction between picornaviruses, TB bacteria and *Salmonella* bacteria and host cells. The Department also hosts the SA/UK Antimicrobial Drug Discovery (ADD) Hub, led by Professor Rosemary Dorrington, focusing on the discovery of novel antimicrobials to address the increasing prevalence and threat of multi-drug resistant bacteria. The ADD Hub, collaboration with the South African Institute for Aquatic Biodiversity, has developed a multi-omics biodiscovery platform to assess the potential of natural products as chemical leads for drug development. One Health-related water quality assessment is also a research focus in terms of bacterial pathogenesis mechanisms, antimicrobial resistance, the transmission pathways of infectious pathogens and the environmental impact of xenobiotic's on aquatic systems.

In addition, the Department hosts a Node of the TIA-DSIT-funded Industrial Biocatalysis Hub (IBH) (based at the Council for Scientific and Industrial Research-CSIR), led by Professor Brett Pletschke, which focuses on the use of biocatalysis for commercialisation of products and processes in industry. The current focus of the IBH Node is on the production of bioproducts from kelp biomass and the use of enzymes to improve the nutritional content of poultry feed. Other research into biotechnological applications in the Department includes the investigation of mycorrhizal fungi for application as biofertilizers in horticulture, agriculture and forestry and the exploitation of insect viruses for agricultural pest control, the latter in collaboration with the Centre for Biological Control (CBC) from the Department of Zoology and Entomology. The Department contributed to forty-nine (49) authored or co-authored peer-reviewed journal articles and thirty-seven (37) conference presentations in 2024.

Postgraduates / Graduations

The Department graduated ten (10) BSc Hons and eleven (11) MSc students and six (6) PhD candidates in the April and October ceremonies of 2024. A number of our Postgraduate students and Postdoctoral Fellows presented their work at local and international conferences. **Drs Richwell Mhlanga** and **Nyeleti Vukea** attended a H3D Comprehensive Workshop on Drug Discovery in Zambia in May 2024. Also in May, PhD candidate **Chishala Kapambwe** attended the H3D symposium on Emerging Treatments for Drug-Resistant Infections of Bacterial and Mycobacterial Origin held in Victoria Falls. In June/July, Dr Nyeleti Vukea attended the FEBS congress in Italy and **Dr Michael Okpara** attended the International Symposium on EBV & KSHV & Related Agents and Diseases Joint Meeting in the US. Dr Okpara also attended the 26th Annual Conference of the European Society for Clinical Virology (ESCV 2024) held in September in Frankfurt, Germany. MSc students **Rabelani Ramahala** and **Shaylyn Govender** visited Cambridge University in September for a week to carry out research and meet with collaborators of RUBi. **Emily Morgan** received a travel fellowship from the African Research Universities Alliance (ARUA) Guild Africa-Europe Cluster for Research Excellence in Artificial Intelligence (CoRE-AI) and visited the University of Uppsala between 15 September and 30 November. **Mr Curtis Chepsiror** was awarded first prize for his MSc-level poster presentation and **Ms Chiratidzo Chamboko** was awarded second prize for her PhD-level poster at the annual Centre for High Performance Computing conference held in December 2024 in Gqeberha.



Members of the Biomedical Biotechnology Research Unit at the annual meeting of the Grand Challenges African Drug Discovery Accelerator for Tuberculosis Consortium held in Stellenbosch in November.
From left: Dr Clifford Ntui, Professor Adrienne Edkins, Dr Ronald Tonui and Mr Piwai Gotora.
Photo: Department of Biochemistry, Microbiology and Bioinformatics

Distinguished Visitors / International Visits

In May 2024, RUBi welcomed the Deputy Ambassador of Switzerland, Mr Marino Cuenat, and Programme Officer for Science and Technology, Ms Kgomotso Austin. The visit focused on strengthening existing collaborations and exploring future partnerships with Switzerland. Professor Matthias Mayer from University of Heidelberg in Germany and Professor Greg Blatch from the Higher Colleges of Technology in the United Arab Emirates, both BioBRU collaborators, visited the Department in June/July 2024 and presented research seminars.

Professor Matthew Groves from Groningen University in the Netherlands visited the Department in August as part of his collaboration with RUBi and as a member of the ARUA Guild Africa-Europe Cluster for Research Excellence in Genomics for Health in Africa and presented a research seminar.

Significant Research Aligned Events

During her sabbatical, **Professor Dorrington** was invited to participate in the UKRI/ODA Workshop: Climate Change Adaptation and Mitigation in the Global South organized by the University of Plymouth in the UK in March 2024.

Professor Edkins was invited to attend the UKRI Medical Research Council (MRC) African Research Leaders networking event and the MRC Fellows Day, which were both held in London, and attended the H3D symposium on Emerging Treatments for Drug-Resistant Infections of Bacterial and Mycobacterial Origin held in Victoria Falls in May 2024.

The biennial South African Society for Biochemistry and Molecular Biology congress was held in July 2024 in Polokwane, where Professor Tastan Bishop delivered a plenary talk and Professor Edkins an invited talk. At the General Meeting of the society, **Professor Jo de la Mare** (Head of Department) was inducted as President, having previously served as Secretary (2018-2022) and Vice-President (2022-2024). Professor de la Mare also attended the meeting of the parent body, the International Union of Biochemistry and Molecular Biology, the Biomolecular Horizons congress in Melbourne in September 2024, where she delivered a talk.

Dr Michael Jukes presented at the International Congress on Invertebrate Pathology and Microbial Control and the 56th Annual Meeting of the Society for Invertebrate Pathology at Technical University of Vienna in Austria in June. Professor Edkins presented an invited talk at the 11th International Conference on the Hsp90 Chaperone Machine in Bavaria, Germany in October. Professor Edkins and Professor Tastan Bishop, as part of the ARUA-Guild Africa-Europe Cluster of Research Excellence in Genomics for Health in Africa (CoRE-GHA), participated in the meeting of the Core-GHA team followed by the Africa-Europe CoRE conference 2024 which was held in October in Stellenbosch. Professor Özlem Tastan Bishop was invited to give a presentation to Ms Eva Herzog, President of the Swiss Confederation, and her delegation during their visit to Novartis's Johannesburg branch in October. She also delivered a plenary talk at the 4th International Conference on Artificial Intelligence and Robotics (ICAIR) in Nigeria in November 2024. Professor Edkins was invited to talk at the 11th International Conference on the Hsp90 Chaperone Machine, which was held in October 2024 in Germany.

Department of Biochemistry, Microbiology and Bioinformatics Publications

Books/Chapters/Monographs

Pletschke, B.I.
Safari, J.B., **Maseko, P.**, **Lokole, B.P.**, **Byamungu, G.**, **Nogqala, S.**, **Mukanya, M.J.**, Ndongwe, T., **Pletschke, B.I.**, **Krause, R.W.M.**, Matlou, G., Siwe-Noundou, X., Nkanga, C.I. and Ssengooba, F. (2024) The Art of Liposome Surface Decoration for Targeted Drug Delivery. In: Weeks, BS & Pignatello, R. *Liposomes as Pharmaceutical and Nutraceutical Delivery System.* IntechOpen p.1-10. ISBN: 978085 4668380.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Pletschke, B.I. and Dames, J.F.
Adeoyo, O.R., **Pletschke, B.I.** and **Dames, J.F.** (2024) Substrate specificity and catalytic properties of glucoamylase from Leohumicola incrustata. *Dutse Journal of Pure and Applied Sciences.* 10 (4). p.1-11.

Peer Reviewed Subsidy-Earning Journal Research Publications

Ang'ang'o, L. and Tastan Bishop, Ö.
Ang'ang'o, L., Waweru, J., Makhulu, E.E., Wairimu, A., Otieno, F.G., Onchuru, T., **Tastan Bishop, Ö.** and Herren, J.K. (2024) Draft genome of *Microsporidia* sp. MB'a malaria-blocking microsporidian symbiont of the *Anopheles arabiensis*. *ASM Science Journal.* 13 (4). p.1-4.

Ang'ang'o, L., Herren, J.K. and **Tastan Bishop, Ö.** (2024) Bioinformatics analysis of the *Microsporidia* sp. MB genome: a malaria transmission-blocking symbiont of the *Anopheles arabiensis* mosquito. *BMC Genomics.* 25 (1132). p.1-28.

Barozi, V., **Govender, S.A.**, **Morgan, E.C.**, **Ramahala, R.** and **Tastan Bishop, Ö.**
Barozi, V., Chakraborty, S., **Govender, S.A.**, **Morgan, E.C.**, **Ramahala, R.**, Graham, S., **Bishop, N.T.** and **Tastan Bishop, Ö.** (2024) Revealing SARS-CoV-2 Mpro mutation cold and hot spots: Dynamic residue network analysis meets machine learning. *Computational and Structural Biotechnology Journal.* 23 (2024). p.3800-3816.

Blatch, G.L.
Ahmad, T., Alhammadi, B.A., Almaazmi, S.Y., Arafa, S., **Blatch, G.L.**, Dutta, T., Gestwicki, J.E., Keyzers, R.A., Shonhai, A. and Singh, H. (2024) *Plasmodium falciparum* heat shock proteins as antimalarial drug targets: An update. *Cell Stress and Chaperones.* 29 (1). p.1-12.

Daniyan, M.O., Singh, H., and **Blatch, G.L.** (2024) The J Domain Proteins of *Plasmodium knowlesi*, a Zoonotic Malaria Parasite of Humans. *International Journal of Molecular Sciences.* 25 (22). p.1-15.

Marszalek, J., De Los Rios, P., Cyr, D., Mayer, M.P., Adupa, V., Andreasson, C., and **Blatch, G.L.** (2024) J-domain proteins: From molecular mechanisms to diseases. *Cell Stress and Chaperones.* 29 (2024). p.21-33.

Blatch, G.L. and Edkins, A.L.
Mayer, M.P., Blair, L., **Blatch, G.L.**, Borges, T.J., Chadli, A., Chiosis, G., de Thonel, A., Dinkova-Kostova, A., Ecroyd, H., **Edkins, A.L.**, Eguchi, T., Fleshner, M., Foley, K.P., Fragkostefanakis, S., Gestwicki, J., Goloubinoff, P., Heritz, J.A., Heske, C.M., Hibshman, J.D., Joutsen, J., Li, W., Lynes, M., Mendillo, M.L., Mivechi, N., Mokoena, F., Okusha, Y., Prahlad, V., Repasky, E., Sannino, S., Scalia, F., Shalgi, R., Sistonen, L., Sontag, E., van Oosten-Hawle, P., Vihervaara, A., Wickramaratne, A., Wang, S.X.Y. and Zininga, T. (2024) Stress biology: Complexity and multifariousness in health and disease. *Cell Stress and Chaperones.* 29 (1). p.143-157.

Brooks, M.
GU, C., Li, Y., Yang, L., Dai, J., Hu, W., Yu, C., **Brooks, M.**, Liao, X. and Qin, L. (2024) Effects of oilseed rape green manure on phosphorus availability of red soil and rice yield in rice - Green manure rotation system. *Frontiers in Plant Science.* 15 (2024). p.1-9.

Chakraborty, A., Chakraborty, A., and Edkins, A.L.
Mathenjwa, G.S., **Chakraborty, A.**, **Chakraborty, A.**, Muller, R., Akerman, M.P., Bode, M.L., **Edkins, A.L.** and Veale, C.G.L. (2024) Rationally modified SNX-class Hsp90 inhibitors disrupt extracellular fibronectin assembly without intracellular Hsp90 activity. *RSC Medicinal Chemistry.* 15 (10). p.3609-3615.

Chakraborty, A., Mhlanga, R., and Edkins, A.L.
Veale, C.G.L., **Chakraborty, A.**, **Mhlanga, R.**, Albericio, F., de la Torre, B.G., **Edkins, A.L.** and Clarke, D.J. (2024) A native mass spectrometry approach to qualitatively elucidate interfacial epitopes of transient protein - protein interactions. *Chemical Communication.* 60 (45). p.5844-5847.

Davison, C. and de la Mare, J.A.
Makhakhayi, L., Malan, F.P., Senzani, S., Tukulula, M., **Davison, C.**, **de la Mare, J.A.**, Nkambule, C.M., Tembu, V.J. and Manicum, A.L. (2024) Synthesis, characterisation, X-ray diffraction and biological evaluation of new thiourea derivatives against *Mycobacterium tuberculosis* and cervical cancer. *Journal of Molecular Structure.* 1314 (2024). p.1-8.

Mapapiro, T., **Davison, C.**, Mambanda, A., **de la Mare, J.A.** and Booysen, I. (2024) Exploring the Biomolecular and Cytotoxic Activities of Novel Rhenium(I) Compounds with 2-Aminoguanidine-Derived Schiff Bases. *Chemistry Select.* 9 (21). p.1-13.

Dingle, L.M.K. and Edkins, A.L.
Daramola, O.A., **Safari, J.B.**, Adeniyi, K.O., Siwe-Noundou, X., **Dingle, L.M.K.**, **Edkins, A.L.**, Tseki, P.F. and **Krause, R.W.M.** (2024) Biocompatible liposome and chitosan-coated CdTe/CdSe/ZnSe multi-core-multi-shell fluorescent nanoprobe for biomedical applications. *Journal of Photochemistry and Photobiology A: Chemistry.* 454 (1). p.1-9.

Dorrington, R.A.
Stirnimann, L., Bornman, T.G., Forrer, H.J., Mirkin, J., Ryan-Keogh, T.J., Flynn, R.F., **Dorrington, R.A.**, Verheye, H.M. and Fawcett, S.E. (2024) A Circum-Antarctic Plankton Isoscape: Carbon Export Potential Across the Summertime Southern Ocean. *Global Biogeochemical Cycles.* 38 (1). p.1-31.

Edkins, A.L.
Bourboulia, D., Blair, L., Clark, M., **Edkins, A.L.**, Hightower, L.E., Mollapour, M., Prahlad, V., Repasky, E., Truebano, M., Truman, A.W., Truttmann, M.C., van Oosten-Hawle, P. and Woodford, M.R. (2024) EDITORIAL: A new chapter for Cell Stress and Chaperones. *Cell Stress and Chaperones.* 29 (1). p.1-3.

Gibb, R.A., Botha, D.K., Venkatachalam, S., Bornman, T.G. and Dorrington, R.A.
Gibb, R.A., **Botha, D.K.**, **Venkatachalam, S.**, Bizani, M., **Bornman, T.G.** and **Dorrington, R.A.** (2024) DNA metabarcoding reveals distinct bacterial and phytoplankton assemblages in the Agulhas Current and the adjacent coastal shelf. *Limnology and Oceanography*. 69 (11). p.1-15.

Grobler, C.E., Mabate, B. and Pletschke, B.I.
Grobler, C.E., **Mabate, B.**, Prins, A., Le Roes-Hill, M. and **Pletschke, B.I.** (2024) Expression, Purification, and Characterisation of Recombinant Alginate Lyase (Flammeovirga AL2) for the Bioconversion of Alginate into Alginate Oligosaccharides. *Molecules.* 29 (1). p.5578.

Hawley, G.
Desmet, P., **Hawley, G.**, Dayaram, A., Power, R.J.,

Heydenrych, R., Dzerefos, C.M., Schaller, R., Hahn, N. and Job, N. (2024) Revision of the Northwest province, South Africa, vegetation map. *Bothalia.* 54 (1). p.1-11.

Hoppe, H.C.
Tlhapi, D.B., Ramaite, I.D.I., Anokwuru, C.P., Van Ree, T., Madala, N.E., and **Hoppe, H.C.** (2024) Effects of seasonal variation on phytochemicals contributing to the antimalarial and antitrypanosomal activities of *Breonadia salicina* using a metabolomic approach. *Heliyon.* 10 (2). p.1-2.

Isemonger, E.W., Madonsela, L.S., Kalinski, J.C.J., Polyzois, A.P., Dorrington, R.A., and McPhail, K.L.
Neuhaus, G.F., Aron, A.T., **Isemonger, E.W.**, Petras, D., Waterworth, S.C., **Madonsela, L.S.**, Gentry, E.C., Noundou, X.S., **Kalinski, J.C.J.**, **Polyzois, A.P.**, Habiyaremye, J.C., Redick, M.A., Kwan, J., **Dorrington, R.A.**, Dorrestein, P.C. and **McPhail, K.L.** (2024) Environmental metabolomics characterization of modern stromatolites and annotation of ibhayipeptolides. *Plos One.* 19 (5). p.1-28.

Kalinski, J.C.J., Matcher, G.F., Polyzois, A.P., Bornman, T.G. and Dorrington, R.A.
Kalinski, J.C.J., Noundou, X.S., Petras, D., **Matcher, G.F.**, **Polyzois, A.P.**, Aron, A.T., Gentry, E.C., **Bornman, T.G.**, Adams, J.B. and **Dorrington, R.A.** (2024) Urban and agricultural influences on the coastal dissolved organic matter pool in the Algoa Bay estuaries. *Chemosphere.* 355 (1). p.1-11.

Kirigin, E., Okpara, M., Matandirotya, L.T., Ruck, J.-. L., Chakraborty, A., and Edkins, A.L.

Kirigin, E., **Okpara, M.**, **Matandirotya, L.T.**, **Ruck, J.-. L.**, Weaver, F., Jackson, Z., **Chakraborty, A.**, Veale, C.G.L., Whitehouse, A., and **Edkins, A.L.** (2024) Hsp70-Hsp90 organising protein (HOP/STIP1) is required for KSHV lytic replication. *Journal of General Virology.* 105 (11). p.1-12.

Mabate, B. and Pletschke, B.I.
Mabate, B. and **Pletschke, B.I.** (2024) Sequential and enzyme-assisted extraction of algal bioproducts from *Ecklonia maxima. Enzyme and Microbial Technology.* 173, 110364.

Matcher, G.F.
Oliver, J., Shum, P., Mariani, S., Sink, K.J., Palmer, R.M. and **Matcher, G.F.** (2024) Enhancing African coelacanth monitoring using environmental DNA. *Biology Letters.* 20 (10). p.1-11.

Mausse Sitoe, S.N.D. and Dames, J.F.
Mausse Sitoe, S.N.D. and **Dames, J.F.** (2024) Characterization of arbuscular mycorrhizal fungal species associating with *Zea mays*. *Frontiers in Plant Science.* 15 (1). p.1-12.

McPhail, K.L.
Vargas-Gastelum, L., Romer, A.S., Ghotbi, M., Dallas, J.W., Alexander, N.R., Moe, K.C., **McPhail, K.L.**, Neuhaus, G.F., Shadmani, L., Spatafora, J.W., Stajich, J.E., Tabima, J.F. and Walker, D.M. (2024) Herptile gut microbiomes: a natural system to study multi-kingdom interactions between filamentous fungi and bacteria. *mSphere.* 9 (3). p.1-11.

McCune, B., Perera, W.H., Xinhui Yu, X. and **McPhail, K.L.** (2024) Visualizing usnic acid with anisaldehyde reagent. *Lichenologist.* 56 (5). p.193-200.

Avalon, N.E., Reis, M.A., Thornburg, C.C., Williamson, R.T., **McPhail, K.L.** and *et al,* (2024) Leptochelins A-C, Cytotoxic Metallophores Produced by Geographically Dispersed Leptothoe Strains of Marine Cyanobacteria. *Journal of the American Chemical SocietyETY.* 146 (27). p.18626-18638.

Mattos, D.R., Neves, W.D., Kitamura , T., Pradhan, R., Wan, X., da Hora, C.C., Tranter, D., Kazemi, S., Yu, Xinhui, Y., Tripathy, N., Paavilainen, V.O., **McPhail, K.L.**, Oishi, S., Badr, C.E. and Ishmael, J.E. (2024) Diastereomers of Coibamide A Show Altered Sec61 Client Selectivity and Ligand-Dependent Activity against Patient-Derived Glioma Stem-like Cells. *ACS Pharmacology and Translational Science.* 7 (6). p.1823-1838.

Mhlanga, R., Tonui, R., Edkins, A.L. and de la Mare, J.A.
Mhlanga, R., **Mbaba, M.**, **Tonui, R.**, **Edkins, A.L.**, **Khanye, S.D.** and **de la Mare, J.A.** (2024) Ferrocenyl Aminocresols display multimodal activity against triple-negative breast cancer cells in vitro. *ChemistrySelect.* 9 (42). p.1-12.

Mkabayi, L. and Pletschke, B.I.
Frans, P., **Mkabayi, L.**, **Pletschke, B.I.** and Frost, C.L. (2024) The effects of Cannabis sativa and cannabinoids on the inhibition of pancreatic lipase - An enzyme involved in obesity. *Biomedicine & Pharmacotherapy.* 179 (2024). p.117357.

Mkabayi, L., and Pletschke, B.I.
Mkabayi, L., Viljoen, Z., Krause, R.W.M., Lobb, K.A., **Pletschke, B.I.**, Frost, C.L. (2024) Inhibitory effects of selected cannabinoids against dipeptidyl peptidase IV, an enzyme linked to type 2 diabetes. *Heliyon.* 10(1). P. 1-15.

Musyoka, T.M. and Tastan Bishop, Ö.
Ntie-Kang, F., Eni, D.B., Telukunta, K.K., Osamor, V.C., Egieyeh, S.A., Duran-Frigola, M., Mishra, P., Shadrack, D.M., Paul, L., **Musyoka, T.M.**, **Tastan Bishop, Ö,**. *et al,* (2024) The workshops on computational applications in secondary metabolite discovery (CAiSMD). *Physical Sciences Reviews.* 9 (10). p.3289-3304.



Members of the Research Unit in Bioinformatics at the 18th Centre for High Performance Computing national conference, held at the Boardwalk Convention Centre, Gqeberha in December.

From left: Ms Chiratidzo Chamboko, Ms Bridget Nkosi, Professor Özlem Tastan Bishop, Ms Rehema Mwaniki, Ms Phiilile Shelembe and Mr Curtis Chepsiror.

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Nyemba, G.R., Davison, C. and de la Mare, J.
Teclegeorgish, Z.W., Mokgalaka, T., Kemboi, D., **Krause, R.W.M.**, Siwe-Noundou, X., Nyemba, G.R., **Davison, C.**, **de la Mare, J.** and Tembu, V.J. (2024) Phytochemicals from *Pterocarpus angolensis* DC and Their Cytotoxic Activities against Breast Cancer Cells. *Plants.* 13(2) (301). p.1-12.

Okpara, M., Vaaltyn, M.C., Watson, J.L. and Edkins, A.L.
Okpara, M., **Vaaltyn, M.C.**, **Watson, J.L.**, Alhassan, M., Albericio, F., de la Torre, B.G., Clarke, D.J., Veale, C.G.L. and **Edkins, A.L.** (2024) Modulators of the Hop-HSP90 Protein-Protein interaction disrupt KSHV lytic replication. *ACS Infectious Diseases.* 10 (11). p.3853-3867.

Okpara, M., Whitehouse, A., and Edkins, A.L.
Okpara, M., Weaver, F., **Whitehouse, A.**, Veale, C.G.L. and **Edkins, A.L.** (2024) Discovery of a small-molecule inhibitor of KSHV lytic replication from the MMV pandemic response box. Antiviral Research. 230 (1). p.1-16.

Olotu, F.A., Chepsiror, C.K., Sheik Amamuddy, O.S.A. and Tastan Bishop, Ö.
Olotu, F.A., Tali, M.B.T., **Chepsiror, C.K.**, **Sheik Amamuddy, O.S.A.**, Boyom, F. and **Tastan Bishop, Ö.** (2024) Repurposing DrugBank compounds as potential *Plasmodium falciparum* class 1a aminoacyl tRNA synthetase multi-stage pan-inhibitors with a specific focus on mitomycin. *International Journal for Parasitology: Drugs and Drug Resistance.* 25 (2024). p.1-23.

Park, Y. and Pletschke, B.I.
Park, Y., Malgas, S., **Krause, R.W.M.** and **Pletschke, B.I.** (2024) Extraction and characterisation of sodium alginate from the Southern African seaweed *Ecklonia maxima*. *Botanica Marina.* 16 (5). p.1-11.

Pletschke, B.I.
Khaswal, A., Mishra, S.K., Chaturvedi, N., Saini, S., **Pletschke, B.I.** and Kuhad, R.C. (2024) Microbial enzyme production: Unlocking the potential of agricultural and food waste through solid-state fermentation. *Bioresource Technology Reports.* 27 (1). p.101880.

Mohotloane, M.M., Alexander, O., Adoons, V.N., **Pletschke, B.I.** and Mafa, M.S. (2024) Peroxidase application reduces microcrystalline cellulose recalcitrance towards cellulase hydrolysis in model cellulose substrates and rooibos biomass. *Carbohydrate Polymer Technologies and Applications.* 7 (2024). p.1-9.

Ramatsui, L., Sithole, T., Edkins, A.L. and Pletschke, B.I.
Ramatsui, L., **Sithole, T.**, Gandla, M.L., Jonsson, L.J., **Edkins, A.L.**, Malgas, S. and **Pletschke, B.I.** (2024) In vitro evaluation of the application of an optimized xylanase cocktail for improved monogastric feed digestibility. *Journal of Animal Physiology and Animal Nutrition.* 108 (3). p.596-610.

Tastan Bishop, Ö.
Tastan Bishop, Ö., **Lobb, K.A.**, **Hoppe, H.C.**, **Diallo, B.N.**, **Swart, T.** *et al.* (2024) AI is a viable alternative to high throughput screening: a 318-target study. *Scientific Reports.* 14 (7526). p.1-16.

Tendwa, M.B.
Mallum, A., Patel, S., Olatunji, E., Nnko, G. and **Tendwa, M.B.** (2024) Treatment delays for cancer patients in Sub-Saharan Africa: South Africa as a microcosm. *Ecancer medical science.* 18 (2024). p.1-11.

Waterworth, S., Solomons, G.M., Kalinski, J.C.J., Madonsela, L.S., Parker-Nance, S. and Dorrington, R.A.
Waterworth, S., **Solomons, G.M.**, **Kalinski, J.C.J.**, **Madonsela, L.S.**, **Parker-Nance, S.** and **Dorrington, R.A.** (2024) The unique and enigmatic spirochete symbiont of latrunculid sponges. *Microbial Ecology.* 1 (2024). p.1-18.

Whitehouse, A.
Carden, H., Harper, K.L., Mottram, T.J., Manners, O., Allott, K., Dallas, M.L., Hughes, D.J., Lippiat, J.D., Mankouri, J. and **Whitehouse, A.** (2024) Kv1.3-induced hyperpolarization is required for efficient Kaposi's sarcoma-associated herpesvirus lytic replication. *Science Signaling.* 17 (845). p.1-11.

Harper, K.L., Harrington, E.M., Hayward, C., Anene, C.A., Wongwiwat, W., White, R.E. and **Whitehouse, A.** (2024) Virus-modified paraspeckle-like condensates are hubs for viral RNA processing and their formation drives genomic instability. *Nature Communications.* 15 (1). p.1-11.

Patterson, M.R., Cogan, J.A., Cassidy, R., Theobald, A.D., Wang, M.Y., Scarth, J.A., Anene, C.A., **Whitehouse, A.**, Morgan, E.L. and Macdonald, A. (2024) The Hippo pathway transcription factors YAP and TAZ play HPV-type dependent roles in cervical cancer. *Nature Communications.* 15 (1). p.1-11.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Tastan Bishop, Ö.
Tastan Bishop, Ö. Art of computational drug design – Possibility of victory without battle. *National Institute for Theoretical and Computational Sciences (NITheCS) Colloquium.* Stellenbosch University, Stellenbosch, South Africa. February 2024.

R.A., Dorrington.
R.A., Dorrington. The SA-UK Antimicrobial Drug Discovery Hub: Successes, challenges and lessons learned on how to make multi- institutional North-South collaborations work. *UKRI/ODA Workshop: Climate Change Adaptation and Mitigation in the Global South.* University of Plymouth, UK. March 2024.

Jukes, M.D. and Knox, C.
Bennett, T.T., Mushore, T.G., Hill, M.P., Moore, S.D., **Jukes, M.D.** and **Knox, C.** The isolation, identification, and characterisation of a novel Alphabaculovirus isolated from *Serrodes partita*. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Bennett, T.T., **Mushore, T.G.**, Hill, M.P., Moore, S.D., **Jukes, M.D.** and **Knox, C.** The isolation, identification, and characterisation of a novel Alphabaculovirus isolated from the fruit piercing moth, *Serrodes partita. 12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Jukes, M.D., Marsberg, T., Moore, S.D., **Knox, C.**, Hill, M.P. and Rabalski, L. *Cryptophlebia peltastica* nucleopolyhedrovirus: A single approach for multiple pests. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Van Der Merwe, M., **Jukes, M.D.**, Mumwell, E., **Knox, C.**, Moore, S.D. and Hill, M.P. Development of an advanced qPCR technique for enhanced and accurate enumeration of the baculovirus biopesticide CrleGV-SA. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Moore, S.D., Opoku-Debrah, J.K., Marsberg, T., **Jukes, M.D.**, Van Der Merwe, M., Lombard, T., Goddard, M.K., Groblar, A., Booyens, W., **Knox, C.**, and Hill, M.P. Innovative mass production and novel formulation of baculovirus biopesticides for false codling moth management. I*nternational Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Jukes, M.D., Tole, S. and Knox, C.
Moore, S.D., **Jukes, M.D.**, Mouton, C., Lombard, T., Goddard, M.K., Hill, M.P., Lita, P.P., Taylor, D.G., **Tole, S.**, **Knox, C.** and Steenkamp, D. Challenges and solutions to viral contamination in mass rearing of codling moth and false codling moth for the sterile insect technique. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Kambani, T.K.T., Jukes, M.D. and Knox, C.
Kambani, T.K.T., **Jukes, M.D.**, **Knox, C.**, Moore, S.D., and Hill, M.P. Evaluating effects of *Cryptophlebia peltastica* nucleopolyhedrovirus and *Cydia pomonella* granulovirus mixtures against *Thaumatotibia leucotreta. 6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Luphondo, K.C. and Jukes, M.D.
Luphondo, K.C., **Jukes, M.D.**, Coombes, C.A., Hill, M.P. and Moore, S.D. Effect of netting on the FCM granulovirus

for the management of false codling moth in citrus orchards. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Luphondo, K.C., **Jukes, M.D.**, Coombes, C.A., Hill, M.P. and Moore, S.D. Effect of netting on the FCM granulovirus for the management of false codling moth in citrus orchards. *6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Matcher, G.F.
Redelinghuys, S., Emami-Khoyi, A., Porri, F. and **Matcher, G.F.** Assessing coastal resilience: multi-disciplinary insights from potential bioindicator species. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Phoswa, S.L., Jukes, M.D. and Knox, C.
Phoswa, S.L., Hill, M.P., Moore, S.D., **Jukes, M.D.** and **Knox, C.** Cloning, and expression of a truncated protein, gp37, from the litchi moth nucleopolyhedrovirus (CrpeNPV) in a bacterial system for improvement of false codling moth granulovirus (CrleGV) infectivity. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Phoswa, S.L., Knox, C. and Jukes, M.D.
Muleya, N., **Phoswa, S.L.**, **Knox, C.**, Moore, S.D., Hill, M.P. and **Jukes, M.D.** The expression of CrpeNPV gp37 as a formulation additive for improved infectivity with CrleGV against *Thaumatotibia leucotreta. International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Pletschke, B.I.
Safari, J.B., Krause, R.W.M., Smith, V.J. and **Pletschke, B.I.** Magnetic cross-linked xylanase aggregates (m-CLXAs) based on aminated iron oxide nanoparticles for arabinoxylan hydrolysis: Preparation, optimisation, characterisation, and mechano-enzymology. *34th Annual Meeting of the Catalysis Society of South Africa (CATSA).* Champagne Sports Resort, Drakensberg, Kwazulu-Natal, Winterton. South Africa. November 2024.

Tole, S., Jukes, M.D. and Knox, C.
Tole, S., Hill, M.P., Moore, S.D., **Jukes, M.D.**, and **Knox, C.** Evaluating baculovirus mixtures against false codling moth *Thaumatotibia leucotreta* Meyrick. (Lepidoptera: Tortricidae). *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Vukea, N. and Edkins A.L.
Vukea, N., Veale C.L.G. and **Edkins A.L.** SARS-CoV2-ACE2 protein-protein interaction (PPI): analysis of individual RBD residues for activity. *48th FEBS Congress.* Milan, Italy, June 2024.

Okpara, M. and Edkins, A.L.
Okpara, M., Veale C.G.L. and **Edkins, A.L.** Identification of a small-molecule Inhibitor of KSHV Lytic Replication. *International Symposium on EBV & KSHV & Related Agents and Diseases – 3rd Joint Meeting.* Hilton Boston Park Plaza, Boston, US. June 2024.

Edkins, A.L.

Edkins, A.L. HOP/STIP1 is required for KSHV lytic replication. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Ndabeni, A. and Edkins, A.L.
Ndabeni, A. and **Edkins, A.L.** Investigating the role of Hop in v-Cyclin-CDK6-NPM complex in KSHV-associated malignancies. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Postgraduate students and Postdoctoral Fellows from the Department participating in the Postgraduate Funding Fair hosted by Rhodes University in May.

From left: Dr Richwell Mhlanga, Dr Nyeleti Vukea, Dr Ronald Tonui, Dr Kelly Schwartz and Ms Anita Ndabeni.

Photo: Department of Biochemistry, Microbiology and Bioinformatics



Nyemba, G.R., Davison, C. and de la Mare, J.
Nyemba, G.R., **Davison, C.** Dube, N.P., Diniso, M., Kemboi, D., Tembu, V.J. and Manicum, A.L. **de la Mare, J.** Screening and characterization of novel compounds and their derivatives from South African medicinal plants against triple-negative breast cancer cells. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Mdiniswa, T. and Abrahams, G.
Mdiniswa, T. and **Abrahams, G.** Analysis of the role of carbonic anhydrase enzymes, in the physiology and virulence of Mycobacterium tuberculosis. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Veldman, W. and Tastan Bishop, Ö.
Veldman, W. and **Tastan Bishop, Ö.** Structural bio-informatics analysis of human NAT2 enzyme function and comparison of all variants that possess known phenotype. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Tastan Bishop, Ö.
Tastan Bishop, Ö. Multi-faceted health and disease effects of missense mutations: a protein structure perspective. *28th Congress of the South African Society of Biochemistry and Molecular Biology.* Protea Ranch Resort, Limpopo, South Africa. July 2024.

Vukea, N., Mhlanga, R., Edkins, A.L. and de la Mare, J.
Vukea, N., **Mhlanga, R.**, Mbaba, M., Khanye, S,D., **Edkins, A.L.** and **de la Mare, J.** Characterization of novel inhibitors for triple negative breast cancer: four needles in a haystack. *26th Congress of the International Union of Biochemistry and Molecular Biology: Biomolecular Horizons.* Melbourne Convention and Exhibition Centre, Melbourne, Australia. September 2024.

Madonsela, L.S., Sipler, R.E. and Dorrington, R.A.
Madonsela, L.S., Waterworth, S.C., **Sipler, R.E.** and **Dorrington, R.A.** Establishing new microbialite formations: from recruitment of keystone species to taxonomically diverse, metabolically complex microbial communities. *19th International Symposium for Microbial Ecology 2024 (ISME19 2024).* Cape Town International Convention Centre, Cape Town, South Africa. August 2024.

Dames J., Chakafana (nee Chifetete) V., V., Matcher, G., Mabvakure B.
Dames J., **Chakafana (nee Chifetete) V.**, **Matcher, G.**, **Mabvakure B.** Arbuscular mycorrhizal-induced gene expression in the leaves of *Solanum tuberosum* varieties *12th International Conference on Mycorrhiza.* 4-9 August, Manchester, UK.

Njanje, I., Swart, T., Tsele, T., Kalinski, J-C.J., Isaacs, M., and Dorrington, R.A.
Njanje, I., Gurmnessa, G.T., **Swart, T.**, **Tsele, T.**, **Kalinski, J-C.J.**, **Isaacs, M.**, Veale, V. And **Dorrington, R.A.** New leads for antimicrobial drug discovery: Omics-guided identification of new bacterial folate biosynthesis inhibitors. *SASBi|SAGS BIO2024 conference.* Future Africa campus, University of Pretoria, South Africa. September 2024.

Solomons, G., Kalinski, J-C., Madonsela, L.S., Parker-Nance, S. and Dorrington, R.A.
Solomons, G., Samantha C., Waterworth, S.C., **Kalinski J-C.**, **Madonsela, L.S.**, **Parker-Nance, S.**, and **Dorrington, R.A.** Genome-resolved analysis of the conserved spirochete in pyrroloiminoquinone producing sponges. *SASBi|SAGS BIO2024 conference.* Future Africa campus, University of Pretoria, South Africa. September 2024.

Edkins, A.L.
Edkins, A.L. Hop regulates proteostasis in the context of viral infection. *11th International Conference on the Hsp90 Chaperone Machine.* Seeon Abbey, Germany, October 2024.

Tastan Bishop, Ö.
Tastan Bishop, Ö. Machine learning and structural bioinformatics in drug discovery for evolving proteins. *4th International Conference on Artificial Intelligence and Robotics (ICAIR).* University of Lagos, Nigeria. November 2024.

Tastan Bishop, Ö. Drug Design, Resistance and Metabolisms through CHPC. *18th Centre for High Performance Computing (CHPC) Conference*. Themed Cyber-infrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.



From left: Professor Jo de la Mare, Professor. Özlem Tastan Bishop, Dr Candace Davison, Mr Teboho Mdiniswa and Dr Wayde Veldman at the SASBMB 2024 congress held at The Ranch resort in Limpopo in July.

Photo: Department of Biochemistry, Microbiology and Bioinformatics

Chepsiror, C, Veldman, W., Olotu, F., and Tastan Bishop, Ö.
Chepsiror, C, Veldman, W., Olotu, F., and Tastan Bishop, Ö. Allosteric modulation of Plasmodium falciparum Isoleucyl tRNA synthetase by South Africa natural compounds. *18 th Centre for High Performance Computing (CHPC) Conference.* Themed Cyberinfrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.

Nkosi, B.V.Z., Wayde Veldman, W. and Tastan Bishop, Ö
Nkosi, B.V.Z., Wayde Veldman, W. and **Tastan Bishop, Ö** Identification of Thienopyrimidines as Putative Inhibitors of Cytoplasmic Plasmodium falciparum Isoleucyl tRNA Synthetase. *18th Centre for High Performance Computing (CHPC) Conference.* Themed Cyberinfrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.

Nkosi, B.V.Z., Wayde Veldman, W. and **Tastan Bishop, Ö**
Mwaniki, R.M., **Veldman, W.**, **Sanyanga, A.**, **Chamboko, C.**, **Tastan Bishop, Ö.** Structural Insights into Afrocentric CYP3A4 Alleles: A Post-Molecular Dynamics Characterization. *18th Centre for High Performance Computing (CHPC) Conference.* Themed Cyber-infrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.

Chamboko, C.R., Veldman, W., Sanyanga, T.A. and Tastan Bishop, Ö.
Chamboko, C.R., **Veldman, W.**, **Sanyanga, T.A.** and **Tastan Bishop, Ö.** Understanding the Impact of Variations in Decreased Function Cytochrome P450 2D6 Alleles. *18th Centre for High Performance Computing (CHPC) Conference.* Themed Cyber-infrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.

Chamboko, C.R., Veldman, W., Sanyanga, T.A. and Tastan Bishop, Ö.
Shelembe, P., **Beemadoo, R.**, **Muronzi, T.** and **Tastan Bishop, Ö.** Impact of Missense Variations and their Allosteric Modulations in Alpha- Galactosidase on the Manifestation of Fabry Disease. *18th Centre for High Performance Computing (CHPC) Conference.* Themed Cyber-infrastructure Collaboration: Towards Accelerated Impact, Boardwalk Convention Centre, Gqeberha. December 2024.

DEPARTMENT OF Biotechnology and the Biotechnology Innovation Centre (RUBIC)

Introduction

Celebrating its tenth year in 2024, the Rhodes University Biotechnology Innovation Centre (RUBIC) has consolidated its leading role in transformative learning experiences for Biotechnology students. Through a transdisciplinary learning approach, the centre continues to embed engaged research approaches and entrepreneurship training into its teaching and research programmes. With an emphasis on societal impact, the Centre aims to graduate Biotechnologists better enabled to address local and global challenges.



Associate Professor Aileen Boshoff
Head of Department

Photo: Jackie Grove

Founder of RUBIC, Professor Janice Limson also celebrates her tenth year as the DSI/NRF South African Research Chair in Biotechnology Innovation and Engagement, which was successfully upgraded to Tier 1 Status for a further five (5) years.

The newly launched Rhodes University Community Water Testing Facility, hosted by RUBIC has partnered with the municipality, NGO and community partners to deliver testing services for critical water quality metrics. Managed by **Lwazikazi Madikiza** (Project Administrator and Science Engagement manager of the Chair), and supported by **Lithalethu Hashe**, the facility is striving to be a sustainable initiative and continues to provide *pro bono* surveys of key sites along Makana Municipality's water distribution network.

RUBIC serves as the proud host to the DSI Nano-Micro



Professor Janice Limson

Director and DSI/NRF South African Research Chair in Biotechnology Innovation and Engagement

Photo: Jackie Grove

Manufacturing Facility in Paper-Based Diagnostics. Lead by Professor Janice Limson and **Dr Ronen Fogel**, the facility has acquired a critical mass of equipment to fabricate and test paper-based diagnostics and has expanded its collaborative network to advance new diagnostics. This facility will play a key role in development of new diagnostic tests through a competitive South African Medical Research Council – United Kingdom Research Initiative grant awarded to these researchers.

Postgraduates / Graduations

RUBIC hosted twenty-one (21) Postgraduate students in 2024, consisting of a cohort of five (5) Honours, eight (8) MSc and eight (8) PhD candidates. The centre celebrated the April and October graduations with a total of four (4) Honours and five (5) MSc degrees being awarded. Students receiving their MSc with distinction included **Michaela Davies**, **Jialin Yu** and **Saltiel Hamese**. Jointly supervised by Professor Limson and **Dr Alette Schoon** of the School of Journalism and Media, MA graduate **Nontokozo Mchunu** received her degree with distinction.

Mr Ntobeko Songcata, a doctoral candidate, excelled as a Postgraduate entrepreneur, which netted him R700 000 from the SAB Foundation's Social Innovation Awards programme. This programme supports businesses with products or services that improve the lives of women, youth, people in rural areas, and people with disabilities. The start-up grant will help toward the development and commercialisation of the device PetriCam.

Working with the Environmental Learning Research Centre (ELRC), RUBIC will take a lead in developing courses that **highlight the transformative value** of transdiciplinary approaches.

Distinguished Visitors / International Visits

The BioSENs research group lead by Professor Limson and Dr Fogel hosted three (3) international visitors and two (2) transdisciplinary workshops. Professor Alex Baumber of the University of Technology Sydney's Transdisciplinary School delivered a series of workshops and lectures aimed at engaging academics around transdisciplinary approaches to research, teaching and innovation. Working with the Environmental Learning Research Centre (ELRC), RUBIC will take a lead in developing courses that highlight the transformative value of these approaches. Emphasising the value of multiple stakeholders in informing research, the SARChI Chair hosted an extensive workshop on unlocking the potential of the cannabis bioeconomy in the Eastern Cape.



From left, back row: Dr Rose Kadye, Chidinma Iheanetu, Shannon Rutherford, Heidi Böttcher, Taweneko Mwale, Michaela Davies and Khanyisile Nkosi.

From left, front row: Lwazi Madikiza, Professor Janice Limson, Professor Aileen Boshoff, Tasmita Singh, Lerato Baloyi-Mokwena and Ilse De Vos.

Photo: Jackie Grove

Representatives from industry, traditional leadership, traditional and commercial growers, national and local government leaders, NGOs and academics from multiple disciplines identified challenges and research areas that could guide future growth in this area.

Professor Stephen Ashworth of the University of East Anglia delivered a well-attended science communication workshop to Rhodes University. Professor Vladimir Lumelsky of the Institute of Electrical and Electronics Engineers (IEEE-Sensors) led a thought-provoking discussion on the role of Sensors in Robotics and Artificial Intelligence.

Significant Research Aligned Events

Key research highlights for 2024 in RUBIC include:

BioSens Research Group: As leaders of this group, Professor Janice Limson and Dr Ronen Fogel made substantial strides in aptamer and paper-based diagnostics, with several publications and patents, significantly advancing diagnostic methods and disease monitoring. Funded through the Eastern Cape's Office of the Premier and the SARChI Chair in Biotechnology Innovation and Engagement, the group launched its cannabis research programme, which entailed extensive engagement with cannabis growing communities in the Pondoland region of the province. This was followed by a comprehensive series of workshops and multi-stakeholder meetings to define research paths and opportunities. Taking a leading role, the group has launched several research projects to advance development of products and services to support traditional growers.

Collaborating with industry, a strong focus was on development of rapid diagnostic tests and services, which are currently undergoing prototyping.

Parasite Molecular Biology and Drug Discovery: Associate Professor Boshoff's research programme continues to be a cornerstone of RUBIC's accomplishments. Her team has made significant advances in understanding human and parasite chaperone protein biology, which is crucial for developing therapeutic interventions for diseases such as Malaria and Trypanosomiasis.

Tissue Engineering and Organ-on-a-Chip Models: The Prinsloo Lab explores diverse biotechnological frontiers, including cellular agriculture, stem cell differentiation, cancer drug discovery, and tissue engineering.

Precision Medicine and Cancer Therapy: The research team led by Research Associate Dr Govindaraj is proving to be pivotal in developing high-throughput screening methods for precision cancer therapy in South Africa.

Collectively, these research efforts underscore RUBIC's commitment to practical and impactful biotechnological advancements. The Centre's innovative projects and collaborative spirit drive transformative progress across multiple disciplines, contributing to the global advancement of biotechnology.

Department of Biotechnology and Biotechnology Innovation Centre (RUBIC) Publications

Concerts, Exhibitions, Performances, Workshops, Events

Limson, J.L.
Limson, J.L. Online. Engaging communities in scientific research. *"New applications of materials and bioreceptors: biosensors and beyond'. International Centre of Biodynamics.* Online. 22 March 2024.

Limson, J.L. and Lotz-Sisitka, H. Worskhop. *Transdisciplinary in higher education research, teaching and innovation.* Rhodes University, Makhanda. South Africa. 10 - 14 June 2024.

Limson, J.L. Round table discussion. "Cannabis Landrace Strains: Indigenous Knowledge (IK), Intellectual Property and Benefit Sharing". Rhodes University, Makhanda. South Africa. 18 June 2024.

Limson, J.L. Workshop. Increasing and Supporting Interdisciplinary Research and Science Engagement. *AESIS: Societal Impact of Research Workshop Summit.* Cape town, South Africa. 14 - 15 October 2024.

Limson, J.L. and Madikiza, L.
Limson, J.L. and **Madikiza, L.** Participatory. Panel Discussion: Realising Section 24: Reflections on Municipalities' responsiveness to environmental obligation. *A4A People's Council.* Amazwi Museum, Makhanda. South Africa. 15 - 16 August 2024.

Madikiza, L. and **Limson, J.L.** Exhibition. Engaging Communities in Research & Innovation. *Rhodes University International Conference on Community Engagement.* Rhodes University, Makhanda. South Africa. 14 - 16 May 2024.

Madikiza, L.
Madikiza, L. Community water testing. *A4A Civic Action Expo.* Joza library, Makhanda. South Africa. 27 November 2024.

Distinguished Visitors

Ashworth, S.
Professor S Ashworth. University of East Anglia, Norwich, United Kingdom. *Workshop-"Science communication".* August 2024.

Baumber, A.
Professor A Baumber. University of Technology Sydney's Transdisciplinary (TD), Sydney, Australia. *Workshop and lecture-"Transdisciplinarity in higher education research, teaching and innovation."* June 2024.

Lumelsky, V.
Professor V Lumelsky. University of Wisconsin-Madison, Madison, United States. *Lecture-"Human-Robot Interaction and Human-Robot Teams".* May 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Chauhan, R., Fogel, R. and Limson, J.L.
Chauhan, R., **Fogel, R.**, Purcarea, C., Necula-Petrareanu, G., Fanjul-Bolado, P., Ibanez, D., Vasilescu, A., Banciu, R.M. and **Limson, J.L.** (2024) Electrochemical characterization of carbon black in different redox probes and their application in electrochemical sensing. *Carbon Trends.* 17 (2024). p.1-14.

Ferreira, L., Flanagan, S.P., Fogel, R. and Limson, J.L.
Ferreira, L., **Flanagan, S.P.**, **Fogel, R.** and **Limson, J.L.**



From left: Professor Keith Cowan, Dr Ronen Fogel, Professor Aileen Boshoff, Professor Earl Prinsloo, Professor Janice Limson and Ms Lwazi Madikiza.

Photo: Jackie Grove



From left back row: Professor Earl Prinsloo and Oratile Makhafula.
From left front row: Heidi Böttcher, Ilse De Vos, Dr Rose Kadye, Taweneko Mwale and Yamnkela Manana.
Photo: Jackie Grove

(2024) Generation of epitope-specific hCG aptamers through a novel targeted selection approach. *PLOS ONE.* 19 (2). p.1-21.

Govindaraj, D.B.T.
Takundwa, M.M. and **Govindaraj, D.B.T.** (2024) Novel strategies for drug repurposing. *Progress in Molecular Biology and Translational Science.* 205 (2024). p.9-21.

Monchusi, B., Dube, P., Takundwa, M.M., Kenmogne, L.V. and **Govindaraj, D.B.T.** (2024) Advances in CRISPR-Cas systems for blood cancer. *Progress in Molecular Biology and Translational Science.* 208 (2024). p.261-284.

Rutkowska, D.A., Du Plessis, L.H., Suleman, E., O'Kennedy, M.M., **Govindaraj, D.B.T.** and Lemmer, Y. (2024) Development of a Plant-Expressed Subunit Vaccine against Brucellosis. *Microorganisms.* 12 (6). p.1-11.

Govindaraj, D.B.T., Musasira, N. and Takundwa, M.M. (2024) Directed CHO: A new miniaturized directed evolution process for phenotype stability trial test of CHO cells before bioreactor scale-up. *SLAS TECHNOLOGY.* 29 (4). p.1-11.

Kadye, R. and Prinsloo, E.
Mkolo, N.M., Naidoo, C.M., **Kadye, R.**, Obi, C.L., Iweriebor, B.C., Olaokun, O.O., **Prinsloo, E.** and Zubair, M.S. (2024) Identification of South African Plant-Based Bioactive Compounds as Potential Inhibitors against the SARS-CoV-2 Receptor. *Pharmaceuticals.* 17 (7). p.1-21.

Jimoh, M.O., Kerebba, N., Okechukwu, O.C., Jimoh, A.A., Salaudeen, T., Bamigboye, S.O., Sogoni, A., Okaiyeto, K., Mkhwanazi, N., **Kadye, R.** and Idris, O.A., Erasmus, M., **Prinsloo, E.**, Laubscher, C.P. (2024). Analysis of antioxidant nutrients, anti-HIV and anticancer metabolic fingerprints of Pelargonium quercifolium (Lf) L'Hér. *Food Chemistry Advances.* 5, p.100804.

Jimoh,M.O., Jimoh M.A., Kerebba, N., Bakare, O.O., Senjobi, C.T., Saheed, S.A., **Kadye, R.**, **Prinsloo, E.**, and Laubscher, C.P. (2024) Liquid chromatography–mass spectrometry and xCELLigence real time cell analyzer revealed anticancer and antioxidant metabolites in *Trianthema portulacastrum* L. (Aizoaceae). *Phytomedicine Plus.* 4(2). p 100550.

Khumalo, L.E., Fogel, R., Mutingwende, N., Madikiza, L. and Limson, J.L.
Khumalo, L.E., Mickelsson, M., **Fogel, R.**, **Mutingwende, N.**, **Madikiza, L.** and **Limson, J.L.** (2024) Progressing from Science Communication to Engagement: Community Voices on Water Quality and Access in Makhanda. *Sustainability (Switzerland).* 16 (1). p.1-20.

Limson, J.L. and Fogel, R.
Madikizela, P., **Limson, J.L.**, **Fogel, R.**, Ristvej, J. and Tandlich, R. (2024) A tool for the assessment of the risk drivers and public perception of WASH in South Africa. *Jàmbá: Journal of Disaster Risk Studies.* 16 (2). p.1-10.

Nqowana, T., **Fogel, R.,** Carlos Bezerra, J and **Limson, J.** (2024) Citizen science tools for engaged research: Water quality monitoring in remote communities. *South African Journal of Science.* 120 (9/10). p.56-64.

Limson, J.L. and Zuma, B.M.
Bani, S., **Limson, J.L.**, **Zuma, B.M.** and Tandlich, R. (2024) Short Communication: Potential of Biochar and Clays as Sorbents for Treatment of Greywater and Related Wastewaters in South Africa. *Journal of Solid Waste Technology and Management.* 50 (2). p.577-589.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Buthelezi, K.T.F. and Prinsloo, E.
Britton, J., Sindelo, A., Sen, P., Magaela, N.B., Matshitse, R., Babu, B., Managa, M., Nene, L.C., **Buthelezi, K.T.F.**, Magadla, A., **Prinsloo, E.** and Nyokong, T. Morpholine modified porphyrinoids for anticancer and antimicrobial treatment - Invited speaker. *International Conference on*

Porphyrins and Phthalocyanines (ICPP-13). Niagara Falls Convention Center Niagara Falls, Buffalo. USA. June 2024.

Davies, M.R., Fogel, R. and Limson, J.L.

Davies, M.R., **Fogel, R.** and **Limson, J.L.** Comparison of Fluorescent and Colorimetric Stains for Monitoring Key Parameters of Biofilm Growth. *Micro Manufacturing Convergence Conference.* University of Stellenbosch, Stellenbosch. South Africa. July 2024.

Limson, J.L.

Limson, J.L. and Accone, T. The story of aptamers: fundamental to applied sciences and back again. *Communicating Discovery Science Symposium.* University of Stellenbosch, Stellenbosch. South Africa. November 2024.

Limson, J.L. and Fogel, R.

Limson, J.L. and **Fogel, R.** Challenges in the generation, evaluation and application of aptamers in diagnostics. *Micro Manufacturing Convergence Conference.* University of Stellenbosch, Stellenbosch. South Africa. July 2024.

Limson, J.L. and Madikiza, L.

Madikiza, L. and **Limson, J.L.** Water Crises: Accountability for the water crisis in CoJ and Makhanda. *Accountability Summit.* University of Pretoria's Gordon Institute of Business Science (GIBS), Pretoria. South Africa. October 2024.

Mahlalela, M., Hand, F., Tembo, P. and Boshoff, A.

Mahlalela, M., **Hand, F.**, **Tembo, P.** and **Boshoff, A.** *Trypanosoma brucei* Hsp70 escort protein regulates the activity of heat shock protein 70. *South African Society for Biochemistry and Molecular Biology (SASBMB) Conference.* Limpopo. South Africa. July 2024.

Rutherford, S.M., Fogel, R. and Limson, J.L.

Rutherford, S.M., **Fogel, R.** and **Limson, J.L.** Low-cost Cellulose Dipstick to Extract CircRNA Cancer Biomarkers. *Micro Manufacturing Convergence Conference.* University of Stellenbosch, Stellenbosch. South Africa. July 2024.

Singh, T., Fogel, R. and Limson, J.L.

Singh, T., **Fogel, R.** and **Limson, J.L.** NGS-Guided Aptamer Re-selection for Improved Sensor Applications: biotin as a modification tag in the amplification of enriched pools. *Micro Manufacturing Convergence Conference.* University of Stellenbosch, Stellenbosch. South Africa. July 2024.

Yu, J., Fogel, R. and Limson, J.L.

Yu, J., **Fogel, R.** and **Limson, J.L.** Evaluation of adsorption-desorption of histamine specific aptamers from gold nanoparticle surfaces as a mechanism to detect bacterial contamination in foodstuffs. *Micro Manufacturing Convergence Conference.* University of Stellenbosch, Stellenbosch. South Africa. July 2024.

From left: Professor Earl Prinsloo and Taweneko Mwale.
Photo: Jackie Grove



DEPARTMENT OF Botany

Introduction

The Botany Department had a busy 2024, continuing research programmes in evolutionary ecology, ecophysiology and climate change.



Photo: Jackie Grove

Professor Susanne Vetter
Head of Department

Professor Brad Ripley and his team at the Rhodes University Elevated CO2 Facility (RUECF) initiated a large experiment in 2023 looking at the interaction of eCO2 and nutrient supply on encroaching and non-encroaching savanna species. This culminated in a month-long campaign to harvest and process the experimental plants in November 2024, with **Nita Pallett**, **Tiffany Pillay**, **Susi Vetter** from the Botany Department, national collaborator Heidi-Jayne Hawkins (University of Cape Town) and international collaborators Colin Osborne and Kimberley Simpson (University of Sheffield), and Caroline Lehmann (Royal Botanic Garden Edinburgh and University of Edinburgh.).

Tiffany Pillay and Susi Vetter continued their research on the responses of the southern Kalahari savannas to climate change and altered fire regimes. This long-term project was initiated in 2022 with an aim to gain fundamental understandings of savanna ecology and to support fire management in the region. The project has gathered momentum and several field campaigns in 2024 have yielded data on the demography of key tree species in relation to fire and rainfall variation and on the responses of key grass species to wildfires.

Dr Tiffany Pillay was on academic leave in the first half of 2024. In February 2024 Tiffany undertook fieldwork in Clarens in the Free State, as part of an ongoing collaboration with Dr Grant

Martin (UFS) and Professor David Ward (Kent State University, USA) examining the growth and allocation strategies of *Gleditsia triacanthos* and *Robinia pseudoacacia* as invasive species in South Africa and other countries. In March 2024, Tiffany Pillay attended the International Savanna Science Network Meeting where she presented research on the effects of nutrient addition, fire and grass competition on the woody encroaching species *Vachellia sieberiana*. The initiation of a large experiment at the Rhodes University Elevated CO2 facility (RUCEF) is looking at the effects of elevated CO2 on these invasive species.

Dr Ethan Newman initiated a large-scale study to disentangle the evolutionary relationships, taxonomy, and adaptation of the Cape Gladiolus to ecological variables, in collaboration with Tony Verboom (Gothenburg University) and Nina Sletvold (Uppsala University). Ethan also finalised a study on the global trends of biotic pollination, which included a team of over thirty (30) researchers from all over the world led by Jeff Ollerton (University of Northampton and Kunming University).



Dr Ethan Newman's collaborators Steve Johnson, Jon Agren, and Nina Sletvold setting up scent extractions on *Gladiolus liliaceus* flowers near Swellendam in the Western Cape.

Photo: Ethan Newman

Professor Craig Peter attended the 23rd World Orchid Conference in Taiwan where he presented a paper on the effectiveness of camera traps documenting insects as pollinators. He also presented a poster reporting back on a project funded by Taiwan Orchids. Craig also sampled seeds of *Plantago lanceolata* across populations in eastern South Africa to contribute to the global study PLANTPOPNET examining variation in germination and seedling establishment traits of widespread invader plants.

Postgraduates / Graduations

In 2024 the Botany Department was home to two (2) Honours students, four (4) MSc students and eight (8) PhD candidates. One (1) PhD and four (4) MSc students graduated, three (3) of whom were awarded the degree with distinction.

The project has gathered momentum and **several field campaigns in 2024 have yielded data on the demography of key tree species in relation** to fire and rainfall variation and on the responses of key grass species to wildfires.



Dr Tiffany Pillay and Professor Brad Ripley during the harvest of the RUCEFF experiment on encroacher and non-encroacher seedling responses to elevated CO2 and nutrient availability.

Photo: Susi Vetter



Delegates of the international SEOSAW workshop hosted by Tiffany Pillay and Susi Vetter in Skukuza.
Photo: Jordan McCullough

MSc student Katharine Khoury was the recipient of the prestigious RU-UP International Travel Award to present a paper on her research at the 3rd Joint Congress on Evolutionary Biology in Montreal, Canada, in July 2024.

Distinguished Visitors / International Visits

Dr Ethan Newman hosted Swedish collaborators Nina Sletvold and Jon Agren in September and October, undertaking extensive fieldwork together to study pollinator-driven plant speciation in the Western Cape on Cape Gladiolus species.

Professor Brad Ripley hosted an open day for guests from the Department of Science and Innovation (DSI) and the National Research Foundation (NRF) showcasing the activities and successes of the Rhodes University Elevated CO2 Facility (RUECF) and negotiating the expansion and sustainability of the facility. Brad Ripley also hosted Professor Adam West (University of Cape Town) and Dr Mthunzi Mndela (University of Fort Hare) at the RUECF to foster collaborative research at the RUECF.

Significant Research Aligned Events

Dr Tiffany Pillay and Professor Susi Vetter organised and hosted an international workshop on “Integrating arid savannas and woodlands into the SEOSAW Network” in Kruger National Park. The Socio-Ecological Observatory for Studying African Woodlands (SEOSAW) is a network of scientists and plots aimed at understanding the response of African woodlands to global change.

The workshop brought together twenty-four (24) ecologists from South Africa, five (5) other African countries and the United Kingdom, about half of whom were early-career scientists, Postdoctoral Fellows or PhD candidates. It provided an opportunity for people to meet colleagues and students and to exchange experiences and ideas around long-term research based on plots, the rationale for the different SEOSAW protocols and how they integrate with other protocols, and particular regional and disciplinary approaches.

Department of Botany Publications

Peer-Reviewed Subsidy-Earning Journal Research Publications

Baso, N.C. and Coetzee, J.A.
Baso, N.C., Bownes, A., Paynter, Q., Cartier, A., **Hill, M.P.** and **Coetzee, J.A.** (2024) Biogeographical comparison of *Lagarosiphon major* between native South Africa and invaded New Zealand: A natural enemy release case study? *Biological Control.* 196 (Sep 2024). p.1-8.

Butler, H.C., Rogerson, A.J., Peter, C.I. and Newman, E.L.
Butler, H.C., **Rogerson, A.J.**, **Peter, C.I.**, Johnson, S.D. and **Newman, E.L.** (2024) Evidence for diurnal bee pollination in the ancestrally hawkmoth-pollinated genus Crinum (Amaryllidaceae). *Botanical Journal of the Linnean Society.* 1 (11). p.1-11.

Coetzee, J.A.
Reid, M.K., **Sutton, G.F.**, **Coetzee, J.A.**, Gettys, L. and **Hill, M.P.** (2024) Distribution and host preference of a potential biocontrol agent with a new association for the alien water lily *Nymphaea Mexicana* in South Africa. *African Journal of Aquatic Science.* 49 (2024). p.132-144.

Dixon, R.B.
Dixon, R.B., **Murray, T.**, **Mann, B.Q.**, **Cowley, P.D.**, **Daly, R.** and **Filmalter, J.D.** (2024) Longshore movements and site fidelity of the iconic giant trevally *Caranx ignobilis* from southern Africa, determined using passive acoustic telemetry. *Marine Ecology Progress Series.* 729 (2024). p.201-218.

Dold, A.P.
McKenzie, R.J. and **Dold, A.P.** (2024) *Crassothonna moniliformis* (Asteraceae, Senecioneae), a new species from the Albany Centre of floristic endemism, South Africa. *Phytotaxa.* 641 (4). p.243-254.

Martínez-Azorín, M.
Crespo, M.B., **Martínez-Azorín, M.** and Mavrodiev, E.V. (2024) "Reticulata irises": a nomenclatural and taxonomic synopsis of the genera *Alatavia* and *Iridodictyum* (Iris subg. Hermodactyloides auct., Iridaceae). *Plant Biosystems.* 158 (4). p.763-787.

Crouch, N.R. and **Martínez-Azorín, M.** (2024) *Schizobasis litanthiflora* (Hyacinthaceae, Urgineoideae), a new species from the Tugela River Basin of KwaZulu-Natal, South Africa. *Phytotaxa.* 672 (2). p.199-207.

Nell, R., Pillay, T. and Vetter, S.
Nell, R., **Pillay, T.** and **Vetter, S.** (2024) Reconstructing thicket clump formation using association rules analysis. *Journal of Vegetation Science.* 35 (3). p.1-10.

Newman, E.L.
Newman, E.L. and Johnson, S.D. (2024) Pollinator-mediated isolation promotes coexistence of closely related food-deceptive orchids. *Journal of Evolutionary Biology.* 38 (2). p.190-201.

Pirie, M. D., Bellstedt, D. U., Bouman, R. W., Fagúndez, J., Gehrke, B., Kandziora, M., **Newman, E.L.**, and Forest, F. (2024). Spatial decoupling of taxon richness, phylogenetic diversity and threat status in the megagenus *Erica* (Ericaceae). *PhytoKeys.* 244. p.127. https//doi.org/10.3897/phytokeys.244.124565

Pallett, N.C.M.
O'Connor, T.G., **Pallett, N.C.M.**, Clegg, B. and Shimbani, J. (2024) Local extirpation of woody species in *Colophospermum mopane* woodland under chronic utilisation by elephants. *African Journal of Ecology.* 62 (3). p.1-11.

Ripley, B.S.
Pallett, N.C.M., Ripley, B.S., Greve, M. and Cramer, M.D. (2024) Rethinking the sub-Antarctic terrestrial N-cycle: evidence for organic N acquisition by Marion Island grasses. *Polar Biology.* 47 (2024). p.411-423.

Simpson, K.
Simpson, K., Mian, S., Forrestel, E.J., Hackel, J., Morton,

Tiffany Pillay and Postgraduate students Bridgette Mc Millan and Jordan McCullough preparing to resample a permanent tree monitoring plot at Tswalu Reserve in the Kalahari. Photo: Professor Susi Vetter





MSc student Kaelin du Plessis explaining her experiment on the effects of elevated CO2 on invasive tree species to a group of visiting school learners. Photo: Professor Susi Vetter

J.A., Leitch, A.R. and Leitch, I.J. (2024) Bigger genomes provide environment-dependent growth benefits in grasses. *New Phytologist.* 244 (5). p.2049-2061.

Singini, E.J. and Mc Millan, B.
Singini, E.J., **Mc Millan, B.**, Newete, S.W. and Witkowski, E.T.F. (2024) Ecological drivers of *Seriphium plumosum* encroachment: Implications for management and conservation. *South African Journal of Botany.* 176 (2025). p.1-8.

Vetter, S.
Vetter, S. (2024) The bii4africa dataset of faunal and floral population intactness estimates across Africa's major land uses. *Scientific Data.* 11 (1). p.1-17.

Briske, D., **Vetter, S.**, Coetsee, C. and Turner, M.D. (2024) Rangeland afforestation is not a natural climate solution. *Frontiers in Ecology and the Environment.* 22 (5). p.1-8.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Baso, N.C.
Baso, N.C. and **Coetzee, J.A.** Fostering trophic resistance to climate change and biological invasions in African freshwater ecosystems. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

English, K.F., **Kinsler, D.L.**, **Baso, N.C.** and **Coetzee, J.A.** Biological control, the answer to mitigating the invasion of water hyacinth on Hartbeespoort Dam? *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Newman, E.L.
Newman, E.L. A test of the Grant Stebbins pollinator shift model of floral evolution. *3rd Joint Congress on Evolutionary Biology.* Canada, Montreal. Canada. July 2024.

Newman, E.L. and Khoury, K.L.
Newman, E.L. and **Khoury, K.L.** Geographic variation in pollinator community composition drives remarkable floral variation in painted ladies. *Fynbos Forum 2024.* Stellenbosch, Stellenbosch. South Africa. August 2024.

Newman, E.L. and **Khoury, K.L.** Disentangling pollination-efficacy and its role in maintaining subspecies boundaries in an African Storksbill. *3rd Joint Congress on Evolutionary Biology.* Canada, Montreal. Canada. July 2024.

Peter, C.I.
Peter, C.I. Securing and Re-evaluating the Conservation Status of the Endemic South African Epiphyte, *Rhipidoglossum millarii*. *23rd World Orchid Conference.* ICC Tainan, Tainan. Taiwan. February 2024.

Peter, C.I. An orchid example shows that commercial camera traps are suitable for documenting qualitative but not quantitative pollination interactions by insects. *23rd World Orchid Conference.* ICC Tainan, Tainan. Taiwan. February 2024.

Ripley., B.S.
Ripley, B.S., Singini, E.J., Reynolds, L., Raubenheimer, S., Jones, E., Carkeek, R., Dixon, R., **Vetter, S.**, **Pillay, T.**, Telford, L., Lehmann, C., Hawkins, H., Cramer, M., Simpson, S. and Osborne, C.P. Growth, allocation and physiological traits underlying tree encroachment in savannas. *Savanna Science Network Meeting.* Skukuza Conference Centre, Skukuza. South Africa. March 2024.

Pillay, T.
Pillay, T., Ngcobo, S. and Ward, D. Nutrient addition, fire and grass competition affects biological nitrogen fixation in *Vachellia sieberiana. Savanna Science Network Meeting*. Skukuza Conference Centre, Skukuza. South Africa. March 2024.

Vetter, S.
Vetter, S., Archibald, S. and Dexter, K.G. Subtropical thicket - part of an Africa-wide dry tropical biome, or floristically distinct? *Thicket Forum.* Addo Elephant National Park, Addo. South Africa. June 2024.

Vetter, S. and Pillay, T.
Vetter, S., Pillay, T. and Greve, M. Life and death in an arid savanna: Effects of rainfall variation and fire on acacia demographics in Tswalu Kalahari Reserve. Congress of the Grassland Society of Southern Africa. *Forever Resort, Gariep.* South Africa. July 2024.

Vetter, S., Mccullough, J.S.M. and Ripley, B.S.
Vetter, S., Osborne, C.P., Lehmann, C.E.R., **Mccullough, J.S.M.** and **Ripley, B.S.** Effects of elevated CO2, grass competition, drought, and fire on bark investment in encroaching and non-encroaching acacia species. *Savanna Science Network Meeting.* Skukuza Conference Centre, Skukuza. South Africa. March 2024.

Vetter, S., Pillay, T. and Mccullough, J.S.M.
Vetter, S., **Pillay, T.**, Greve, M. and **Mccullough, J.S.M.** Effect of rainfall variation and fire on tree demographics in Tswalu Reserve. *Oppenheimer Research Conference.* Oppenheimer Cricket Pavilion, Johannesburg. South Africa. October 2024.

DEPARTMENT OF Chemistry

Introduction

Chemistry celebrated 120 years as a core member of the Rhodes University community. We also celebrated 100 years since J.L.B. Smith became the third member of the Department, although the year ended with sharing in the loss of his son William Smith, the nation's favourite mathematics teacher. In fact, 2024 was an historical milestone for our Department, reflecting backwards to our beginnings and forward to our future.



Professor Rosa Klein
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

Although BSc Honours numbers have dwindled in some quarters, our Honours class continued to attract some outstanding students from both Rhodes University and farther afield, all of whom graduated in April 2024. Although only one (1) of these graduates remains in our research programme, we are proud to acknowledge that our students are able to find excellent placement in Masters programs at Rhodes University two (2) in Pharmacy, and one (1) in Nanotechnology) and at other South African Universities, as well as in industrial operations across the country.

Our thirteen (13) MSc graduates have continued on to Doctoral studies, of which **Kristin Burgess** warrants particular mention as the winner of a prestigious bursary to study at Cambridge University. The excellent facilities and research culture are attractive to students, and help to keep them engaged in research beyond their Masters studies.

Eight (8) Doctoral candidates graduated in 2024, a lower number than in previous years. However, the quality of our graduates continues to impress. Although four (4) are working as Postdoctoral Fellows in science institutes, (two (2) at the Tebello Nyokong Institute of Nano-technology Innovation at Rhodes, and two (2) at the Drug Discovery and Development centre at UCT), the remaining four (4) have also continued into academic careers. We are proud that our graduates make a contribution to knowledge generation during their Postgraduate studies and continue that trajectory when they leave us.

Distinguished Visitors / International Visits

Distinguished Professor Tebello Nyokong was inaugurated as a member of the Pontifical Academy of Social Sciences by Pope Francis in September 2024, and in October 2024 she was inaugurated as a Fellow of the Royal Society and receiving an Honorary Doctor of Science degree from Imperial College London.

Also in October, the Department of Chemistry played host to Oliver Tambo Professor Hulda Swai from the Nelson Mandela African Institution of Science and Technology in Arusha, Tanzania. We introduced her to collaborators in the Departments of Chemistry and



We are proud that our graduates make a contribution to knowledge generation during their Postgraduate studies and **continue that trajectory when they leave us.**

October Graduation 2024
Photo: Department of Chemistry

Biochemistry, as well as facilitating a tour of the Schonland Herbarium. We look forward to fostering ongoing collaborations in the fight against malaria and other neglected tropical diseases. This visit was initiated by the late Professor Rui Krause.

Significant Research Aligned Events

Green chemistry was highlighted as part of the Sustainability Colloquium hosted by the RU Environmental Committee. This event, which took place during the Swot Week break in May 2024, provided an opportunity for various researchers from across the Rhodes University community to highlight contributions being made to sustainability. **Professor Rosa Klein** presented the advances the Department has made in transforming our undergraduate and Honours curricula to equip our graduates and Postgraduates to carry out research in all chemistry disciplines with a view to sustainable futures.

In December 2024 the Vice-Chancellor presided over the opening of the Tebello Nyokong Institute for Nanotechnology Innovation, a R90 million facility designed to facilitate research into applications of nanotechnology to medicinal, energy, and other applications. This was the culmination of years of planning, designing, and dreaming related not only to the facility but to the research that inspired it. Congratulations to **Distinguished Professor Nyokong**, and also to **Professor Philani Mashazi**, who has nurtured the process through to completion.



Professor Rui Krause describing the intricacies of the Mass Spectrometer. Photo: Department of Chemistry

In memorial

In September, having recently returned from a research visit to Brazil, **Professor Rui Krause** succumbed following a short illness, leaving behind his wife Gunda and daughters Arien and Nimue. He also left behind an outstanding legacy of broad-based research in nanotechnology, natural products, medicinal chemistry, and even materials science, as well as an extensive network of collaborators spanning the globe.

It is very difficult to decide how he is most missed, whether it was as a creative researcher, caring and generous supervisor, warm and inclusive colleague, or a friend always ready with a smile. It is not so difficult to recognize that he was a multitalented, productive researcher who has left behind a large hole.

Department of Chemistry Publications

Distinguished Visitors

Dos Santos Diniz, B.
Mr B Dos Santos Diniz. University of São Paulo, São Paulo, Brazil. *Research Collaboration/Internship*. March 2024.

Chu, W.
Professor W. Chu. University of Cape Town, Cape Town, South Africa. *Research Collaboration*. September 2024.

Churchhill, D.
Professor D. Churchhill. Korea Advanced Institute of Science & Technology (KAIST), Daejon, South Korea. *Research Collaboration*. February 2024.

Cuena, M.
Mr M. Cuena. Embassy of Switzerland in South Africa, Pretoria, South Africa. *Tour of new INI building*. May 2024.

Finogenov, D.
Mr D. Finogenov. Ivanovo State University of Chemistry and Technology, Ivanovo, Russia. *Research Collaboration/ Internship*. January 2024.

Isaiah, B.
Mr B. Isaiah. United States International University, Africa, Nairobi, Kenya. *Research Collaboration*. October 2024.

Makhoba, X. and Rashamuse, R.
Dr X. Makhoba and **Dr R. Rashamuse.** Department of Science and Innovation, Pretoria, South Africa. *Meeting with Prof Nyokong and NIC funded students + INI tour*. June 2024.

Managa, M.E.
M.E. Managa. UNISA, Florida, South Africa. *Research Collaboration*. November 2024.

May, A.
Dr A. May. Northwest University, Potchefstroom, South Africa. *Research Collaboration*. December 2024.

Meireles Freire, P.
Mr P. Meireles Freire. University of São Paulo, São Paulo, Brazil. *Research Collaboration/Internship*. March 2024.

Modibane, K.D. and Serage, R.
Professor K.D. Modibane and **Mr R. Serage.** University of Limpopo, Polokwane, South Africa. *Research Collaboration*. October 2024.

Sikhwivhilu, L., Papo, J. and Ntsendwana, B.
Dr L. Sikhwivhilu, **Dr J. Papo** and **Dr B. Ntsendwana.** Mintek, Johannesburg, South Africa. *Meeting with Prof Nyokong and NIC funded students + INI tour*. June 2024.

International Visits

Ledwaba, M.M.
Ledwaba, M.M. University of Antwerp, Antwerp, Belgium. *Research Collaboration*. 18 November - 12 December 2024.

Macigane, P.R.
Macigane, P.R. University of Strathclyde, Glasgow, Scotland. *Research Collaboration*. 28 October - 15 November 2024.

Mack, J.
Mack, J. University of São Paulo, São Paulo, Brazil. *Research collaboration.* 9 - 11 September 2024.

Magwaza, T.M.
Magwaza, T.M. University of Antwerp, Antwerp, Belgium. *Research Collaboration*. 29 November - 12 December 2024.

Nyokong, T. and Mashazi, P.N.
Nyokong, T. and **Mashazi, P.N.** Imperial College London and Royal Society, UK, London, United Kingdom. *Professor Nyokong awarded Honorary Doctor of Science degree from Imperial College London and the inauguration of Professor Nyokong as a Fellow of the Royal Society*. 15 - 18 October 2024.

Nyokong, T., Mashazi, P.N. and Cobus, G.I.
Nyokong, T., **Mashazi, P.N.** and **Cobus, G.I.** Pontifical Academy of Social Sciences, Vatican City, Rome, Italy. *Professor Nyokong appointed as a member of Pontifical Academy of Social Sciences by Professor Francis*. 22 - 26 September 2024.

Patents

Nyokong, T. and Sen, P.
Nyokong, T. and **Sen, P.** (2024) *Novel phthalocyanine compounds and the use thereof for the treatment of diseases*. South Africa. 2024. WO2024115968.

Peer Reviewed Subsidy-Earning Journal Research Publications

Byamungu, G. and Krause, R.W.M.
Lokole, P.B., **Byamungu, G.**, Mutwale, P.K., Ngombe, N.K., Mudogo, V., **Krause, R.W.M.** and Nkanga, C.I. (2024) Plant-based nanoparticles targeting malaria management. *Frontiers in Pharmacology*. 15 (2024). p.1-26.

Daramola, O.A., Safari, J.B. and Krause, R.W.M.
Daramola, O.A., **Safari, J.B.**, Adeniyi, K.O., Siwe-Noundou, X., **Dingle, L.M.K.**, **Edkins, A.L.**, Tseki, P.F. and **Krause, R.W.M.**v(2024) Biocompatible liposome and chitosan-coated CdTe/CdSe/ZnSe multi-core-multi-shell fluorescent nanoprobe for biomedical applications. *Journal of Photochemistry and Photobiology A: Chemistry*. 454 (1). p.1-9.

Egunlusi, A.O.
Egunlusi, A.O. and Joubert, C.J. (2024) NMDA Receptor Antagonists: Emerging Insights into Molecular Mechanisms and Clinical Applications in Neurological Disorders. *Pharmaceuticals*. 17 (15). p.1-27.

Finogenov, D.
Vyalkin, D.A., Eroshin, A.V., Otlyotov, A.A., Minenkov, Y., **Finogenov, D.**, Zhabanov, Y.A. and Stuzhin, P.A. (2024) DFT and TDDFT study of Al (III), Ga (III), In (III) porphyrazinatesand their perhalogenated derivatives. *Journal of Porphyrins and Phthalocyanines*. 28 (9-10). p.549-727.

Hulushe, S.T. and Watkins, G.M.
Hulushe, S.T., **Watkins, G.M.** and **Khanye, S.D.** (2024) A cobalt(ii) coordination polymer-derived catalyst engineered via temperature-induced semi-reversible single-crystal-to-single-crystal (SCSC) dehydration for efficient liquid-phase epoxidation of olefins. *Dalton Transactions*. 53 (27). p.11326-11343.

Hulushe, S.T., **Watkins, G.M.** and **Khanye, S.D.** (2024) Enhanced Catalytic Activity of a Copper (II) Metalorganic Framework Constructed via Semi reversible Single-Crystal-to-Single-Crystal Dehydration. *ACS OMEGA*. 9 (7). p.7511-7528.

Jokazi, M., Centane, S., Mashazi, P.N. and Nyokong, T.
Jokazi, M., **Centane, S.**, **Mashazi, P.N.** and **Nyokong, T.** (2024) Photoelectrodegradation and sensing of penta-chlorophenol using In and Mn metalated porphyrins in the presence of TiO2 nanoparticles. *Journal of Photochemistry and Photobiology A: Chemistry*. 460 (2025). p.1-13.

Kemboi, D.
Silihe, K.K., Zingue, S., Yeshak, M.Y., Bisrat, D., **Kemboi, D.**, Brautigam, K., Rody, A., Michel, T., Asres, K., Njamen, D., Bishayee, A. and Koster, F. (2024) Purification of a-amyrin-acetate and phenylpropanoïd compounds from *Ficus umbellata Vahl* (Moraceae) stem bark and evaluation of their antibreast cancer potential. *South African Journal of Botany*. 177 (2025). p.445-456.

Khene, S.M.
Zeki, K., Asrak, S., Yabas, F.N., Cevik, N., Yabas, E., **Khene, S.M.**, Salih, B. and Canlica, M. (2024) The new metal-free,

zinc, magnesium, indium ball-type phthalocyanines and their hybrids with graphene oxide: Synthesis, investigation of photophysical, photochemical properties and theoretical studies. *Journal of Photochemistry and Photobiology A: Chemistry*. 461 (2025). p.1-13.

Koohyar, F. and Lobb, K.A.

Koohyar, F. and **Lobb, K.A.** (2024) Computational study on the adsorption and mechanisms of the hydrogenation of N-Cbz-protected glycine, alanine, valine, and phenylalanine on palladium, Pd (1 0 0), surface. *Materials Chemistry and Physics*. 320 (1 July 2024). p.129466.

Krause, R.W.M.

Teclegeorgish, Z.W., Mokgalaka, T., Kemboi, D., **Krause, R.W.M.**, Siwe-Noundou, X., **Nyemba, G.R.**, **Davison, C.**, **De La Mare, J.** and Tembu, V.J. (2024) Phytochemicals from *Pterocarpus angolensis* DC and Their Cytotoxic Activities against Breast Cancer Cells. *Plants*. 13(2) (301). p.1-12.

Lakkakula, J., **Krause, R.W.M.**, Barage, S., Joshi, A., Patil, S., Khan, A.A. and Roy, A. (2024) Exploring oral drug delivery: In vitro release and mathematical modeling of hydrophobic drug (Na-L-thyroxine) and its cyclodextrin inclusion complex in chitosan microparticles. *International Journal of Biological Macromolecules*. 265 (2). p.1-11.

Park, Y., Malgas, S., **Krause, R.W.M.** and **Pletschke, B.I.** (2024) Extraction and characterisation of sodium alginate from the Southern African seaweed *Ecklonia maxima*. *Botanica Marina*. 16 (5). p.1-11.

Kubheka, G., Mack, J. and Nyokong, T.

Kubheka, G., **Mack, J.** and **Nyokong, T.** (2024) Effect of # -extension and halogenation on the optical limiting properties of meso-pyrenylBODIPY dyes. *Journal of Porphyrins and Phthalocyanines*. 28 (2024). p.61-71.

Leoma, M.

Karthik, V., Ravi, S.K., Lohith, T.N., **Leoma, M.**, Sridhar, M.A. and Sadashiva, M.P. (2024) In silico studies of thiazole derivative towards its potential use against SARS-CoV-2: An intuition from an experimental and computational approach. *Journal of Molecular Structure*. 1322 (2025). p.1-15.

Karthik, V., Ravi, S.K., Lohith, T.N., **Leoma, M.**, Sridhar, M.A. and Sadashiva, M.P. (2024) Structure elucidation and computational studies of the thiazole derivative against SARS-CoV-2 virus: Insights from XRD, DFT, molecular docking, and molecular dynamics simulation. *Journal of Molecular Structure*. 1322 (3). p.1-13.

Nagarajappa, L.T., Chikkappaiahnayaka, S., **Leoma, M.**, Isamura, B.K., Venkatesh, K., Singh, K.V., Sindogi, K., Anandalwar, S.M. and Sadashiva, M.P. (2024) Unraveling the crystal structure, stability and drug likeness of 1,3,4-oxadiazole derivatives against Myelofibrosis: a combined experimental and computational investigation. *Journal of Biomolecular Structure and Dynamics*. 2024 (1). p.1-16.

Lobb, K.A.

Ukwueze, N.N., Ezeorah, C.J., Onyeyilim, E.L., Uzoewulu, C.P., Okoro, Uchechukwu, Ukoha, P.O., Nnaji, N., Anarado, C.J.O., Dege, N., Obasi, N.L., Ugwu, A.O., Onyeisi, N.M., **Lobb, K.A.** and Ujam, O.T. (2024) Synthesis, Characterization and Computational Studies on (E)-4-(1-((2-hydroxyphenyl)imi no) hexyl)-5-methyl-2-phenyl-2,4-dihydro -3H-pyrazol-3-one. *Journal of Molecular Structure*. 1323 (25 February 2025). p.140552.

Iloamaeke, I.M., Ezenwa, S., Olasunkanmi, L., **Lobb, K.A.** and Nnaji, N. (2024) Biomass of *Anthonotha macrophylla* leaf extract as a mild steel acid corrosion inhibitor: Experimental and theoretical study. *Next Materials*. 7 April 2025. p.100344.

Lobb, K.A., Hoppe, H.C., Diallo, B.N. and Swart, T.

Tastan Bishop, Ö., **Lobb, K.A.**, **Hoppe, H.C.**, **Diallo, B.N.**, **Swart, T.** and The Atomwise AIMS Program, '.e.t.a.l.'. (2024) AI is a viable alternative to high throughput screening: a 318‐ target study. *Scientific Reports*. 14 (7526). p.1-16.

Professor Rui Krause with Tsebang Matlapeng and Bafokeng Sekaleli - a photograph that beautifully illustrates his warm nature and affection for his students. Photo: Department of Chemistry



Lokole, B.P., Safari, J.B. and Krause, R.W.M.
Lokole, B.P., Ngombe, N.K., Motomba, D.I., **Safari, J.B.**, Mpuza, M.K., **Krause, R.W.M.**, Mutwale, P.K. and Nkanga, C.I. (2024) Preparation and characterization of micellar nanoparticles using crude saponins from five Congolese plant species. *Pharmaceutical Science Advances*. 2 (2024). p.1-11.

Luhana, C.B. and Mashazi, P.N.
Luhana, C.B. and **Mashazi, P.N.** (2024) Conducting Nickel Hydroxide Thin Film on Molybdenum Disulfide? Reduced Graphene Oxide Composite Electrode for Simultaneous Detection of Uric Acid, Dopamine and Ascorbic Acid. *ChemElectroChem*. 11 (16). p.11-16.

Mack, J. and Nyokong, T.
Nagarajan, T., Gayathri, M.P., **Mack, J.**, **Nyokong, T.**, Govindarajan, S. and Babu, B. (2024) Blue-Light-Activated Water-Soluble Sn (IV)-Porphyrins for Antibacterial Photodynamic Therapy (aPDT) against Drug-Resistant Bacterial Pathogens. *Molecular Pharmaceutics*. 21 (5). p.2365-2374.

Mack, J., Kubheka, G., May, A.K., Ngoy, B.P. and Nyokong, T.
Mack, J., **Kubheka, G.**, **May, A.K.**, **Ngoy, B.P.** and **Nyokong, T.** (2024) BODIPY dyes for optical limiting applications on the nanosecond timescale. *Dalton Transactions*. 53 (2024). p.11326-11343.

Magaela, N.B. and Nyokong, T.
Magaela, N.B., Managa, M.E. and **Nyokong, T.** (2024) The synthesis of 5,10,15,20-tetra pentafluorophenyl porphyrin loaded onto spermine modified carbon nanospheres for enhanced cancer selectivity in photodynamic therapy. *Journal of Molecular Structure*. 1306 (2024). p.1-10.

Magaela, N.B., Ledwaba, M.M., Mack, J. and Nyokong, T.
Magaela, N.B., **Ledwaba, M.M.**, Malomane, N., **Mack, J.**, **Nyokong, T.** and Managa, M.E. (2024) Photodynamic inactivation of *Staphylococcus aureus* and *Escherichia coli* with free-base and indium (III) 5,10,15,20-tetrakis(4-pyridyl) porphyrin adsorbed onto single-walled carbon nanotubes. *Journal of Porphyrins and Phthalocyanines*. 28 (2024). p.260-271.

Matshitse, R. and Nyokong, T.
Welsh, A., **Matshitse, R.**, Khan, A., **Nyokong, T.**, Prince, S. and Smith, G.S. (2024) Trinuclear ruthenium (II) polypyridyl complexes: Evaluation as photosensitizers for enhanced cervical cancer treatment. *Journal of Inorganic Biochemistry*. 256 (2024). p.1-10.

Matshitse, R., Nemakal, M. and Nyokong, T.
Khan, S.U., **Matshitse, R.**, Borah, R., **Nemakal, M.**, Moiseeva, E.O., Dubinina, T.V., **Nyokong, T.**, Verbruggen, S.W. and De Wael, K. (2024) Coupling of Phthalocyanines with Plasmonic Gold Nanoparticles by Click Chemistry for an Enhanced Singlet Oxygen Based Photoelectrochemical Sensing. *ChemElectroChem*. 11 (11). p.1-10.

May, A.K., Mack, J. and Nyokong, T.
May, A.K., Ngoy, B.P., **Mack, J.** and **Nyokong, T.** (2024) Photodynamic antimicrobial activities of a series of meso-substituted 2,6-dibrominated1,3,5,7-tetramethyl BODIPY dyes. *Journal of Porphyrins and Phthalocyanines*. 28 (2024). p.88-96.

Mbaba, M.
Mhlanga, R., **Mbaba, M.**, **Tonui, R.**, **Edkins, A.L.**, **Khanye, S.D.** and **De La Mare, J.A.** (2024) Ferrocenyl Aminocresols display multimodal activity against triple-negative breast cancer cells in vitro. *ChemistrySelect*. 9 (42). p.1-12.

Mciteka, L.P., Lobb, K.A. and Kaye, P.T.
Mciteka, L.P., **Lobb, K.A.**, Stander, M.A. and **Kaye, P.T.** (2024) Electrospray ionisation mass spectrometric studies of N-substituted 10-(aminosulfonyl)bornyl acrylate derivatives. *ARKIVOC*. 7 (2024). p.1-10.

Mkhondwane, S.T., Mgidlana, S., Openda, Y.I., Nwahara, N.U. and Nyokong, T.
Mkhondwane, S.T., **Mgidlana, S.**, **Openda, Y.I.**, **Nwahara, N.U.** and **Nyokong, T.** (2024) Phthalocyanine conjugated manganese ferrite nanoparticles embedded in TiO_2 fibers for photo-, sono- and photosono-catalytic degradation of Rhodamine 6G. *Catalysis Today*. 432 (2024). p.1-10.



Dr Bertha Chithambo, making it all look easy!
Photo: Department of Chemistry

Mkhondwane, S.T., Sebiawu, G.E., Mgidlana, S., Openda, Y.I., Nwahara, N.U., Mack, J. and Nyokong, T.
Mkhondwane, S.T., **Sebiawu, G.E.**, **Mgidlana, S.**, **Openda, Y.I.**, **Nwahara, N.U.**, **Mack, J.** and **Nyokong, T.** (2024) Photosono activation of peroxymonosulfate using A3B phthalocyanines supported on titanium dioxide nanofibers for degradation of Rhodamine 6G. *Synthetic Metals*. 307 (2024). p.1-16.

Mokgopa, K.P., Lobb, K.A. and Tshiwawa, T.
Mokgopa, K.P., **Lobb, K.A.** and **Tshiwawa, T.** (2024) A Computational Study of Green Tea Extracts and their Derivatives as Potential Inhibitors for Squalene Monooxygenase. *Medicinal Chemistry*. 20 (7). p.1-12.

Molupe, N., Sindelo, A., Mack, J. and Nyokong, T.
Ndundu, A., **Molupe, N.**, **Sindelo, A.**, Osomba, L., Kkuboni, M., Ngoy, B.P., **Mack, J.** and **Nyokong, T.** (2024) Antimicrobial Photodynamic Therapy Activity Properties of 2,6-Brominated and -Iodinated BODIPY Core Dyes and their π-Extended 3,5-Distyryl Analogues. *Macroheterocycles*. 17 (4). p.306-314.

Msutu, T. and Mashazi, P.N.
Msutu, T. and **Mashazi, P.N.** (2024) Enrichment of prostate-specific antigen using magnetic-silica antibody nanobioconjugates and fluorescence detection. *Sensors & Diagnostics*. 4 (1). p.44-54.

Msutu, T., Adeniyi, O.K. and Mashazi, P.N.
Msutu, T., **Adeniyi, O.K.** and **Mashazi, P.N.** (2024) Antibody fluorescein-doped silica nanobioconjugates for the ultrasensitive detection of prostate-specific antigen. *Sensors & Diagnostics*. 3 (7). p.1167-1176.

Mulaudzi, I., Mpeta, L.S., Matshitse, R., Chindeka, F. and Nyokong, T.
Mulaudzi, I., **Mpeta, L.S.**, **Matshitse, R.**, **Chindeka, F.** and **Nyokong, T.** (2024) The effect of reduced graphene oxide and exfoliated graphite on dye sensitized solar cells containing octa carboxylic acid Cu phthalocyanine. *Journal of Coordination Chemistry*. 78 (4). p.1-13.

Nyokong, T.
Nyokong, T. and Greed, S. (2024) The power of putting education first. *Nature Reviews Chemistry*. 8 (2024). p.295-296.

Regasa, M.B. and **Nyokong, T.** (2024) Advantages of Electrochemical Exfoliation Method Over Conventional Methods. *Engineering Materials*. 2883 (2024). p.33-59.

Oyim, J.O., Jokazi, M., Mack, J. and Nyokong, T.
Oyim, J.O., **Jokazi, M.**, **Mack, J.**, Amuhaya, E.K. and **Nyokong, T.** (2024) Indium porphyrin - colloidal activated carbon composites for photocatalytic activity against an organic pollutant and bacteria. *Polyhedron*. 253 (2024). p.1-12.

Oyim, J.O., Magadla, A., Mack, J. and Nyokong, T.
Oyim, J.O., **Magadla, A.**, **Mack, J.**, Amuhaya, E.K. and **Nyokong, T.** (2024) Expanding the horizons of photo-

dynamic therapy: Indium metalated pyridinyl-based trans-A2B2 porphyrin as novel anti-biofilm agents. *Dyes and Pigments*. 232 (2025). p.1-13.

Safari, J.B., Maseko, P., Lokole, B.P., Byamungu, G., Nogqala, S., Mukanya, M.J. and Krause, R.W.M.
Safari, J.B., **Maseko, P.**, **Lokole, B.P.**, **Byamungu, G.**, **Nogqala, S.**, **Mukanya, M.J.**, Ndongwe, T., **Pletschke, B.I.**, **Krause, R.W.M.**, Matlou, G., Siwe-Noundou, X., Nkanga, C.I. and Ssengooba, F. (2024) The Art of Liposome Surface Decoration for Targeted Drug Delivery. *InTech*. 1 (1). p.1.

Samuel, Z., Jokazi, M., Nwahara, N.U. and Nyokong, T.
Samuel, Z., **Jokazi, M.**, **Nwahara, N.U.** and **Nyokong, T.** (2024) Nitrite electrochemical sensing using Cu centred porphyrin functionalized TiO_2 nanoparticles modified glassy carbon electrode. *Journal of Applied Electrochemistry*. - (2024). p.1-16.

Sewry, J.D.
Harrison, T.G., Davies Coleman, M.T., Rivett, A.C., Khan, M.A.H., **Sewry, J.D.**, Wajrak, M., Barker, N.M., Furze, J., Franklin, S.D., Sellou, L., Shallcross, N.K.R. and Shallcross, D.E. (2024) Simple Climate Models That Can Be Used in Primary, Secondary, and Tertiary Education. *Journal of Chemical Education*. 2024 (101). p.4528-4532.

Sindelo, A. and Nyokong, T.
Sindelo, A. and **Nyokong, T.** (2024) Photoinactivation of microorganisms and photodegradation of pollutants using phthalocyanines supported on nanofibers and glass wool. *Journal of Photochemistry and Photobiology A: Chemistry*. 447 (2024). p.1-12.

Soy, R.C., Babu, B., Mack, J. and Nyokong, T.
Soy, R.C., **Babu, B.**, **Mack, J.** and **Nyokong, T.** (2024) Photodynamic anticancer and antibacterial properties of a series of Sn(IV) tetraarylporphyrins. *Journal of Porphyrins and Phthalocyanines*. 28 (2024). p.601-617.

Soy, R.C., Macigane, P.R., Mack, J. and Nyokong, T.
Soy, R.C., **Macigane, P.R.**, **Mack, J.** and **Nyokong, T.** (2024) Photodynamic antibacterial chemotherapy activities of P(V) and Ga(III) triarylcorroles and their silver nanoparticle conjugates. *Journal of Porphyrins and Phthalocyanines*. 28 (2024). p.469-486.

Soy, R.C., Mafukidze, D.M., Mack, J. and Nyokong, T.
Soy, R.C., **Mafukidze, D.M.**, **Mack, J.** and **Nyokong, T.** (2024) The Photodynamic Antibacterial Activity Properties of a Series of Indium(III) Porphyrins and their Gold and Silver Nanoparticle Conjugates. *European Journal of Inorganic Chemistry*. 27 (2024). p.1-14.

Welegergs, G., Jokazi, M., Nwahara, N.U. and Nyokong, T.
Welegergs, G., Ambaye, A.D., **Jokazi, M.**, **Nwahara, N.U.** and **Nyokong, T.** (2024) Bioengineering of one dimensional hierarchical Cu_7S_4 hollow nanotubes for non-enzymatic glucose sensing applications. *RSC Advances*. 14 (2024). p.27122-27131.

Peer-reviewed Proceedings

Sewry, J.D.
Williams, J.A., **Sewry, J.D.** and **Cobbing, K.M.** The introduction and adaptation of the Investigative Science Learning Environment (ISLE) approach in a South African high school. *Proceedings of SAIP 2024, the 68th Annual Conference of the South African Institute of Physics*. Rhodes University, Grahamstown. South Africa. January 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Britton, J., Sindelo, A., Sen, P., Magaela, N.B., Matshitse, R., Babu, B., åManaga, M., Nene, L.C., Magadla, A. and Nyokong, T.
Britton, J., **Sindelo, A.**, **Sen, P.**, **Magaela, N.B.**, **Matshitse, R.**, **Babu, B.**, **Managa, M.**, **Nene, L.C.**, **Buthelezi, K.T.F.**, **Magadla, A.**, **Prinsloo, E.** and **Nyokong, T.** Morpholine

Multidisciplinary research - Professor Brett Pletschke discussing research with chemistry Postgraduates in the Physics Department.
Photo: Department of Chemistry





Justin Safari and Paula Maseko attending the CATSA conference in the Drakensberg in November 2024.
Photo: Department of Chemistry

modified porphyrinoids for anticancer and antimicrobial treatment - Invited speaker. *International Conference on Porphyrins and Phthalocyanines (ICPP-13)*. Niagara Falls Convention Centre Niagara Falls, Buffalo. USA. June 2024.

Jokazi, M. and Nyokong, T.

Jokazi, M. and **Nyokong, T.** The effect of TiO_2 nanoparticles on the catalytic activity of a porphyrin towards electrochemical sensing and photoelectrodegradation of pentachlorophenol. *International Conference on Porphyrins and Phthalocyanines (ICPP-13)*. Niagara Falls Convention Centre Niagara Falls, Buffalo. USA. June 2024.

Jokazi, M. and **Nyokong, T.** Electrochemical Sensing and Photoelectrodegradation of Pentachlorophenol using Metal Porphyrins as photoelectrocatalysts. *South African Chemical Institute (SACI) Conference*. Via Zoom, N/A. N/A. October 2024.

Mack, J.

Mack, J. Laser flash photolysis, photophysical and optical limiting properties of selected photosensitizers - Invited Speaker. *Rental Pool Program and African Laser Centre Program Grant holder report back meeting*. CSIR, Pretoria. South Africa. January 2024.

Mack, J. Development of porphyrinoid dye-based materials for use in safety, healthcare, and pollution control - Invited Speaker. *Rental Pool Program and African Laser Centre Program Grant holder report back meeting*. CSIR, Pretoria. South Africa. January 2024.

Mack, J. Optical limiting and PACT activity properties of BODIPY and azaBODIPY dyes - Invited Speaker, Virtual Meeting. *Main Group Chemistry Webinar, IOS Press*. N/A, N/A. N/A. January 2024.

Mack, J. The rational design of porphyrin and BODIPY analogues for biomedical and nonlinear optical applications - Keynote Speaker. *WTBC 2024, Workshop on Theoretical Bioinorganic Chemistry*. Federal University of Minas Gerais, Belo Horizonte. Brazil. September 2024.

Mack, J., Soy, R.C., Dingiswayo, S., Burgess, K.P., Chiyumba, C.N., Molupe, N., Sebiawu, G.E., Ledwaba, M.M., Magwaza, T.M., Tauyakhale, K.G. and Nyokong, T.

Mack, J., Babu, B., **Soy, R.C.**, **Dingiswayo, S.**, **Burgess, K.P.**, **Chiyumba, C.N.**, **Molupe, N.**, **Sebiawu, G.E.**, **Ledwaba, M.M.**, **Magwaza, T.M.**, **Tauyakhale, K.G.** and **Nyokong, T.** The photodynamic antimicrobial and anticancer activity properties of structurally analogous porphyrin, corrole, chlorin and N-confused porphyrin complexes - Keynote speaker. *International Conference on Porphyrins and Phthalocyanines (ICPP-13)*. Niagara Falls Convention Centre Niagara Falls, Buffalo. USA. June 2024.



Plant extracts - green chemistry!
Photo: Department of Chemistry

Mack, J., Soy, R.C., May, A.K., Kubheka, G., Sebiawu, G.E., Ledwaba, M.M., Magwaza, T.M., Tauyakhale, K.G., Macigane, P.R. and Nyokong, T.

Mack, J., **Soy, R.C.**, Babu, B., **May, A.K.**, **Kubheka, G.**, **Sebiawu, G.E.**, **Ledwaba, M.M.**, **Magwaza, T.M.**, **Tauyakhale, K.G.**, **Macigane, P.R.**, Ngoy, B.P., De Wael, K. and **Nyokong, T.** Rational design of porphyrin and BODIPY analogues for biomedical applications: further progress and future perspectives. *Centre for High Performance Computing 2024 National Conference*. Boardwalk International Convention Centre, Gqeberha. South Africa. December 2024.

Magaela, N.B. and Nyokong, T.

Magaela, N.B., Managa, M.E. and **Nyokong, T.** Photodynamic therapy of Sn-tetra pentafluorophenyl porphyrin loaded onto spermine modified carbon nanospheres for enhanced cancer selectivity. *International Conference on Porphyrins and Phthalocyanines (ICPP-13)*. Niagara Falls Convention Centre Niagara Falls, Buffalo. USA. June 2024.

Mashazi, P.N.

Mashazi, P.N. Graphene-phthalocyanine composite thin films as electrochemical sensors for neurotransmitters and screening of interferents - Invited speaker. *International Conference on Porphyrins and Phthalocyanines (ICPP-13)*. Niagara Falls Convention Centre Niagara Falls, Buffalo. USA. June 2024.

Nyokong, T.

Nyokong, T. Development of drugs for Multidrug Resistance Bacteria: the role of artificial intelligence. *Biennial Plenary on Science for Sustainability and Wellbeing in the Anthropocene Opportunities, Challenges, and Artificial Intelligence (AI)*. Pontifical Academy of Sciences, Vatican City, Rome. Italy. September 2024.

Safari, J.B., Krause, R.W.M. and Smith, V.J.

Safari, J.B., **Krause, R.W.M.**, **Smith, V.J.** and **Pletschke, B.I.** Magnetic cross-linked xylanase aggregates (m-CLXAs) based on aminated iron oxide nanoparticles for arabinoxylan hydrolysis: Preparation, optimisation, characterisation and mechano-enzymology. *34th Annual Meeting of the Catalysis Society of South Africa (CATSA)*. Champagne Sports Resort, Drakensberg, Kwazulu-Natal, Winterton. South Africa. November 2024.

DEPARTMENT OF Computer Science

Introduction

The research activity in the Department of Computer Science is organized around several mutually supporting research groups, the boundaries of which fluctuate as new technologies and techniques are developed or extended into current research domains. There is a strong focus on Information Security, Applied Machine Learning and Artificial Intelligence in general, across many of these groups.



Professor Karen Bradshaw

Head of Department

Photo: Jackie Grove

The Department's research is largely conducted under the auspices of the Telkom Centre of Excellence (CoE) in Distributed Multimedia, which is an initiative that has been ongoing since 1997 and brings together industry and academia. In addition to, but separate from the CoE, a multi-disciplinary research initiative between the South African Institute for Aquatic Biodiversity (SAIAB), the Computer Science Department and the Mathematics Department at Rhodes University was set up in 2022.

The current research groups in the Department, together with the main researchers, are outlined below.

Artificial Intelligence and Robotics

Mr James Connan, Associate Professor Dane Brown, Professor Karen Bradshaw, Dr Stones Dalitso Chindipha, Mr Josh van Staden and Mr Marc Marais

This group focuses on three (3) distinct areas of Artificial Intelligence, namely, image processing, machine learning and intelligent agents. Research is conducted in a wide range of application areas using appropriate techniques that are evolving at a rapid pace.

Security and Networks

Dr Stones Dalitso Chindipha and Professor Barry Irwin

The Security and Networks Research Group (SNRG) concentrates in the areas of Information Security and Computer Networks, both crucial in modern computing and telecommunications.

Convergence

Dr Zelalem Shibeshi, Professor Nomusa Dlodlo, and Professor Alfredo Terzoli

This group focuses on the rich intersection of legacy telecommunication systems and organisations and the Internet. The main research theme is 'Software Defined Networks, Network Function Virtualisation, Cloud and Fog computing for 5G networks'.

Distributed and Parallel Computing

Professor George Wells and Professor Karen Bradshaw

As one of the most established areas of research in the Department, this group focuses on the ever-present and



Kenneth Chieza (MSc student) presenting his research on fish detection algorithms at the South African Conference on Artificial Intelligence Research, Bloemfontein.

Photo: Department of Computer Science

vital theme of parallel and distributed computation, in particular the use of GPUs for high performance computing (including computational modeling) and concurrent programming in the Java programming language.

Software Design and Development

Dr Yusuf Motara

This group focuses on finding ways in which the next generation of software and software development can be conceptualised, designed, taught, and implemented. The research agenda encompasses Computer Science education and gamification in this context.

ICT for Development

Professor Nomusa Dlodlo, Dr Zelalem Shibeshi and Professor Alfredo Terzoli

This group focuses on a long-term, multidisciplinary effort to introduce meaningful and sustainable ICT in impoverished rural and peri-urban areas of South Africa. The group is currently also working in the areas of the Internet of Things and Blockchain applications.

Postgraduates / Graduations

Whilst the number of Postgraduates in the Department has declined sharply in the past few years, the quality of our Postgraduates has remained strong as evidenced by the number of student publications. At the graduation ceremonies during the year, eleven (11) Honours and three (3) Masters students received their degrees. Included in this cohort of graduates is one (1) MSc and two (2) Honours students who were involved in the research collaboration between the Department and SAIAB.

The Centre of Excellence Prize for the Best Research Student in Computer Science for 2024 was awarded to **Alden Boby**, who obtained his MSc with distinction for his research on licence plate recognition for vehicle re-identification.

The research activity in the Department of Computer Science is organized around several mutually supporting research groups, the **boundaries of which fluctuate as new technologies and techniques are developed or extended** into current research domains.

Distinguished Visitors / International Visits

It was a relatively quiet year in terms of both inbound and outbound international visits. In November 2024, Professor Barry Irwin from Noroff University College in Norway visited the Department to further ongoing research collaborations in the Information Security field. In July 2024, Professor Bradshaw visited colleagues at the Hamburg Applied University of Technology in Germany to further collaboration on computational modeling initiatives.

Department of Computer Science Publications

Books/Chapters/Monographs

Chindipha, S.D.
Chindipha, S.D. (2024) Object Detection in Cybersecurity: A Review of Automation of Malware Detection. In: Atemkeng, Marcellin (ed.). *Global Perspectives on the Applications of Computer Vision in Cybersecurity*. Hershey, PA, United States: IGL Global. p.1-100. ISBN: 0001668481278.

Peer Reviewed Subsidy-Earning Journal Research Publications

Bradshaw, K.
Cuthbert, C., **Pearse, N.J.** and **Bradshaw, K.** (2024) Data Visualization of Budgeting Assumptions: An Illustrative Case of Trans-Disciplinary Applied Knowledge. *Journal of Systemics, Cybernetics and Informatics*. 22 (1). p.130-149.

Bainomugisha, E., **Bradshaw, K.**, Ujakpa, M.M., Nakatumba-Nabende, J., Nderu, L., Mduma, N., Kihoza, P. and Irungu, A. (2024) Computer Science Education in Selected Countries from Sub-Saharan Africa. *ACM Inroads*. 15 (1). p.65-82.

Brown, D.L. and Abraham, A.G.
Brown, D.L. and **Abraham, A.G.** (2024) Predicting Crime Hot Spots Using Machine Learning Algorithms: Cities in USA and South Africa. *Communications in Computer and Information Science*. 2131 (1). p.123-143.

Chieza, K., Brown, D.L., Connan, J. and Salie, D.
Chieza, K., **Brown, D.L.**, **Connan, J.** and **Salie, D.** (2024) Automated Fish Detection in Underwater Environments: Performance Analysis of YOLOv8 and YOLO-NAS. *Communications in Computer and Information Science*. 2326 (1). p.334-351.

Machanick, P.
Machanick, P. (2024) Mentorship Lessons from Growing a Developing Country Journal. *Communications of the ACM*. 67 (11). p.35-37.

Salie, D., Brown, D.L. and Chieza, K.
Salie, D., **Brown, D.L.** and **Chieza, K.** (2024) Deep Neural Network Compression for Lightweight and Accurate Fish Classification. *Communications in Computer and Information Science*. 2326 (1). p.300-318.

Shibeshi, Z.S.
Gebeyehu, S. and **Shibeshi, Z.S.** (2024) Maize seed variety identification model using image processing and deep learning. *Indonesian Journal of Electrical Engineering and Computer Science*. 33 (2). p.990-998.

Tholanah, R.S. and Bradshaw, K.
Gwapedza, D.R., Barreteau, O., **Mantel, S.K.**, Paxton, B., Bonte, B., **Tholanah, R.S.**, **Xoxo, B.S.**, Theron, S., **Mabohlo, S.**, **O'Keeffe, J.H.**, **Bradshaw, K.** and **Tanner, J.L.** (2024) Engaging stakeholders to address a complex water resource management issue in the Western Cape, South Africa. *Journal of Hydrology*. 639 (131522). p.1-11.

The Automated detection of penguins at SANREC, Gqeberha using machine learning models (research conducted by Professor Dane Brown).
Photo: Department of Computer Science





Automated detection of penguins on Boulders Beach using machine learning models (research conducted by Professor Dane Brown). Photo: Department of Computer Science

Peer-reviewed Subsidy - Earning Proceedings

Brown, D.L. and Mollah, I.

Brown, D.L. and **Mollah, I.** Enhanced Human Face Recall by Reconstruction of Real and Synthetic Occlusions. *5th International Conference on Data Intelligence and Cognitive Informatics (ICDICI)*. Online, online. India. November 2024.

Chieza, K. and Brown, D.L.

Chieza, K. and **Brown, D.L.** Enhancing Images of Underwater Environments using AI for a Robust Fish Classification System. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2024*. Skukuza Safari Lodge, Kruger National Park, Skukuza. South Africa. October 2024.

De Silva, N.M.T. and Brown, D.L.

De Silva, N.M.T. and **Brown, D.L.** Early Detection of Wheat Stripe Mosaic Virus Using Deep Learning and Multispectral. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2024*. Skukuza Safari Lodge, Kruger National Park, Mpumalanga. South Africa. October 2024.

De Silva, N.M.T. and **Brown, D.L.** Tomato Disease Detection Using Multispectral Imaging with Deep Learning Models. *7th International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems*. Online, online. Mauritius. August 2024.

Magwenzi, T., Terzoli, A. and Shibeshi, Z.S.

Magwenzi, T., **Terzoli, A.** and **Shibeshi, Z.S.** A Private Micro Cloud for Clusters of Public Schools in Rural and Township Areas of South Africa. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2024*. Skukuza Safari Lodge, Kruger National Park, Mpumalanga. South Africa. October 2024.

Ncube, T., Dlodlo, N. and Terzoli, A.

Ncube, T., **Dlodlo, N.** and **Terzoli, A.** SDN-based Routing for IoT Mobile Ad-Hoc Networks. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2024*. Skukuza Safari Lodge, Kruger National Park, Mpumalanga. South Africa. October 2024.

Salie, D., Brown, D.L., Connan, J. and Chieza, K.

Salie, D., **Brown, D.L.**, **Connan, J.** and **Chieza, K.** Evaluating AI Model Generalization for Underwater Fish Detection. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC) 2024*. Skukuza Safari Lodge, Kruger National Park, Skukuza. South Africa. October 2024.



Karon, R., Dlodlo, N. and Terzoli, A.

Karon, R., **Dlodlo, N.** and **Terzoli, A.** Broadband Network Simulations Towards Cost assessment: Case of a Namibian Rural Health. *2024 3d Zimbabwe Conference of Information and Communication Technologies ZCICT.* NUST, Bulawayo. Zimbabwe. October 2024.

Baza, V., Dlodlo, N. and Terzoli, A.

Baza, V., **Dlodlo, N.** and **Terzoli, A.** Building a peer-to-peer learning platform for university students using WebRTC and mobile technology. *2024 3d Zimbabwe Conference of Information and Communication Technologies ZCICT.* NUST, Bulawayo. Zimbabwe. October 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Magwenzi, T., Terzoli, A. and Shibeshi, Z.S.

Magwenzi, T., **Terzoli, A.** and **Shibeshi, Z.S.** A Private Micro Cloud for Clusters of Public Schools in Rural and Township Areas of South Africa. *Southern African Telecommunications Networks and Applications Conference*. Skukuza Safari Lodge, Kruger National Park. South Africa. October 2024.

DEPARTMENT OF Drama

Introduction

The Drama department had a very active research year in 2024. The year kicked off with the Orientation Show, *RU Make Sure*, which was directed by Makhaola Ndebele and choreographed by Ashwin May. The show was a great success, to the extent that the DVC of Research has now diarized this as an annual must-see event on her calendar. The Orientation Show set the tone for the rest of the year, which was packed with productions and events, many of them not only featuring students, but also departmental staff.



Professor Heike Gehring
Head of Department

Photo: Jackie Grove

In term two, department lecturer, **Thembela Madliki**, created and directed the production *Ntakana*, which gave some Postgraduate students and staff an opportunity to showcase their talent, and also profiled the Drama department at the National Arts Festival. Other works that featured staff members at the National Arts Festival were *Cantos of a Life in Exile*, written and performed by **Makhaola Ndebele** and *Just a Phase*, created and performed by **Ashwin May**. Other festival contributions were *Fallen (and I can't get up)* and *Sometimes I Have to Lean in*, both created and performed by **Dr Alan Parker**. **Lalu Mokuku** also made a festival contribution with Meqoqo's *Mamemamela* ("Listen"), while **Angelinah Maponya** was the designer for the Nama Khoi productions *Dwaling* and *Swartwater*, both Ovation Award winning shows.

Staff also made important research contributions, with two (2) staff members having book launches during this year – **Dr Alex Halligey** and **Professor Mark Fleishman's** book *Making/Doing/Thinking: Methods for Performance Research* and Alan Parker and **Gavin Krastin's** *Portals into Praxis: Artists' Reflections on the Live Art Arcade 2018 – 2022*. Lalu Mokuku made a contribution to CHERTL's booklet *Embedding Multilingualism in the Curriculum: Using Language as a Resource for Teaching and Learning*. She is also working on a book project on Playback Theatre. **Dr Nkululeko Sibanda** was appointed as co-editor of *RiDE: The Journal of Applied Theatre and Performance*.

Strong contributions were made towards the university's internationalization vision. **Professor Heike Gehring** was invited as guest lecturer at the University of New York in Berlin and Dr Nkululeko Sibanda and Professor Gehring presented papers at the International Federation for Theatre Research, held in Manila, Philippines. Dr Alan

Parker presented a paper at the Institute for Creative Art's Live Arts Festival and Conference and three (3) of our students, **Azole Tima**, **Nokulunga Masia** and **Joshua Arnold**, performed there. Lalu Mokuku participated in the ASSITEJ world congress in Cuba, while **Thembela Madliki** was chosen to take part in the LaMama Director's Symposium in Umbria, Italy. Alex Halligey was a recipient of the prestigious Erasmus Plus funding, which enabled an exchange programme for staff and students between Rhodes University and the University of Malmö in Sweden.

Last, but certainly not least, our Department made a significant contribution to the university's community engagement and social justice programme. There were many events, with one of the highlights being the site-specific intervention, *Ten Minute Town*, conceptualized and curated by Alex Halligey with Jade Bowers from the University of Johannesburg and MA students in collaboration with the University of Malmö and Ubom! Eastern Cape Theatre Company. Then there were the quarterly Meqoqo Playback Theatre events produced and directed by Lalu Mokuku. Another big community event was Ubom! Theatre Company's Makhanda Drama Development Festival, under the directorship of **Gary Kitching** with the support of **Luvuyo Yanta** and **Noluvuyo (Nine) Magagula**. Kitching was on the executive committee of the University's Pride event and was in many ways the driving force behind this spectacular event.

Postgraduates / Graduations

Three (3) of our Masters students graduated with distinction. They are **Cailyb Prinsloo**, **Martinique Kotze** and **Khanya Ngcuka**. Ngcuka was also invited to perform her final Masters production, *Second Hands*, at Theatre Arts in Observatory, Cape Town, as part of the Y*oung Professionals Programme.*

Three (3) other Masters students were chosen to go on a six-month course in Malmö, funded by Erasmus Plus. They are **Junaid Denston**, **Lebohang Ntsane** and **Masego Madisha**. Another Masters student, **Joshua Arnold**, was invited by artist Nelisiwe Xaba, to perform with her at the Institute for Creative Arts Conference in Cape Town.

Distinguished Visitors / International Visits

Two (2) MA students and two (2) staff members from Malmö University came to visit Rhodes to participate in the *Ten Minute Town* project. Performance artist Selo Pesa visited the Department on an artist residency.

Significant Research Aligned Events

The projects, Ubom! Theatre Company and First Physical Theatre Company/NERA contributed to community engagement and social justice projects.

Our Department made a **significant contribution** to the university's community engagement and social justice programme.

Honours in Drama students in a scene from the Rhodes University Orientation Show for first year students. Photo: Unknown



Department of Drama Publications

Books/Chapters/Monographs

Parker, A.C.
Parker, A.C. (2024) Thinking through micropractice: an embodied interrogation of the archive. In: Fleishman, M. and Halligey, A. (eds.). p.221-229. ISBN: 9780799225594

Sibanda, N.
Sibanda, N., Moyo, C., Chipatiso, C. and Hussey, I. (2024) Breaking Barriers Through Theatre: The Case of King George VI Centre in Bulawayo. In: Glørstad, V., Østern, T.P., McCaffrey, T., Chikonzo, K. and Chivandikwa, N. (eds.). *Theatre and Performing Arts, Disability Citizenship and Community development – Perspectives from the Global South and North.* Oslo: Cappelen Damm. p.67-85. ISBN: 9788202839468.

Concerts, Exhibitions, Performances, Workshops, Events

Gehring, H.
Gehring, H. Facilitator. *Weekly Breathwork Workshops*. Berlin, New York. South Africa. 15 December 2023 - 30 April 2024.

Gehring, H. Facilitator. *Weekly Voice Workshops.* New York University Berlin. Berlin, Germany. 15 January - 29 April 2024.

Gehring, H. Dramaturg. Full length Theatre Production. *Second Hands* by Khanya Ngcuka. *The Young Professionals Programme.* Theatre Arts Observatory., Cape Town, South Africa. 18 January - 3 February 2024.

Parker, A.C.
Parker, A.C. Dramaturg. Arcade2024. *Live Art Arcade at Live Art Festival*. Hiddingh Campus, Cape Town. South Africa. 5 - 6 September 2024.

Parker, A.C. Director. Cry if you want to. *Live Art Festival*. Hiddingh Campus, Cape Town. South Africa. 5 September 2024.

Parker, A.C. Choreographer; Performer. Sometimes I have to lean in at National Arts Festival. *Sometimes I have to lean in*. Rhodes Box Theatre, Makhanda. South Africa. 20 - 22 June 2024.

Parker, A.C. Choreographer; Performer. Fallen (and I can't get up) at Theatre Arts. *Fallen (and I can't get up)*. Theatre Arts, Cape Town. South Africa. 23 - 25 August 2024.

Parker, A.C. Choreographer; Performer. Fallen (and I can't get up) at National Arts Festival. *Fallen (and I can't get up)*. Rehearsals Room, Makhanda. South Africa. 24 - 29 July 2024.

Sibanda, N.
Sibanda, N. Presenting/ Facilitating. The Theatre Archive in Zimbabwe: Key Points, Challenges and Opportunities. *SASUF Research and Innovation Week in Sweden*. Online, online. Sweden. 13 - 17 May 2024.

MA students in a scene from *Ten Minute Town*, directed by Alex Halligay.
Photo: Sam McCarthy





MA student in Interdisciplinary Performance Praxis, Teryy Rala-Rala in a scene from *Ten Minute Town*.

Photo: Aman Bloom

Distinguished Visitors

Parker, A.C.

Parker, A.C. University of Texas, Austin, United States of America. *Guest Lecture [virtual] University of Texas at Austin - Performance as Research.* February 2024.

Gehring, H.

Gehring, H. New York University Berlin, Berlin, Germany. *Guest Lecturer*. January to May 2024. **Høg Hansen, A.** and **Rundberg, M.** Malmö University. Erasmus staff exchange. *Place Texts, Place Moves, Makhanda* project. August/ September 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Parker, A.C.

Parker, A.C. (2024) Notes on Contributors. *Performance Research*. 28 (4). p.148-150.

Sibanda, N.

Sibanda, N. (2024) Gukurahundi as a Cultural Event: Cultural Politics and the Culture of Violence in Matabeleland. *Genealogy*. 8 (4). p.1-12.

Sibanda, N. (2024) The Public Intellectualism of Stephen Chifunyise: Crafting an African-Inspired Theatre Praxis. *South African Theatre Journal*. 0 (0). p.1-14.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Gehring, H.

Gehring, H. How Intergenerational Trauma can play itself out on stage. *International Federation of Theatre Research.* University of the Philippines, Manila, Philippines. July 2024.

Sibanda, N.

Sibanda, N. Remembering the Theatre Archive in Zimbabwean Theatre Sector: Key Points, Challenges and Opportunities. *Amazwi Literature, Heritage, Ecology Conference*. Amazwi South African Museum of Literature, Makhanda, South Africa. March 2024.

Sibanda, N. Theatre, space, and hegemony in postcolonial Zimbabwe. *International Federation of Theatre Research*. University of Philippines - Diliman, Manila. Philippines. July 2024.



A scene from *Cantos of a Life in Exile* by Makhaola Ndebele, National Arts Festival 2024.

Photo: Mark Wessels

DEPARTMENT OF Economics and Economic History

Introduction

The Department of Economics and Economic History had a busy and productive research year in 2024. In addition to continuing the strong research publication trajectory, the focus has been widened to include more structured support for Masters students and PhD candidates, offering regular, on campus, research workshops.



Professor Jen Snowball

Head of Department

Photo: Jackie Grove

Research support for early career staff is also at the forefront of Departmental activities, and we are delighted that **Dr Sandile Phakathi**, who was an nGAP scholar and graduated with her PhD in Economics from Rhodes University in 2022, was the recipient of the Commerce Faculty Emerging Researcher of the Year Award for 2023. The award was met with much acclaim. The Financial Markets research area also continues to develop, and **Professor Meshach Aziakpono** was an invited keynote speaker at the 4th Annual FinTech Summit Africa, delivering an address entitled: "Central Bank Digital Currency and its Relevance in Africa."

Postgraduates / Graduations

The annual Postgraduate student conference theme for 2024 was "Navigating the Future" and was held at Rhodes University from the 27-28 September. The conference is organised by a mixed team of staff (Dr Phakathi and Professor Snowball) and students (Lusanda Mpedi, Sabelo Shabalala, Mbali Mafuya and Karabo Zondo). Invited keynote addresses were delivered by Mr Tatonga Rusike (online), a Director and Economist at the Bank of America Merrill Lynch, and Mr Marcel Jakubec, an Associate Director in Financial Services Strategy at Accenture. Both are Rhodes University Economics alumni, and in addition to offering insightful addresses in their areas of economic expertise, also talked to students about their life experiences and offered advice for the transition to the world of work.

From 2024, Masters students and PhD candidates in Economics are required to attend three (3) in-person workshops that provide orientation and guidance on the research process including proposal writing, research methods, research ethics, academic writing, and submitting articles for journal publication. They also provide an opportunity for students to present their work to peers and other staff, and to receive feedback from the wider group. Students who participated in the 2024 workshops commented very favourably on how much they helped, and the workshops will become an ongoing part of the Postgraduate research support provided by the Department.

This year was also an exceptional one for PhD graduations in Economics – not traditionally a field in which many practicing economists have a PhD. There were three (3) PhD graduates across the two (2) graduations, including **Vuyani Maqanda** (Energy Economics); **Fiona Drummond** (Cultural Economics) and **Dr Jewel Ndalama** (International Trade).



Masters and PhD Research Group
Photo: Department of Economics and Economic History

Distinguished Visitors / International Visits

In August 2024, Dr Phakathi presented a paper entitled, "Institutional Innovations for Improved Water Security: Empirical Evidence from Four Smallholder Irrigation Schemes in South Africa" at the 32nd International Conference of Agricultural Economists in New Delhi. Dr Phakathi was selected for a grant from the International Association of Agricultural Economists to finance her travel to India, the conference registration fee, and her local stay.

Mr Fryer, with a Postgraduate student, **Claire McCann**, presented their work at the Social Policy Association (SPA) Annual Conference, in Glasgow in July 2024. The paper was entitled: "Transforming South Africa's welfare regime by transforming civil society: SmartStart, the Social Employment Fund and Early Childhood Development".

In March 2024, Professor Bruce Seaman from Georgia State University in the USA visited Rhodes University to work with Economics Department staff on a project commissioned by the South African Cultural Observatory (SACO). SACO is a research think-tank funded by the national Department of Sport, Arts and Culture and led by Nelson Mandela University, with Rhodes University as a founding partner. Professor Seaman led a team that redesigned and updated one of SACO's premier online tools: The South African Festivals Economic Impact Calculator (SAFEIC), designed to help arts and culture events estimate and track their financial impact on host cities.

The Department also contributes to policy development at a national level, with a report to the BCEA (Basic Conditions of Employment Act) influencing policy directly as the NMWC **actioned the report's recommendation** to adjust the earnings threshold in line with inflation.

Significant Research Aligned Events

Rhodes University is one of the lead partners in a new Africa-Europe Cluster of Research Excellence (CoRE), which was launched in a hybrid event on the 8th of March 2024 as part of the RU120 Celebrations. The CoREs represent a partnership between the African Research Universities Alliance (ARUA) and The Guild, a network of European research-intensive Universities. One of the CoREs, "Creative Economies: Cultures, Innovation and Sustainability" is hosted by the Department of Economics at Rhodes University. The Creative Economies CoRE aspires to become an international point of reference for interdisciplinary research on the cultural and creative industries. Lead partners are Rhodes University, King's College, London, and the University of Lagos.

The event also launched the new *African Journal of Creative Economy (AJCE)*, published by OASIS. The AJCE has attracted strong interest and will apply for accreditation in 2026/7. The Creative Economies CoRE also hosted a very successful Creative Economies in Africa Annual PhD and Early Career Researchers Conference online in July 2024, where Rhodes University



PhD candidates **Fiona Drummond** and **Raymond Ndhlovu** presented their work. The CoRE also organized regular online seminars, including speakers like Patrick Kabanda, the acclaimed author of "The Creative Wealth of Nations".

Economics Department Staff have also been active participants in South African conferences. **Professor Aziakpono** presented a paper at the 2024 Cooperative Banking Indaba organised by The Co-operative Banks Development Agency (CBDA) in collaboration with the Gauteng Department of Economic Development, Environment, Conservation and Tourism (GDED), Gauteng Province.

Ms Bom presented her paper (part of her ongoing PhD work) entitled "Exchange rate and oil prices pass-through to inflation: The rand to dollar moderating effect" at the Third International Biennial Macroeconomics Symposium in Durban.

Ms Niki Cattaneo participated the inaugural APORDE (African Programme on Rethinking Development Economics) Alumni Conference (18 March 2024); and the international seminar series on African Structural Change and Economic Development, co-hosted by the Nelson Mandela School of Public Governance (UCT) and SOAS, University of London. In the first two weeks of September 2024, she was a facilitator and speaker at the annual APORDE seminar in Muldersdrift, an international event supported by the Department of Trade, Industry and Competition (DTIC), and Trade and Industrial Policy Strategies (TIPS).

In October 2024, Dr Phakathi was invited by the Faculty of Economic and Financial Science (FEFS) at Walter Sisulu University (Mthatha) as the keynote speaker during their Faculty Research Day held on 11 October 2024. Dr Phakathi delivered an address entitled "Economic and Financial Impacts of Climate Change in South Africa: Examining the Macroeconomic and Sectoral Impacts of Climate Change and the Role of Research in Providing Data-Driven Insights for Policy Interventions". In November 2024, Dr Phakathi was selected to participate in the Afrobarometer's Emerging Scholars Workshop held in Pretoria from the 19th to the 21st of November 2024. Afrobarometer's Capacity Building Unit aspires to bring together a group of talented early-career researchers and experienced academic mentors, along with Afrobarometer staff, to build analytical capacity on the African continent. She was fully funded to attend this workshop, where she presented her research focus.

The Department also contributes to policy development at a national level. **Professor Rogan** and **Dr Friederichs** presented two (2) important reports commissioned by the Department of Higher Education and Training (DHET) on the Destination of Technical and Vocational Education and Training College Graduates and a Tracer study of the 2019 Cohort of the Centres of Specialisation (CoS) Programme Completers. Professor Rogan, Dr Friderichs, Dr Phakathi and Ms (Dr) Malimba also completed two (2) projects commissioned by the Department of Employment and Labour. Both project reports were presented to the National Minimum Wage Commission (NMWC)- the first was on the earnings threshold for the BCEA (Basic Conditions of Employment Act) and the second was on recommendations to address earnings inequality. The first report appears to have influenced policy directly as the NMWC actioned the report's recommendation to adjust the earnings threshold in line with inflation. Professor Rogan has also been working with a PhD candidate (**Vanray Nel**) on a project commissioned by the Presidential Climate Commission which aims to model the labour market implications of South Africa's net zero pathway options.

Internationally, Professor Rogan was awarded a five (5) year research grant to continue research on informal sector taxation in a selection of middle- and low-income countries. Project activities in 2024 included two field visits to Ghana as well as to a workshop in the UK where Professor Rogan was appointed as a Research Affiliate at the International Centre for Tax and Development at the Institute for Development Studies (University of Sussex).

Department of Economics and Economic History Publications

Books/Chapters/Monographs

Mhlana, S. and Rogan, M.
Mhlana, S., Moussié, R., Roever, S. and **Rogan, M.** (2024) Informal Employment and an Inclusive Recovery: What is Missing from National Economic Recovery Plans? In: Chen, M.A., Rogan, M.J. and Sen, K. (eds.). *COVID-19 and the Informal Economy: Impact, Recovery and the Future.* Oxford: Oxford University Press. p.207-232. ISBN: 9780198887041.

Rogan, M.
Rogan, M. and Skinner, C. (2024) South Africa's Informal Economy and COVID-19: Differentiated Impacts and an Uneven Recovery. In: Chen, M.A., Rogan, M.J. and Sen, K. (eds.). *COVID-19 and the Informal Economy: Impact, Recovery and the Future*. Oxford: Oxford University Press. p.97-114. ISBN: 9780198887041.

Chen, M., **Grapsa, G.**, Ismail, G., Reed, S., **Rogan, M.** and Valdivia, M. (2024) COVID-19 and Informal Work: Degrees and Pathways of Impact in 11 Cities around the World. In: Chen, M.A., Rogan, M.J. and Sen, K. (eds.). *COVID-19 and the Informal Economy: Impact, Recovery and the Future*. Oxford: Oxford University Press. p.23-48. ISBN: 9780198887041.

Roever, S. and **Rogan, M.** (2024) Urban regulation for self-employed informal workers. In: *Mapping Legalities*. London: Routledge. p.1-18. ISBN: 9781003384816.

Anyidoho, A.N., Gallien, M., **Rogan, M.** and van den Boogaard, V. (2024). Taxing informal workers fairly to reduce inequality and support inclusion, *T20 Brazil: Policy Brief-TF01*, Subtopic 5, Think-Tank20 (T20). G20 Summit, Rio de Janeiro: Brazil.

Anyidoho, A.N., Gallien, M., **Rogan, M.**, and van den Boogaard, V. (2024). The price of simplicity: Skewed and regressive taxation in Accra's informal sector, *ICTD Research in Brief 140.* Brighton: Institute of Development Studies, https://www.doi.org/10.19088/ICTD.2024.098.

International Visits

Phakathi S.

Phakathi S. 2024. "Institutional Innovations for Improved Water Security: Empirical Evidence from Four Smallholder Irrigation Schemes in South Africa." Presented at the 32nd International Conference of Agricultural Economists (ICAE 2024), the triennial conference of the International Association of Agricultural Economists (IAAE) to be held from 2-7 August 2024 in New Delhi.

Fryer, D. and McCann, C.

Fryer, D. and **McCann, C.** 2024. Transforming South Africa's welfare regime by transforming civil society: SmartStart, the Social Employment Fund and Early Childhood Development. Paper presented at the Social Policy Association (SPA) Annual Conference, 3-5 July, University of Strathclyde Technology and Innovation Centre, Glasgow.

Snowball, J.D.
Snowball, J.D. UNESCO, Paris, France. *Editorial Board meeting for the production of the fourth edition of the Reshaping Policies for Creativity.* 12 - 13 December 2024.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Snowball, J.D.
Getawa N.G. and **Snowball, J.D.** (2024) Unleashing the potential of the South African designer fashion sector. *African Journal of Creative Economy*. 1 (1). p.1-11.

Peer Reviewed Subsidy-Earning Journal Research Publications

Aziakpono, J.M.
Zinyoro, T. and **Aziakpono, J.M.** (2024) Performance determinants of non-life insurance firms: a systematic review of the literature. *Cogent Business & Management*. 11 (1). p.1-38.

Cattaneo, N.
Andangnui, Q., **Louw, L.** and **Cattaneo, N.** (2024) Macro-locational determinants of Chinese foreign direct investment in Cameroon. *South African Journal of Economic and Management Sciences*. 27 (1). p.1-12.

Friderichs, T.J. and Rogan, M.
Friderichs, T.J., **Rogan, M.** and Needham, S. (2024) Gendered labour market outcomes among South African technical and vocational education and training (TVET) completers. *Journal of Vocational, Adult and Continuing Education and Training*. 7 (2). p.1-18.

Malimba, N., Mutambara, T.E. and Marire, J.
Malimba, N., **Mutambara, T.E.** and **Marire, J.** (2024) Measuring intra-industry trade and productivity in the South African pharmaceutical sector. *South African Journal of Economic and Management Sciences*. 27 (1). p.1-16.

Marire, J.
Marire, J. and Iqbal, A. (2024) Infrastructure development, informal economy, and gender inequality in Sub-Saharan Africa. *Journal of Infrastructure, Policy and Development*. 8 (6). p.1-31.

Rogan, M.
Rogan, M. (2024) A Modern Guide to the Informal Economy. *International Labour Review*. 163 (2024). p.349-351.

Anyidoho, N.A., Gallien, M., **Rogan, M.** and van den Boogaard, V. (2024) The taxed informal economy: Fiscal burdens and inequality in Accra. *World Development*. 187 (2025). p.1-20.

Snowball, J.D. and Gouws, A.
Snowball, J.D. and **Gouws, A.** (2024) Cultural consumption and equality of access during economic downturns: The expenditure Gini coefficient for South Africa. *South African Journal of Economics*. 92 (1). p.120-132.

Snowball, J., Drummond, F. and Tarentaal, D.
Snowball, J., **Drummond, F.** and **Tarentaal, D.** (2024). Supporting the festival industry in troubled times: Higher education research and collaboration with festivals in South Africa during COVID-19. *Industry and Higher Education*. 38 (1). P78-86.

Snowball, J.
Hadisi, S. and **Snowball, J.** (2024) Assessing the potential of the craft sector's contribution to employment and gross domestic product in South Africa, *Creative Industries Journal*. 17:3, 419-433.

FACULTY OF EDUCATION:

Department of Secondary and Post-School Education (DoSPSE)

Introduction

The Department of Secondary and Post-School Education exposed itself to a rich array of research-related accomplishments and engagements during 2024. Amongst those is a diverse range of research outputs, international guest lectures, hosting and participating in research fora, and guest lectures. Academics and Postgraduate students in the Environmental Learning Research Centre (ELRC), led by SARChI Chair of Global and Social Learning Systems, Distinguished Professor Heila Lotz-Sisitka, continued to make impactful contributions both locally and globally.



Professor Zingiswa Jojo

Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

During 2024, the Department of Secondary and Post-School Education celebrated the graduation of four (4) MEd students, and two (2) PhD candidaates (Professor Simuja). In addition, five (5) MEd and eight (8) PhD students graduated from ELRC.

The Environmental Learning Research Centre

In 2024 the SARChI Chair of Global Change and Social Learning Systems, working with the Chair of Environment and Sustainability Education and staff and students in the Environmental Learning Research Centre (ELRC), continued to work along its four research tracks focussing on theory and methodology development, catalytic studies of transformative social learning, and green skills learning pathways and synthesis research. In 2024 the Chairs and ELRC were able to support a strong network of researchers who collectively produced twenty-five (25) peer reviewed journal articles and five (5) book chapters, with forty-six (46) conference and sixty-eight (68) other research-based contributions. The Chair and ELRC graduated eight (8) PhDs and five (5) Masters students in 2024 and hosted seven (7) Postdoctoral Fellows. Overall, the ELRC hosted and supported fifty-five (55) registered Postgraduate scholars in 2024, showing its continued vibrancy as an active centre for the study and advancement of Environment and Sustainability Education in Africa. A further exciting development for 2024 was completion and graduation from the first cohort of the Postgraduate Diploma in Social Learning and Sustainability introduced in 2023.

Some highlights of the four (4) research tracks include:

Research Track 1: Theory and Methodology Development

Here the keynote address of **Professor Eureta Rosenberg** at the World Environmental Education Congress on evaluation methodology stands out. Furthermore **Taryn Pereira-Kaplan** completed a PhD focussing on transdisciplinary research praxis with social movements, while **Distinguished Professor Lotz-**



Newly graduated PhD scholars Dr Mzukisi Kuse, Dr Iris Chimbodza and Dr Sidney Muhangi from the Environmental Learning Research Centre, with Distinguished Professor Lotz-Sisitka and Dean and Professor Eureta Rosenberg at the 2024 Graduation Celebration of the Faculty of Education. Photo: DoSPSE

A further exciting development for 2024 was completion and **graduation from the first cohort of the Postgraduate Diploma** in Social Learning and Sustainability introduced in 2023.

Sisitka continued to strengthen research on transformative, transgressive learning with a highlight here being the ongoing work on temporality and T-learning. An ongoing important activity supporting theory and methodology development remains the editing of the *Southern African Journal of Environmental Education*, led by **Associate Professor Lausanne Olvitt** in 2024.

Research Track 2: Transformative Social Learning

Here the National Humanities and Social Sciences award to **Dr Dylan McGarry** for his work in the One Ocean Hub stands out amongst many other inspiring works that have advanced transformative social learning in the context of sustainability transitions. Dr McGarry was awarded two (2) national prizes at national level for his work on an animation film, and an exhibition which furthered transformative social learning in the context of community-engaged approaches to advancing ocean governance.

Research Track 3: Green Skills Learning Pathways

Highlights for this research track include the development of a strong partnership between the ELRC and the Wits Centre for Researching Education and Work, with a number of projects advancing knowledge of skills development in the Just Transition, including studies to inform reskilling of at-risk occupations for workers at risk in the mining and automotive value chains in South Africa and the Eastern Cape. A further highlight here was the extension of the UNICEF / YOMA project for advancing understanding and actualisation of green learn to earn pathways for unemployed youth in South Africa. A new phase of this project brought R13 million into the partnership and has allowed the ELRC to appoint Maletje Mponwana as Youth Programme Co-ordinator for 2025.

Research Track 4: Synthesis Studies to Inform Education System Development

Highlights in this research track include two significant syntheses papers, one published in a book on agency and cultural historical activity theory, which articulated a global south view on emancipatory agency using cultural historical activity theory research, and a meta-review publication which brings together ten (10) years of research on transformative, transgressive learning written by Distinguished Professor Lotz-Sisitka and published in a Special Issue journal focussing on the politics of environmental education research. The second five-year review report on the SARChI Chair was also completed and submitted to the NRF. This has marked out new directions for advancing synthesis in the Chair, and in itself offers a valuable synthesis tool for the Chair and ELRC's research. Wrapping up the DSI/NRF Community of Practice on Social Learning and Sustainable Development was also a key synthesis activity in 2024.

New Research Emerging

The Chairs and ELRC catalysed several new research projects in 2024, notably an **ERASMUS programme** that will expand earlier work in the Sustainability Starts with Teachers (SST) programme. The new project, implemented with ten (10) University partners in Africa in South Africa, Malawi, Namibia, Zambia and Kenya, and with partners Europe, is led by Distinguished Professor Lotz-Sisitka, **Dr Zintle Songqwaru** and **Dr Wilma van Staden** at Rhodes University. It will expand the SST programme to include a strong Education for Sustainable Development (ESD) leadership component. The online course pioneered between 2019-2023 will be revised and new modules generated to advance this ongoing operational research programme focusing on integration of sustainability into Teacher Education in Africa.

A second new project catalysed in 2024 is a Spencer Foundation project which is led by Professor Eureta Rosenberg. This project is associated with the TRANSECTs project which is developing methodology and evaluation approaches for transdisciplinary teaching and learning in biosphere reserves in South Africa, Germany and Canada. This was a key 'outflow' project of the DSI/NRF Community of Practice that was led by Distinguished Professor Lotz-Sisitka and Professor Rosenberg between 2019-2024.

The DSI/NRF Community of Practice (COP) project came to an end in 2024 with a highlight being the production of a Special Issue of the *South African Journal of Science*. This special issue focusses on 'engaged sustainability science and sustainability science engagement', and articles written by the Chairs and scholars at Rhodes University in this special issue centres transformative learning as a core focus in development of trans-disciplinary science in South Africa. Another important outflow project of the DSI/NRF Community of Practice was the establishment of a Future Earth Africa Hub Leadership Centre at Rhodes University, in partnership with the NRF and the University of Pretoria.

At Rhodes University, the ELRC is a founding partner, along with the Institute of Water Research (IWR) and the Institute of Social and Economic Research (ISER), giving practical effect to the cross-cutting research themes of 'Ecology, Economy and Society'; 'Water Security' and 'Education for Sustainable Futures' at Rhodes University. To develop these cross-cutting themes, inter- and transdisciplinary partnerships and scholarship is needed, with projects such as the DSI/NRF COP and the Future Earth Africa Hub Leadership Centre indicating the maturity of the ELRC to both lead and catalyse such partnerships and scholarly trajectories within the university.

In 2024 a highlight was the hosting of the Future Earth Africa Hub Leadership Centre node co-ordinators meeting at Rhodes University, and the establishment of the ELRC-led Science Cluster which is focussing on Africa Youth Futures and Sustainability Learning. This new cluster seeks to develop knowledge of how best to engage Africa's youth in co-constructing more sustainable futures for the continent. The science cluster is led by **Dr Injairu Kulundu-Bolus** and PhD candidate **Mr Maletje Mponwana**, working with Research Associate Dr Priya Vallabh.

SAERA Honours Award for Distinguished Professor Lotz-Sisitka

And finally, a further highlight for the Department of Secondary and Post-Schooling Education, and its ELRC and SARChI Chair, in 2024 was the award of the South Africa Education Research Association (SAERA) Research Honours Award to Distinguished Professor Heila Lotz-Sisitka, at the SAERA Conference hosted in November 2024 at the University of the Free State. This award is for a significant career long contribution to educational research in South Africa and constitutes one of the highest levels of peer recognition for an educational researcher in South Africa. Distinguished Professor Lotz-Sisitka also renewed her NRF Rating in 2024 at the level of B2, confirming her status as an internationally recognised researcher.



Distinguished Professor Lotz-Sisitka receiving the SAERA Research Honours Award at the SAERA Conference in November 2024.

Distinguished Visitors / International Visits

The faculty hosted Associate Professor Allyson Rogn-Klyve from Central Washington University (January-June 2024) and international researchers from Germany and Australia. Professor Rogn-Kkyve was also the plenary speaker at the Association for Mathematics Education of South Africa (AMESA) that took place at Sol Plaatje University, Kimberley, Northern Cape from the 17-21 June 2024. She also gave a few lectures to our BED students.

The SPSE Department also hosted Professor Carol Betram, who gave a Public Lecture on 'Why a Competency framework for schooling will not improve the quality of teaching and learning'. This was presented by Professor Carol Bertram at the BLT (UKZN) on the 14 October 2024. During the week of 14-18 October 2024,

ELRC-led Science Cluster which is focussing on **Africa Youth Futures and Sustainability Learning**, and seeks to develop knowledge of how best to engage Africa's youth in co-constructing more sustainable futures for the continent.

she also presented workshops on assessment of PGCE students and offered suggestions of curriculum coverage in our Educational Studies PGCE course, as well as giving lectures to our 2024 PGCE group.

The following scholars visited ELRC in 2024

Professor Cyrus Samimi, Bayreuth University, Germany. His interest is in understanding and quantifying climatological and eco-climatological patterns and processes. The foci of his research is on analyzing climatic, eco-climatological, and environmental patterns, their interdependencies, and their change on a regional and local scale. Regions of interest are sub-Saharan Africa, High Asia and Central Europe. With his team, they assess processes and causes using remote sensing, including intensive ground truthing, multivariate statistics and predictive mapping. Of special interest is the quantification of eco-climatological parameters, often used as the basis for resource assessment. Hence, resource use and the human impact on patterns and changes is also a core interest of our work.

Dr Njihia Mukirae, Kenyatta University, Kenya, who is a lecturer in the Department of Educational Management, Policy & Curriculum Studies, in the School of Education, at Kenyatta University. His work includes teaching and examining undergraduate and Postgraduate students in Educational Planning, Economics of Education, Curriculum Studies, Educational Management and Research Methods.

Ms Patience Awopegba, UNESCO East Africa, Kenya, a Programme Specialist in Education Planning at UNESCO International Institute for Capacity Building in Africa. She represented UNESCO IICBA at the 68th OMEP World Assembly and International Conference held at the Ewha Womans University, Seoul, Republic of Korea from 4-8 July. The theme of the conference was "Transforming Early Childhood Systems for future Generations". During the conference the OMEP called on local, national, and global leaders to:

1. Ensure humanitarian and just conditions for all displaced, migrant, refugee, and asylum-seeking children
2. Create transparent public policies and mechanisms through to help treat such children.
3. Protect young children by providing secure places for them to play and learn.
4. Educate teachers and caregivers to work successfully with these and other traumatized children as they gain access to educational programs and systems, as is their inalienable right guaranteed by the Convention on the Rights of the Child.

Significant Research Aligned Events

The celebrated excellence in research and creative outputs include:

Distinguished Professor Heila Lotz-Sisika received a B2 NRF rating in June 2024, and **Professor Zingiswa Jojo** received a C2 NRF rating in March 2024. In addition, Professor Zingiswa was elected the secretary of the Commission of African Women in Mathematics (CAWM) and consequently organised and attended the "New Mathematical Concepts and Applications in Life Sciences" in Casablanca from 4 - 8 March 2024. She also attended the 15th International Congress on Mathematical Education from the 7 – 14 July 2024 in ICC Sydney, Australia. In that Congress, she co-chaired the Mathematical Literacy strand, which is one of the Topic Study Groups (TSG) of the congress, with Dr Marc North and Professor Kai-Lin Yang from Canada and Taiwan, respectively. She also presented two (2) papers (i) on Innovative instructional approaches used by primary school teachers in decolonizing mathematics curriculum using ethnomathematics integration and (ii) Using lesson study to enhance culture and mathematical literacy TVET college curriculum implementation.

Professor Simuja, Professor Jojo and seven (7) Postgraduate students attended and presented papers at the Southern African Association for Mathematics, Science and Technology Education (SAARMSTE) in Namibia in January 2024. Our Department also hosted two (2) SAARMSTE colloquiums for the Eastern Cape chapter in 2024.

Professor Simuja also serves as an executive member for SAERA. Professors Jojo and Simuja together with three (3) Postgraduate students also attended the 12th Teacher Education and Inter-disciplinary Research conference in Happy Valley Hotel in Ezulwini, Eswatini from the 8 - 12 April 2024. Five (5) papers were presented in that conference.

nGAP lecturer **Mr Sean Nkosi**, took significant strides in his research journey by attending and engaging in MEd supervision while continuing his PhD research which he submitted for examination towards end 2024. He also organised the visit by Professor Tom Smit and Ms Gilberte Verbeeck, both from Antwerp University, they gave guest lectures on 'Teaching with taboo's and maths and magic' on the 11 and 12 April 2024.

Faculty of Education: Department of Secondary and Post-School Education (DoSPSE) Publications

Books/Chapters/Monographs

Jojo, Z.M.M.

Jojo, Z.M.M. (2024) Mathematics Education Indigenous Epistemologies and Applications in Postgraduate Research. In: Gumbo, M.T. and Gaotlhobogwe, M. (eds.). *Global Perspectives on Decolonizing Postgraduate Education*. USA, IGI Global. p.149-165. ISBN: 9798369312896.

Jojo, Z.M.M. (2024) Mentorship and Support for Young South African Women Advancement in Mathematical-Related Careers. In: Craig, C. (ed.). *Mentoring in STEM Through a Female Identity Lens: Heroes Make a Difference for Women*. United States: Vernon Press. p.55-74. ISBN: 979888 1900175.

Lotz-Sisitka, H.

Lotz-Sisitka, H. (2024) Regional, epistemic, educative, and political-ecological dynamics of an internationalization at home model. In: *Internationalization of the doctoral experience*. London: Routledge. p.23-35. ISBN: 9781003317555.

Lotz-Sisitka, H., Thifhulufhelwi, R., Chikunda, C. and Mponwana, O.W.

Lotz-Sisitka, H., **Thifhulufhelwi, R.**, **Chikunda, C.** and **Mponwana, O.W.** (2024) The Emancipatory Nature of Transformative Agency Mediating Agency from Below in a Post-Apartheid Land Restitution Case. In: Hopwood, N. and Sannino, A. (eds.). *Agency and Transformation Motives, Mediation, and Motion*. Cambridge: Cambridge University Press. p.230-264. ISBN: 9781009153799.

O'Donoghue, R.B.

O'Donoghue, R.B. and **Rosenberg, E.** (2024) A review of the staging and enactment of environment and sustainability education in South Africa: An illustrative case study. In: Thomas, R. and Rieckmann, M. (eds.). *World review: Environmental and sustainability education in the context of the sustainable development goals*. USA: CRC Press. p.22-39. ISBN: 9781003145203.

O'Donoghue, R.B. and **Rosenberg, E.** (2024) A Review of the Staging and Enactment of Environment and Sustainability Education in South Africa. An Illustrative Case Study. In: Rieckmann, M. and Thomas Muñoz, R. (eds.). *Environmental and Sustainability Education in the Context of the Sustainable Development Goals*. London: Routledge, Taylor & Francis Group. p.1-18. ISBN: 9781003145202.

Simuja, C.

Simuja, C. (2024) Rural School Teachers Leveraging Pandemic Teaching Experiences for Technology Integration in Post-Pandemic Classrooms. In: Carbonara, D. and Tomei, L. (eds.). *Instructional Technology Theory in the Post-Pandemic Era*. USA: IGI Global. p.125-147. ISBN: 9798369376454.

Simuja, C. (2024) Adapting Virtual Laboratories in Post-COVID-19 Pandemic Learning Landscapes: An Exploration of Science Teacher Perceptions and Adoption in Rural Schools. In: Carbonara, D. and Tomei, L. (eds.). *Instructional Technology Theory in the Post-Pandemic Era*. USA: IGI Global. p.395-427. ISBN: 9798369376454.

Simuja, C. (2024) Exploration of Foundation Phase: Pre-service Teachers Perspectives on Their Abilities to Integrate Technology in the Classroom. In: Chigona, Agnes., Crompton, Helen. and Tunjera, Nyarai. (eds.). *Global Perspectives on Teaching with Technology: Theories, Case Studies, and Integration Strategies*. London: Routledge, Taylor & Francis Group p.1-318. ISBN: 9781003406631.

Simuja, C. (2024) Promoting pre-service teachers TPACK development in an education science course. In: Ramnarain, U. and Ndlovu, M. (eds.). *Information and Communications Technology in STEM Education an African Perspective*. London: Routledge, Taylor & Francis Group. p.182-198. ISBN: 9781 003279310.

Simuja, C. and Sepula, C.

Simuja, C. and **Sepula, C.** (2024) Pre-service Teachers' Pedagogical Awareness of Technology Integration in the Classroom. In: Chigona, Agnes., Crompton, Helen. and Tunjera, Nyarai. (eds.). *Global Perspectives on Teaching with Technology: Theories, Case Studies, and Integration Strategies*. London: Routledge, Taylor & Francis Group p.93-109. ISBN: 9781003406631.

Concerts, Exhibitions, Performances, Workshops, Events

Bhurekeni, J.B. and Zeisser Gutierrez, M.

Bhurekeni, J.B., **Zeisser Gutierrez, M.** and **Mandikonza, C.** n/a. Co-Facilitated the UNESCO Assessing Learning with Living Heritage with teachers. *n/a*. n/a, n/a. Namibia. 20 - 22 March 2024.

Bhurekeni, J.B. and **Zeisser Gutierrez, M.** n/a. Co-Facilitated the UNESCO Assessing Learning with Living Heritage with teachers at SCOPE. *n/a*. n/a, Harare. Zimbabwe. 19 - 21 March 2024.

Hayes, N.

Hayes, N. Co-facilitated a session at the Independent Schools Association of South Africa Regional Aspiring Leaders workshop. *"The principal's role in creating and inclusive environment in a school*. 1 January 2024.

Kulundu, I.M.

Kulundu, I.M. Collective Participatory Action Research on Collective Healing Convened by the Desmond Tutu Foundation. South Africa. 12 December 2024.

Kulundu, I.M. Collective Participatory Action Research on Collective Healing Convened by the Desmond Tutu Foundation. South Africa. 7 - 8 August 2024.

Kulundu, I.M. Nurturing Fields of Change Convened by the Alef Trust. Workshop on A Litany for Regenerative African Futures. South Africa. 23 October 2024.

Kulundu, I.M. Collective Participatory Action Research on Collective Healing Convened by the Desmond Tutu Foundation. South Africa. 14 - 15 May 2024.

Lotz-Sisitka, H.

Limson, J.L. and **Lotz-Sisitka, H.** Participatory. Transdisciplinarity in higher education research, teaching and innovation. *Transdisciplinarity in higher education research, teaching and innovation*. Rhodes University, Makhanda. South Africa. 10 - 14 June 2024.

Lotz-Sisitka, H. and Muhangi, S.

Lotz-Sisitka, H., **Muhangi, S.**, Poulton, W., Ramsarup, P. and Hepplethwaite, V. n/a. Equipping South Africa's Workforce for a Just Transition Through Upskilling and Reskilling (ILO Project). Finalising Rapid Mapping Working Report and Triangulation with Stakeholder Interviews. *n/a*. n/a, Port Alfred. South Africa. 11 - 15 November 2024.

Lotz-Sisitka, H., Maqwelane, L. and Van Heerden, S.J.A.

Lotz-Sisitka, H., **Maqwelane, L.**, Ramsarup, P. and **Van Heerden, S.J.A.** n/a. Just Transition Consortium for Research on Employment and Work (PCC Project): Skills Team. Just Energy Transition (JET) Skills Planning and Fieldwork. Wits University, Johannesburg. South Africa. 1 - 3 July 2024.

Lotz-Sisitka, H., **Maqwelane, L.**, Ramsarup, P. and **Van Heerden, S.J.A.** n/a. Just Transition Consortium for Research on Employment and Work (PCC Project): Skills Team. JET Skills Challenges and Profile Framework for Occupations in Transition. Wits University, Johannesburg. South Africa. 29 July - 1 August 2024.

Mponwana, O.W.
Mponwana, O.W. n/a. Facilitated a collaborative workshop titled "Working for the Common Good and Learning for the Future" Workshop: Mapping learning pathways. Mushroom Farm, Howick. South Africa. 8 - 9 February 2024.

Mponwana, O.W. Oral presentations, Zoom. Facilitated a UNICEF Green Learn 2 Earn YOMA Operational Research Workshop in the Eastern Cape, Rhodes University, Makhanda. Room 20 - ELRC, Makhanda. South Africa. 20 November 2024.

Mponwana, O.W. presentations. Co-facilitated a session at the DSI/NRF COP Youth Policy Dialogue Workshop. *The workshop was entitled Young People's Work and Perspectives in Engaging Sustainability Policy and Practice Framings, Communications, Caring and Shift.* Global Change Institute, Johannesburg. South Africa. 29 - 30 October 2024.

Muhangi, S.
Muhangi, S. Engaged in the Global Convening Programme-The Times of a Just Transition, Capacity Building Workshop: Crossed Timelines: Aligning knowledge transfer and just decisions. British Academy, London. England. 1 February - 1 January 2024.

Muhangi, S. n/a. Active engagement in the Global Convening Programme, The Times of Just Urban Transitions to Sustainability Time-Lab. Bergen. Norway. 24 - 28 June 2024.

Muhangi, S. n/a. Active engagement as a change-maker South African Institute for International Affairs (SAIIA) Visioning Summit Youth Futures for Systemic Justice: Co-creating Skills Anticipation Praxis in East and Southern Africa. Cape Town. South Africa. 2 - 6 September 2024.

Muhangi, S. n/a. Actively participated in the Earth Shot Week Youth Climate Leaders Programme by Earth shot and Common purpose. Cape Town. South Africa. 3 November - 8 January 2024.

Muhangi, S. n/a. Active participation and presentation in the Times of a Just Transition London Convening Meeting. *n/a*. n/a, London. England. 23 September - 28 January 2024.

Muhangi, S. Oral presentations. Active participant in the DSI/NRF COP Youth Policy Dialogue Workshop: Young People's Work and Perspectives in Engaging Sustainability Policy and Practice. *n/a*. Global Change Institute, Johannesburg. South Africa. 29 - 30 October 2024.

Olvitt, L.L.
Olvitt, L.L. n/a. Reviewing academic articles for the Southern African Journal of Environmental Education (SAJEE). Workshop facilitated at the 42nd Environmental Education Association of Southern Africa (EEASA). 42nd EEASA venue, Lusaka. Zambia. 17 - 19 September 2024.

Sibanda, A.
Sibanda, A. Presentations. Fundisa for Change: Training of Trainers: Umgungundlovu Stakeholder Forum. Online, South Africa. 14 - 16 October 2024.

Sibanda, A. Active Teaching and Learning, Fundisa for Change online courses, LEAP schools. Active Teaching and Learning, Fundisa for Change online courses, LEAP schools. Online. South Africa. 23 April 2024.

Sibanda, A. n/a. Climate Change in Grade 7 to 9 - NS curriculum: Exploring climate change content in CAPS and links to SDGs. Online. South Africa. 25 March 2024.

Sibanda, A. Presentation. Active teaching and learning. Teaching Biodiversity in Life Sciences Gr 10 to 12. Fundisa for Change: Training of Trainers, Northwest Parks & Tourism Board. Northwest. South Africa. 14 - 15 March 2024.

Sibanda, A. Presentations. Fundisa for Change: Teaching Biodiversity in Life Sciences Grade 10 to 12. Gauteng facilitators. *Trainer of trainers.* Online, online. South Africa. 25 - 28 June 2024.

Sibanda, A., Van Staden, W. and Lotz-Sisitka, H.
Sibanda, A., **Van Staden, W.**, **Lotz-Sisitka, H.** and Fundisa for Change Team, n./. a. n/a. Fundisa for Change: KIC 2.0. Theory of Change Workshop Evaluation. Pretoria. South Africa. 23 March 2024.

Sibanda, A., **Van Staden, W.**, **Lotz-Sisitka, H.**, **Rosenberg, E.** and Fundisa for Change Team, n./. a. n/a. Active participation. Fundisa for Change Curriculum Working Group Meeting. Pretoria. South Africa. 22 January 2024.

Sibanda, A., **Van Staden, W.**, **Lotz-Sisitka, H.** and Fundisa for Change Team, n./. a. n/a. Active Participation. Fundisa for Change: KIC 2.0. Instructional design workshop program. *n/a*. n/a, Johannesburg. South Africa. 4 - 5 July 2024.

Sibanda, A., Van Staden, W. and Van Der Merwe, U.
Sibanda, A., **Van Staden, W.** and **Van Der Merwe, U.** Facilitating. March roll-out. Introduction to ESD and Fundisa for Change Teaching Practices Online Course. Online. South Africa. 1 - 31 March 2024.

Sisitka, L. and Van Staden, W.
Sisitka, L. and **Van Staden, W.** n/a. Amanzi for Food Materials Development Workshop. Online. South Africa. 20 February 2024.

Sithole, P.
Sithole, P. panel discussions, Oral presentation, pre-screening of courses. Facilitated soft launch of the ELRC Micro-Learning Courses. *The session was entitled "Soft Launch Micro-Learning Courses in the Green Learn 2 Earn UNICEF Project*. Room 20 -ELRC, Makhanda. South Africa. 20 November 2024.

Van Heerden, S.J.A. and Lotz-Sisitka, H.
Van Heerden, S.J.A., **Lotz-Sisitka, H.**, **Maqwelane, L.**, Castel-Branco, R. and **Dhlamini, P.T.** JET Skills, Social Protection, and Modelling Updates. Just Transition Consortium for Research on Employment and Work (PCC Project). *JET Skills, Social Protection, and Modelling Updates*. Wits University, Johannesburg. South Africa. 15 - 16 July 2024.

Van Staden, W.
Van Staden, W., Gqumani, L. and Fundisa Team, n./. a. n/a. Fundisa for Change Trainer of Trainers Teacher training and Curriculum Transformation SANBI. Cape Town. South Africa. 23 - 25 April 2024.

Van Staden, W. n/a. Amanzi for Food Digital Tool and course curriculum enrichment. Curriculum Enrichment Regional workshop: Real-Life Learning Labs (RLLL) on Food Systems Transformation. INSSPIRE. Uganda. 8 October 2024.

Van Staden, W. n/a. Amanzi for Food Digital Tool and course curriculum enrichment. Curriculum Enrichment Regional workshop: Real-Life Learning Labs (RLLL) on Food Systems Transformation. INSSPIRE. Uganda. 8 October 2024.

Van Staden, W. and O'Donoghue, R.B.
Van Staden, W. and **O'Donoghue, R.B.** n/a. ESD Digitalisation and online co-engaged active learning Summer School https://sites.google.com/ru.ac.za/esd-digital/home. South Africa. 25 - 28 November 2024.

Van Staden, W. and Sisitka, L.
Van Staden, W. and **Sisitka, L.** n/a. Amanzi for Food' Training of Trainers Certificate of Competence in Curriculum Innovation and Changing Practice NQF Level. *n/a*. n/a, n/a. South Africa. 6 January - 1 December 2024.

Van Staden, W. and **Sisitka, L.** n/a. Amanzi for Food' Training of Trainers Certificate of Competence in Environmental Learning and Changing Practice NQF Level 5. *n/a*. n/a, n/a. South Africa. 6 January - 1 December 2024.

Van Staden, W. and Sithole, P.
Van Staden, W., Sisitka, L. and **Sithole, P.** n/a. Amanzi for Food online course workshop. *n/a*. Online, online. South Africa. 9 January - 4 December 2024.

Van Staden, W., Sithole, P. and Lotz-Sisitka, H.
Van Staden, W., Sisitka, L., **Sithole, P.**, **Lotz-Sisitka, H.** and Swanepole, K. n/a. Amanzi for Food Learning Network Workshop. *n/a*. n/a, n/a. South Africa. 21 May - 22 March 2024.

Zeisser Gutierrez, M.
Zeisser Gutierrez, M. n/a. Conceptual and methodological co-designer and co-facilitator of the 11th international colloquium of CFPCI. *n/a*. n/a, Vitre. France. 17 - 18 October 2024.

Zeisser Gutierrez, M. n/a. Three workshops on ethical concerns regarding living heritage safeguarding research from experiences on living heritage and education research. *n/a*. Regional Multidisciplinary Research Centre, National Autonomous University of Mexico, Morelos. Mexico. 9 - 13 September 2024.

Zeisser Gutierrez, M. and Bhurekeni, J.B.
Zeisser Gutierrez, M., **Bhurekeni, J.B.** and **Mandikonza, C.** n/a. Co-Facilitated the UNESCO online course on Living Heritage, transformative education and assessment with teachers from 8 countries. *n/a*. online, online. South Africa. 22 - 31 July 2024.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Kulundu, I.M. and McGarry, D.
Koenig, R., Seneque, M., Akomolafe, B., Fazey, I., **Kulundu, I.M.**, Proyer, M., **McGarry, D.** and McKenzie, F. (2024) Transgressive Knowing: Lying Down with the Trouble. *Journal of Awareness-Based Systems Change*. 4 (1). p.1-27.

Peer Reviewed Subsidy-Earning Journal Research Publications

Bhurekeni, J.B.
Bhurekeni, J.B. (2024) Addressing issues of mental health in schools through the arts: Teachers and music therapists working together Clough, Nick & Jane Tarr (2022). *Journal of the Musical Arts in Africa*. 21 (1-2). p.147-150.

Chanyau, L. and Rosenberg, E.
Chanyau, L. and **Rosenberg, E.** (2024) Value created for small-scale farmers in agroecology movement in the Eastern Cape region of South Africa: An application of the value creation framework. *Agroecology and Sustainable Food Systems*. 48 (3). p.1-28.

Elifas, T.N. and Simuja, C.
Elifas, T.N. and **Simuja, C.** (2024) The Pedagogical Insights of Mathematics Teachers Integrating Artificial Intelligence in Rural Upper Primary Schools of Namibia. *Interdisciplinary Journal of Education Research*. 6 (37). p.1-13.

Hellemann, P.C.
Hellemann, P.C. and **Sipungu, T.A.** (2024) Aunty with a Key: Aunties? power, status and authority in African traditional ceremonies. *Inkanyiso*. 16 (1). p.1-10.

Hungwe, K.N.
Hensley, M.S., Martin, J.A., Miller, K.A. and **Hungwe, K.N.** (2024) Laboratory Safety Teams as an Evolving Community of Practice: Exploring the How and Why. *Journal of Chemical Education*. 101 (10). p.4124-4135.

Nyansa, M.M.S., Burrows, N.L., Gelerneau, A.J., Bekkala, A.P. and **Hungwe, K.N.** (2024) Investigating the Impact of RAMP-Based Safety Instruction on Student Learning in an Organic Chemistry Lab Course. *Journal of Chemical Education*. 101 (6). p.2203-2214.

Nyansa, M.M.S., Burrows, N.L., Galerneau, A.J., Bekkala, A.P. and **Hungwe, K.N.** (2024) Beyond Intentions: Understanding the Gap between Safety Education and Student Behaviors. *Journal of Chemical Education*. 101 (3). p.798-806.

Jojo, Z.M.M.
Gula, Z. and **Jojo, Z.M.M.** (2024) Harnessing Indigenous Knowledge for Teaching of Mathematics for Sustainable Development in Rural Situated Primary Schools. *African Journal of Research in Mathematics, Science and Technology Education*. 28 (3). p.404-421.

Jojo, Z.M.M. (2024) Culturally responsive pedagogy for the promotion of understanding Mathematics: The case of rural situated primary schools in Post-apartheid South Africa. *Interdisciplinary Journal of Sociality Studies*. 4 (S1). p.1-15.

Mbhiza, H.W. and **Jojo, Z.M.M.** (2024) Pedagogical and Social Transformations in Post-Apartheid Mathematics Education. *Interdisciplinary Journal of Sociality Studies*. 4 (S1). p.1-2.

Kuse, M.
Kuse, M., Nienaber, S., Tau, M. and Cindi, D. (2024) Investing in social learning processes to support science-engaged governance of strategic water source areas. *South African Journal of Science*. 120 (9/10). p.1-11.

Lotz-Sisitka, H.
Ramsarup, P., McGrath, S. and **Lotz-Sisitka, H.** (2024) A landscape view of emerging sustainability responses within VET. *Journal of Vocational Education and Training*. 76 (2). p.259-280.

Lotz-Sisitka, H., **Limson, J.L.** and Le Grange, L. (2024) Sustainability science engagement and engaged sustainability science. *South African Journal of Science*. 120 (9/10). p.1-3.

Lotz-Sisitka, H., Micklesson, M., **Mvulane, P.**, Brownell, F., Thifulufhelwi, R. and Russel, C. (2024) Bringing River health into being with citizen science: River commons co-learning and practice. *South African Journal of Science*. 120 (9/10). p.1-9.

Lotz-Sisitka, H., McGrath, S. and Ramsarup, P. (2024) Oil, transport, water and food: A political-economy-ecology lens on VET in a climate changing world. *Journal of Vocational Education and Training*. 76 (2). p.281-301.

Lotz-Sisitka, H. (2024) Towards a politics of transgression in environmental education research: Meta-review of a T-learning research 'archive. *Australian Journal of Environmental Education*. 40 (3). p.1-25.

Lotz-Sisitka, H. and Mphepo, G.
Lotz-Sisitka, H., Le Grange, L. and **Mphepo, G.** (2024) Engaged sustainability science and place-based transgressive learning in higher education. *South African Journal of Science*. 120 (9/10). p.1-9.

Malua, A.N. and Olvitt, L.L.
Malua, A.N. and **Olvitt, L.L.** (2024) The Emergence of Education for Sustainable Development in Namibia's Senior Primary English Language Curriculum: A Morphogenetic Case Study. *Journal of Education for Sustainable Development*. 18 (1). p.1-9.

Maqwelane, L.
Maqwelane, L., Nkamisa, A., Sehoma, C., Mohamed, K. and Qambela, G. (2024) "The issues still persist": a roundtable discussion of perpetual crisis, the massification of grief and joyful black futures. *Anthropology Southern Africa*. 47 (1). p.85-94.

Martin, A.
Martin, A. (2024) Hydro-Rugging as Reparative Caring Encounter: Remembering Southern Oceanic Hauntologies. *Environmental Communication*. 19 (1). p.60-73.

Martin, A. (2024) Strand looping as a relational enquiry to reimagine higher education and gender studies along the Camissa coastline. *Gender and Education*. 36 (8). p.830-844.

McGarry, D.
Whittingham, J. and **McGarry, D.** (2024) Mapping for connection, a life beyond mapping for control: lessons from? mapping-as-performance? with Empatheatre in South Africa. *Frontiers in Marine Science*. 11 (1). p.1-18.

Niner, H., Wilson, D., Hoareau, K., Strand, M., Whittingham, J., **McGarry, D.**, Erinosho, B., Ibrahim, S., Tshiningayamwe, S., Febrica, S., Lancaster, A.M.S.N. and Prokic, M. (2024) Reflections on the past, present, and potential futures of knowledge hierarchies in ocean biodiversity governance research. *Frontiers in Marine Science*. 11 (2024). p.1-21.

McGarry, D. and Droomer, C. (2024) Flotation Devices Restor(y)ing Haunted South African Ocean Herstories through Mending as a Decolonial Love Language. *Environmental Communication*. 19 (1). p.29-44.

McGarry, D. and Martin, A.
McGarry, D., Bozalek, V. and **Martin, A.** (2024) A lateral line organ for Slow co-engaged science for hot messes. *South African Journal of Science*. 120 (9/10). p.1-4.

Munyanyo, J. and Simuja, C.
Munyanyo, J. and **Simuja, C.** (2024) Emergency remote teaching during COVID19: an examination of selected secondary school teachers' experiences on technology integration in Namibia. *The Independent journal of teaching and learning*. 19 (2). p.79-92.

O'Donoghue, R.B., Van Staden, W. and Bhurekeni, J.B.
O'Donoghue, R.B., **Van Staden, W.**, **Bhurekeni, J.B.**, Snow-Macleod, J. and Ndlamlenze, L. (2024) A Formative Study Towards the Inclusion of Indigenous Technologies and Knowledge Practices in Science, Technology, Engineering, Arts, and Mathematics (STEAM) Curriculum Settings. *Educational Research for Social Change*. 13 (1). p.34-37.

Olvitt, L.L.
Olvitt, L.L., Davies, M., Ebrahim, A., Ebrahim, A. and **Cockburn, J.** (2024) Transdisciplinary curriculum design for sustainability transitions: A reflective dialogue. *South African Journal of Science*. 120 (9/10). p.1-8.

Gwedla, N., **Shackleton, C.M.** and **Olvitt, L.L.** (2024) Comparing perceptions of barriers to tree planting in domestic and public spaces of low-income neighbourhoods in small to medium-sized South African towns. *Cities*. 147 (1). p.1-11.

Rittmann, H.
Rittmann, H. and Mpofu, N. (2024) Exploring teachers' self-reported practices for fostering critical thinking skills in ESL multilingual high school settings. *Social Sciences and Humanities Open*. 10 (1). p.1-11.

Rosenberg, E.
Rosenberg, E., **Mtati, N.** and **Cockburn, J.** (2024) For environmental monitors, relationships matter in multiple ways: insights from a research collaboration in South Africa. *Frontiers in Environmental Science*. 12 (1). p.1-10.

Shambare, B.
Theodorio, A.O., Mataka, T.W. and **Shambare, B.** (2024) Teacher educators' use of mind mapping in the development of TPACK in a technology-rich learning environment. *Education and Information Technologies*. 29 (1). p.18675-18694.

Simuja, C. and Shambare, B
Simuja, C. and **Shambare, B.** (2024) Exploring the Integration of Virtual Laboratories in Science Education: Insights from Rural Teachers in South Africa. *International Journal of Virtual and Personal Learning Environments*. 14 (1). p.1-19.

Simuja, C. and **Shambare, B.** (2024) Unveiling the TPACK pathways: Technology integration and pedagogical evolution in rural South African schools. *Computers and Education*. 7 (2024). p.1-22.

Simuja, C. and Munyanyo, J.
Simuja, C. and **Munyanyo, J.** (2024) Experiences of Rural Secondary School Teachers in the Integration of Technology during Emergency Remote Teaching during the COVID-19 Pandemic in Namibia: An Exploratory Study. *Africa Education Review*. 20 (3). p.24-39.

Simuja, C. and Shikesho, H.N.
Simuja, C. and **Shikesho, H.N.** (2024) Investigating the Experiences of Mathematics Teacher Technology Integration in the Selected Rural Primary Schools in Namibia. *International Journal of Technology Enhanced Learning*. 3 (1). p.1-15.

Simuja, C. and Elifas, T.N.
Simuja, C. and **Elifas, T.N.** (2024) The Pedagogical Insights of Mathematics Teachers Integrating Artificial Intelligence in Rural Upper Primary Schools of Namibia. *Interdisciplinary Journal of Education Research*. 6 (37). p.1-13.

Souza, B.
Souza, B., Kaunda, B. and Potgieter, L. (2024) Inclusive Education in Southern Africa: A Critical Policy Analysis. *Journal of Educational Studies*. 23 (3). p.55-57.

Souza, B. (2024) Examining the role of Education for Sustainable Development (ESD) in strengthening inclusive education in teacher education: A Vygotskian analysis of change projects from Malawi and Eswatini. *Journal of Education*. 96 (0). p.98-116.

Souza, B. (2024) Resistance to heteronormative laws and homophobic religions in selected short stories from sub-Saharan Africa. *Imbizo: International Journal of African Literary and Comparative Studies*. 0 (0). p.1-19.

Souza, B. (2024) Mitigating policy-to-practice disparities in inclusive education from a bioecological systems perspective: The case of selected secondary schools in the Lower Shire, Malawi. *South African Journal of Education*. 44 (Supplement 1). p.1.

Theodorio, A.O.
Theodorio, A.O. (2024) Examining the support required by educators for successful technology integration in teacher professional development program. *Cogent Education*. 11 (1). p.1-17.

Van Staden, W., Lotz-Sisitka, H. and O'Donoghue, R.B.
Van Staden, W., **Lotz-Sisitka, H.** and **O'Donoghue, R.B.** (2024) The framing of course design tools for an online pre-service training course to activate ESD in subject teaching. *The Independent journal of teaching and learning*. 19 (2). p.65-78.

Van Staden, W., O'Donoghue, R.B. and Lotz-Sisitka, H.
Van Staden, W., **O'Donoghue, R.B.** and **Lotz-Sisitka, H.** (2024) Clarifying the design of a Handprint e-learning resource platform for mediating ESD in teacher education in southern African settings. *Journal of Education for Sustainable Development*. 17 (2). p.162-178.

Zeisser Gutierrez, M.
Legoas, J., **Zeisser Gutierrez, M.** and Gutierrez, M. (2024) Aprender desde lo alto: Cosmologías andinas y pedagogía radial en la experiencia de Pukllasunchis. *Revista Política y Estrategia*. 9 (2). p.71-106.

Peer Reviewed Subsidy-Earning Conference Proceedings

Simuja, C.
Simuja, C. Technology Integration Challenges in Mathematics Education: Evidence From Selected Rural Primary School Teachers in Okahao Education Circuit, Namibia. *The 32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education.* International University of Management, Windhoek. Namibia. January 2024.

Simuja, C. and Angula, M.
Simuja, C. and **Angula, M.** Perceptions of Mathematics Teachers on the Development of their Technological Pedagogical Content Knowledge Through Lesson Planning Integrating Technology in Oshana Region, Namibia. *The 32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education.* International University of Management, Windhoek. Namibia. January 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Bhurekeni, J.B.
Bhurekeni, J.B. Creating time and space for engaging children's voices: Evidence on emergent sustainability competencies stemming from a sociocultural Afrophilic philosophy for children study. *11th South African Education Research Association (SAERA) Conference.* University of Free State, Bloemfontein. South Africa. October 2024.

Bhurekeni, J.B. Unearthing the symbolism of the seed in the "seeding local cultures" research and its implications for childhood education. *Seeding Local Cultures Blended Conference and the 2nd Integral Sustainability Education Symposium.* SCOPE, n/a. Zimbabwe. December 2024.

Bhurekeni, J.B. and Lotz-Sisitka, H.
Bhurekeni, J.B. and **Lotz-Sisitka, H.** Sustainable researching: Using alternative research methodologies towards an inclusive and equitable knowledge production in research involving children. *42nd Environmental Education Association of Southern Africa (EEASA) Conference*. n/a, Lusaka. South Africa. September 2024.

Bhurekeni, J.B., Zeisser Gutierrez, M. and Mandikonza, C.
Bhurekeni, J.B., **Zeisser Gutierrez, M.** and **Mandikonza, C.** Assessment for flourishing: Thinking/living tool for assessing living heritage in education to advance quality education. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Dirwai, C., Bayley, K.A. and Bhurekeni, J.B.
Dirwai, C., **Bayley, K.A.** and **Bhurekeni, J.B.** Plenary Dialogue. The University community nexus Another look at sustainability in practice at Domboshava Zimbabwe. *Seeding Local Cultures Blended Conference and the 2nd Integral Sustainability Education Symposium.* n/a, n/a. Zimbabwe. December 2024.

Kulundu, I.M.
Kulundu, I.M. Transforming knowledge for Africa's future. International Forum of UNESCO Chairs and Partners convened by the African Union Commission and UNESCO. Opening panel. A litany for regenerative African futures. *n/a*. n/a, Addis Ababa. Ethiopia. September 2024.

Lotz-Sisitka, H.
Lotz-Sisitka, H. Keynote address: Transformative learning in the Anthropocene. *8th Working Session of Transformational Change Learning Partnership (TCLP) of Climate Investment Funds,* Virtual, Virtual. South Africa. September 2024.

Lotz-Sisitka, H. Keynote address: Transitioning, Transitioning, Transforming. Learning and Justice in the thick present between past(s), present(s) and futures(s). *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Lotz-Sisitka, H. Plenary dialogue: WEF nexus and education. *12th World Environmental Education Congress.* n/a, Abu Dhabi. UAE. January 2024.

Lotz-Sisitka, H. Epistemic justice in formative intervention research in southern Africa. *ISCAR Conference.* n/a, Rotterdam. Netherlands. August 2024.

Lotz-Sisitka, H. Closing plenary. *Wits Just Transitions Conference*. n/a, Johannesburg. South Africa. May 2024.

Lotz-Sisitka, H. Addressing environmental and social justice imperatives through collaboration. Lessons from the field. *Environmental Justice People's Council.* Amazwi Museum, Makhanda. South Africa. August 2024.

Lotz-Sisitka, H. Keynote address: Mainstreaming ESD in South Africa's education system. *9th Department of Basic Education Lekgotla*. n/a, Boksburg. South Africa. March 2024.

Lotz-Sisitka, H. Opening plenary contribution: Future Earth Africa Hub Leadership Centre Introduction. *SRI Africa Conference*. n/a, Durban. South Africa. May 2024.

Lotz-Sisitka, H. Education, ethics and sustainability. SASUF Pre-Conference Workshop Plenary Contribution. *SASUF Pre-Conference Workshop.* University of Gothenburg, Gothenburg. Sweden. May 2024.

Lotz-Sisitka, H. and Muhangi, S.
Lotz-Sisitka, H., **Muhangi, S.**, Ramsarup, P. and Poulton, W. Panel discussion: Planning for new occupations and technologies in the energy sector: Green hydrogen, energy efficiency, battery storage, NEVs. *42nd Environmental Education Association of Southern Africa (EEASA) Conference, Lusaka, Zambia 17-19 September.* n/a, Lusaka. Zambia. September 2024.

Lotz-Sisitka, H., Mponwana, O.W., Mathaba, K., Mvulane, P. and Chitengi, K.
Lotz-Sisitka, H., Lupele, C., Wals, A., **Mponwana, O.W.**, Musutu, A., **Mathaba, K.**, **Mvulane, P.** and **Chitengi, K.** Conference panel discussion: Bridging River co-learning arenas (RCAs) for sustainable livelihoods in southern Africa. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Mponwana, O.W.
Mponwana, O.W. Exploring the development of learning pathways within community-based water quality monitoring practices: A case study of citizen science. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Mponwana, O.W. Exploring the mediation of occupationally directed learning pathways in a social employment programme as a transformative approach to skills development in the water sector of South Africa. *Rios en Movimiento International Meeting Riverhood and River Commons*. n/a, Manizales. Colombia. March 2024.

Muhangi, S.
Muhangi, S. Panellist on skills for just transitions panel at Presidential Climate Commissions Skills Indaba. *n/a*. n/a, Johannesburg. South Africa. October 2024.

Muhangi, S. Investigating temporal dynamics and contradictions in agricultural skills ecosystems: Implications for extension skills development in Eastern Cape, South Africa. *42nd Environmental Education Association of Southern Africa (EEASA) Conference*. n/a, Lusaka. Zambia. September 2024.

Muhangi, S., Lotz-Sisitka, H. and Chanyau, L.
Muhangi, S., **Lotz-Sisitka, H.**, De Souza, B. and **Chanyau, L.** Panel discussion: Monitoring and evaluation of climate change communication and education. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. January 2024.

Mvulane, P.
Mvulane, P. Inclusive and valuable collaborations for river co-governance: The case of Inanda in uMngeni catchment, South Africa. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Olvitt, L.L.
Olvitt, L.L. Community-engaged research to support food gardening in Early Childhood Development Centres – A case study of the "1stWeEat" Project. *42nd Environmental Education Association of Southern Africa (EEASA) Conference*. n/a, Lusaka. Zambia. September 2024.

Sibanda, A.
Sibanda, A. Exploring the opportunities and limitations of social learning through field days in building farmers' resilience to climate change: A value creation approach. *4th Annual Education for Sustainable Development Interdisciplinary Research (ESDIR) Blended Conference*. NUST, Bulawayo. Zimbabwe. October 2024.

Sibanda, A., Van Staden, W. and Lotz-Sisitka, H.
Sibanda, A., **Van Staden, W.** and **Lotz-Sisitka, H.** A conceptual understanding of how technological affordances impact online Education for Sustainable Development courses. *4th Annual Education for Sustainable Development Interdisciplinary Research (ESDIR) Blended Conference.* n/a, Bulawayo. South Africa. October 2024.

Sibanda, A., **Van Staden, W.** and **Lotz-Sisitka, H.** ESD change projects and curriculum-activated change projects in South African schools: An exploratory study from the Fundisa [Teaching] for Change programme. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Sibanda, A., **Van Staden, W.** and **Lotz-Sisitka, H.** Strategies for embracing instructional technologies in designing ESD online courses: The experiences of emerging ESD online course designers. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Van Staden, W.
Van Staden, W. Transformative learning in agriculture: Introducing the digital field support tool. *42nd Environmental Education Association of Southern Africa EEASA conference*. n/a, Lusaka. Zambia. January 2024.

Van Staden, W. STEAM driving digital transformation in higher education institutes. *42nd Environmental Education Association of Southern Africa (EEASA) Conference.* n/a, Lusaka. Zambia. September 2024.

Van Staden, W. Online Course-activated co-engaged innovations to support the uptake of ESD at an institutional and policy level. *Education Studies Association of Ireland Conference (ESAI).* n/a, Lusaka. Zambia. September 2024.

Zeisser Gutierrez, M.
Zeisser Gutierrez, M. Approach and methodologies for transforming education through living heritage. *11th International Colloquium of CFPCI, Vitré, France.* n/a, Vire. France. October 2024.

Zeisser Gutierrez, M. interweaving cultural worlds in education: co-creating a research process for epistemic justice. *42nd Environmental Education Association of Southern Africa (EEASA) Conference*. n/a, Lusaka. Zambia. September 2024.

Zeisser Gutierrez, M. Plenary discussion Celebrating the living heritage of indigenous people: experiences con co-producing a collaborative publication. *6th International Congress on intangible cultural heritage safeguarding experiences*. n/a, Campecha. Mexico. August 2024.

Zeisser Gutierrez, M. Uywanakuy- criándonos en diversidad: una experiencia de investigación colaborativa sobre PCI y education. *6th International Congress on intangible cultural heritage safeguarding experiences*. n/a, Campecha. Mexico. August 2024.

Dean of Education: Publications

Books/Chapters/Monographs

Rosenberg, E.
O'Donoghue, R.B. and **Rosenberg, E.** (2024) A review of the staging and enactment of environment and sustainability education in South Africa: An illustrative case study. In: Thomas, R. and Rieckmann, M. (eds.). *World review: Environmental and sustainability education in the context of the sustainable development goals*. USA: CRC Press. p.22-39. ISBN: 9781003145203.



O'Donoghue, R.B. and **Rosenberg, E.** (2024) A Review of the Staging and Enactment of Environment and Sustainability Education in South Africa. An Illustrative Case Study. In: Rieckmann, M. and Thomas Muñoz, R. (eds.). *Environmental and Sustainability Education in the Context of the Sustainable Development Goals*. London: Routledge Taylor and Francis. p.1-18. ISBN: 9781003145202.

Concerts, Exhibitions, Performances, Workshops, Events

Rosenberg, E.

Rosenberg, E. n/a. TD evaluation approaches – online workshop for TRANSECTS. *n/a*. n/a, n/a. South Africa. 29 October 2024.

Sibanda, A., **Van Staden, W.**, **Lotz-Sisitka, H.**, **Rosenberg, E.** and Fundisa for Change Team, n./. a. n/a. Active participation. Fundisa for Change Curriculum Working Group Meeting. *n/a*. n/a, Pretoria. South Africa. 22 January 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Rosenberg, E.

Rosenberg, E., **Cockburn, J.**, Reed, M., James, W., Gengelbach, J. and Walk, H. (2024) Evaluating innovation in transdisciplinary sustainability education: TRANSECTS' international learning labs. *South African Journal of Science*. 120 (9/10). p.1-8.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Rosenberg, E.

Rosenberg, E. Bridging theory and practice through Transdisciplinary Learning Labs to build sustainability competencies in higher education: Insights from the TRANSECTS project in Canada, South Africa and Germany. *12th World Environmental Education Congress.* Abu Dhabi. UAE. February 2024.

Rosenberg, E. Learning to learn - conservation organisation strategies for responding to demanding goals in complex contexts. *The 6th Garden Route Interface and Networking (GRIN) Conference*. Knysna. South Africa. October 2024.

Rosenberg, E. Keynote address: Investing in green skills: Key considerations. Empowering Sustainable Development through Investment in Green Skills, GreenMatter - *Nedbank World Youth Skills Day.* Sandton. South Africa. July 2024.

Rosenberg, E. Keynote address: Connecting with policy and practice through multi-layered and engaged research: Small-scale agriculture examples. Connecting Research, Policy and Practice for Social-Ecological Resilience. *South African Resilience Alliance (SARA) Knowledge Exchange.* Stellenbosch. South Africa. July 2024.

Rosenberg, E. Keynote address: Researching green transitions, new learning pathways and skills development with uncertainty and a transformative intent: Insights from the South. Researching Work and Learning in Times of Change. *RWL13 Conference*. Linkoping University, Sweden. June 2024.

Rosenberg, E. Keynote address: Building blocks to champion EE & ESD's Evaluation. *12th World Environmental Education Congress.* Abu Dhabi. UAE. February 2024.

Rosenberg, E. Building Blocks to Champion EE & ESD's Evaluation. Keynote address. *Connecting People, Creating Tomorrow, the 12th World Environmental Education Congress*. ADNEC Centre Abu Dhabi, Abu Dhabi. Abu Dhabi. January 2024.

Rosenberg, E. Researching green transitions, new learning pathways and skills development with uncertainty and a transformative intent: Insights from the South. *Researching Work and Learning in Times of Change, RWL13 Conference*. Linköping University, Linköping. Sweden. June 2024.

Rosenberg, E. Learning to learn - conservation organisation strategies for responding to demanding goals in complex contexts. *The 6th Garden Route Interface and Networking (GRIN) Conference*. Villa Castellini, Knysna. South Africa. October 2024.

Rosenberg, E. Connecting with policy and practice through multi-layered and engaged research: Small-scale agriculture examples. *Connecting Research, Policy and Practice for Social-Ecological Resilience, South African Resilience Alliance (SARA) Knowledge Exchange*. STIAS Stellenbosch Institute for Advanced Study, Stellenbosch. South Africa. July 2024.

FACULTY OF EDUCATION:

Department of Primary and Early Childhood Education (PECE)



Associate Professor Ingrid Schudel

Head of Department

Photo: Jackie Grove

Introduction

The Department of Primary and Early Childhood Education (DPECE) has had a productive and internationally rich research year. Staff participated in conferences, fora, projects and collaborations with links to Australia, China, Germany, New Zealand, Namibia, Sweden, the United Kingdom, and the United States.

PECE produced six (6) book chapters, seventeen (17) peer-reviewed journal articles, thirteen (13) peer-reviewed conference proceedings articles, and for the first time, the Department had a creative output (from participation in the National Arts Festival) recognised for full subsidy. The year, rich with writing retreats, is aimed at keeping up this substantial research contribution. We look forward to seeing our Postgraduate graduations grow as our newly appointed early career staff find their supervision strengths. We are also pleased that our substantial and quality Bachelor of Education (Honours) programme is starting to bear fruit at the Masters and PHd level.

Postgraduates / Graduations

We celebrate our five (5) Master of Education and one (1) Doctor of Philosophy graduates. Our Honours programme graduated twenty (20) students in the Education Leadership and Management specialism and our first cohort of six (6) students in the Primary Education specialism walked across the stage in November.

Under the leadership of Professor Grant, the Rhodes University Educational Leadership & Management Honours students of 2023 created a booklet for sharing their research projects. The booklet is titled: *LEARNING TO LEAD: Exploring leadership potential among primary school learners.* Five (5) of these students are now in their second year of a Master of Education degree – taking their research knowledge further.

Distinguished Visitors / International Visits

Between January and June 2024, the Department hosted Dr Allyson Rogan-Klyve from Central Washington University who participated actively in our teaching and research programme.

In January 2024 Professor Kevin Larkin (Griffith University, Australia), Professor Katie Makar (University of Queensland), Professor Silke Ladel and Dr Dinah Wiedenhoefer (University of Schwäbisch Gmünd, Germany) visited with the South African Numeracy Chair Project (SANCP) team. The visitors provided sessions at the SAARMSTE Eastern Cape Chapter conference, sessions with our pre-service and in-service teachers (both hosted by SANCP) and supported the team of thirteen (13) Postgraduate students during a writing retreat at the Mpekweni Beach Resort.



The year, **rich with writing retreats**, is aimed at keeping up this substantial research contribution. We look forward to seeing our Postgraduate graduations grow as our newly appointed early career staff find their supervision strengths.

Professor Callie Grant spent a month at Warwick University, United Kingdom for her second year as a Visiting Fellow. She worked with Professor Pontso Moorosi on a book entitled *Socialisation of school leaders in sub-Saharan Africa: Reimagining the landscape.*

In May **Professor Ingrid Schudel** attended the South African-Swedish University Forum meeting in Malmo, Sweden where she co-presented with Hanna Hofverberg from Malmö University in a series of workshops titled: *Sustainably (Re)Storying the World through STEAM.*

Significant Research Aligned Events

Professor Callie Grant was part of an Education Faculty editorial team that produced a Special Issue of the *Journal of Education* reflecting on the SAERA conference on the *Education(al) Foundations, Education(al) Futures in South and Southern Africa* which Rhodes University hosted in 2023.

Professor Callie Grant's University Staff Doctoral Programme had their third doctoral scholar graduate at Rhodes. One of these scholars - **Dr Nqobile Msomi** - has now joined the Department as a Senior Research Associate, whilst living in the UK and working at Cambridge University. DPECE also has renewed the Senior Research Associate position for **Dr Sally Robertson** and appointed **Dr Westaway** as a Senior Research Associate.

Mr Ntsika Kitsili participated in the beginning of a 4-year longitudinal PrimTed-commissioned study amongst six (6) universities. The goal is to write isiXhosa home language standards to assess changing knowledge of isiXhosa teaching amongst BEd students.

Ms Tammy Booysen, together with her colleagues Professor Graven and Dr L Westaway have secured R2.3 million from the Oppenheimer Memorial Trust for research on using digital technologies for teaching place value applications amongst BEd Pre-service and in-service students.

Faculty of Education: **Department of Primary and Early Childhood Education (PECE) Publications**

Books/Chapters/Monographs

Graven, M.
Graven, M. and Venkat, H. (2024) Interventions to strengthen teaching and learning in contexts of disadvantage. In: Doig, B., Novotna, J., Kaur, B. and Pugalee, D. (eds.). *Elementary Mathematics Teaching: Insights from 30 years of the Symposium of Elementary Mathematics Teaching (SEMT).* Oxford University Press. p.3-24. ISBN: 9780192869647.

Heyd-Metzuyanim, E. and **Graven, M.** (2024) Identity as a Critical Lens on Teaching and Learning Mathematics. In: *Fourth International Handbook of Mathematics Education*. Online: Springer, Cham. p.413-438. ISBN: 9783031514739.

Graven, M., Vale, P. and Long, R.
Graven, M., **Vale, P.** and **Long, R.** (2024) Professional Development of South African Primary Mathematics Teachers: A Network of Multiple, Overlapping, Aligned Projects for Lifelong Learning. In: Kakoma, L. and Schafer, M. (eds.). *Mathematics Teacher Training and Development in Africa*. New York: Springer. p.229-252. ISBN: 9783031687549.

Hellemann, P.C.
Hellemann, P.C., Mahadew, A., Mpisi, T. and Daries, G. (2024) Chapter 18: Culturally and linguistically responsive pedagogies in early childhood education. In: Mncanca, M., Koen, M., Ebrahim, H. and Okeke, C. (eds.). Cape Town: Juta & Co. p.215-227. ISBN: 9783111687549.

Mamase, Z.
Aiseng, K.M. and **Mamase, Z.** (2024) Public health communication and language policy at Rhodes University during the COVID-19 Pandemic. In: *Public Health Communication Challenges to Minority and Indigenous Communities*. USA: IGI Global. p.130-142. ISBN: 9798369306246.

Robertson, S.A. and Graven, M.
Robertson, S.A. and **Graven, M.** (2024) Exploring the implications of the multilingual turn in mathematics education research for South African policy makers, researchers and educators. In: Essien, A. (ed.). *Multilingualism in the teaching and learning of mathematics in Africa: Issues for mathematics education research*. Oxford, UK: Bloomsbury Publishing. p.23-45. ISBN: 9781350369214.

Peer Reviewed Subsidy-Earning Journal Research Publications

Gabriel, N.I.
Gabriel, N.I. and Mpofu, N. (2024) Learning activities used for reading literacy instruction in selected Namibian primary schools in selected Namibian primary schools. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-10.

Gobodwana, A.
Gobodwana, A. (2024) The strategies in teaching isiXhosa semantics in Foundation Phase: A systematic review. *Reading & Writing*. 15 (1). p.1-10.

Grant, C.
Grant, C. (2024) 'Sink or swim' school leadership socialisation: A global South case of principal preparation and development. *Management in Education*. 2024 (1). p.1-6.

Graven, M.
Lovemore, T. and **Graven, M.** (2024) Pre-service teachers' use of the jump strategy on the empty number line for mental computation'. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-11.

Bowie, L. and **Graven, M.** (2024) Using games to develop number sense in early grade maths clubs. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-11.

Visnovska, J., **Graven, M.**, Cortina, J.L. and Vale, P. (2024) Decolonising Content Narratives in Mathematics and Science Education: The Case of Reinventing Length Measurement. *African Journal of Research in Mathematics, Science and Technology Education*. 3 (1). p.1-14.

Graven, M. and Westaway, L.
Graven, M., Venkat, H., Mathews, C. and **Westaway, L.** (2024) An introduction to early grade mental mathematics and number sense. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-3.

Hellemann, P.C.
Hellemann, P.C. (2024) Crossing Disciplinary Boundaries and Extending Participation through Film and Applied Theatre Techniques: Reflecting on the *Umzi ka* Mama Oral Histories Project. *African Journal of Inter/Multidisciplinary Studies*. 6 (1). p.1-12.

Hellemann, P.C. and **Heshu, M.P.** (2024) Beyond Re-enactment: exploring the Battle at Egazini with grade 10 history learners using applied theatre. *Yesterday & Today*. 32 (1). p.39-75.

Kitsili, N.A. and Murray, S.R.
Kitsili, N.A. and **Murray, S.R.** (2024) The challenge of incorporating new methods: The case of group guided reading in South Africa. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-10.

Kumm, M.L. and Graven, M.
Kumm, M.L. and **Graven, M.** (2024) Exploring pre-service teachers' knowledge of efficient calculation strategies. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-14.

Long, K.A.
Long, K.A. and **Bowles, T.N.** (2024) No-fee school consistently outperforms Progress in International Reading and Literacy benchmarks: Presenting early grade reading data from a case in Makhanda, Eastern Cape. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-11.

Long, K.A. and Grant, C.
Long, K.A. and **Grant, C.** (2024) Child participation in South African primary schools: How useful is the Lundy model? *South African Journal of Childhood Education (SAJCE).* 14 (1). p.1-5.

Schudel, I.
Schudel, I. (2024) Enabling STE(A)M in Sustainability Education Through Dialogic/Dialectic Reconciliation. *Educational Research for Social Change*. 13 (1). p.1-21.

Schudel, I. (2024) Situating potentially and kinetically powerful knowledges: the power of meaning-making and social change. *Journal of Curriculum Studies*. 2024 (1). p.1-20.

Vale, P. and Graven, M.
Booi, T., **Vale, P.** and **Graven, M.** (2024) Research-informed translation of mental strategy teaching materials into isiXhosa. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-11.

Vale, P. and Westaway, L.
Vale, P. and **Westaway, L.** (2024) The development of pre-service teachers? competence to teach mental calculation strategies. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-9.



Photo: Chris Marais

Peer-reviewed Subsidy-Earning Proceedings

Booysen, T.I.
Booysen, T.I. Using a visual representation framework with pre-service teachers to analyse Place Value representations. *46th Annual Conference of the Mathematics Education Research Group of Australasia (MERGA46)*. Griffith University, Gold Coast. Australia. June 2024.

Brown, B.
Brown, B. Mathematics for Teaching as an Instrumental Toolkit – Primary Preservice Teaching and Assessment. *15th International Congress on Mathematics Education*. Sydney, Sydney. Australia. July 2024.

Graven, M.
Graven, M. Plenary: Building and engaging communities: the case of the mental starters assessment project. *Psychology of Mathematics Education*. Aotearoa New Zealand, Auckland. New Zealand. July 2024.

Graven, M., Borba, M., Jablonka, E., Martin, D.B. and Subramaniam, R. Conversations towards Building Back Better. T*he 14th International Congress on Mathematical Education.* East China Normal University, Shanghai. China. July 2024.

Graven, M. and Jorgensen, R. Building Parental Capital in Supporting Early Literacy and Numeracy Learning. *46th Annual Conference of the Mathematics Education Research Group of Australasia (MERGA46)*. Griffith University, Gold Coast. Australia. June 2024.

Lovemore, T.S.
Lovemore, T.S. Pre-Service Teachers' Use of Jump Strategy on the Empty Number Line When Recording Micro-Teaching Videos. *46th Annual Conference of the Mathematics Education Research Group of Australasia (MERGA46)*. Griffith University, Gold Coast. Australia. June 2024.

Lovemore, T.S., Robertson, S.A. and Graven, M.
Lovemore, T.S., **Robertson, S.A.** and **Graven, M.** Navigating ethical dilemmas around the dual roles of supervisors in a mathematics design-research study. *32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education.* The International University of Management, Swakopmund. Namibia. January 2024.

Robertson, S.A. and Graven, M.
Robertson, S.A. and **Graven, M.** Catching the Trans-languaging Wave: Considerations for Young Multilingual Learners' Mathematical Meaning-Making. *46th Annual Conference of the Mathematics Education Research Group of Australasia (MERGA46)*. Griffith University, Gold Coast. Australia. June 2024.

Robertson, S.A. and **Graven, M.** Let us take the multilingual turn to make language a genuinely inclusive resources for mathematical meaning-making. *32nd Annual Conference for Research in Mathematics, Science and Technology Education*. The International University of Management, Swakopmund. Namibia. January 2024.

Shigwedha, E.N. and Westaway, L.
Shigwedha, E.N. and **Westaway, L.** Namibian Senior Primary Teachers? Subject Matter Knowledge of Computational Estimation. *32nd Annual Conference of the Southern African Association for Researching Mathematics, Science and Technology Education*. Tunana Hall, University of Namibia. Namibia. 16 - 18 January 2024 0.

Vale, P. and Graven, M.
Vale, P. and **Graven, M.** Shifting Deficit Perspectives of Teacher-Parent Partnerships: Post-Covid Teacher Stories. *47th Conference of the International Group for the Psychology of Mathematics Education*. Aotearoa New Zealand, Auckland. New Zealand. July 2024.

Vale, P., Westaway, L. and Graven, M.
Larkin, K., Ladel, S., **Vale, P.**, Kortenkamp, U., **Westaway, L.** and **Graven, M.** Investigating the impact of language on Place Value learning. *32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education.* International University of Management, Swakopmund. Namibia. January 2024.

Westaway, L., Vale, P., Vale, P. and Graven, M.
Westaway, L., **Vale, P.**, **Vale, P.**, **Graven, M.**, Larkin, K. and Ladel, S. A comparison of Place Value across four African primary school curricula. *32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education.* The International University of Management, Swakopmund. Namibia. January 2024.

Peer-Reviewed Subsidy-Earning Creative Outputs

Schudel, I.
Schafer, M. and **Schudel, I.** Photography exhibition. We are sky's things. *National Arts Festival.* Rhodes University, Makhanda. South Africa. 22 June - 3 July 2024.

DEPARTMENT OF Environmental Science

Introduction

The Department of Environmental Science produced a sizeable number of publications. These consisted of thirty-four (34) papers in peer-reviewed subsidy-earning journals, four (4) book chapters, and thirteen (13) papers in non-peer-reviewed conference presentations. Staff participated in various research conferences and workshops both locally and internationally and served on several national and international organizations.



Professor Sheunesu Ruwanza
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

We have a healthy number of Postgraduate students (seventeen (17) PhD; twenty (20) Masters and thirteen (13) Honours). Six (6) Masters students and four (4) PhD candidates graduated in 2024. As usual, Postgraduates were significant contributors to the outputs of the Department. During 2024, three (3) former and current PhD candidates (Falayi, M., Mutumbi, U., Senkoro, A.), five (5) Masters (Coka, N., Mhlongo, E.S., Mjoli, N., Read, R., Seboko, T.) and three (3) Honours (Nkosi, B., Mlonzi, V., Tshikombeni, O.) were lead or co-authors on journal publications. We regard this as a vital part of the research process, which also strengthens the research experience and credentials of the Postgraduates after they leave the Department.



South Africa-Sweden University Forum (SASUF) collaborators and University of Venda partners at a workshop at the University of Venda in Limpopo Province of South Africa.

Seated from left to right; Mr MT Mokoena, Dr FM Murungweni, Professor N Potgieter, Ms H Siaga and Professor C Alarcón-Ferrari.

Standing from left to right; Mr S Baloyi, Ms D Thibedi, Ms T Shai, Professor S Ruwanza, Ms S Munyai, Mr S Ramusunzi and Mr TM Hatramela. Photo: Department of Environmental Science

The Department regards authoring publications as a **vital part of the research process**, which also strengthens the research experience and credentials of the Postgraduates after they leave the Department.

Distinguished Visitors / International Visits

Professor S Ruwanza visited Swedish University of Agricultural Science in Uppsala, in Sweden to conduct a SASUF funded collaboration workshop from 13 - 14 May 2024. The two-day collaborative workshop was entitled “Invasive alien plants as a global challenge – where do we go from here”. The collaborative workshop was attended by more than fifteen (15) global participants, mostly from South Africa and Sweden.

Dr N Gwedla was part of the Erasmus+Staff Mobility Exchange Program for Teaching and Training between Rhodes University and Friedrich-Alexander-Universitat Erlangen-Nurnberg (FAU). She was hosted by the FAU from 16 - 21 June 2024 in Germany. This is an initiative to maintain relations and collaborations between our Department and the Institute of Geography at FAU.

Significant Research Aligned Events

Professor S Ruwanza organised a SASUF funded collaborative workshop that was hosted at University of Venda from 7 to 9 October 2024. The collaborative workshop included four (4) universities, namely two (2) South African Universities (Rhodes University and University of Venda) and two (2) Swedish Universities (Stockholm University and Swedish University of Agricultural Science). The collaborative workshop included guest lectures, field excursions, and grant application writing.

Distinguished Professor Charlie Shackleton co-convened a symposium panel at the PECS-3 conference in Montreal (Canada) from 12 to 15 August 2024. The topic was “Provisioning ecosystem services in dynamic urban systems: the overlooked benefits of urban foraging and its implications for research and practice”.

Department of Environmental Science Publications

Books/Chapters/Monographs

Adeyemi, O. and Shackleton, C.M.
Adeyemi, O. and **Shackleton, C.M.** (2024) Practices and perceptions of wild foragers in Lagos Metropolis, Nigeria. In: Dhyani, S. and Sardeshpande, M. (eds). Urban foraging in the changing world. Springer. p. 45-58. ISBN 978-981-97-0344-9.

Cockburn, J., Mtati, N. and Masterson, V.
Cockburn, J., **Mtati, N.** and **Masterson, V.** (2024) Re-focusing stewardship on stewards: place-based insights on diversity, relationality and the politics of land. In: Sherren, K., Thondhlana, G. and Jacksonsmith, D. (eds.). *Opening windows: embracing new perspectives and practices in natural resource social sciences*. Colorado: University press of Colorado. p.300-310. ISBN: 9781646426287.

Shackleton, C.M.
Shackleton, C.M. (2024) Multiple roles of non-timber forest products in ecologies, economies and livelihoods. In: Peh, K., Corlett, R. and Bergeron, Y. (eds). Routledge Handbook of Urban Biodiversity. (2nd ed.) London: Routledge. p.612-624. ISBN: 9781003016120.

Shackleton, C.M. (2024) Urban green infrastructure, biodiversity, poverty, and equity. In: Nilon, C.H. and Aronson, F.J. (eds.). *Routledge Handbook of Urban Biodiversity*. London: Routledge. p.307-319. ISBN: 9780367444549.

Peer Reviewed Subsidy-Earning Journal Research Publications

Adeyemi, O.
Lawal, A., **Adeyemi, O.** and Jimoh, B. (2024) Does Forest cover affect the regeneration potential of tree species? A case study of Triplochiton scleroxylon in Akure Forest Reserve. *Journal of Research in Forestry, Wildlife & Environment*. 16 (2). p.62-67.

Adeyemi, O. and Shackleton, C.M.
Adeyemi, O. and **Shackleton, C.M.** (2024) The abundance and distributional (in)equalities of forageable street tree resources in Lagos Metropolis, Nigeria. *Ecosphere*. 15 (9). p.1-10.

Adeyemi, O. and **Shackleton, C.M.** (2024). Street tree abundance, composition and (mal)distribution in Lagos Metropolis, Nigeria. *Trees, Forests & People*. 15: 100470.

Cockburn, J.
Olvitt, L.L., Davies, M., Ebrahim, A., Ebrahim, A. and **Cockburn, J.** (2024) Transdisciplinary curriculum design for sustainability transitions: A reflective dialogue. *South African Journal of Science*. 120 (9/10). p.1-8.

Rosenberg, E., **Cockburn, J.**, Reed, M., James, W., Gengelbach, J. and Walk, H. (2024) Evaluating innovation in transdisciplinary sustainability education: TRANSECTS' international learning labs. *South African Journal of Science*. 120 (9/10). p.1-8.

Augenstein, K., Lam, D.P.M., Horcea-Milcu, A.I., Bernert, P., Charli-Joseph, L., **Cockburn, J.**, Kampfmann, T., Pereira, L.M. and Sellberg, M.M. (2024) Five priorities to advance transformative transdisciplinary research. *Current Opinion in Environmental Sustainability*. 68 (101438). p.1-10.

Cockburn, J. and Mtati, N.
Weaver, M.J.T., **Cockburn, J.**, **Mtati, N.** and **Palmer, C.G.** (2024) Exploring transformative processes at the intersections of land, water and livelihoods: a case study from the Tsitsa Project, South Africa. *Ecosystems and People*. 19 (1). p.1-20.

Coka, N., Thondhlana, G. and Ruwanza, S.
Coka, N., **Thondhlana, G.** and **Ruwanza, S.** (2024) Perceptions of *Acacia dealbata* invasion and clearing in Upper Tsitsana villages in the Eastern Cape Province of South Africa. *Forests Trees and Livelihoods*. 33 (2). p.101-117.

De Vos, A.
Denner, C., Clements, H.S., Child, M.F. and **De Vos, A.** (2024) The diverse socioeconomic contributions of wildlife ranching. *Conservation Science and Practice*. 6 (7). p.1-22.

Xoxo, B.S., **Mantel, S.K.**, **De Vos, A.**, **Tanner, J.L.** and Le Maître, D.C. (2024) Using the analytic hierarchical process to identify potential sites for rural ecological infrastructure investment in South Africa: examples from Cacadu and Tsitsa Catchments. *Restoration Ecology*. 1 (1). p.1-15.

Falayi, M.
Gusha, B., **Gwapedza, D.R.**, Gwate, O., **Palmer, A.** and **Falayi, M.** (2024) A scoping review of communal rangelands management in southern Africa: towards sustainable management of rangelands. *Pastoralism*. 14 (2024). p.1-11.

Gwedla, N. and Shackleton, C.M.
Gwedla, N., **Shackleton, C.M.** and **Olvitt, L.L.** (2024) Comparing perceptions of barriers to tree planting in domestic and public spaces of low-income neighbourhoods in small to medium-sized South African towns. *Cities*. 147 (1). P 104776.

Lotz-Sisitka, H., Cockburn, J. and Jalasi, E.M.
Lotz-Sisitka, H., Pahl-Wostl, C., Meissner, R., Scholz, G., **Cockburn, J.**, **Jalasi, E.M.**, Stuart-Hill, S. and **Palmer, C.G.** (2024) Interrelated transformative process dynamics in the face of resource nexus challenges: an invitation towards cross case analysis. *Ecosystems and People*. 20 (1). p.1-16.

Matikinca, P., Nyamakura, B.K. and Shackleton, S.E.
Matikinca, P., **Nyamakura, B.K.** and **Shackleton, S.E.** (2024) Climate change adaptation and disaster risk reduction in South Africa's local municipal plans. *South African Journal of Science*. 120 (7/8). p.1-9.

Mhlongo, E.S. and Ruwanza, S.
Mhlongo, E.S., **Ruwanza, S.** and Dalu, T. (2024) Perceptions, Knowledge, and Invasion Extent of Lantana camara on Household Yards in Rural Communities in Limpopo Province, South Africa. *Society & Natural Resources*. 37(8). P. 1218-1239.

Mjoli, N. and Shackleton, C.M.
Mjoli, N. and **Shackleton, C.M.** (2024) Refugia for non-timber forest product populations: Prevalence and efficacy. *Basic and Applied Ecology*. 77 (1). p.26-34.

Ruwanza, S. and Mlonzi, V.
Ruwanza, S., and **Mlonzi, V.** (2024). Role of Vachellia karroo as a nurse plant in oldfields targeted for passive restoration. *BOTHALIA African Biodiversity & Conservation. 54*(1). p.1-13.

Mtati, N.
Fry, A.S., **Weaver, M.J.T.**, **Libala, N.**, **Ralekhetla, M.M.**, **Gusha, B.**, **Mtati, N.** and **Palmer, C.G.** (2024) Stepping stones to transformative participatory governance capabilities in a rural landscape restoration project. *Ecosystems and People*. 20 (1). p.1-15.

Mtati, N. and Cockburn, J.
Rosenberg, E., **Mtati, N.** and **Cockburn, J.** (2024) For environmental monitors, relationships matter in multiple ways: insights from a research collaboration in South Africa. *Frontiers in Environmental Science*. 12 (1). p.1-10.

Mutumbi, U., Thondhlana, G. and Ruwanza, S.
Mutumbi, U., **Thondhlana, G.** and **Ruwanza, S.** (2024) Adoption of residential rooftop solar PV systems in South Africa: A scoping review of barriers. *Heliyon*. 10, e30937.

Mvulane, P.
Lotz-Sisitka, H., Micklesson, M., **Mvulane, P.**, Brownell, F., Thifulufhelwi, R. and Russel, C. (2024) Bringing River health into being with citizen science: River commons co-learning and practice. *South African Journal of Science*. 120 (9/10). p.1-9.

Read, R.L., Shackleton, C.M. and Sinasson Sanni, K.G.
Read, R.L., **Shackleton, C.M.** and **Sinasson Sanni, K.G.** (2024) Environmental worldviews and attitudes of public-sector urban planners in shaping sustainable urban development: the case of South Africa. *Frontiers in Sustainable Cities*. 6 (1). p.1342894.

Ruwanza, S.
Ruwanza, S. (2024) Continuous Monitoring of Vegetation

and Soil Recovery After Eucalyptus grandis Removal in Dense Trees and Shrubs Areas. *African Journal of Ecology*. 62: e13324.

Sardeshpande, M. and Shackleton, C.M.
Sardeshpande, M. and **Shackleton, C.M.** (2024) Spatial synergies for urban foraging: A South African example. *Ambio*. 54 (2024). p.714-733.

Seboko, T.C., Ruwanza, S. and Shackleton, C.M.
Seboko, T.C., **Ruwanza, S.** and **Shackleton, C.M.** (2024) The distribution and abundance of woody invasive alien plants in small towns in Eastern Cape Province, South Africa. *Urban Ecosystems*. 27. p.1877-1890.

Seboko, T.C., **Shackleton, C.M.** and **Ruwanza, S.** (2024) Urban residents' knowledge of and attitudes and willingness to control woody invasive alien plants in their domestic gardens in South Africa. *People and Nature*. 6(5). p.2077-2090.

Senkoro, A.M. and Shackleton, C.M.
Senkoro, A.M., Munt, D.D., **Shackleton, C.M.**, Barros, R.A.I. and Voeks, R.A. (2024) The case of a threatened medicinal tree with optimistic prospects under climate change. *Global Ecology and Conservation*. 54.e03126.

Shackleton, C.M.
Shackleton, C.M., Brom, P., **Gwedla, N.**, Matamanda, A.R., Sardeshpande, M. and Kumar-Nair, S. (2024) Embedding opportunities for poverty alleviation in urban green infrastructure design and management using South Africa as a case example. *Cities*. 155. p. 105442.

Shackleton, C.M. and Adeyemi, O.
Shackleton, C.M., **Adeyemi, O.** and Setty, S. (2024) Why are non-timber forest products still the poor relative in Global Forest Resource Assessments? *Forest Policy and Economics*. 163. P103232.

Shackleton C.M. and Sinasson Sanni, K.G.
Shackleton, C.M., Garekae, H., Sardeshpande, M., **Sinasson Sanni, G.** and Twine, W.C. 2024. Non-timber forest products as poverty traps: fact or fiction? *Forest Policy & Economics*. 158: 103114.

Sinasson Sanni, K.G., Shackleton, C.M., Ruwanza, S. and Thondhlana, G.
Sinasson Sanni, K.G., **Shackleton, C.M.**, **Ruwanza, S.** and **Thondhlana, G.** (2024) Contextual and socio-economic factors affected urban dwellers experiences of and vulnerability to ecosystem disservices. *Scientific African*. 26 (2024). p.1 - 11.

Thondhlana, G.
Thondhlana, G. and **Nkosi, B.** (2024) Campus sustainability at Rhodes University, South Africa: perceptions, awareness level, and potential interventions. *Frontiers in Sustainability*. 5 (2024). p.1 - 10.

Tshikombeni, O.V., Shackleton, C.M. and Ntshudu, M.
Tshikombeni, O.V., **Shackleton, C.M.** and **Ntshudu, M.** 2024. Low knowledge of national biodiversity symbols amongst urban South Africans limits their potential value as conservation flagship species. *People & Nature*. 6 (1). p.107-116.

Yapi, T.S. and Shackleton, C.M.
Yapi, T.S., **Shackleton, C.M.** and Le Maitre, D.C. (2024) Identifying opportunities and constraints to effective management of invasive Australian wattle (Acacia) species in grassland landscapes, South Africa. *Ecology and Society*. 29 (4). p.1-6.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Cockburn, J.
Cockburn, J. Vulnerability, trust and ethics of care in service of our filthy river. *Higher Education Close-up (HECU) Conference*. Rhodes University, Makhanda. South Africa. July 2024.

Cockburn, J. Engaged research and teaching for the public good: the interconnection of head, heart and hands. *Rhodes University Community Engagement Conference*. Rhodes University, Makhanda. South Africa. May 2024.

Cockburn, J., Collett, A., Mathiso, Z. and Nkhwazi, M.A.
Cockburn, J., **Collett, A.**, **Mathiso, Z.** and **Nkhwazi, M.A.** River relations for resilience: a social-ecological perspective from Makhanda, South Africa. *Southern African Resilience Academy (SARA) Knowledge Exchange Event*. Stellenbosch University, Stellenbosch. South Africa. July 2024.

Mothupi, F.M. and Shackleton, C.M.
Mothupi, F.M. and **Shackleton, C.M.** Traditional knowledge and consumption of wild edible plants. *49th Congress of the South African Association of Botanists.* Richards Bay, South Africa. 7-11 January 2024.

Mothupi, F. and **Shackleton, C.M.** 2024. Availability, abundance and economic value of cultivated and wild fruit trees in rural Limpopo home gardens. 26th Indigenous Plant Use Forum. Darling, South Africa. 11-16 August 2024.

Ntshanga, N.K. and Shackleton, C.M.
Ntshanga, N.K. and **Shackleton, C.M.** Conservation status of South Africa's indigenous medicinal plants. (Paper). Conference on African thought and indigenous knowledge: a portal for health and wellbeing. *Conference on African thought and indigenous knowledge: a portal for health and wellbeing*. Gqeberha, Gqeberha. South Africa. August 2024.

Shackleton, C.M.
Hurley, P.T. and **Shackleton, C.M.** Provisioning ecosystem services in dynamic urban systems: the overlooked benefits of urban foraging and its implications for research and practice. *PECS-3 conference.* Montreal, Montreal (Canada. Canada. August 2024.

Shackleton, C.M. Challenges to urban greening in South African cities: a social and ecological perspective. *Buffalo City urban heat seminar*. East London, East London. South Africa. June 2024.

Shackleton, C.M. 2024. Towards a manual as a resource for forest depts, conservation and development agencies and NGOs to determine ecological sustainability of NTFP harvests. (Paper). *FAO Capacity Development Programme on enhancing Non-Wood Forest Products value chains: Lessons from the Republic of Korea.* 25 September 2024, virtual.

Martins, V., Shackleton, C.M. and De Vos, A.
Martins, V., **Shackleton, C.M.** and **De Vos, A.** Assessing the sustainability of bushmeat hunting in the indigenous forests of the Eastern Cape. *Garden Route Interface & Networking.* Knysna, Knysna. South Africa. October 2024.

Sifanele, L.
Sifanele, L. Community engagement in the use of invasive alien plants as hedges in rural and urban contexts of the Eastern Cape. *Rhodes University Community Engagement.* Rhodes University, Makhanda. South Africa. May 2024.

Sifanele, L. and Shackleton, C.M.
Sifanele, L. and **Shackleton, C.M.** The prevalence and motivations of using invasive alien plants as hedges in rural and urban contexts of the Eastern Cape. *Rhodes University Postgraduate.* Rhodes University, Makhanda. South Africa. September 2024.

Zwedala, L.M.N., Shackleton, C.M. and Gwedla, N.
Zwedala, L.M.N., **Shackleton, C.M. and Gwedla, N.** The contribution of urban green spaces to the cultural identity of black African urban residents in Langa Township, Western Cape. *Conference on African thought and indigenous knowledge: a portal for health and wellbeing*. Gqeberha. South Africa. August 2024.

Non-Peer Reviewed Articles in Popular Media

Shackleton, C., Tshikombeni, O. and Ntshudu, M.
Shackleton, C., Tshikombeni, O. & Ntshudu, M. 2024. Do you know what South Africa's national fish is? *Daily Dispatch* online. https://dispatch.pressreader.com/article/281612425928115.

Shackleton, C.M.
Shackleton, C.M. 2024. Only 3 % of South Africans can name all five national animals and plants. Why these symbols matter. *The Conversation*. 2 Nov 2024. https://theconversation.com/only-3-of-south-africans-can-name-all-five-national-animals-and-plants-why-these-symbols-matter-241284.

Mutumbi, U., Thondhlana, G. and Ruwanza, S.
Mutumbi, U., **Thondhlana, G.** and **Ruwanza, S.** 2024. Home solar systems in South Africa: more will be installed if households are given loans, free maintenance and security. *The Conversation*. 7 June 2024. https://theconversation.com/home-solar-systems-in-south-africa-more-will-be-installed-if-households-are-given-loans-free-maintenance-and-security-230491.

DEPARTMENT OF Fine Art

Introduction

The Department of Fine Art had a very productive research year in 2024. Outputs generated by our staff, Postgraduates, and SARChI Research Associates and Fellows comprised thirteen (13) subsidy-earning publications (books, chapters, monographs, and journal articles); twelve (12) conference presentations; and thirty-eight (38) exhibitions, performances, presentations, workshops and events.



Associate Professor Maureen De Jager
Head of Department

Photo: Jackie Grove

Many of these were related to our RU120 exhibition, *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department* and related colloquium, which involved several Fine Art staff members as curators, exhibiting artists, presenters, performers and session chairs.

Postgraduates / Graduations

During 2024, two (2) MFA Candidates mounted solo exhibitions for examination purposes: **Phila Phaliso** presented *Ixhala Lika Nongayindoda* and **Nichole Bouwer** presented *It's not gonna be lekker: a visual representation of Real-life Tattoo narratives*, both at the 1820 Settlers Monument. PhD candidate **Raphaela Linders** presented *Heart!2.0*, also at the 1820 Settlers Monument – the first PhD exhibition to be shown as part of our newly developed Fine Art PhD programme.

Three (3) Postgraduates in the SARChI programme on the Arts of Africa received their PhD degrees – **Binjun Grobbelaar Hu**, **Claire Nalukenge** and **Lifang Zhang**. Grobbelaar continued as a Postdoctoral Fellow, and former Postdoctoral Fellow and PhD candidate, **Barnabas Muvhuti**, published the book, *Chronicles of the Road: Five Nations, Five Artists.*

Distinguished Visitors / International Visits

SARChI Chair, **Professor Ruth Simbao**, was invited to visit a number of international art and higher education institutions, including the Africa Institute in Sharjah, the UAE, Eduardo Mondlane University in Maputo, Mozambique, and the Institute of African and Diaspora Studies at University of Lagos, Nigeria. She and SARChI PhD candidate, Binjun Grobbelaar presented at the Yale University symposium on cultural dimensions of Africa-China encounters. Simbao was the keynote speaker at the Atlantica conference at the University of Lagos, which was organised in collaboration with the University of Exeter in the UK. The conference, *Seen from Lagos: Africa Regroundings* focused on African thought, philosophy and artistic practices. Simbao also travelled to St. Helena Island in the South Atlantic, where she worked on a narrative documentary film on the history of island from the perspective of feminist genealogies and breathing archives.

Head of Department, **Associate Professor Maureen de Jager**, was an invited participant in a specialist course on *Supervising Artistic and Practice-based Research - Publishing for Urgency* hosted by the Royal Danish Academy of Fine Arts, the Center for Practice-based Art Studies, and the University of Copenhagen, at ArtHub Copenhagen.

Significant Research Aligned Events

Many of the Fine Art Department's 2024 research outputs were related to the exhibition, *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*, conceptualised and curated by **Emeritus Professor Dominic Thorburn**, Associate Professor Maureen de Jager, and Lecturer Robyn Munnick and hosted by the Fine Art Department (June – October 2024). The exhibition, which drew primarily from Rhodes University's extensive art collection to map four decades of artworks produced by fulltime and contract teaching staff of the Rhodes University Fine Art Department, served to commemorate the 120th anniversary of Rhodes University (RU120) and was also featured on the main curated programme of the National Arts Festival 2024. It included artworks by several current staff members, including Senior Lecturer **Christine Dixie**, **Associate Professor Stephen Ọlárànmí**, Lecturer **Sikhumbuzo Makandula** and Senior Lecturer **Rat Western**, as well as Thorburn, Munnick and De Jager.

SABC News crew interviewing exhibition custodian Snelihle Maphumulo.
Photo: Department of Fine Art



The exhibition garnered a great deal of positive publicity for the University, the Fine Art Department, and the RU Art Collection, enjoying media coverage in the *Mail & Guardian* and the *Daily Dispatch*. Munnick, De Jager, and exhibition custodian **Snelihle Maphumulo**, were also interviewed for a segment on *SABC News*. In addition to the exhibition, the curators facilitated the publication of a richly illustrated exhibition catalogue (with an essay by notable arts writer Robyn Sassen) and a one-day colloquium, *Continuing the conversation*, which included presentations by invited guests and various staff members with still other staff members contributing as session chairs (September 2024).

Other highlights during the National Arts Festival included Christine Dixie's *The Abyssal Zone* (Makhanda, June 2024) – one (1) of four (4) solo exhibitions shown by Dixie in 2024. Her other solo exhibitions included *The Binding Project* (Johannesburg, April 2024); *Trade-Off* (Johannesburg, August – September 2024) and *Blueprint for the DisOrder of Things* (Stellenbosch, September – October 2024). Dixie also participated in a number of group exhibitions.

Sikhumbuzo Makandula participated in the National Arts Festival in his capacity as dramaturge for *Izandi Zemilambo Yabo Kuthi* (Makhanda, June). In addition, Makandula delivered a paper at *Zizimase: Sonic Aesthesis* (Cape Town, October 2024) and presented a solo exhibition, *Izwekufa: Ode To Richard Madela* and performance piece in Kimberley (December 2024).

Robyn Munnick created a body of work titled *Transpose* in response to her selection for the Nando's Creative Exchange, which was exhibited in Gqeberha (December 2023 - January 2024) and Cape Town (February – April 2024). Selected works were then shown at the Rand Merchant Bank Latitudes Art Fair and at the Nando's Central Kitchen (Johannesburg, May 2024). Munnick also presented a paper on her teaching pedagogy at the Rhodes University *Teaching and Learning Showcase* (November 2024).

Stephen Ọlárànmí participated in the *Arts Council of the African Studies Association (ACASA)* conference (Chicago, August 2024), delivering a paper titled 'Interventions and Resistances: Shifting Pole, Shifting Role: Politics and Protests in the Performances of Jelili Atiku'.

Ruth Simbao continues to be a PI and collaborator in the Africa Multiple Cluster of Excellence. As part of this cluster research, she participated in a book project on Africa-Asian engagement, and travelled to Lusaka, Zambia, to complete the filming for her feature documentary on the TAZARA memorial park.



SABC News crew interviewing exhibition curator Robyn Munnick. Photo: Department of Fine Art

Lastly, a notable research achievement for the Fine Art Department is that several creative outputs produced by Fine Art staff members received accreditation from the Department of Higher Education and Training (DHET) in 2024, including outputs by Maureen de Jager, Christine Dixie, and Rat Western. As per the DHET *Creative Research Outputs and Innovations Report 2024*, the artworks /exhibitions by Fine Art Staff that were accredited include:

- **De Jager, M.** DHET subsidy earning Creative Research Output. *MARGINALIA.* Units Awarded: 2.
- **Dixie, C.** DHET subsidy earning Creative Research Output. *The Matrices.* Units Awarded: 1.
- **Dixie, C.** DHET subsidy earning Creative Research Output. *Blueprint for the DisOrder of Things/The Astronomer, the Princess and the Order of Things.* Units Awarded: 2.
- **Western, R.** DHET subsidy earning Creative Research Output. *Refrain (in perpetuity).* Units Awarded: 1.

Department of Fine Art Publications

Books/Chapters/Monographs

De Jager, M.S.
De Jager, M.S. (2024) Lost Luggage. In: Borgen, M., Lund, J., Slager, H. and Van der Tuin, I. (eds.). *Challenging Institutionalization*. United Kingdom (London): Sternberg Press. p.37-42. ISBN: 9781915609625.

Khoza, M.
Khoza, M. (2024) Multi-modes of Erasure: An Analysis of the Art History and Visual Art Curriculum. In: Macari, K. (ed.). *Cultural Awareness in Teaching Art and Design*. London: Routledge. p.1-15. ISBN: 9781032616612.

Muvhuti, B.T.
Muvhuti, B.T. (2024) *Chronicles of the Road: Five nations, Five artists*. Doha: Hamad Bin Khalifa. University Press. ISBN: 9789927170645.

Simbao, R.
Simbao, R. (2024) Moving Graves, Rousing Spirits: Shades of Heritage and Creative Resistance at the Chinese Memorial Park in Zambia. In: Chang, Y. and Fendler, U. (eds.). *Africa-Asia: Multifaceted Engagement in the Contemporary World*. Singapore: Springer. p.163-202. ISBN: 978981 9706969.

Simbao, R. (2024) Radical Intimacies: Anti-Monumental Storytelling in the Art of Gladys Kalichini. In: Esquivel, I., Haloba, A. and Berger, G. (eds.). *Voicing Out Silences*. Oslo: Office for Contemporary Art Norway. p.21-39. ISBN: 978826936 4804.

Stanley-Niaah, S.N.
Stanley-Niaah, S.N. (2024) The Sound of Citizenship: Performance, Politics, Transgression. In: Stanley Niaah, S. and Papoutsaki, E. (eds.). *Island Cultures and Festivals: A Creative Ecosystem*. Jamaica: The University of the West Indies Press. p.174-201. ISBN: 9789766409678.

Stanley-Niaah, S.N. (ed.) (2024) *Island Cultures and Festivals: A Creative Ecosystem*. Jamaica: The University of the West Indies Press. ISBN: 9789766409678.

Concerts, Exhibitions, Performances, Workshops, Events

Bouwer, N.A.
Bouwer, N.A. Exhibiting artist - MFA Exhibition. *It's not gonna be lekker: a visual representation of Real-life Tattoo narratives*. 1820 Settler's Monument, Makhanda. South Africa. 29 November 2024.

Dantas, N.I.
Dantas, N.I. Curator. Stirring the Pot. *Summer exhibition - Casa da Cultura de Comporta*. Casa da Cultura de Comporta, Comporta. Portugal. 13 July - 31 August 2024.

De Jager, M.S.
De Jager, M.S. Exhibiting artist - group exhibition. Erode: Erase (Inertia this dead-weight of too many winters); Suitcases (Alphabet, Plane, Shame); MARGINALIA. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

De Jager, M.S. Co-curator. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

De Jager, M.S. Presenter. Unsettling the Angel: a critical-creative re-reading of a Makhanda memorial. *Continuing the conversation (colloquium)*. Fine Art Department, Rhodes University, Makhanda. South Africa. 26 September 2024.

The Abyssal Zone, solo exhibition by Christine Dixie.
Photo: Mark Wessels





In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department, curated by Dominic Thorburn, Maureen de Jager, and Robyn Munnick. Photo: Department of Fine Art

Dixie, C.

Dixie, C. Exhibiting artist - solo exhibition. *Trade-Off*. Gallery of the SARChi chair in SA Art and Visual Culture. Johannesburg. South Africa. 22 August - 20 September 2024.

Dixie, C. Exhibiting artist - solo exhibition. *The Abyssal Zone*. Gallery in the Round, 1820 Settlers Monument, Makhanda. South Africa. 20 - 30 June 2024.

Dixie, C. Exhibiting artist - solo exhibition. *The Binding Project*. 54 The Valley Rd, Johannesburg. South Africa. 13 - 20 April 2024.

Dixie, C. Exhibiting artist - group exhibition. Springbok Landscape -I-V. *land/lines*. Atherstone Gallery, 1820 Settler Monument, Makhanda. South Africa. 20 - 30 June 2024.

Dixie, C. Exhibiting artist - group exhibition. Albany Gold I and II. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Dixie, C. Exhibiting artist - solo exhibition. *Blueprint for the DisOrder of Things*. Gallery of the University of Stellenbosch, Stellenbosch. South Africa. 23 September - 6 October 2024.

Dixie, C. Exhibiting artist - group exhibition. That One Day. *Resilience and Reflection: Celebrating 30 Years of Democracy*. Apartheid Museum, Johannesburg. South Africa. 18 April - 31 December 2024.

Dixie, C. Artist led Workshop. *Transform a Found Book into an Original Artwork*. Gallery of the University of Stellenbosch, Stellenbosch. South Africa. 25 - 26 September 2024.

Dixie, C. Exhibiting artist - group exhibition. Home. *re/connect/ing*. University of Johannesburg Art Gallery, Johannesburg. South Africa. 28 September 2024 - 9 January 2025.

Folaranmi, S.

Folaranmi, S. Exhibiting artist – group exhibition. In this Place. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Folaranmi, S.A. Presenter. Places, History and Recollection: Rhodes Art School. *Continuing the conversation (colloquium)*. Art School Gallery, Rhodes University, Makhanda. South Africa. 26 September 2024.

Linders, R.C.T.

Linders, R.C.T. Exhibiting artist - PhD Exhibition. *Heart! 2.0*. 1820 Settlers Monument, Makhanda. South Africa. 21 November 2024.

Makandula, S.N.

Njovane, T. and **Makandula, S.N.** Respondent. Book Launch. *Hugo Canham's Riotous Deathscapes*. Rhodes University, Makhanda. South Africa. 25 April 2024.

Makandula, S. Dramaturge. *Izandi Zemilambo Yabo Kuthi*, National Arts Festival, Makhanda. South Africa 20 - 30 June 2024.

Makandula, S.N. Exhibiting artist - group exhibition. Mzilikazi I, II; A trial for my country. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Makandula, S. Presenter. Imifanekiso: Ukwakha umkhanya. *Photography Practice and Visual Journalism Workshop*. Market Photo Workshop. Johannesburg. South Africa. 21 – 26 August 2024.

Makandula, S. Presenter. Mzilikazi Washiya Abantwana Emazweni. *Continuing the conversation (colloquium)*. Fine Art Department, Rhodes University, Makhanda. South Africa. 26 September 2024.

Makandula, S. Exhibiting artist - solo exhibition. *Izwekufa: Ode To Richard Madela.* Duggan Cronin Gallery, Kimberley. South Africa. 5 December 2024.

Makandula, S. Performance artist – group exhibition, Reclaiming Space. *Inhlambuluko.* Kimberley. South Africa. 4 December 2024.

Munnick, R.T.
Munnick, R.T. Exhibiting artist - group exhibition. Take off in Turquoise & Windy July. *Same size, same price, no signature*. Art on Target, Gqeberha. South Africa. 7 - 22 August 2024.

Munnick, R.T. Exhibiting artist - group exhibition. Untitled 1. Creative Block. *Spier Arts Trust Creative Block*. GFI Art Gallery, Gqeberha. South Africa. 5 December - 28 January 2024.

Munnick, R.T. Exhibiting artist - group exhibition. Limitation of light and To a distance. *Nando's Creative Exchange*. Nando's Central Kitchen Garden, Johannesburg. South Africa. 26 May 2024.

Munnick, R.T. Exhibiting artist - group exhibition. From here and From there - Nando's Creative Exchange. *RMB Latitudes Art Fair 2024*. Shepstone Gardens, Johannesburg. South Africa. 22 - 26 May 2024.

Munnick, R.T. Exhibiting artist - group exhibition. 131km, Monday morning, Limitation of light, Water off day, To a distance, From there and From here. *Nando's Creative Exchange*. Union House, Cape Town. South Africa. 14 February - 15 April 2024.

Munnick, R.T. Presenter. The Manipulation of Painting: pushing the boundaries between material, surface and application. *Continuing the conversation (colloquium)*. Art School Gallery, Rhodes University, Makhanda. South Africa. 26 September 2024.

Munnick, R.T. Co-curator. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Munnick, R.T. Exhibiting artist - group exhibition. Doesn't it seem much warmer? *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Phaliso, P.V.
Phaliso, P.V. Exhibiting artist - MFA Exhibition. *Ixhala Lika Nongayindoda*. 1820 Settlers Monument, Makhanda. South Africa. 1 March 2024.

Thorburn, D.
Thorburn, D. Exhibiting artist - group exhibition. Sunday afternoon thoughts of Monet and Magnus; Carbon Black & Old Brown; Fairyland Lost (from District Six 50th Commemoration Portfolio). *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Thorburn, D. Co-curator. *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Thorburn, D. Presenter. Pressing Matters. *Continuing the conversation (colloquium)*. Fine Art Department, Rhodes University, Makhanda. South Africa. 26 September 2024.

Western, R.
Western, R. Exhibiting artist - group exhibition. Refrain (in perpetuity). *In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department*. Art School Gallery, Rhodes University, Makhanda. South Africa. 10 June - 11 October 2024.

Western, R. Presenter. Refrain (in perpetuity): Popular Culture and Collective Memory. *Continuing the conversation (colloquium)*. Art School Gallery, Rhodes University, Makhanda. South Africa. 26 September 2024.

International Visits

De Jager, M.S.
De Jager, M.S. ArtHub Copenhagen, Copenhagen, South Africa. *Participant in a specialist course on 'Supervising Artistic and Practice-based Research - Publishing for Urgency'*. 19 - 22 August 2024.

Simbao, R.
Simbao, R. St. Helena Archives and the St. Helena Research Institute, Jamestown, St. Helena Island. *Research and filming for the experimental film, A Burnt Orange Skirt and a Silver Tray*. 10 - 24 August 2024.

Simbao, R. Africa Institute, Sharjah, United Arab Emirates. *Research and planning for forthcoming book, Our Modern: Art of the African World co-edited with Smooth Nzewi and Salah Hassan.* 2 - 8 March 2024.

Simbao, R. The TAZARA Memorial Park and Museum, Chongwe District (Lusaka Province), Zambia. *Research and filming for Tulelosha: The TAZARA Memorial in Zambia*. 8 - 22 May 2024.



In conversation: Four decades of artworks by current and former staff of the Rhodes University Fine Art Department, curated by Dominic Thorburn, Maureen de Jager, and Robyn Munnick. Photo: Department of Fine Art



Ruth Simbao, St. Helena Island film still, 2024. Photo: Department of Fine Art

Peer Reviewed Subsidy-Earning Journal Research Publications

Cheng, Y.
Cheng, Y. 2(024). "Arrest the dance!": Rethinking Tejumola Olaniyan's "Postcolonial Antinomy" and the Politics of Art Activism. *Journal of the African Literature Association*. 18 (2), p.257 -276

Folaranmi, S.A.
Folaranmi, S.A. (2024) That the House May Stand Again Veranda Posts in Oyo Palace. *African Arts*. 57 (1). p.46-63.

Folaranmi, S.A. (2024) You Cannot See It: Navigating Yorùbá Religious Artistic Materials.*The Art Bulletin* 13 (1). p.73–91.

Ogunjimi, I.T.
Ogunjimi, I.T. (2024) Public Art Forms as Image and Cultural Identity of Indigenous Towns in the Oke-Ogun Region of Oyo State, Nigeria. *African Arts*. 57 (4). p.28-43.

Simbao, R.
Simbao, R. (2024) A Trickser Also Known as Jozi. *Safundi*. 25 (4). p.1-7.

Titus, O.S.
Titus, O.S. 2024. Nature Representation in Innocent Idibia's Song 'You are my African Queen'. *West African Theatre and Performing Arts Journal*. 3 (2024). p.73-87.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

De Jager, M.S.
De Jager, M.S. Unsettling the Angel: a critical-creative re-reading of a Makhanda memorial. *UNSETTLED: re-Collective Memories and Histories of South Africa (37th Conference of the South African Visual Art Historians Association)*. Bird Street Gallery, Gqeberha. South Africa. September 2024.

Folaranmi, S.A.
Folaranmi, S.A. Interventions and Resistances: Shifting pole, shifting role: politics and protests in the performances of Jelili Atiku. *Arts Council of the African Studies Association (ACASA)*. Chicago University (online), Chicago. USA. August 2024.

Grobbelaar, B.
Grobbelaar, B. Spaces of Appearance: Diasporic Crossroads in the Politics of Aesthetics on the Rand. *Mapping Contemporary Asia-Africa in a Changing World-System*. Centre for Asian Studies in Africa, University of Pretoria, Pretoria. South Africa. August 2024.

Grobbelaar, B. Collecting Semi-Colonial Chinese Border Aesthetics: Uncovering Authorship through the Lens of Chinese Immigrant Collectors in South Africa. *Yale University symposium, Africa-China: Cultural Dimensions*. Eduardo Mondlane University, Maputo. Mozambique. March 2024.

Grobbelaar, B. The Politics of Chinese Aesthetics on the Rand. *ASCA Workshop: Resistance, Refusal, Fugivity*. University of Amsterdam, Amsterdam. Netherlands. June 2024.

Makandula,S.
Makandula,S. Imagining the Ordinary City, Arts, Place Making & Everyday Urban Lives. *Zizimase: Sonic Aesthesis*. University of Cape Town. South Africa. 28-29 October 2024.

Munnick, R.T.
Munnick, R.T. Facilitated Learning in Fine Art, Painting. *Teaching and Learning Showcase: Transformative Pedagogies in Changing Times (Rhodes University)*. Eden Grove, Makhanda. South Africa. November 2024.

Simbao, R.
Simbao, R. Audacious Art Histories: A Collaborative Publishing Model. *Arts Council of the African Studies Association (ACASA)*. Chicago University (online), Chicago. USA. August 2024.

Simbao, R. With My Toes in the Soil: From A Plateau to a Spiritual Atlantica (Keynote Address). *Atlantica Art: Seen from Lagos*. Institute of African and Diaspora Studies, University of Lagos, Lagos. Nigeria. June 2024.

Simbao, R. Can A Camera Pray? Lens-Based Art and Metaphysical Approaches to Land and Place (Invited Plenary Presentation). *Speaking in Tongues: A Critical Gathering on the Occasion of the Seekers, Seers, Soothsayers Exhibition*. Zeitz Museum for Art Africa (MOCAA), Cape Town. South Africa. July 2024.

Simbao, R. Tulelosha: Intimacy and Intervention at the TAZARA Memorial Park in Zambia (Invited Plenary Presentation). *Yale University Council on African Studies symposium, Africa-China: Cultural Dimensions*. Eduardo Mondlane University, Maputo. Mozambique. March 2024.

Simbao, R. Breathing Archives: Releasing the Text of the St. Helena Archives Through Creative Film and Community Collaboration. *St. Helena: A Unique Environment, A Rich Tapestry*. St. Helena Research Institute (online), Jamestown. St. Helena Island. November 2024.

DEPARTMENT OF Geography

Introduction

Geography is a diverse discipline, and this is continually reflected in the research of the Department. Current research activities of the Department include the wild and augmented honeybush industry; land and agrarian reform; human mobility; the social dynamics of small towns; spatial dynamics related to heritage conservation; the impacts of dams on societies and river systems; soil erosion and sediment transfer; wetlands and their importance to society and the natural environment; applications of Geographical Information Systems (GIS) and Remote Sensing; Antarctic geomorphology, applied climatology and pyrogeography.



Dr Sheldon Strydom

Head of Department

Photo: Jackie Grove

The honeybush industry continues to be a focus of studies for staff and research students led by **Dr GK McGregor** who completed her doctoral thesis on the sustainability of the wild honeybush industry in 2024. Masters student **Ms T Makhuza** continued with her honeybush research - a complementary piece of work on the sustainability of the cultivated honeybush industry. Her preliminary findings, that successful cultivation follows a model that is not over-intensive, considers the social well-being of its staff, and works within the natural distribution range of the selected species, was very well received at the South African Honeybush Tea Association AGM. Several Postgraduate Geography students were awarded bursaries to serve as field assistants in the first national resource assessment of *Cyclopia intermedia* and *Cyclopia subternata*. They developed skills in field survey, field mapping and desk-top analysis and gained valuable experience working with staff from the NGO, Living Lands. Students also participated in and provided administrative and logistical support for a non-detriment finding workshop (NDF) for the two honeybush species, which is currently under review by the National Scientific Authority.

Not only is our research academically diverse but is spatially extensive, with projects extended across South African and down to Antarctica, ranging from mountains to small towns. Our research is also conducted with a multitude of local and international collaborators. The Department is extremely proud of our training of Postgraduate students and exposing them to the international research community. All those involved in such interactions have shown that Rhodes University, and the Department of Geography, are conducting research that is internationally relevant and of an international standard.

Postgraduates / Graduations

Gilliam McGregor was awarded her PhD. Her doctoral thesis focused on the sustainability of the wild honeybush industry in 2024. It was a novel piece of work which recorded insights into the effect of harvesting on wild



Cultivated honeybush surveys to measure productivity of plants over time. Photo: Department of Geography

Students participated in and provided administrative and logistical support for a non-detriment finding workshop (NDF) for the two honeybush species, which is currently under review by the National Scientific Authority.

Cyclopia intermedia populations and identified the conditions for sustainable enterprises both economically and in terms of harvester livelihoods.

Distinguished Visitors / International Visits

Kepe, T.

Professor T. Kepe. University of Toronto, spent a large proportion of his sabbatical from the University of Toronto here, whilst conducting research in Pondoland.

Memela, S.

Dr Sinenhlanhla Memela. *Human Geography Seminar Series*, 24 January 2024, hosted by University of Sheffield (Online): Lefebvrian analysis of livestock keeping in Fingo Village, Makhanda (Grahamstown), South Africa.

Seminar presentation, 17-24 November 2024, hosted by Patliputra University, Patna University and University of Dehli, India: Transforming Living Spaces and Cultural Practices.

Significant Research Aligned Events

Dr Sinenhlanhla Memela won third place in a lightning talk session hosted by Geographical Society of Ireland Postgraduate and Early Career Network (GSI PECN) at the IGC in Dublin.

2024: International Geographic Union: $750-Travel Grant to participate in the 35th International Geographical Congress in Dublin, Ireland.

Department of Geography Publications

Books/Chapters/Monographs

Memela, S., Irvine, P.M., Padayachee, H., Mokoena, R.A. and Kondile, L.
Memela, S., **Irvine, P.M.**, **Padayachee, H.**, **Mokoena, R.A.** and **Kondile, L.** (2024) Challenges in the Walking Journeys of an African Pedestrian: A Case Study from Makhanda, South Africa. In: Brunn, S.D. (ed.). *Geography of Time, Place, Movement and Networks, Volume 4: Mapping Time Transport Journeys*. Switzerland: Springer Nature Switzerland. p.111-127. ISBN: 9783031580369.

Concerts, Exhibitions, Performances, Workshops, Events

Irvine, P.M.
Irvine, P.M. and **Fourie, W.E.** Organiser. Ex-Scapes Workshop. *Ex-Scapes Workshop*. Rhodes University, Makhanda. South Africa. 8 August 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Bannatyne, L.J., Rowntree, K.M., Foster, I.D.L. and Huchzermeyer, N.H.
Bannatyne, L.J., **Rowntree, K.M.**, **Foster, I.D.L.** and **Huchzermeyer, N.H.** (2024) Confluence-based suspended sediment fingerprinting: an exploratory approach to determining source to sink sediment contributions in the Tsitsa River catchment, Eastern Cape, South Africa. *South African Geographical Journal, The*. 106 (4). p.399-422.

Dlongolo, Z.N., Irvine, P.M. and Memela, S.
Dlongolo, Z.N., **Irvine, P.M.** and **Memela, S.** (2024) Creative Destruction and Built Environment Heritage in Makhanda, South Africa. *Modern Geográfia*. 19 (2). p.47-70.

Ellery, S.G. and Ellery, W.N.
Ellery, S.G., **Ellery, W.N.**, Tsikos, H. and Dunlevey, J. (2024) Depression wetland formation by redox-driven iron and silica cycling. *Wetlands Ecology and Management*. 32 (2024). p.191-206.

Irvine, P.M. and Dlongolo, Z.N.
Irvine, P.M. and **Dlongolo, Z.N.** (2024) (Late) nt? Exploring the latent potential for participatory heritage conservation in Makhanda, South Africa. *Habitat International*. 149 (103107). p.1-8.

Irvine, P.M., Memela, S. and Kondile, L.
Irvine, P.M., **Memela, S.** and **Kondile, L.** (2024) Stray urbanism: stray donkeys and place-identity in Makhanda, South Africa. *GeoJournal*. 89 (139). p.1-12.

Kepe, T.
Ibrahim, A.S., Kuuire, V. and **Kepe, T.** (2024) On mapping urban community resilience: Land use vulnerability, coping and adaptive strategies in Ghana. *Environmental Management*. 370 (2024). p.1-17.

Kepe, T. (2024) Memorials and shifting meanings of rural revolts in South Africa: the Mpondo rural revolts and insurgent scholarship. *Review of African Political Economy*. 51 (180). p.274-289.

Montgomery, R.A., Kabra, A., **Kepe, T.**, Garnett, S.T. and Merino, R. (2024) Recentring social justice in conservation science: Progressive policies, methods, and practices. *Biological Conservation*. 294 (2024). p.1-5.

Kepe, T. and Mnwana, S.C.
Manona, S.S., **Kepe, T.**, **Mnwana, S.C.** and Forslund, D. (2024) Unsustainability Entanglements in the Planning of the N2 Wild Coast Highway Project, South Africa. *Transformation*. 113 (2024). p.5-30.

Vesleskarvet study site in Western Dronning Maud Land, Antarctica. Photo: Department of Geography





Donkeys as identity and place-making in Makhanda. Photo: Chris Marais

Lemahieu, A.
Strand, M., Albany, Y., Buthelezi, M.N.L., Hambaze, N., **Lemahieu, A.**, Magwaza, F.M., Rivers, N., Swartbooi, T.T.B., van Vught, H. and Snow, B. (2024) Reflecting on arts-based participatory research: considerations for more equitable transdisciplinary collaborations. *Ecology and Society*. 29 (4). p.1-19.

Memela, S. and Ndude, M.A.
Memela, S. and **Ndude, M.A.** (2024) Utilisation of rondavel space by amaXhosa people: a case of Mbhashe local municipality, Eastern Cape Province, South Africa. *Humanities and Social Sciences Communications*. 11 (1122). p.1-9.

Strydom, S.
Strydom, S. and Savage, M. (2024) Modification of the microclimate and fire danger by Berg winds in the midlands of KwaZulu-Natal. *South African Geographical Journal, The*. 2024 (1). p.1-18.

Matimolane, S., **Strydom, S.**, Mathivha, F.I. and Chikoore, H. (2024) Evaluating the spatiotemporal patterns of drought characteristics in a semi? Arid region of Limpopo Province, South Africa. *Environmental Monitoring and Assessment*. 196 (2024). p.1-11.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Irvine, P.M. and Dlongolo, Z.N.
Irvine, P.M. and **Dlongolo, Z.N.** Creative Destruction and the Reinvention of Heritage Spaces: the creative class, third places and the prisons of Makhanda, South Africa. *Society of South African Geographers (SSAG) Conference*. North-west University, Potchefstroom. South Africa. September 2024.

Irvine, P.M. and Memela, S.
Irvine, P.M. and **Memela, S.** Rose-tinted spectacles: perspectives on garden festivals, place identity and political ecology in Raymond Mahlaba Local Municipality. *Society of South African Geographers (SSAG) Biennial Conference*. Northwest University, Potchefstroom. South Africa. September 2024.

Meiklejohn, I and Foxon, N.
Meiklejohn, I., Hansen, C. and **Foxon, N.** 2024. Permafrost and Active Layer Monitoring in the Ahlmannryggen and Jutulsessen regions of Western Dronning Maud Land. *SCAR XI Open Science Conference*. 19-23 August 2024, Pucón, Chile. Abstracts Volume: ISBN 978-0-948277-69-6.

Meiklejohn, I and Lemahieu, A.
Meiklejohn, I. Kotzé, C., Correa, F. and **Lemahieu, A.** 2024. Characterising Von Kármán Vortex Streets over the Sub-Antarctic Prince Edward Islands. *SCAR XI Open Science Conference*. 19-23 August 2024, Pucón, Chile. Abstracts Volume: ISBN 978-0-948277-69-6.

Memela, S.
Memela, S. Lefebvrian analysis of livestock keeping in Fingo Village, Makhanda (Grahamstown), South Africa. *35th International Geographical Congress 24th-30th August 2024 in Dublin, Ireland*. Dublin, Dublin. Ireland. August 2024.

Commissioned Reports and Non-Peer Reviewed Publications

McGregor, G.K.
McGregor, G.K. (2024). *Aspects of the sustainability of the wild honeybush industry*. PhD Dissertation, Rhodes University, Makhanda. https://doi.org/10.21504/10962/464266.

McGregor, G.K., Kraaij, T., Sephton, M. (2024). *Resource assessment for Cyclopia intermedia (Honeybush Bergtee)*. Unpublished report commissioned by the Department of Forestry, Fisheries and the Environment (DFFE) and the South African National Biodiversity Institute (SANBI) for UNDP/GEF6 Project 5686. (Not yet available online).

McGregor, G.K., Kraaij, T., Sephton, M. (2024). *Resource assessment for Cyclopia subternata (Honeybush Vleitee).* Unpublished report commissioned by the Department of Forestry, Fisheries and the Environment (DFFE) and the South African National Biodiversity Institute (SANBI) for UNDP/GEF6 Project 5686. (Not yet available online).

McGregor, G.K. (2024). *Honeybush Industry Statistics 2023-2024*. 2. SAHTA. https://sahta.co.za/industry/facts-statistics/

DEPARTMENT OF Geology

Introduction

The Department of Geology in 2024 consisted of three (3) full time academic staff members and one (1) part-time nGAP lecturer, four (4) research associates, and two (2) vacant posts. In spite of these staffing challenges, the Department published nine (9) subsidy-earning research articles, fourteen (14) conference abstracts, one (1) book chapter, and eighteen (18) creative outputs.



Professor Stephen (Steve) Prevec
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

The Geology Department graduated four (4) Msc students, three (3) Honours students, and fourteen (14) BSc students in 2024.

Distinguished Visitors / International Visits

The Department hosted visits of several noteworthy international colleagues, including Professor Per Ahlberg of the University of Uppsala (Sweden) and Professor Kate Trinajstic (Curtin University (Australia) and an Honorary Research Associate of Rhodes Geology) who came to conduct research with Dr Rob Gess, and in the latter case also with Mr Ryan Nel, whose PhD she is co-supervising with Rob Gess. Dr Eugene Grosch hosted Professor Hong-Kun Dai in the field for a research visit in the Barberton greenstone belt, Mpumalanga. Professor Hong-Kun Dai is from the State Key Laboratory of Geological Processes and Mineral Resources, School of Earth Sciences, China University of Geosciences, Wuhan, China. It marked the beginning of a new international collaboration. In addition, Mr Sojen Joy of Anglo American (South Africa) and



The 2024 Geology Honours class visit The Big Hole (background) in Kimberley, at the Kimberley Mining Museum. This was the site of the discovery that diamonds actually came from volcanic rocks deep inside the Earth, subsequently known as kimberlites.
Photo: Department of Geology

Professor Wolf Maier (Cardiff University, UK) visited the Department for research collaborations with and sample and/or data collection facilitated by Professor Steve Prevec.

In terms of exporting our expertise abroad, **Professor Harmer** visited Professor Reiner Klemd (Professor für Geochemie und Lagerstättenkunde) at the GeoZentrum Nordbayern, Universitaet Erlangen-Nuernberg, Erlangen, Germany, care of a Visiting Professor Grant. **Professor Prevec** visited Dr Greg Shellnutt and his research group at the Taiwan Normal University, Taipei (Taiwan), for research and journal editorial collaboration. Professor Prevec presented two (2) public lectures during his visit, on the geology and research pertaining to the Bushveld Complex (South Africa) and on that of Sudbury (Canada). Ryan Nel visited the lab of Professor Kate Trinajstic in Curtin University, Perth, Australia.

Significant Research Aligned Events

Professional societies

Dr Grosch was nominated and elected as a South African Committee Member to the International Union of Geological Sciences (IUGS). **Professor Steffen Büttner** began his first full year as the President of the Igneous and Metamorphic Studies Group (IMSG), a national research-oriented organisation associated with an annual national research conference founded in 2008. This year commenced with the annual meeting of the IMSG in January 2024 held at Oribi, KwaZulu-Natal, and included presentations from various members of the Department including staff and Postgraduate students.

Journal contributions

Professor Prevec continued to serve as co-editor (one of two) of the international research journal *The Canadian Journal Of Mineralogy & Petrology (CJMP)*. In addition, he continued to edit and produce the quarterly magazine of the *Mineralogical Society of South Africa (Minsa)*, and contributed regularly to the international magazine of the Geochemical Society, *Elements*, on behalf of the Mineralogical Association of Canada.

Dr McLoughlin was appointed co-Editor in chief of the international journal *Precambrian Research*, and became a member of the International Subcommision on Precryogenian Stratigraphy. Dr Grosch continued his Associate Editorial services on behalf of the international journal *LITHOSPHERE*.

Professional Conferences

Dr Grosch participated in the European Geosciences Union (EGU) conference in Vienna, Austria, where he presented the abstract: 'Paleoarchean volcanic stratigraphy and geochemistry of the mafic-ultramafic Kromberg Formation type-section, Barberton greenstone belt, South Africa.'

Dr Gess attended the 17th International Symposium on Early and Lower Vertebrates (ISELV) in Canada, which was accompanied by the opportunity to visit major collections and fossil localities in eastern Canada, including the Miguasha lagerstätte (Québec) and the Joggins cliffs (Nova Scotia).

Dr McLoughlin attended the European Geophysical Union annual meeting in Vienna and presented on work involving a Rhodes Honours student investigating modern stromatolites from Skoenmakerskop near Gqeberha.

Professor Prevec served on the organising committee of the Geological Society of South Africa's "100 years of the Merensky Reef" commemorative conference held in August 2024, honouring the discovery of the world's richest platinum metal deposits in South Africa since 1924.

New research initiatives and collaborations

Dr Grosch was awarded a prestigious NRF Support for Rated Researcher Grant (first year) and continued with his 3-year NRF 'Support for Rated Researchers Grant' awarded in 2023 on research in the Barberton greenstone belt.

Department of Geology Publications

Books/Chapters/Monographs

Mavuso, S.S.
Mavuso, S.S., Naidoo, N., Warren, K. and Hunter, L. (2024) Chapter 9: Hominins. In: Shook, B., Nelson, K., Aguilera, K. and Braff, L. (eds.). *Explorations: An Open Invitation to Biological Anthropology*. Arlington, VA: American Anthropological Association. p.1-46. ISBN: 9781931303811.

Creative Writing

Prevec, S.A.
Prevec, S.A. (2024) Elements (magazine of the Geochemical Society). In: Chakraborty, S. (ed.). *Mineralogical Association of Canada page*. USA: Geochemical Society.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Editor's column*. 3rd Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Elements (magazine of the Geochemical Society). In: Chakraborty, S. (ed.). *Mineralogical Association of Canada page*. 4th Ed. USA: Geochemical Society.

Prevec, S.A. (2024) Elements (magazine of the Geochemical Society). In: Sisson, T. (ed.). *Mineralogical Association of Canada page*. 5th Ed. USA: Geochemical Society.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Crossword: lithium minerals*. 2nd Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Crossword: phosphate minerals*. 3rd Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Crossword: REE minerals*. 4th Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Book review: The Mountain Mystery, by Ron Miksha*. 4th Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Rock art (an update)*. 4th Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Editor's column*. 4th Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South African quarterly magazine. In: Prevec, S.A. (ed.). *Editor's column*. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: Prevec, S.A. (ed.). *Minsa goes to the IMSG*. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Great moments in Geology: Pacific Rim Uprising*. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Crossword: pseudomorphic minerals*. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Elements (magazine of the Geochemical Society). In: Blichert-Toft, J. (ed.). *Mineralogical Association of Canada page*. 3rd Ed. USA: Geochemical Society.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Editor's column*. 2nd Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Mineralogical Society of South Africa quarterly magazine. In: *Great moments in Geology: Lapland on Netflix (Sisu, Avgundren (The Abyss))*. 2nd Ed. Johannesburg, R.S.A.: Mineralogical Society of South Africa.

Prevec, S.A. (2024) Elements (quarterly magazine of the Geochemical Society). In: Blichert-Toft, J. (ed.). *Mineralogical Association of Canada page*. 6th Ed. USA: Geochemical Society.



The 2024 Geology Honours classes of Rhodes and UCT, visiting an addit (a lateral tunnel) associated with an old gold discovery in the Witwatersrand Basin, host to the world's richest gold deposits. Photo: Department of Geology

Distinguished Visitors

Ahlberg, P.
P Ahlberg. University of Uppsala, Uppsala, Sweden. *Research collaboration with Dr Gess, public presentation.* September 2024.

Trinajstic, K.
K. Trinajstic. Curtin University, Australia, Perth, Australia. *Research collaboration with Dr Gess and Mr R. Nel*. March 2024.

Joy, S.
Mr S Joy. Anglo American, Johannesburg, RSA. *Research; visited Professor. Prevec, Emeritus. Professor. Marsh*. October 2024.

Maier, W.D.
WD Maier. Cardiff University, UK, Cardiff, U.K. *Research collaboration, sample collection; visited Professor Prevec*. August 2024.



Geology Honours students with Dr Eugene Grosch mapping coastal outcrops of Cape Granite, Western Cape Province. Photo: Department of Geology

International Visits

Harmer, R.E.
Harmer, R.E. GeoZentrum Nordbayern, Universitaet Erlangen-Nuernberg, Erlangen, Germany. *Research visit: Emeritus Professor Harmer visited Professor Reiner Klemd (Professor für Geochemie und Lagerstättenkunde), care of a Visiting Professor Grant.* 15 October - 15 November 2024.

Prevec, S.A.
Prevec, S.A. Taiwan Normal University, Taipei, Taiwan / China. *Research exchange (Dr G Shellnutt & group, with Professor S Prevec)*. 26 October - 10 November 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Chakraborty, T. and Büttner, S.H.
Chakraborty T., and **Büttner S.H.** Costin G and Kankuzi CF (2024) The petrogenesis of highly fractionated gem-bearing pegmatites of Malawi: evidence from mica and tourmaline chemistry and finite step trace element modelling. *Mineralium Deposita*. https://doi.org/10.1007/s00126-023-01236-1.

Gess, R.
Gess, R. and Burrow, C.J. (2024) A new *gyracanthid* (stem Chondrichthyes) from the Late Devonian (Famennian) of the Eastern Cape, South Africa. *Journal of Vertebrate Paleontology*. 43 (4). p.1-12.

Gess, R. and Berry, C. (2024) Archaeopteris trees at high southern latitudes in the late Devonian. *Review of Palaeobotany and Palynology*. 331 (2024). p.1-11.

Marshall, J., Blom, H., Niedzwiedzki, G., Qvarnstrom, M., **Gess, R.**, Whiteside, J. and Ahlberg, P. (2024) The palaeoenvironmental record through a Devonian-Carboniferous boundary super-monsoon lake. *Geologica Balcanica*. 53 (3). p.1-4.

Gess, R. and Reddy, C.P.
Gess, R. and **Reddy, C.P.** (2024) South Africa's oldest ophiuroid fossils provide rare insights into the origination of the Malvinoxhosan Realm. *South African Journal of Science*. 120 (11/12). p.1-11.

Manona, S.S.
Manona, S.S., **Kepe, T.**, **Mnwana, S.C.** and Forslund, D. (2024) Unsustainability Entanglements in the Planning of the N2 Wild Coast Highway Project, South Africa. *Transformation*. 113 (2024). p.5-30.

Moore, A.E.
Moore, A.E., Helmstaedt, H. and Bamford, M. (2024) The legacy of African kimberlite and diamond research and exploration for the earth sciences. *Journal of African Earth Sciences*. 213 (2024). p.1-31.

Prevec, S.A.
Prevec, S.A. (2024) Preface; thematic issue from the 14th International Platinum Symposium. *The Canadian Journal of Mineralogy and Petrology*. 62 (5). p.655-657.

Scoon, R.N.
Scoon, R.N., Bristow, D.M. and Mitchell, A.A. (2024) Petrogenesis of Discordant Ultramafic Bodies in the Lower Critical Zone at the Winterveld Chromite Mine, Eastern Bushveld Complex, South Africa: Late-Magmatic Intrusions and Dismembering of the LG6 Chromitite. *Economic Geology*. 119 (6). p.1211-1230.

Scoon, R.N., Bristow, D.M., Reichhardt, F.J. and Mitchell, A. (2024) The Petrogenesis of the Lower Critical Zone and Lower Group Chromitites, Eastern Bushveld Complex: Incremental Development of Igneous Layering and Injection of Chromite Slurries. *Economic Geology*. 119 (7). p.1441-1467.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Büttner, S.H. and Chakraborty, T.
Büttner, S.H., **Chakraborty, T.**, Frei, D. and Glodny, J. Geochronology, geochemistry, and melt fractionation of gem bearing Pan-African pegmatites in Malawi. *12th Igneous and Metamorphic Studies Group Conference*. Lake Eland Resort, Port St Johns. South Africa. January 2024.

Büttner, S.H. and Marima, E.
Büttner, S.H., **Marima, E.** and Rocholl, A. The evolution of large ilmenite-hosted melt inclusions: evidence of spinodal and binodal dissociation of kimberlitic carbonated silicate melt. *4th European Mineralogical Conference*. Trinity College, Dublin. Ireland. August 2024.

Büttner, S.H. and Prevec, S.A.
Büttner, S.H. and **Prevec, S.A.** Dynamic constraints of multiple offset dyke injections in the footwall of the Sudbury

impact melt sheet. *12th Igneous and Metamorphic Studies Group Conference*. Lake Eland Resort, Port St Johns. South Africa. January 2024.

Gess, R.
Harris, C., **Gess, R.**, Penn-Clarke, C.R. and Jinnah, Z. A transgressive model for the Waterloo Farm black shale lagerstätte (Late Devonian Period). *22nd Biennial Conference of the Palaeontological Society of Southern Africa*. South African College for Tourism, Graaff-Reinet. RSA. September 2024.

Gess, R. A symmoriid (stem holocephalan) from the Devonian of South Africa offers insight into the origins of post End Devonian Extinction recovery faunas. *22nd Biennial Conference of the Palaeontological Society of Southern Africa*. South African College of Tourism, Graaff-Reinet. South Africa. September 2024.

Luksevics, E., Ahlberg, P.E., Niedzwiedzki, G., Alksnitis, V., **Gess, R.** and Stinkulis, G. Ventastega and a new tetrapod from the Upper Famennian of Latvia. *17th International Symposium on Early and Lower Vertebrates*. University of Quebec at Rimouski, Rimouski & Miguasha, Quebec. Canada. June 2024.

Gess, R. A symmoriid (stem holocephalan) with a Damocles-like spine from the Devonian of South Africa. *17th International Symposium on Early and Lower Vertebrates*. University of Quebec at Rimouski, Rimouski & Miguasha, Quebec. Canada. June 2024.

Grosch, E.G., Ndlela, S. and Mcloughlin, N.
Grosch, E.G., **Ndlela, S.**, Murphy, D., **Mcloughlin, N.**, Trubac, J. and Slama, J. Paleoarchean volcanic stratigraphy and geochemistry of the mafic-ultramafic Kromberg Formation type-section, Barberton greenstone belt, South Africa. *European Geophysical Union*. Vienna Convention Centre, Vienna. Austria. April 2024.

Mcloughlin, N. and Mahlapha, K.E.
Mcloughlin, N. and **Mahlapha, K.E**. Microtextures of modern tufa stromatolites from the peritidal zone near Schoenmakerskop, Eastern Cape, South Africa: investigating the relative contributions of microbes, algae and chemical precipitation to microbialite growth. *European Geophysical Union*. Vienna Convention Centre, Vienna. Austria. April 2024.

Muriungi, N.K. and Büttner, S.H.
Muriungi, N.K., **Büttner, S.H.** and Glodny, J. Geochemistry of tantalum-niobium oxides in the rare-metal pegmatites of Embu, Kenya. *AGU 2024*. Washington, Washington. USA. December 2024.

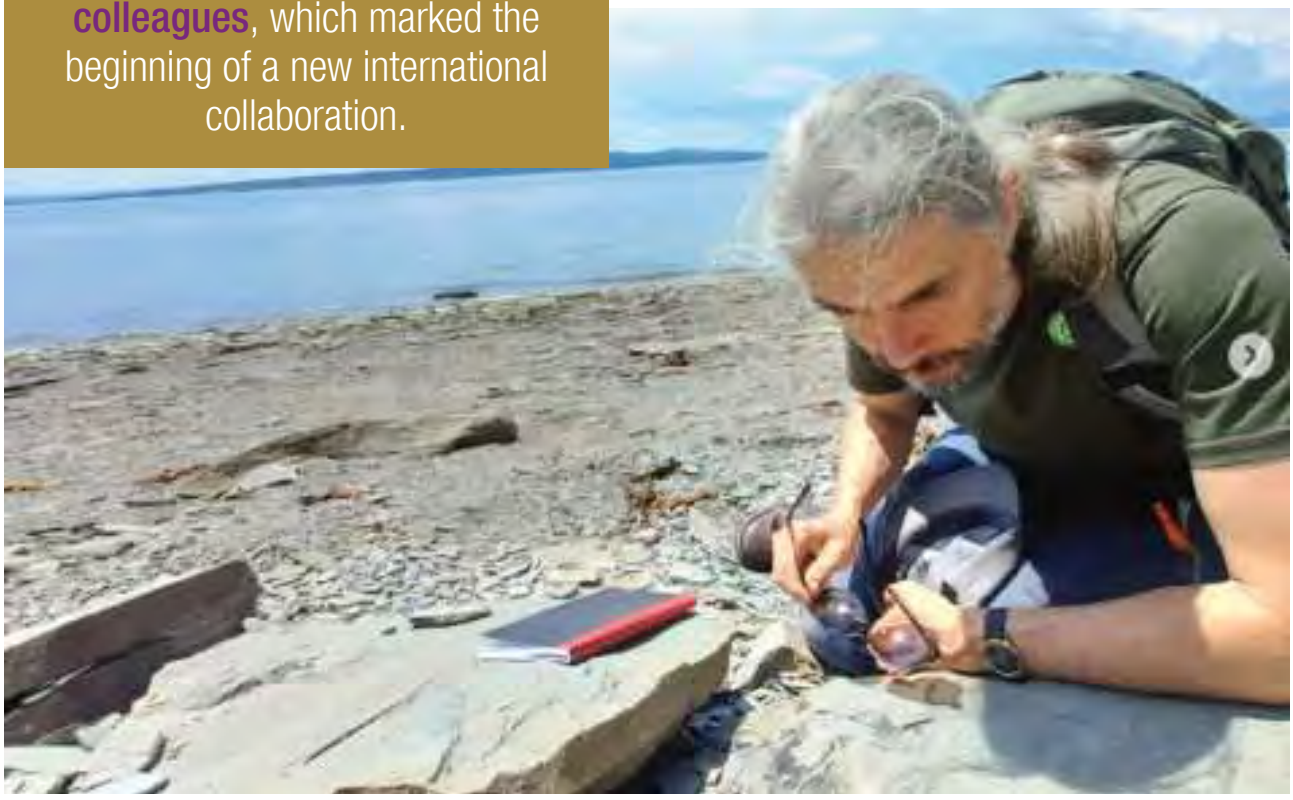
Muriungi, N.K., **Büttner, S.H.**, Glodny, J. and Harder, S. Fluorine and bismuth-bearing accessory minerals indicate magma evolution in rare element pegmatites in Embu County, Kenya. *4th European Mineralogical Conference*. Trinity College, Dublin. Ireland. August 2024.

Muriungi, N.K., **Büttner, S.H.**, Glodny, J. and Harder, S. Geochronology and mineralization of Pan-African gem pegmatites in Kenya. *12th Igneous and Metamorphic Studies Group Conference: IMSG 2024*. Lake Eland Resort, Port St Johns. South Africa. January 2024.

Nel, R., Trinajstic, K. and Gess, R.
Nel, R., **Trinajstic, K.**, Trinajstic, K. and **Gess, R.** New morphological insights on adult and juvenile arthrodire placoderm from the Late Devonian, Famennian deposits of Waterloo Farm. *22nd Biennial Conference of the Palaeontological Society of Southern Africa (PSSA)*. South African College for Tourism, Graaff-Reinet. RSA. September 2024.

Prevec, S.A.
Prevec, S.A. Considerations for the effective graphical presentation of PGE data. *Igneous & Metamorphic Studies Group (IMSG) Annual National Meeting*. Lake Eland Game Reserve, Oribi, KZN. RSA. January 2024.

The Department hosted visits of several **noteworthy international colleagues**, which marked the beginning of a new international collaboration.



Dr Rob Gess examining *Bothriolepis* placoderm fish eroded from the cliffs at the iconic Late Devonian (Frasnian) Miguasha National Park in Quebec.

Photo: Department of Geology

DEPARTMENT OF History

Introduction

The History Department continues to produce research in a range of areas, including biography, the history of the Communist Party of South Africa/South African Communist Party, environmental history, visual and sound history, race and DNA testing, the history of universities in South Africa, mining history and creative history. In addition, members of the Department continue to participate in international and national conferences and workshops.



Photo: Jackie Grove

Dr Janeke Thumbran
Head of Department

Postgraduates / Graduations

The Department graduated two (2) Honours students and two (2) Masters, one with distinction. The Department has also hosted a Postdoctoral Fellow, Dr Tinashe Munyarari.

Significant Research Aligned Events

The History Department seminar series featured presentations from both Postgraduate students and distinguished international scholars. The seminar series continues to be a critical space for workshopping Postgraduate proposals, thesis chapters and conference presentations, as well as book chapters and articles that lead to staff publications.

Dr Thumbran presented at the second iteration of the workshop, “That’s History - 30 Years of SA History Since Apartheid” in June 2024. The paper, “Re-thinking categories of race thirty years after apartheid” will feature in an edited volume with Duke University Press.



History staff and Postgraduate students at Amathole Museum in Qonce.

Back row, left to right: Lavita Nuvunga, Loren Delponte, Ernst Marais, Lwazi Rotya, Nkanyiso Khanyile, Dr Shahid Vawda, and Dr Craig Paterson.

Front, left to right: Dr Stephanie Victor (History Curator, Amathole Museum), Meghan Vetch, Dr Janeke Thumbran, Dr Dominique Santos (Department of Anthropology), and Lari Hallowes.

Photo: Department of History

The Department's seminar series continues to be a **critical space for workshopping Postgraduate proposals**, thesis chapters and conference presentations, as well as book chapters and articles that lead to staff publications.

Dr Thumbran, Dr Madimu, Dr Paterson and Ms Mbinda presented at the biannual Southern African Historical Association Conference in June 2024, along with three (3) MA students from the Department.

In November 2024, staff and Postgraduate students took a trip to the Amathole Museum in Qonce. At the museum, Postgraduate students had an opportunity to engage with a curator on research and/or other career paths in museums.

In 2024 the History Department participated in a workshop on reimagining of Cory Library as a dynamic space of interdisciplinary research. The Department continue to work with Cory Library to expand the use of collections in both under-graduate work and Postgraduate research.

Department of History Publications

Books/Chapters/Monographs

Baines, G.F.
Baines, G.F. (2024) Removing Rhodes from His Pedestal: De-Commemoration in Postcolonial South Africa. In: *De-Commemoration: Removing Statues and Renaming Places*. 12th Ed. New York: Berghahn Books. p.65-72. ISBN: 9781805-391081.

Baines, G.F. (2024) Contested Commemoration and Memorialization of South Africa's Apartheid Wars. In: *The Palgrave Encyclopaedia of Cultural Heritage and Conflict*. Switzerland: Palgrave Macmillan. p.1-11. ISBN: 9783030614935.

Baines, G.F. (2024) Smuts and the Politics of Segregation - The Prosecution of Pass Laws Under the United Party Government. In: *Reappraising the Life and Legacy of Jan C. Smuts*. South Africa: UJ Press. p.247-276. ISBN: 9781776489671.

Concerts, Exhibitions, Performances, Workshops, Events

Thumbran, J.D.
Thumbran, J.D. Presenter. New Archives and Categories: Re-thinking the African Renaissance Thirty Years After Apartheid. *That's History? Thirty Years after the end of Apartheid.* Johannesburg Institute of Advanced Study, Johannesburg. South Africa. 24 - 25 June 2024.

Thumbran, J.D. Presenter. Universities and Archives. *Research Project on the Histories of Universities in South Africa*. Ali Mazrui Centre for Higher Education Studies, University of Johannesburg, Johannesburg. South Africa. 18 - 19 March 2024.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Baines, G.F.
Baines, G.F. (2024) Symbolic Decolonization and Postal Politics: Sovereignty, Secession and the Stamps of Pseudo-States in Sub-Saharan Africa, c.1960-1979. *Monde(s)*. 26 (2). p.113-134.

Peer Reviewed Subsidy-Earning Journal Research Publications

Baines, G.F.
Baines, G.F. (2024) Terry Smyth, Captive Fathers, Captive Children: Legacies of the War in the Far East (Bloomsbury, 2022). *British Journal for Military History*. 10 (2). p.157-159.

Baines, G.F. (2024) The Historiography and Historicity of Mercenaries and Private Military Contractors in Sub-Saharan Africa. *International Journal of Military History and Historiography*. 2024 (2024). p.1-27.

Heshu, M.P.
Hellemann, P.C. and **Heshu, M.P.** (2024) Beyond Re-enactment: exploring the Battle at Egazini with grade 10 history learners using applied theatre. *Yesterday & today*. 32 (1). p.39-75.

Kirkaldy, A.
Kirkaldy, A. (2024) The Berlin Missionary Society in South Africa with particular focus on the Transvaal, 1834?1975. *South African Journal of Cultural History/ Suid-Afrikaanse Tydskrif vir Kultuurgeskiedenis*. 38 (2.2). p.1-20.

Kirkaldy, A. (2024) Not mere assistants- "Conventicles", African intermediaries, "Apostates" and the introduction of Christianity to Vendaland in the late nineteenth century. *South African Journal of Cultural History/ Suid-Afrikaanse Tydskrif vir Kultuurgeskiedenis*. 38 (2.2). p.76-94.

Maylam, P.
Maylam, P. (2024) Writing the history of South African universities: Trends and themes. *South African Journal of Higher Education*. 38 (4). p.190-208.

Paterson, C.J.
Paterson, C.J. (2024) The Lion's Historian: Africa's Animal Past by SANDRA SWART. Johannesburg: Jacana Media, 2023. 376 pp.ISBN 978?1?4314?33957. *South African Historical Journal*. 75 (4). p.1-2.

Thumbran, J.D.
Dlamini, J., Hassim, S., Phillips, L.H., Saunders, C., Simpson, T., **Thumbran, J.D.** and Magaziner, D. (2024) South Africa, 1994 + 30: A Conversation About History After Apartheid. *Journal of African History*. 65 (1). p.4-21.

Wells, J.C.
Wells, J.C. (2024) The Search for Survival. *Bulletin of the National Library of South Africa (Former Quarterly Bulletin of the National Library of South Africa)*. 78 (1). p.33-58.

Wells, J.C. (2024) Using creative history to expose domestic work as 'the last bastion of apartheid'. *Bulletin of the National Library of South Africa (Former Quarterly Bulletin of the National Library of South Africa)*. 78 (2). p.87-104.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Baines, G.F.
Baines, G.F. "The Historiography of Mercenaries and Private Military Contractors in Sub-Saharan Africa". *Military History Colloquium Conference.* Lancaster University, Lancaster. UK. June 2024.

Baines, G.F. "Symbolic decolonization and postal politics: sovereignty, secession and the stamps of pseudo states in sub-Saharan Africa, c.1961-1980". *Universal Postal Union Historians' Colloquium*. Berne, Berne. Switzerland. February 2024.

DEPARTMENT OF

Human Kinetics and Ergonomics (HKE)

Introduction

Human Kinetics and Ergonomics (HKE) presents unique research opportunities across a wide range of topics from human factors and ergonomics to sports science and physical activity. This year we placed a renewed emphasis on our research agenda, with continued strong output from the cricket research group under the leadership of Professor Candice Christie. We were also very excited to welcome Professor Mike Lambert as an Honorary Professor in the Department, where he has already made significant contributions. However, there are two (2) research focus areas that stand out for the year as we highlight below.



Mr Andrew Todd

Head of Department

Photo: Jackie Grove

SleepCHAMPzzzz

The SleepCHAMPzzz study (Sleep and Circadian Health in Adolescents: A Mental-Health Participation Study) is a Wellcome Trust funded project that aims to identify sleep and circadian-related mechanisms through which adolescents (Grade 8 learners specifically) may either develop or demonstrate resilience to depression and anxiety (www.sleepchampzzz.com). The study is longitudinal in nature, running from 2024 through to 2027, with sites in Makhanda, Cape Town and Coventry in the United Kingdom. A crucial part of the project revolves around the involvement of people with a lived experience of living with, teaching or mentoring adolescents with sleep and/or mental health problems. This ensures that the research is performed in collaboration with the local community and that it considers the important contextual and cultural nuances that may impact the research program.

Associate Professor Jonathan Davy is the overall project lead at the Makhanda site, along with **Dr Swantje Wells**. The wider SleepCHAMPzzz research team has representation from the University of Cape Town, Coventry University and the University of the Witwatersrand.

Healthy Active Kids South Africa

The HAKSA 2026 Report Card team comprises a multidisciplinary group of South African researchers, practitioners, and stakeholders dedicated to assessing and promoting physical activity and healthy behaviours among children and adolescents. The team works collaboratively to evaluate and assign evidence-based grades to various health indicators aligned with the global framework set by the Active Healthy Kids Global Alliance (AHKGA).

Principal Investigator / Lead

Candice Christie, Rhodes University – Overall project leadership, coordination with the Active Healthy Kids Global Alliance and strategic oversight.

Core Research Team

Experts in physical activity, health promotion, public health, sports science, epidemiology, and education from universities and research institutions across South Africa (over thirty (30) researchers).

Emerging Scholars and Postgraduate Students

Postgraduate students contributing to data gathering, analysis, and indicator-specific research, referred to as the HAKSA Steering Committee, include PhD candidate **Elrico de Bruyn** and MSc students, **Maria Caporossi**, **Buhle Mgadi** and **Robyn Hendriks** from the HKE department. While Elrico de Bruyn is also a co-lead of a selection of indicators for the report card.

Stakeholders and Partners

Representatives from government departments, NGOs and advocacy groups, schools and community leaders.

International Collaboration

The team aligns its work with the Active Healthy Kids Global Alliance (AHKGA), contributing to global physical activity surveillance and comparisons through the Global Matrix 5.0 in 2026, which includes over 70 countries.

There can be little doubt that HKE continues to lead not just local but national and international research agendas.

Postgraduates / Graduations

HKE continued to have a strong cohort of Postgraduate students in 2024 with a total of thirty-four (34) Postgraduates (seven (7) Honours, twenty (20) MSc and seven (7) PhD students). Considering the small size of the academic staff complement, this is an impressive number of Postgraduate students. We were also proud to have graduated five (5) MSc students across the two graduation ceremonies in 2024.

Distinguished Visitors / International Visits

In May 2024, **Swantje Wells** and **Jonathan Davy** went to Coventry University in the United Kingdom as part of the Wellcome Trust-funded project SleepCHAMPzzz. They spent time with the larger group of researchers and received training on how to use and interpret data from the equipment (such as Polysomnography) that the project has bought for the Department.

This year we placed a **renewed emphasis on our research agenda**, with continued strong output from the cricket research group with an additional two research focus areas that stand out for the year.

In August 2024, Candice Christie was invited to guest lecture at the University of the West Indies in the Department of Sports Medicine in Kingston, Jamaica, where she spent two weeks working with the students in the Department. Candice (together with her PhD candidate Elrico de Bruyn) also represented the Department at the workshops of the International Society for Physical Activity and Health as the new lead of the South African report card on physical activity in children in Paris, France in October 2024.

Andrew Todd spent time in Accra, Ghana, working with the university of Ghana to support the development of Human Factors and Ergonomics education at the university. While both Andrew and Jonathan Davy went to South Korea as members of the International Ergonomics Association Executive committee for both the executive meeting and the council meeting.

Significant Research Aligned Events

A highlight of the year for the HKE Department was hosting the executive council meeting of the International Ergonomics Association (IEA) in March 2024. A total of fourteen (14) academics from ten (10) different countries participated in the two-day meeting. We were also able to collaborate with the Ergonomics Society of South Africa by hosting a one-day symposium on campus leveraging having the IEA executive in town.



Photo: Chris Marais

Department of Human Kinetics and Ergonomics Publications

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Kingwill, K.R., Todd, A. and Davy, J.
Kingwill, K.R., **Todd, A.** and **Davy, J.** (2024) Reflections on an engaged research approach to understanding patient record-keeping systems in a local clinic in Makhanda. *African Journal of Higher Education Community Engagement*. 1 (2). p.1-25.

Peer Reviewed Subsidy-Earning Journal Research Publications

Christie, C.J.
Pote, L., Nicholls, S., Shaw, A., Keenan, J. and **Christie, C.J.** (2024) Physiological and Perceptual Demands During a Simulated The Hundred Batting Work-Bout in Female Cricketers. *Journal of Science in Sport and Exercise*. 1 (1). p.1-7.

Nyawose, Z.Z., Naidoo, R., **Christie, C.J.**, Bassett, S., Coetzee, D., Van Gent, M., Monyeki, A., Gradidge, P., Janse van Rensburg, C., Cozett, C., Young, M., Slemming, W., Morrow, L., Pienaar, A., Krog, S., Walter, C., Kholvadia, A., de Milander, M., Naidoo, N. and Lambert, E.V. (2024) Results From South Africans' 2022 Healthy Active Kids Report Cardon Physical Activity, Body Composition Proxies, and Nutritional Status in Children and Adolescents. *Journal of Physical Activity and Health*. 21 (21). p.861-871.

Pote, L., Nicholls, S., Keenan, J., Cresswell, A., Woodward, J. and **Christie, C.J.** (2024) A Comparison of the Physical Characteristics of Adolescent Female, Academy Cricket Players. *Journal of Science in Sport and Exercise*. 10 (1007). p.1-9.

Christie, C. J., McEwan, K., Munro, C. E., King, G. A., Le Roux, A., Olivier, B., Jackson, B., Manjra, S., MacMillan, C., & Pote, L. (2023). Do South African international cricket pace bowlers have similar bowling volume and injury risk associates compared to other elite fast bowlers? I*nternational Journal of Sports Science & Coaching*. 19(2), 797-804. https://doi.org/10.1177/17479541231174301

Davy, J.D.
Davy, J.D. (2024). Sometimes, we must look at where we have come from to appreciate where we must go. *Ergonomics SA: Journal of the Ergonomics Society of South Africa*. 34(1), 1-1.

Goodenough, L.B. and Wells, S.
Goodenough, L.B. and **Wells, S.** (2024) The effect of submersion in water and breathing modality (assisted breathing versus apnea) on different stages of the information processing chain. *Ergonomics SA*. 34 (1). p.36-49.

Lambert, M.I.
Lombard, W.P. and **Lambert, M.I.** (2024) Physical fitness metrics and their relationship to locomotor activity profiles among female international field hockey players across an Olympic cycle. *Journal of Science and Medicine in Sport*. 27 (2024). p.341-353.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Bennett, C., Davy, J., Wells, S. and Bennett C
Bennett, C., Davy, J., Wells, S. and Bennett C. Characterising Cabin and Cockpit crew Flight and Duty Period (FDP) demands and the prevalence of sleepiness, fatigue, and insomnia in short-haul operations. *22nd Triennial Congress of the International Ergonomics Association.* International Convention Center, Jeju, South Korea. 25-29 August 2024.

Bennett, C.,
Davy, J., Wells, S. and **Bennett C.** Prevalence of fatigue, insomnia, sleep disruptions and physical activity in aviation maintenance staff. *22nd Triennial Congress of the International Ergonomics Association.* International Convention Center, Jeju, South Korea. 25-29 August 2024.

Caporossi Cugildi, M.V. and Christie, C.J.
Caporossi Cugildi, M.V. and **Christie, C.J.** Attitudes and perceptions of school-related physical activity and physical education. *20th Conference of the South African Sports Medicine Association*. Protea Hotel - Marriot, Stellenbosch, Cape Town. South Africa. October 2024.

Christie, C.J.
Christie, C.J. Healthy Active Kids South Africa Report Card 2022. *International Society of Physical Activity and Health*. Le Palaisdes Congres de Paris, Paris. France. October 2024.

De Bruyn, E., Reddy, N. and Christie, C.J.
De Bruyn, E., **Reddy, N.** and **Christie, C.J.** Role of a Multistakeholder School Cricket Programme in Improving Adolescent Public Health in the Eastern Cape. *Rhodes University Community Engagement Conference: Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities*. The Yellowwood Terrace, Grahamstown. South Africa. May 2024.

Du Plessis, A.G.
Du Plessis, A.G. An investigation into the lower back pain attitudes and beliefs of current educators and future ergonomists in South Africa. *22nd Triennial Congress of the International Ergonomics Association.* International Convention Center, Jeju, South Korea. 25-29 August 2024.

Le Grange, S., Todd, A. and Davy, J.D.
Le Grange, S., **Todd, A.** and **Davy, J.D.** Academic or 'zoombie'? Characterizing sleep quality, work and lifestyle behaviours among a cohort of South African academic staff during the covid-19 pandemic. *22nd Triennial Congress of the International Ergonomics Association.* International Convention Center, Jeju, South Korea. 25-29 August 2024.

Skeyi, S., De Bruyn, E., Hendricks, R.N. and Todd, A.
Skeyi, S., **De Bruyn, E.**, **Hendricks, R.N.** and **Todd, A.** Setting Boundaries and Ethical Engagement: Advocating for the community in a multi-stakeholder project. *Rhodes University Community Engagement Conference: Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities*. The Yellowwood Terrace, Grahamstown. South Africa. May 2024.

Todd, A.I.
Todd, A.I. Operating as a nuisance: The role of human factors and ergonomics in informal work and city design. *2nd International meeting on ergonomics and work*. Faculty of work, Universidad de Valle, Cali, Colombia. March 2024.

Todd, A.I. Growing our profession: From physical, cognitive and organisational to systems HFE. *University of Ghana conference on human factors and ergonomics.* University of Ghana, Accra, Ghana. May 2024.

Todd, A.I. Good practice of a pedagogical method for learning systems approach. *22nd Triennial Congress of the International Ergonomics Association.* International Convention Center, Jeju, South Korea. 25-29 August 2024.

DEPARTMENT OF Ichthyology and Fisheries Science

Introduction

The Department of Ichthyology and Fisheries Science (DIFS) focus is on the study of fish, fisheries, aquaculture, and the sustainable utilization of aquatic resources, primarily through research and research-related teaching and training of students in these fields. It is recognised by the African Union as a *Centre of Excellence for Training in Marine Fisheries and Aquaculture*, with an emphasis on biodiversity and ecosystems studies.



Photo: Jackie Grove

Professor Amber Childs
Head of Department

Our vision is to be a globally-recognised academic department of excellence in Ichthyology, Fisheries Science and Aquaculture – advancing knowledge, promoting sustainable aquatic environments, and fostering innovation. We are dedicated to delivering high-quality, inclusive education that empowers future leaders in aquatic science. We strive to lead cutting-edge research and build strong partnerships with industry stakeholders, policy-makers and broader society to drive real-world impact. Our staff of seven (7) academics continued the Department's international reputation through collaborative teaching and research relationships with 30+ universities and research institutions around the world. In addition to the South African Institute of Aquatic Biodiversity (SAIAB), our Postgraduate supervision and research network also include collaborations with several institutions across the African continent and abroad. These include the Department of Forestry, Fisheries and Environment (DFFE), the South African Environmental Observation Network (SAEON), North West Provincial Government, Water Research Commission (WRC), Oceanographic Research Institute (ORI), Makerere University (Uganda), Bahir Dar University (Ethiopia), University of Namibia, Eldoret University (Kenya), Maynooth University (Ireland),

University of Ghent (Belgium), University of Montpellier (France), Center for Environment, Fisheries and Aquaculture Science (CEFAS) (UK), IRD (France), the Alfred Wegener Institute (Germany), Fort Hare University, University of Johannesburg, University of Pretoria, University of Cape Town, Stellenbosch University, Nelson Mandela University and researchers from numerous fish-farming industry partners. The DIFS is committed to producing graduates able to address the increasing challenges facing aquatic ecosystems in a rapidly changing world. Our commitment to society - through our research and graduate programme, we aim to protect biodiversity, promote sustainable resource use and contribute to the resilience of aquatic environments.

Postgraduates / Graduations

We have a thriving Postgraduate school with four (4) Postdoctoral Fellows, thirty (30) PhD, twenty-two (22) MSc and five (5) Honours students registered in the DIFS in 2024. The number of Postgraduate students graduating in 2024 included eight (8) PhD, four (4) MSc and five (5) Honours students. Our large Postgraduate school of 50-60 registered Postgraduates is made possible primarily due to our well-developed network of collaborative partners, especially the NRF South African Institute for Aquatic Biodiversity (SAIAB), as well as our close working relationship with our associate title holders.

Distinguished Visitors / International Visits

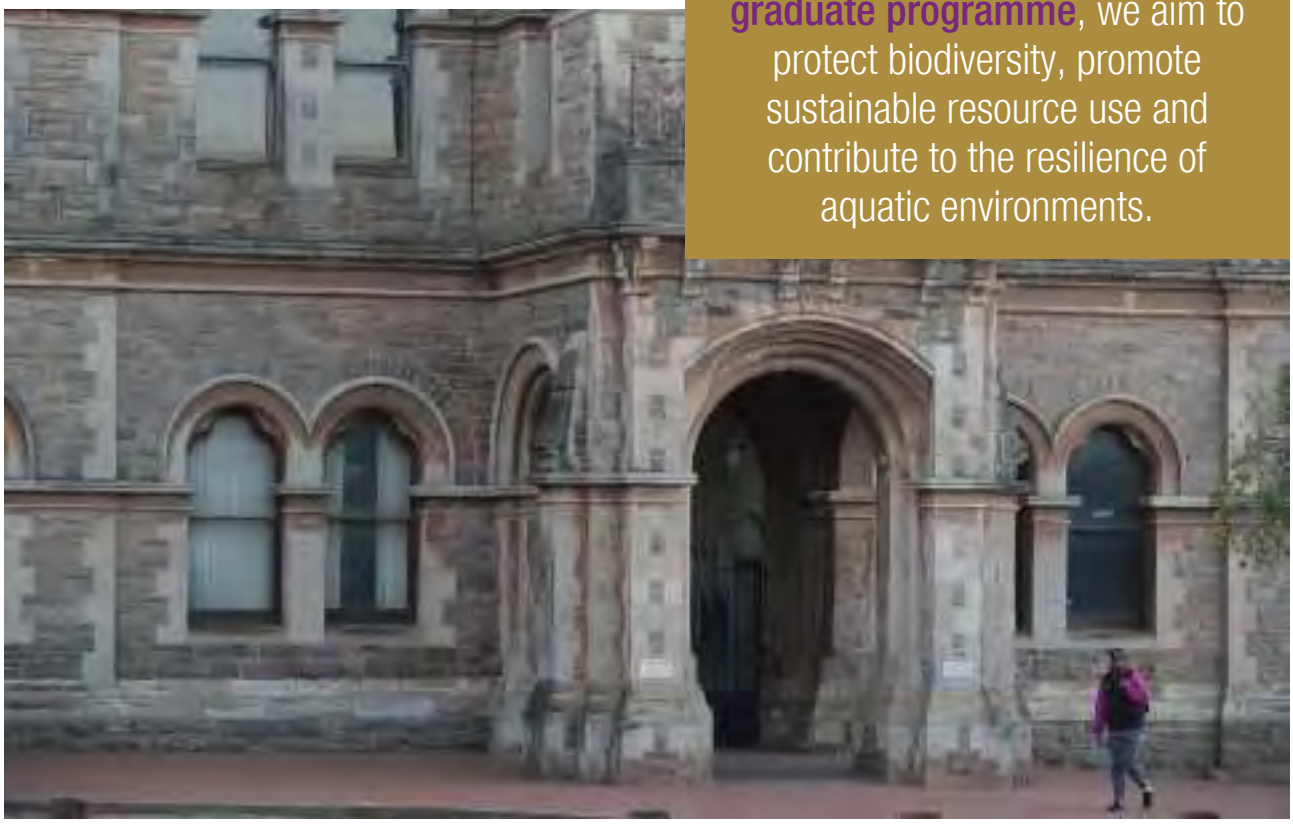
The Department continued to strengthen its international collaborations across the globe, including the United Kingdom, Europe, Germany, Canada, Australia, America, Mauritius, and Seychelles, and solidified its African presence as an African Union Centre of Excellence in Marine Fisheries and Aquaculture, collaborating with numerous countries in Africa, including Eritrea, Kenya and Tanzania.

Professors Jones and Britz represented the DIFS as an *African Union Centre of Excellence in Marine Fisheries and Aquaculture* at various events in 2024, that included visits to Egypt, Morocco, Kenya and Ethiopia, where Professor Britz advised the AU on aspects of fish trade, policy and reform and Professor Jones reported on the activities and contributions that the DIFS has made to aquaculture and fisheries development and education across Africa.

Professor Jones was elected as Vice-Secretary of the Centres of Excellence Network established by the African Union Inter-African Bureau for Animal Resources (AU-IBAR). The network is a governing instrument that fulfils the role of integrating continental capacity to conduct high quality evidence-based research, education and training in aquaculture and fisheries management, and its function is to ensure alignment between the AU-IBAR's fourteen CoE's, their needs, and those of the AU-IBAR.

Dr Melissa Martin from the University of Malaysia joined the DIFS staff as a Hugh Kelly Fellow in 2024. She contributed to teaching and worked closely with **Associate Professor Wilbert Kadye** and colleagues from SAIAB on various aspects of fish taxonomy.

Our commitment to society - through our **research and graduate programme**, we aim to protect biodiversity, promote sustainable resource use and contribute to the resilience of aquatic environments.



Professor Potts attended the World Fisheries Congress, which was held between the 3rd and 7th of March 2024 in Seattle, USA. He also hosted Dr Kieran Hyder (CEFAS) who gave a keynote presentation at the Southern Africa Linefish Symposium, which was organised by the Department in August 2024.

Professor Childs presented her research and was part of the scientific committee of the International Conference on Marine Connectivity in Montpellier, France. This international scientific event was jointly organized by the European COST Action, Unifying approaches to Marine Connectivity for Improved Resource Management for the Seas (SEA-UNICORN), the French CNRS research network Océans et Mers (OMER) and the international network OceanKAN (affiliated to the Marine Life 2030 program) as part of the UN Ocean Decade, and hosted by the Centre for Marine Biodiversity, Exploitation & Conservation (MARBEC).

Significant Research Aligned Events

This year, our staff initiated several new projects, successfully concluded others and continued to advance their ongoing globally relevant and impactful research. In collaboration with their students and research teams, these combined efforts, outlined below, reflect a strong commitment to fundamental and applied science aimed to address the critical challenges facing our aquatic environments.

Professor Sauer has been working on several projects in Africa and the Western Indian Ocean. A suite of papers has been completed on small tuna in the Western Indian Ocean, in collaboration with research colleagues from Kenya, Mozambique and Tanzania, and will be published early in 2025, and an MSc student and PhD candidate graduated in October 2024. A research project on transboundary fisheries management in Zambia was completed and a further PhD candidate graduated in October 2024. Work on the international One Ocean Hub was finalised and reports completed. Research on value chains in the octopus fishery in the Seychelles was completed and a manuscript will be published in 2025. In collaboration with **Professor Britz**, work continued on several projects under the African Union, as part of the activities of the DIFS as an African Union Centre of Excellence; two (2) reports and two (2) Policy Briefs were completed. A new research project was initiated in Rodrigues concentrating on the data management systems and management of the octopus fishery. Working with WWF, a project has commenced to develop a tool to evaluate national blue economy plans against the Sustainable Blue Economy principles, and finally working with FAO, developing a technical report based on a review of impacts of climate change on the Atlantic at the Regional Fisheries body (RFB) and advisory body levels.

Professor Booth continued with his research investigating the movement dynamics of mako sharks in the Atlantic Ocean and the movement dynamics of African penguins off the west coast.

Professor Jones spent much of 2024 wrapping up his two European Union funded projects (i.e., COTRA and AquaViate) with forty-one (41) partners from Africa, South America and Europe, and developing new international partners for the DIFS as part of the Limaqua Project, an IRD/NRF funded initiative to promote collaboration between South African and French researchers in the field of marine aquaculture. He was also elected to serve as Vice Chairman of the *Aquaculture Association of Southern Africa*, and to serve as a member of South African government's *Operation Phakisa's Aquaculture Training and Skills Development Expert Group*. He continued his research projects in collaboration with the South African abalone farming industry and the development of novel, integrated aquaculture/agriculture food production systems in collaboration with Taylor Made Water Solutions and the South African Breweries.

Professor Kaiser continued research and collaboration with DFFE (three (3) projects), the University of Montpellier in France, the Norwegian Sequencing Centre / Part of NorSeq (https://www.norseq.org/) to conduct whole genome genetic sequencing on pipefish genome, and three COTRA students to finalise and publish three (3) papers in 2025.

Professor Potts has continued with his research on recreational fisheries. He was appointed as the Chair for the 11th World Recreational Fisheries Conference that will be held in 2026. He continued his active international collaborations on several recreational fisheries projects including one on catch-and-release mortality, recreational angling license systems, and compliance in recreational fisheries. He is contributing to the recreational fisheries module for an international online course on Global Recreational Fisheries and co-authored a chapter on the Recreational Fisheries for the UN World Ocean Assessment. He also led the development of a Practitioners guide for recreational fisheries managers for the Environmental Défense Fund. This guide has been translated into seven (7) languages and is being used to inform recreational fisheries management practices in several countries, including China, and The Bahamas. His fisheries and climate change research continued with the completion of an NRF-ACEP project on how fisheries-induced evolution reduces the resilience of fishes to adapt to climate change. He and Professor Childs were part of a consortium that were awarded a joint NRF-ANR research project with French colleagues that aims to further our understanding of the effects of exploitation on the physiological resilience of fish populations. His engaged research project with recreational anglers continued. The co-developed competitive angling database is ten years old and the data is rich enough to be used for the stock assessment of several shore-based fishery species. This is the first time that any population information will be available for these species and will provide information that can be incorporated into management frameworks. Professor Potts also expanded his research back into the freshwater fisheries realm, with research projects in Lesotho and Mpumalanga. Professor Mann and Professor Potts' Southern African Fisheries Ecology Research (SAFER) Lab, with support from SAIAB, hosted the 6th Southern African Marine Linefish Symposium in August 2024. This provided a platform for linefish researchers and several stakeholders, including DFFE, SANParks, Cape Nature, East Cape Parks, SANBI and several others, to showcase and discuss linefish research in southern Africa.

Professor Childs continued with her collaborative NRF MCR project (Project CAREZone) addressing knowledge gaps in our marine-shore based fishery using a socio-

ecological approach (ecosystem, human dimension and governance) for improved conservation and management of our shore-based line fishery and a NRF ACEP grant (Project SAFEZone) assessing key conservation actions outlined in the newly established *Argyrosomus* spp conservation strategy. She also continued her ongoing research assessing the link between linefish physiology and movement behaviour and international collaborations on marine fish connectivity, which also saw the completion of the COST Action SEA-UNICORN project with Dr Darnuade. She also continued her research with several other research programmes, in which she is a collaborator, including Professor James (SAIAB) seascape ecology research, Dr Murray (SAIAB) mugilid movement ecology research, as well as eagle ray and blue ray movement ecology research as part of Dr Soekoe and Kyle Smith's Save our Seas and SANPARKS research, respectively. Within each of these larger programmes, Professor Childs is currently supervising several Postgraduate students with her colleagues at the DIFS, SAIAB, University of Pretoria, Nelson Mandela University, University of Montpellier, IRD (France) and SANParks.

Photo: Chris Marais



Department of Ichthyology and Fisheries Science Publications

Books/Chapters/Monographs

Broom, C.J. and Weyl, O.L.F.
Shelton, J.M., **Broom, C.J.**, **Coetzee, J.A.**, **Hill, M.P.**, Motitsoe, S., Jacobs, S., van der Walt, J.A., **Weyl, O.L.F.** and Esler, K.J. (2024) Restoring freshwater ecosystems: Lessons from case studies on riparian vegetation, aquatic weeds and freshwater fish. In: Dalu, T. and Masese, F.O. (eds.). *Afro-tropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.617-636. ISBN: 9780443238987.

Porri, F.
Porri, F., Wynberg, R. and **McConnachie, B.** (2024) Shifting from Development to Empowerment Through Eco-Creative Knowledge. In: *In Routledge Handbook of Arts and Global Development*. London: Routledge. p.477-492. ISBN: 978100-3289838.

Peer Reviewed Subsidy-Earning Journal Research Publications

Arkhipkin, A.I.
Buring, T., van der Grient, J., Pierce, G.J., Bustamante, P., Scotti, M., Jones, J.B., Rocha, F. and **Arkhipkin, A.I.** (2024) Unveiling the wasp-waist structure of the Falkland shelf ecosystem: the role of *Doryteuthis gahi* as a keystone species and its trophic influences. *Journal of the Marine Biological Association of the United Kingdom*. 104 (2). p.1-11.

Bova, C.S. and Potts, W.M.
Bova, C.S., **Potts, W.M.**, Radford, Z., Schiefer, P. and Hyder, K. (2024) Tools for assessing recreational fisheries compliance an under appreciated yet essential component of management. *Reviews in Fish Biology and Fisheries*. 35 (2024). p.1-9.

Bova, C.S., Gusha, M.N. and Potts, W.M.
Engelhard, G.H., **Bova, C.S.**, **Gusha, M.N.**, **Potts, W.M.**, Hyder, K. and *et al,* (2024) Climate risk assessment of the fisheries in Namibia. *Reviews in Fish Biology and Fisheries*. 34 (2024). p.1231-1260.

Chakona, A.
Van Nynatten, A., **Castaneda, R.A.**, **Chakona, A.**, Lovejoy, N.R., **Weyl, O.L.F.** and **Mandrak, N.E.** (2024) Environmental DNA metabarcoding in the Cape Fold aquatic ecoregion: Opportunities and challenges for eDNA uptake in an endemism hotspot. *Freshwater Biology*. 69 (11). p.1627-1639.

Childs, A.R.
Murray, T.S., **Elston, C.**, Smale, M.J., **Childs, A.R.**, Dicken, M.L. and **Cowley, P.D.** (2024) Marine predators segregate interspecifically by space and time in a sheltered coastal bay. *Journal of Fish Biology*. 1 (2024). p.1-15.

Childs, A.R. and Murray, T.
Welch, R.J., **Childs, A.R.**, **Murray, T.**, Darnaude, A.M. and James, N.C. (2024) The role of acoustic telemetry in assessing fish connectivity within marine seascapes: A global review. *Journal of Fish Biology*. 2024 (1). p.1-20.

Cochrane, K.L.
Cochrane, K.L., Butterworth, D., Hilborn, R., Parma, A.M., Plagányi, E.E. and Sissenwine, M.P. (2024) Errors and bias in marine conservation and fisheries literature: Their impact on policies and perceptions. *Marine Policy*. 168 (2024). p.1-11.

Cochrane, K.L., Butterworth, D., Hilborn, R., Parma, A.M., Plagányi, E.E. and Sissenwine, M.P. (2024) Response to rejoinder to: Cochrane *et al.*, Errors and bias in marine

conservation and fisheries literature: Their impact on policies and perceptions [Mar. Policy 168 (2024) 106329]. *Marine Policy*. 172 (2025). p.1-3.

Duncan, M.I.
Duncan, M.I., Micheli, F., Marquez, J.A., Lowe, C.J., Hamilton, S.J. and Sperling, E.A. (2024) Temperature-dependent hypoxia tolerance of purple sea urchin *Strongylocentrotus purpuratus* across biogeography and ontogeny. *Marine Ecology Progress Series*. 739 (2024). p.129-146.

Shing Hiung, D.L.C.Y., Schuster, J.M., **Duncan, M.I.** and *et al,* (2024) Ocean weather, biological rates, and unexplained global ecological patterns. *PNAS Nexus*. 3 (8). p.1-3.

Eggers, J.M. and Cochrane, K.L.
Eggers, J.M., Johnston, S.J. and **Cochrane, K.L.** (2024) The ecological and socioeconomic implications of future total allowable catch decisions and illegal fishing scenarios for South Africa's West Coast rock lobster fishery. *Marine Policy*. 170 (2024). p.1-11.

Elston, C., Murray, T. and Mann, B.Q.
Elston, C., **Murray, T.**, Rogers, T., **Parkinson, M.C.**, **Mann, B.Q.**, **Daly, R.**, **Filmalter, J.D.** and **Cowley, P.D.** (2024) Diamond *Gymnura natalensis* and duckbill *Aetomylaeus bovinusrays* undertake nationwide coastal migrations. *Journal of Fish Biology*. 2024 (1). p.1-16.

Gayiza, M.
James, N.C., Jacobs, A.G., **Gayiza, M.**, Human, L.R.D., Steyn, P. P., **Bernard, A.T.F.** and Rishworth, G.M. (2024) Nursery provision of red-algal habitats in temperate Algoa Bay, South Africa. *Marine Biology*. 171 (185). p.1-13.

Gennari, E.
Ryan, L.A., **Gennari, E.**, Slip, D.J., Collin, S.P., Peddemors, V.M., Huveneers, C., Chapuis, L., Hemmi, J.M. and Hart, N.S. (2024) Counter illumination reduces bites by Great White sharks. *Current Biology*. 34 (24). p.5789-5795.

Gusha, M.N., Bova, C.S. and Potts, W.M.
Gusha, M.N., Wilhelm, M.R., **Bova, C.S.**, Engelhard, G.H., Hyder, K. and **Potts, W.M.** (2024) Horizon scan survey to identify key research questions to promote sustainability of the marine recreational fishery in Namibia. *Fisheries Management and Ecology*. 1 (2024). p.1-9.

Hecht, T.
Payet, S., de Vos, B., Rose, M., Adonis, D., Lesperance, A. and **Hecht, T.** (2024) Uncovering the relationship between light intensity and *Tripneustes gratilla* (collector sea urchin): implications for aquaculture. *Western Indian Ocean Journal of Marine Science*. 23 (2). p.75-83.

James, N.C., Potts, W.M. and Duncan, M.I.
Edworthy, C., **James, N.C.**, **Potts, W.M.**, **Duncan, M.I.** and Dupont, S. (2024) Temperate coastal fish shows resilience to extreme low pH in early larval stages. *Journal of Experimental Marine Biology and Ecology*. 578 (2024). p.1-11.

Kadye, W.T.
Jordaan, M.S., Barrow, S., **Kadye, W.T.** and **Chakona, A.** (2024) Status and distribution of a novel redfin lineage, *Pseudobarbus* sp. *burchelli Tradouw* from the Cape Fold Ecoregion of South Africa. *African Journal of Aquatic Science*. 49 (1). p.29-39.

Kadye, W.T., Wood, P.J. and *et al,* (2024) Fresh Lan Div: A Global Database of Freshwater Biodiversity Across Different Land Uses. *Global Ecology and Biogeography*. 33 (12). p.1-9.

Kadye, W.T., Nkomo, T. and Kambikambi, M.J.
Kadye, W.T., **Nkomo, T.**, **Kambikambi, M.J.** and **Chakona, A.** (2024) Trophic niche patterns of endangered *Sandelia bainsii* and *Amatolacypris trevelyani* in the Eastern Cape, South Africa: Insights from stable isotope analysis. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 34 (2). p.1-17.

Kruger, J., Smale, M. and Potts, W.M.
Gouws, G., **Kruger, J.**, **Smale, M.**, Henriques, R. and **Potts, W.M.** (2024) Revisiting the description of *Atractoscion macrolepis* (Perciformes: Sciaenidae): Another argument for comprehensive taxonomy. *ZOOTAXA*. 5529 (1). p.159-174.

Lee, B. and Arkhipkin, A.I.
Lee, B., Skeljo, F., Randhawa, H.S., Browns combe, W. and **Arkhipkin, A.I.** (2024) Early life-history patterns in Patagonian toothfish *Dissostichus eleginoides* from the Patagonian Shelf. *Marine Ecology Progress Series*. 726 (2024). p.131-148.

Lipinski, M.R.
Pocwierz-Kotus, A., **McQuaid, C.D.**, **Lipinski, M.R.**, Zbawicka, M. and Wenne, R. (2024) SNPs Analysis Indicates Non-Uniform Origins of Invasive Mussels (Mytilus gallo provincialism Lamarck, 1819) on the Southern African Coast. *Animals*. 14 (21). p.1-14.

Madzivanzira, T.C.
Guareschi, S., Mathers, K.L., South, J., Navarro, M., Renals, T., Hiley, A., Antonsich, M., Bolpagni, R., Bortolus, A. and **Madzivanzira, T.C.** (2024) Framing challenges and polarized issues in invasion science: toward an interdisciplinary agenda. *BioScience*. 74 (12). p.825-839.

Mann, B.Q.
Groeneveld, J., Klein, J.D., **Bennett, R.H.**, Abdulla, A.S., Bond, M.E., **Ebert, D.A.**, Fernando, S.M., Gledhill, K.S., Jaquemet, S., Kiszka, J.J., MacDonald, A.H., **Mann, B.Q.**, Nevill, J., Price, A.S., Rumbelow, J., Sitoe, J.J., van Staden, M., Wueringer, B.E. and Bester-van der Merwe, A.E. (2024) Population genetic structure of bottlenose and white spotted wedge fishes from the Southwest Indian Ocean using a dual marker approach. *Endangered Species Research*. 53 (1). p.409-427.

Mann, B.Q. and Potts, W.M.
Mann, B.Q., Jordaan, G.L., Dalton, W.N., **Daly, R.**, Soekoe, M., **Potts, W.M.**, Smale, M.J. and Swart, L. (2024) Movement and growth of the spotted gully shark *Triakis megalopterus* in South African waters. *African Journal of Marine Science*. 46 (2). p.109-123.

Mann-Lang, J.
Atkins, S., **Mann-Lang, J.**, Cliff, G., Pillay, N. and Cantor, M. (2024) Articulating the dynamics among stakeholders in KwaZulu-Natal's bather-shark conflict to create a productive research-implementation space. *Ocean & Coastal Management*. 255 (2024). p.1-9.

Verissimo, D., Blake, K., Flint, H.B., Doughty, H., Espelosin, D., Gregg, E.A., Kubo, T., **Mann-Lang, J.**, Perry, L.R., Selinske, M.J., Shreedhar, G. and Thomas-Walters, L. (2024) Changing Human Behavior to Conserve Biodiversity. *Annual Review of Environment and Resources*. 49 (2024). p.12.

Martin, M.B., Kadye, W.T. and Scheepers, M.J.
Martin, M.B., **Chakona, A.**, **Kadye, W.T.** and **Scheepers, M.J.** (2024) Revalidation of *Enteromius karkensis* (Gilchrist and Thompson 1913) (Cypriniformes: Smiliogastrinae) from the southern temperate freshwater ecoregion, South Africa. *Journal of Fish Biology*. 1 (2024). p.1-19.

Mpopetsi, P.P. and Kadye, W.T.
Mpopetsi, P.P. and **Kadye, W.T.** (2024) Isotopic diversity and niche patterns reveal contrasting resource use among co-occurring non-native fishes within a flow-altered African river system. *Biological Invasions*. 26 (1). p.1-23.

Mukhari, D.L., Smith, M.K.S. and Pegg, J.
Mukhari, D.L., **Mofu, L.**, Lombard, A.T., Attwood, C.G., Witteveen, M., **Smith, M.K.S.**, **Cowley, P.D.**, **Weyl, O.L.F.** and **Pegg, J.** (2024) Life-history of invasive common carp, *Cyprinus Carpio*, within a natural lake (Groenvlei), South Africa. *African Journal of Aquatic Science*. 49 (3). p.246-253.

Muller, C., Porri, F. and Potts, W.M.
Muller, C., Lett, C., **Porri, F.**, Pattrick, P., Bailey, D., Denis, H., Barrier, N., **Potts, W.M.** and Kaplan, D.M. (2024) Coastal connectivity of an abundant inshore fish species: model-data comparison along the southern coast of South Africa. *Marine Ecology Progress Series*. 731 (2024). p.89-104.

Murray, T., Mann, B.Q., Cowley, P.D. and Filmalter, J.D.
Dixon, R.B., **Murray, T.**, **Mann, B.Q.**, **Cowley, P.D.**, **Daly, R.** and **Filmalter, J.D.** (2024) Longshore movements and site fidelity of the iconicgiant *trevally Caranx ignobilis* from Southern Africa, determined using passive acoustic telemetry. *Marine Ecology Progress Series*. 729 (2024). p.201-218.

Mutizwa, T.I., Kadye, W.T. and Braganca, P.H.N.
Mutizwa, T.I., **Kadye, W.T.**, **Braganca, P.H.N**, Bere, T. and **Chakona, A.** (2024) Hidden in the riffles: A new suckermouth catfish (Mochokidae, Chiloglanis) from the middle Zambezi River system, Zimbabwe. *Zookeys*. 1 (2024). p.57-91.

Naylor, M.
Novak, T., Bridges, C.R., **Naylor, M.**, Yemane, D. and Auerswald, L. (2024) Acute Hypercapnia at South African Abalone Farms and its Physiological and Commercial Consequences. *Fishes*. 9 (8). p.1-16.

Ndaba, J.
Mbandzi, N., **Puccinelli, E.**, Pieterse, P.P., **Ndaba, J.** and **Porri, F.** (2024) Metal bioaccumulation in marine invertebrates and risk assessment in sediments from South African coastal harbours and natural rocky shores. *Environmental Pollution*. 355 (15). p.1-11.

Ndaleni, P.M. and James, N.C.
Ndaleni, P.M., **James, N.C.**, **South, J.** and **Weyl, O.L.F.** (2024) Reproductive biologies of *Psammogobius knysnaensis* and *Caffrogobius gilchristi* in a warm-temperate South African estuary. *African Journal of Aquatic Science*. 49 (1). p.1-6.

Nodo, P. and Childs, A.R.
Nodo, P., **Childs, A.R.**, Pattrick, P. and **James, N.C.** (2024) Spatial patterns and environmental drivers of demersal fish assemblages in the Swartkops and Sundays estuarine to marine seascapes, South Africa. *African Journal of Marine Science*. 46 (2). p.125-141.

Ntokoane, T. and Kadye, W.T.
Ntokoane, T., **Vreven, E.J.W.M.N.**, **Braganca, P.H.N.**, **Kadye, W.T.** and **Chakona, A.** (2024) Taxonomic diversity, distribution, and ecology of the freshwater fishes of the Zambezian Lowveld Ecoregion in southern Africa: A systematic review. *Journal of Fish Biology*. 106 (2). p.315-343.

Oliver, J.
Oliver, J., Shum, P., Mariani, S., Sink, K.J., **Palmer, R.M.** and **Matcher, G.F.** (2024) Enhancing African coelacanth monitoring using environmental DNA. *Biology Letters*. 20 (10). p.1-11.

Ortega-Cisneros, K. and Cochrane, K.L.
Ortega-Cisneros, K., de Moor, C.L. and **Cochrane, K.L.** (2024) Linking the movement of South African sardine and anchovy to environmental variables using a model of intermediate complexity. *Fisheries Research*. 275 (2024). p.1-18.

Paulet, T.G.
Johnson, T.L., de Bresser, J.C., Cottrant, E., Drobniewska, N.J., **Paulet, T.G.** and Underhill, L.G. (2024) Distribution and site fidelity of four endemic catshark species in Walker Bay, South Africa. *African Journal of Marine Science*. 46 (1). p.1-11.

Pegg, J.
Woodford, D.J., **South, J.**, **Mofu, L.** and **Pegg, J.** (2024) River hydrology mediates fish invasions in Addo Elephant National Park, South Africa. *KOEDOE*. 66 (1). p.1-11.

Raman, N.V., Belay, B.M.G., **South, J.**, Botha, T.L., **Pegg, J.**, **Khosa, D.**, **Mofu, L.**, Walsh, G., **Jordaan, M.S.**, Koelmans, A.A., Teurlincx, S., Helmsing, N.R., de Jong, N., van Donk, E., Lürling, M., Wepener, V., Fernandes, T.V. and de Senerpont Domis, L.N. (2024) Effect of an antidepressant on aquatic ecosystems in the presence of microplastics: A mesocosm study. *Environmental Pollution*. 357 (2024). p.1-13.

Porri, F.
Lett, C., Malauene, B.S., Hoareau, T.B., Kaplan, D.M. and **Porri, F.** (2024) Corridors and barriers to marine connectivity around southern Africa. *Marine Ecology Progress Series*. 731 (2024). p.105-127.

Gauff, R.P.M., Mugnai, F., Mancuso, F.P., **Porri, F.**, Costantini, F. and Airoldi, L. (2024) Distribution of native and non-indigenous bivalves and their settlers along an urban gradient. *Frontiers in Marine Science*. 11 (2024). p.1-9.

Porri, F., **Claassens, L.**, **Froneman, P.W.** and *et al* (2024) Coastal greening of grey infrastructure: an update on the state of the art. *Proceedings of the Institution of Civil Engineers - Maritime Engineering*. 177 (2). p.34-72.

Pringle, B.A., Duncan, M.I., Winkler, A. and Potts, W.M.
Pringle, B.A., **Duncan, M.I.**, **Winkler, A.**, Mafwila, S., Jagger, C., McKeown, N.J., Shaw, P.W., Henriques, R. and **Potts, W.M.** (2024) Effect of temperature on metabolic stress and recovery of two *Argyrosomus* species from simulated catch-and-release angling. *Fisheries Management and Ecology*. 1 (2024). p.1-11.

Pringle, B.A., Shaw, P.W. and Potts, W.M.
Wilhelm, M.R., Jagger, C.E., Nghipangelwa, N.M., **Pringle, B.A.**, **Shaw, P.W.**, **Potts, W.M.**, Henriques, R. and McKeown, N.J. (2024) Otolith shape analysis as a tool for species identification and management of cryptic congeners in the northern Benguela ocean warming hotspot. *Fisheries Research*. 281 (2025). p.1-11.

Sauer, W.H.H. and Lipinski, M.R.
Nomxego, L.C.J., Kjesbu, O.S., **Sauer, W.H.H.** and **Lipinski, M.R.** (2024) Life-history parameters of adult females of *Merluccius capensis* (Gadidae) off the south coast of South Africa. *Journal of Fish Biology*. 105 (3). p.623-1039.

Sauer, W.H.H. and Shaw, P.W.
Treleven, C.R., Kishe-Machumu, M.A., Silas, M.O., Ngatunga, B.P., Kuboja, B.N., Mgeleka, S.S., Taylor, A.L., Elsmore, M.A.M., Healey, A.J.E., **Sauer, W.H.H.**, **Shaw, P.W.** and McKeown, N.J. (2024) Genetic analysis of Octopus cyanea reveals high gene flow in the South-West Indian Ocean. *Ecology and Evolution*. 14 (4). p.1-15.

Sauer, W.H.H., Arkhipkin, A.I. and Shaw, P.W.
Sauer, W.H.H., **Arkhipkin, A.I.**, **Shaw, P.W.** and *et al,* (2024) Towards global traceability for sustainable cephalopod seafood. *Marine Biology*. 171 (2). p.1-47.

Sauer, W. H. and Arkhipkin, A. I.
Gleadall, I. G., Moustahfid, H., **Sauer, W. H.**, Ababouch, L., **Arkhipkin, A. I.**, Bensbai, J., ... and Yamaguchi, T. (2024). Towards global traceability for sustainable cephalopod seafood. *Marine Biology*. 171(2), 44.

Sauer, W.H.H.
Gleadall, I.G., Barkai, A., Lajbner, Z., McIntyre, P.B., Moustahfid, H., Olsen, P., Oyanedel, R., Pang, Y., Pierce, G.J., Quesada, L. and **Sauer, W.H.H.** (2024). Sustainable seafood: advances in traceability, assessment, monitoring and resource management. *African Journal of Marine Science*. 46(4), pp.239-245.

Scheepers, M.J.
Scheepers, M.J., **Braganca, P.H.N.** and **Chakona, A.** (2024) Revalidation of *Enteromius crocodilensis* (Fowler, 1934) from synonymy with the disjunctly distributed *Enteromius argenteus* (Günther, 1868) based on molecular and morphological evidence. *Journal of Fish Biology*. 1 (2024). p.1-16.

Scheepers, M.J., **Braganca, P.H.N.** and **Chakona, A.** (2024) Naming the other cousin: A new Goldie barb (Cyprinidae: Smiliogastrininae) from the northeast escarpment in South Africa, with proposed taxonomic rearrangement of the Goldie barb group in southern Africa. *Journal of Fish Biology*. 105 (4). p.1041-1361.

Shaw, P.W.
Sales, J.B.L., Anderson, F.E., Paiva, B.L., Cunha, Y.T.C., Rodrigues, A.E.S., Ferreira, Y., Rodrigues-Filho, L.F.S., **Shaw, P.W.**, Haimovici, M., Markaida, U., Ready, J.S. and Sampaio, I. (2024) The vicariant role of Caribbean formation in driving speciation in American loliginid squids: the case of *Doryteuthis pealeii* (Lesueur 1821). *Marine Biology*. 171 (82). p.1-14.

McKeown, N.J., Campanella, F., Silva, J.F., Roel, B.A., Healey, A.J.E., **Shaw, P.W.** and van der Kooij, J. (2024) Genomic analysis of NE Atlantic sardine (Sardina pilchardus) reveals reduced variation in a recently established North Sea population and directs reconsideration of management units. *Ecology and Evolution*. 14 (8). p.1-11.

de Becquevort, S., McKeown, N.J., Blake, M. and **Shaw, P.W.** (2024) Genetic variation reveals complex population structuring of *Tomicus piniperda* L. (Coleoptera, Scolytidae) in the UK: Implications for management of this important pest. *Agricultural and Forest Entomology*. 26 (2). p.249-261.

Sithole, Y. and Chakona, A.
Sithole, Y., **Vreven, E.J.W.M.N.**, **Braganca, P.H.N.**, Musschoot, T. and **Chakona, A.** (2024) Nine in one: integrative taxonomic evidence of hidden species diversity in the widespread Zambezi grunter, *Parauchenoglanis ngamensis* (Siluriformes: Auchenoglanididae), from southern and south-central Africa. *Zoological Journal of the Linnean Society*. 202 (3). p.1-11.

Towner, A.V. and Booth, A.J.
Towner, A.V., Micarelli, P., Hurwitz, D., Smale, M.J., **Booth, A.J.**, Stopforth, C., Jacobs, E., Reinero, F.R., Ricci, V., Di Bari, A., Gavazzi, S., Carugno, G., Mahrer, M. and **Gennari, E.** (2024) Further insights into killer whales Orcinus orca preying on white sharks *Carcharodon carcharias* in South Africa. *African Journal of Marine Science*. 46 (1). p.1-5.

Whitfield, A.K.
Whitfield, A.K. and Weerts, S.P. (2024) Fish species, families and guilds recorded in selected estuaries of Mozambique. *Western Indian Ocean Journal of Marine Science*. 23 (1). p.53-67.

Winkler, A.
Kraf, S., **Winkler, A.**, Abecasis, D. and Mourier, J. (2024) Long-term co-occurrence and gregariousness in the migratory common stingray using network analysis. *Marine Biology*. 171 (2024). p.1-15.

Winkler, A.C.
Gandra, M., **Winkler, A.C.**, Afonso, P. and Abecasis, D. (2024) Long-distance migrations and seasonal movements of meagre (Argyrosomus regius), a large coastal predator, along the Iberian Peninsula coast. *Movement Ecology*. 12 (1). p.1-11.

Kraft, S., **Winkler, A.C**. and Abecasis, D. (2024) Horizontal and vertical movements of the critically endangered *Rostroraja alba* in a coastal marine protected area. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 34 (6). p.1-14.

Abecasis, D., Martínez-Ramirez, L., Gandra, M. and **Winkler, A.C.** (2024) Tracking movements of meagre (Argyrosomus regius) during the spawning season: Preliminary indications of off estuary spawning. *Journal of Fish Biology*. 2024 (1). p.1-7.

Martínez-Ramirez, L., Bentes, L., Dias, A., Erzini, K., Gandra, M., Kraft, K., **Winkler, A.C.** and Abecasis, D. (2024) Tagging mortality in acoustic telemetry studies: Insights from a multispecies analysis. *Journal of Fish Biology*. 2024 (1). p.1-11.

Kraft, S., **Winkler, A.C.** and Abecasis, D. (2024) Seasonal movement dynamics of the commercially important thornback ray (Raja clavata) in a coastal marine protected area. *Ocean and Coastal Management*. 254 (2024). p.1-12.

Yimam, H.M.
Getnet, M.A., Mekonnen, M.Y., **Yimam, H.M.**, Berihun, A.M. and Malede, B.A. (2024) Histopathology based study of Nile tilapia fish (Oreochromis niloticus) as a biomarker for water pollution evaluation in the southern gulf of Lake Tana, Ethiopia. *BMC Veterinary Research*. 20 (1). p.1-11.

Wu Y., Kaiser, H. and Jones, C.L.W.
Wu Y., **Kaiser, H.**, and **Jones, C.L.W.** 2024. Natural stable isotope ratios as a tool in understanding nutrient allocation of protein sources in the growth of farmed abalone, *Haliotis midae. Aquaculture, Fish and Fisheries.* 4 (3). p.1- 14.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Childs, A.R. and Potts, W.M.
Porri, F., **Childs, A.R.**, **Potts, W.M.**, **Muller, C.** and **Van Der Walt, K.A.** Investigating recruitment dynamics and retention patterns of fish larvae in nearshore environments along the south - east coastline of South Africa. *7th International Marine Conservation.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Porri, F.
Ndaba, J., **Porri, F.**, **Pattrick, P.**, Pieterse, P.P. and **Puccinelli, E.** Weaving and indigenous knowledge material for nature-based coastal eco-engineering practices: a case study with *Cyperus textilis*. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Mpanza, N.P., **Porri, F.** and **Pattrick, P.** Light trap efficiency validation for monitoring of larval assemblages in urban coastal habitats. *7th International Marine Conservation Congress*. Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Nabani, X.P., **Mpanza, N.P.**, **Porri, F.**, And **Van Der Walt, K.A.** Enhancing the functionality and biodiversity of urbanised coastlines through nature-based ecological engineering and Indigenous Knowledge. *7th International Marine Conservation Congress*. Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Mxo, R.V., **Porri, F.** and Adams, J.B. Bridging worlds: braiding scientific and indigenous knowledge to cultivate for nature-based eco-engineering in coastal urban environments. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Brigham, R.M. Thermoregulation: Convergence between bats and nightjars. *Thermo-regulation: Convergence between bats and nightjars*. Thompson Rivers University, Kamloops BC. Canada. February 2024.

Redelinghuys, S., Emami-Khoyi, A., **Porri, F.** and **Matcher, G.F.** Assessing coastal resilience: multi-disciplinary insights from potential bioindicator species... *7th International Marine Conservation Congress*. Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Porri, F., **Mpanza, N.P.**, **Ndaba, J.**, Howse, M. and **Van Der Walt, K.A.** Fostering harmony between science and indigenous perspectives for sustainable nature-based coastal solutions. *7th International Marine Conserv-ation Congress*. Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Midgley, J.M., Goergen, G. and Jordaens, K. The genus Afroxanthandrus Kassebeer, 2000 now contains four valid species. *12th International Symposium on Syrphidae*. Pruhonice Castle in Pruhonice, Pruhonice. Czech Republic. September 2024.

Williams, K.A. The state of the genus *Hybomitra Enderlein* (Diptera: Tabanidae) in the Afrotropics including the discovery of a new species from South Africa. *In the proceedings of Ento 24*. Liverpool, Liverpool. Liverpool. September 2024.

Wasserman, R.J., **Cowley, P.D.** and **Naesje, T.F.** Movement behaviour of adult leervis in the Breede Estuary: Insights through acoustic telemetry. *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J., Deyzel, S.H.P. and *et al,* 3.8. Using a Zoo scan approach to quantify the effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Midgley, J.M., Jordaens, K. and *et al,* 3.6. The first confirmed female of *Mesembrius ingratus* (Loew, 1858) (Diptera: Syrphidae) from KwaZulu-Natal, South Africa. *12th International Symposium on Syrphidae*. Pruhonicy, Pruhonicy. Czech Republic. October 2024.

Midgley, J.M., **Bellingan, T.A.**, Goergen, G., *et al*, 3.6. Overview of recent achievements in Afrotropical hoverfly (Syrphidae) taxonomy and phylogeny. *12th Inter-national Symposium on Syrphidae*. Pruhonicy, Pruhonicy. Czech Republic. January 2024.

Wasserman, R.J., **Naidoo, T.** and *et al,* 3.8. Are temporary wetlands predator free? *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J., **Bernard, A.T.F.** and *et al,* BRUVs vs DOVs? A case study using coral reef fish communities in iSiman-galiso Wetland Park. *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Villet, M.H. and **James, H.** Africa gains two new families: the value of vouchered survey samples in Plecoptera systematics. *International Joint Meeting on Ephemeroptera and Plecoptera*. Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino, Turin. Italy. July 2024.

Cooper, F.R. The unexplored part of South Africa: mammal species diversity in Camdeboo National Park, Eastern Cape. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. September 2024.

Kilian, W.M. The movement behaviour of adult lives in the Breed Estuary: Insights from acoustic telemetry. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Midgley, J.M., Jordaens, K., De Meyer, M., *et al,* 3.8. Syrphidae and the diversity of pollinating Diptera in Afrotropical biodiversity hotspots. *12th International*

Symposium on Syrphidae. South African Armour Museum, Bloemfontein. South Africa. September 2024.

Naidoo, T., **Wasserman, R.J.** and **Mofu, L.** Zooplankton hatching phenology dynamics in fishless temporary wetlands. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Mbandzi, N., **Porri, F.**, **Ndaba, J.** and **Puccinelli, E.** Bioaccumulation of metals in marine invertebrates: Ecological risk assessment in coastal harbours and natural rocky shores along the South African south coast. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Barry, M. Using Zoo scan software to quantify effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Memela, S.P. A comparison of the effectiveness of baited remote underwater stereo-video systems versus diver-operated stereo-video systems in surveying reef fish populations. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Bell, M.J. Are temporary wetlands predator free? Insight from insect phenology dynamics across a temporary wetland hydroperiod. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Mphokane, K. Identifying African blowfly larvae using their muscle attachment sites (MAS). *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. September 2024.

Hendricks, E.R. Zooplankton phenology and shifting community dynamics over a hydroperiod in temporary wetlands. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Midgley, J.M., *et al*, 3.6. A best way forward to the organisation of entomological training courses in sub-Saharan Africa. *88th Conference and Annual General Meeting of the South African Museums Association*. Bloemfontein, Bloemfontein. South Africa. October 2024.

Harvey, O.R. Piospheres: Unravelling the Ecological Interaction of Arthropods and Birds in the Kalahari Desert. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. January 2024.

Wasserman, R.J., **Naidoo, T.**, **Mofu, L.** and *et al,* 3.8. Zooplankton hatching phenology dynamics in fish-less temporary wetlands. *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Midgley, J.M., Goergen, G. and *et al,* 3.6. Rapid invasion of the Afrotropics by the New World Florida Calligrapher, *Toxomerus floralis*: a case study on the import-ance of digitised specimen data. *88th Conference and Annual General Meeting of the South African Museums Association*. Bloemfontein, Bloemfontein. South Africa. October 2024.

Wasserman, R.J., **Motitsoe, S.N.**, **Mlambo, M.** and *et al,* 3.8. *Tarebia granifera* invasions in South Africa. *National symposium on Biological Invasions*. Sol Plaatjies University, Kimberly. South Africa. December 2024.

Wasserman, R.J., Coetzee, J. and **Strange, E.** Do floating aquatic invasive plants facilitate mosquito proliferation. *National symposium on Biological Invasions*. Sol Plaatjies University, Kimberly. South Africa. September 2024.

Brigham, R.M. Heterothermy: a perspective based on nightjars. *Plenary talk for Global Nightjar network annual meeting*. Virtual, Virtual. Virtual. November 2024.

Jones, C.L.W.
Madlala, N.P., **Jones, C.L.W.** and **Wu A.** *Aquaculture Association of Southern Africa Conference 2024*, Stellenbosch, South Africa, 9-13 July 2024. Effect of IMTA *Gracilaria gracilis* on the growth and behaviour of farmed abalone *Haliotis midae*. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Jones, C.L.W.
Taylor, R.P. and **Jones, C.L.W.** 2024. Integrating brewery effluent treatment with hydroponics and fish culture. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Mogalekwena, A., Mthembu, S., **Taylor, R.**, Selapa, W.N., **Jones, C.L.W.** and **Vine, N.G.** 2024. Incorporating fish production into a constructed wetland system used to treat anaerobically digested brewery effluent for onsite reuse. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Lutili, F.M., **Jones, C.L.W.**, **Mabasa, N.** and Mbalasa, M. 2024. Drain-fill technology and retaining solids in an aquaponics systems. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Mdhluvu, R.M., Selapa, W.N., **Jones, C.L.W.**, **Mlambo, V.**, Fouche, C., **Macey, B.M.**, Darias, M.J. and **Kaiser, H.** 2024. Effect of replacing dietary fishmeal with black soldier fly larvae meal on the growth of farmed dusky kob, *Argyrosomus japonicus* (Temminck & Schlegel 1843), juveniles. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Dlamini, F. and **Jones, C.L.W.** 2024. Factors influencing the success of transport of South African abalone (*Haliotis midae*). *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

Mdletshe, S., **Jones, C.L.W.**, Qondani, S., Meys, J. and Wortley, R. 2024. Carbon dioxide anaesthesia and low pH on recovery, health and feed consumption of abalone *Haliotis midae*. *Aquaculture Association of Southern Africa Conference 2024.* Stellenbosch, South Africa, 9-13 September 2024.

Cesler, L., **Jones, C.L.W.**, **Taylor, R.** and **Mabasa, N.** 2024. Filtering brewery effluent with constructed wetlands. *Aquaculture Association of Southern Africa Conference 2024.* Stellenbosch, South Africa, 9-13 September 2024.

Mwangudza, P., Brink-Hull, M., **Macey, B.** and **Jones, C.L.W.** 2024. Effects of biosecure macroalgae on the gut microbiome of abalone *Haliotis midae*. *Aquaculture Association of Southern Africa Conference 2024*. Stellenbosch, South Africa, 9-13 September 2024.

DEPARTMENT OF Information Systems

Introduction

The Department's research focus areas include AI Technology, Business Analytics, Business Process Management, eGovernment, eLearning, Health Information Systems, ICT for Development, ICT for Education, IT Governance, Information Security, Project Management, and User Experience. Staff undertake research in their respective fields independently or collaboratively with Research Associates and colleagues from other institutions, both locally and internationally.



Professor Greg Foster
Head of Department

Photo: Jackie Grove

Postgraduates / Graduations

Postgraduate numbers in the Department comprise four (4) PhD candidates, ten (10) Masters atudents, and a class of forty-two (42) Honours students. We celebrated the graduation of one (1) Master of Commerce in Information Systems, with Distinction.

Distinguished Visitors / International Visits

The Department welcomed a visit from Dr Orre and Mr Tibblin from Malmö University (Sweden) and Mr Boucher from the University of Fort Hare in November 2024 as part of a collaborative project exploring the use of virtual exchange hackathons to build global citizenship in students.

Significant Research Aligned Events

Professor Foster was part of the Rhodes University delegation that attended the SASUF Research and Innovation Week in Sweden in May 2024. At this event, Professor Foster and collaborators from Malmö University (Sweden), Linköping University (Sweden) and Sefako Makgatho Health Sciences University presented a poster entitled "Enhancing a Digital Health Platform to Improve Patient Engagement for Perioperative Information Exchange with Clinical Service Providers".

Professor Siebörger remained active in an ongoing collaborative research project between Rhodes University, the Institute for Development Studies (England) and the University of South Australia. This research focuses on developing digital platforms (MobiSAfAIDS and MobiSAM) to support citizen engagement with government for health and basic services provision in Southern Africa.

Research during 2024 focused on the responsible use of data generated by citizens in their use of civic tech applications to engage with government agents and service providers.



Professor Greg Foster and collaborators presented a poster entitled "Enhancing a Digital Health Platform to Improve Patient Engagement for Perioperative Information Exchange with Clinical Service Providers" at the SASUF Research and Innovation Week 2024 held in Sweden.

Left to right: Professor Foster (Rhodes University, South Africa), Dr Steyl (Sefako Makgatho Health Sciences University, South Africa), Professor Kluyts (Sefako Makgatho Health Sciences University, South Africa), and Dr Orre (Malmö University, Sweden).

Photo: Department of Information Systems

Staff undertake research in their respective fields **independently or collaboratively with research associates** and colleagues from other institutions, both locally and internationally.

Dr Baduza was active in two (2) projects. The first, which is funded by the British Academy and led by the Institute of Development Studies in collaboration with Rhodes University and IIE Varsity College, examines citizen voice and social accountability in South Africa's digitalisation of social protection systems. The second, which is funded by the EU Commission for the Grow Green Africa EU project, is investigating ICT renewable energy solutions through Postgraduate supervision. This project facilitates knowledge exchange by supporting the mobility of students and staff members from five (5) participating African institutions: National University of Science and Technology (NUST) in Zimbabwe, Namibia University of Science and Technology (NUST) in Namibia, Copperbelt University (CBU) in Zambia, Rhodes University (RU) in South Africa, and University of Eswatini (UNESWA) in Eswatini. The University of Turku (UTU), a European Union partner from Finland, provides the project's technical lead.

Department of Information Systems Publications

Books/Chapters/Monographs

Sieborger, I.

Khene, C., **Sieborger, I.** and Thinyane, M. (2024) Critical Design in Civic Tech in Southern Africa. In: Onyango, G. and Karuri-Sebina, G. (eds.). *Digitalisation and Public Policy in Africa*. Switzerland: Palgrave Macmillan Cham. p.39-59. ISBN: 9783031750786.

Concerts, Exhibitions, Performances, Workshops, Events

Salamntu, T.P.L.

Salamntu, T.P.L. and Seymour, L. Presentation. Business Process Management Practices: A Case Study of a State-Owned Enterprise. *IFIP Doctoral Consortium*. Protea Hotel Marriott, Cape Town. South Africa. 19 - 23 May 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Flowerday, S.

Eminov, E. and **Flowerday, S.** (2024) Suspicious Financial Activity in the Context of In-Game Asset Exchange Marketplace. *Journal of Cybersecurity and Privacy*. 4 (4). p.938-950.

Pardon, M. and **Flowerday, S.** (2024) Sustainable crypto-currency blockchain defence against security attacks. *Computer Fraud and Security*. 2024 (1). p.1-11.

Higgs, J. and **Flowerday, S.** (2024) Towards definitive categories for online video game money laundering. *Journal of Money Laundering Control*. 27 (6). p.1051-1062.

Tilbury, J. and **Flowerday, S.** (2024) Humans and Automation: Augmenting Security Operation Centres. *Journal of Cybersecurity and Privacy*. 4 (3). p.388-409.

Tilbury, J. and **Flowerday, S.** (2024) The rationality of automation bias in security operation centers. *Journal of Information Systems Security*. 20 (2). p.89-109.

Flowerday, S. and Tilbury, J. (2024) Automation Bias and Complacency in Security Operation Centres. *Computers*. 13 (7). p.1-22.

Higgs, J. and **Flowerday, S.** (2024) Online video games: cyberlaundering vulnerabilities and controls. *Journal of Information Systems Security*. 20 (1). p.11-26.

Lehasa, O.

Vu, Q.T., Harada, K., Tan, E., Zamami, Y., **Lehasa, O.**, Koyama, T. and Nishimura, Y. (2024) Burden of depressive disorders in Vietnam from 1990 to 2019: A secondary analysis of the Global Burden of Disease Study 2019. *Journal of Psychiatric Research*. 172 (1). p.420-426.

Lehasa, O. and Okonkwo, C. (2024) Dataset for discovering new hypertension small molecules using machine learning-aided computational fragment-based design. *Data in Brief*. 55 (110677). p.1-15.

Ms Salamntu presenting at the ICTAS 2024 conference held in Durban, South Africa.

Photo: Department of Information Systems



Lehasa, O. and Chude-Okonkwo, U.K. (2024) Leveraging Drug-Gene Interaction Information for Personalized Hypertension Drug Molecule Discovery. *Current Pharmacogenomics and Personalized Medicine*. 10 (1). p.1-16.

Lehasa, O.M. and Chude-Okonkwo, U.K. (2024) Machine Learning-aided Computational Fragment-based Design of Small Molecules for Hypertension Treatment. *Intelligence Based Medicine.* 10 (100171). p.1-15.

Owen, M., Flowerday, S. and Van Der Schyff, K.
Owen, M., **Flowerday, S.** and **Van Der Schyff, K.** (2024) Optimism bias in susceptibility to phishing attacks: an empirical study. *Information and Computer Security*. 32 (5). p.656-675.

Renaud, K.
Dupuis, M., Searle, R. and **Renaud, K.** (2024) Finding Grace in Responses to Adverse Cybersecurity Incidents. *Journal of Intellectual Capital*. 26 (1). p.1-41.

van Schaik, P. and **Renaud, K.** (2024) PEDRO: Privacy-Enhancing Decision Support Tool. *Applied Sciences*. 14 (20). p.1-11.

Ahmad, R., Terzis, S. and **Renaud, K.** (2024) Getting users to click: a content analysis of phishers? tactics and techniques in mobile instant messaging phishing. *Information and Computer Security*. 32 (4). p.420-435.

Jarvie, C. and **Renaud, K.** (2024) Online Age Verification: Government Legislation, Supplier Responsibilization, and Public Perceptions. *Children*. 11 (9). p.1-11.

Renaud, K., Sengul, C., Kovila, C., Clift, B., Taylor, J.E., Springett, M. and Morrison, B. (2024) We're Not That Gullible!? Revealing Dark Pattern Mental Models of 11-12-Year-Old Scottish Children. *ACM Transactions on Computer-Human Interaction*. 31 (3). p.1-11.

Renaud, K. (2024) The burden of keeping passwords secret. *Network Security*. 6 (2024). p.1-11.

Renaud, K. and Warkentin, M. (2024) The insider threat 'zoo'. *Computer Fraud and Security*. 2024 (5). p.1-10.

Prior, S. and **Renaud, K.** (2024) Are UK Parents Empowered to Act on Their Cybersecurity Education Responsibilities? *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics).* 14728 (2024). p.77-96.

Renaud, K. (2024) The Q-Z of cyber security. *Network Security*. 2024 (4). p.1-10.

Das Chowdhury, P. and **Renaud, K.** (2024) Advocating a Policy Push Toward Inclusive and Secure 'Digital-First' Societies. *IEEE Security and Privacy*. 22 (5). p.23-31.

Sukumani, R. and Salamntu, T.P.L.
Sukumani, R., **Salamntu, T.P.L.** and Seymour, L. (2024) Business process management critical success factors: a scoping review. *International Journal of Business Process Integration and Management*. 11 (4). p.303-313.

Renaud, K.
Van Der Schyff, K., Prior, S. and **Renaud, K.** (2024) Privacy policy analysis: A scoping review and research agenda. *Computers and Security*. 146 (2024). p.1-14.

Peer-reviewed Subsidy- Earning Proceedings

Salamntu, T.P.L.
Salamntu, T.P.L., Adebisi, A. and Paschal, I.M. Point of Sales (POS) Terminals for Bank Service Delivery, the needs for Management of Information Security: A case of Nigeria's Banking Sectors. *2024 Conference on Information Communications Technology and Society (ICTAS)*. Blue Waters Hotel, Durban. South Africa. March 2024.

Salamntu, T.P.L. and Mbengo, L.Q.
Salamntu, T.P.L. and **Mbengo, L.Q.** Towards Understanding the Hindering Factors of Business Process Management Adoption in State-Owned Enterprises: A Scoping Review. *2024 Conference on Information Communications Technology and Society (ICTAS)*. Blue Waters Hotel, Durban. South Africa. March 2024.

Salamntu, T.P.L. and Msayi, M.
Salamntu, T.P.L. and **Msayi, M.** Understanding the Benefits of Deep Learning in Drug Discovery: A Scoping Review. *2024 Conference on Information Communications Technology and Society (ICTAS)*. Blue Waters Hotel, Durban. South Africa. March 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Foster, G.
Kluyts, H.L., **Foster, G.**, Steyl, C., Duvenhage, H., Orre, C.J. and Chew, M. Enhancing a Digital Health Platform to Improve Patient Engagement for Perioperative Information Exchange with Clinical Service Providers. *SASUF Research and Innovation Week 2024 - Sustainability Forum*. Lund University, Lund. Sweden. May 2024.

Salamntu, T.P.L.
Salamntu, T.P.L., Rosman, M.R.M. and Razlan, M.A.A. Learning Management System (LMS) Quality Metrics: A Case Study in Malaysian Higher Learning Institution. *International Conference on Management, Informatics, and Social Sciences.* Virtual, Virtual. Malaysia. September 2024.

Salamntu, T.P.L. and Makamba, V.
Salamntu, T.P.L. and **Makamba, V.** Understanding the organisational cultural elements that impede the success of a Business Process Management (BPM) in South African State-Owned Enterprises (SOEs): A Scoping Review. *International Conference on Management, Informatics, and Social Sciences*. Virtual, Virtual. South Africa. September 2024.

Salamntu, T.P.L. and Mkhize, L.A.
Salamntu, T.P.L. and **Mkhize, L.A.** The benefits of Enterprise Content Management (ECM) system to manage content in Higher Education Institution: A scoping review. *International Conference on Management, Informatics, and Social Sciences.* Virtual, Virtual. Malaysia. September 2024.

SCHOOL OF

School of Journalism and Media Studies



Dr Jeanne du Toit

Head of School

Photo: Jackie Grove

Introduction

The year 2024 marked a transformative chapter for the School of Journalism and Media Studies (JMS), characterised by an unprecedented surge in scholarly activity, innovation, and global engagement. With a record-breaking volume of research outputs, the School demonstrated its commitment to fostering a vibrant research culture that bridges critical inquiry with societal relevance.

Staff members, Postdoctoral Fellows, and Postgraduate students alike advanced impactful studies, contributing to urgent debates spanning media literacy, digital inequalities, digital methods, decoloniality, media histories, youth digital lifeworlds, disability and inclusion, misinformation, and the evolving intersections of media and AI. This year also saw JMS scholars invited to and actively participating in prominent national and international fora – from keynote addresses and distinguished fellowships in the USA and Europe to panel leadership at regional conferences and academic summits across South Africa, Zimbabwe, USA, Germany, Portugal, and Australia. Such engagements not only underscored the School's growing influence within academic and policy circles but also reaffirmed its role in shaping globally relevant African scholarship rooted in context, care, and critique. Complementing these achievements was a rich tapestry of peer-reviewed publications, creative outputs, book chapters, monographs, edited volumes, and public-facing dialogues – including podcasts and community workshops, that brought research into conversation with pressing societal issues. These efforts contributed substantially to Rhodes University's 120th anniversary celebrations, reflecting JMS's intellectual vitality and commitment to transformation.

Postgraduates / Graduations

The School of Journalism and Media Studies graduated thirty-four (34) Bachelor of Arts, forty-two (42) Bachelor of Journalism, eight (8) Bachelor of Social Science, six (6) Postgraduate Diploma in Journalism, seven (7) Postgraduate Diploma in Media Management (part-time), five (5) Honours, two (2) Bachelor of Social Science (Hons), one (1) Postgraduate Diploma in Economics Journalism, and one (1) PhD student.

Distinguished Visitors / International Visits

Dalvit, L.

Dalvit, L. Visiting Professor in the Department of Sociology and Social Research at the University of Trento (Italy). March-August 2024.

Dalvit, L. Guest lecture titled "Why care about disability? Critical reflections on digital inclusion, inequality and invisibility" for staff and Postgraduate students in the Department of Information Engineering and Computer Science at the University of Trento (Italy). 14 May 2024.

Dalvit, L. Guest lecture titled "The lost keys and the lamplight: absences and methodological challenges in



JMS staff and Zikhona Tshona, keynote speaker at the Annual JMS Assembly.

Photo: School of Journalism and Media Studies

researching online (self) representations of people with disabilities in South Africa" for Postgraduate students in the Department of Sociology and Social Research at the University of Trento (Italy). 06 May 2024

Dalvit, L. International seminar titled "Digital society and disability: Research directions from the Global North and South", in collaboration with Prof David Pettinicchio of the University of Toronto (Canada), for staff and Post-graduate students in the Department of Communication and Social Research at La Sapienza University of Rome (Italy). 24 April 2024.

Uzuegbunam, C.E.

Uzuegbunam, C.E. Invited Discussant (in person): African Studies Association Annual Meeting/Conference, Global Africa, 12-14 December 2024, Marriott Downtown Magnificent Mile, Chicago, Illinois, USA.

Uzuegbunam, C.E. (2024): Invited as CCNY-ASA Returning Fellow (in person): Carnegie Corporation of New York Fellowship in partnership with African Studies Association (ASA), Chicago, Illinois, USA.

Uzuegbunam, C.E. (2024): Guest Lecturer (virtual): "Digital Self Representation" for Master's in Psychology Students, Academic Institute for Higher Education (AIHE), Germany.

Uzuegbunam, C.E. (2024) Guest Seminar Lecturer (virtual): "Researching children and young people's digital lifeworlds in African contexts: A missed opportunity?" Centre for Communication, Media, and Society, University of Kwazulu-Natal, 14 August.

Uzuegbunam, C.E. (2024): Keynote Speaker (hybrid): "Information Disorder in African contexts: Towards an Agenda for Critical Media Literacies". Hybrid Workshop on Media Literacy from an International Perspective, sponsored by Cornell University's Institute for African Development, Latin American & Caribbean Studies, etc., with funds from US Dept of Education, 4 June.

Participating in prominent national and international fora not only underscored the **School's growing influence within academic and policy circles** but also reaffirmed its role in shaping globally relevant African scholarship rooted in context, care, and critique.

Significant Research Aligned Events

Uzuegbunam, C.E.

Uzuegbunam, C.E. Awarded the Michael Haley Grant for the 74th Annual International Communication Association conference in Australia.

Uzuegbunam, C.E. Awarded the Esteemed Fellowship Recognition Award by the Carnegie Corporation of New York, Marriott Magnificent Mile, Chicago, Illinois, USA.

Uzuegbunam, C.E. Received a Y2 Rating by the National Research Foundation of South Africa.

Uzuegbunam, C.E. Featured as African Male Researcher of the Month (February), by *African Researchers Magazine*, United Kingdom.

Andrew W. Mellon Foundation funded Project "Media and Social Belonging: Probing Coloniality and Decoloniality"

Principal Investigator: Professor Anthea Garman



In 2024, the School continued with the Andrew W. Mellon Foundation funded project that began in 2018 and made substantial progress in its various projects:

Digital Material Culture Project – Phase 2

TEAM: Dr Chikezie E. Uzuegbunam (team leader), Associate Professor Priscilla Boshoff, Dr Alette Schoon, and Postdoctoral Fellows Dr Nonhlanhla Ndlovu and Dr Bimbo Fafowora. Location: Riebeek East, rural town near Makhanda.

FOCUS: Youth, mobile media, and digital practices in hyperlocal contexts.

METHODS: Mobile Diary, Photovoice, Walkthrough Interviews.

OUTCOMES: Conference presentations (IAMCR and SACOMM), immersive writing retreats, and a published journal article.

Digital Media Methods MOOC and Handbook

LEAD: Dr Alette Schoon.

COLLABORATORS: Digital Humanities Hub at Rhodes, DHASA, University of Eswatini.

OUTPUTS: Six (6) prototype research tools from a Hackathon; ongoing development of training modules and a handbook for African media educators.

Book on African Creative Digital Cultures

TEAM: Associate Professor Priscilla Boshoff, Dr Bimbo Fafowora and Dr Chikezie E. Uzuegbunam.

PROGRESS: Sixty-four (64) proposals received; thirty-two (32) accepted for final publication. Emerald Publishers expressed interest.

Black Ink Film Project

PHASE 1: Creation of nine dramatized video stories on the 19th-century Black press.

PHASE 2: Filming of a documentary road trip featuring three academics exploring sites and archives related to Black journalism history.

GOAL: Engaging journalism students with decolonial media histories via phenomenological storytelling.

TEAM: Dr Alette Schoon and Dr Taryn de Vega of Rhodes JMS, in association with Dr Nkululeko Sibanda of Drama Department and his third-year drama class, as well as Dr Bulelwa Nosilela (African Languages) and Sanele Ntshingana (School of Languages).

Digitisation of Newspaper Press Union (NPU) Archive

SCOPE: 5,000 pages digitised, including 250 historical bulletins (1920–1959).

SIGNIFICANCE: Illuminates media-state relations during apartheid, enabling scholarly access to previously obscure records.

Bodymapping Digital Death Workshop

FACILITATOR: PhD candidate Robyn Perros.

FOCUS: Facebook death practices in Eastern Cape through arts-based research.

OUTCOME: Six (6) life-sized bodymaps now on permanent display, contributing to digital death studies and embodied African research methods.

School of Journalism and Media Studies Publications

Books/Chapters/Monographs

Aiseng, K.M.

Aiseng, K.M. (2024) *The Sociolinguistics of South African Television Language Ideologies in Selected Case Studies*. Switzerland: Palgrave Macmillan. ISBN: 9783031549144.

Aiseng, K.M. (2024) Language Revitalisation and Community Broad casting in South Africa: A Case of Vaaltar FM. In: Nkoala, S. and Motsaathebe, G. (eds.). *100 Years of Radio in South Africa, Volume 2*. Cham: Palgrave Macmillan. p.25-46. ISBN: 9783031407055.

Aiseng, K.M. (2024) Women and self-representation in South Africa's Twitter. In: Mpofu, S. and Aiseng, K.M. (eds.). *Social Media and Gender in Africa: Discourses on Power and Politics of Everyday Life*. Plymouth UK: Lexington Books. p.1-352. ISBN: 9781666948028.

Aiseng, K.M. and **Mamase, Z.** (2024) Public health communication and language policy at Rhodes University during the COVID-19 Pandemic. In: *Public Health Communication Challenges to Minority and Indigenous Communities*. USA: IGI Global. p.130-142. ISBN: 9798369306246.

Aiseng, K.M. (2024) Decolonizing Journalism Education in South Africa. In: Oyedemi, T. and Smith, R. (eds.). *Media in Africa: Theory, Critique, and Industry*. London: Routledge. p.71-88. ISBN: 9781032392394.

Aiseng, K.M. (2024) The Economic Freedom Fighters and politics of populism: enhancing political participation, or a threat to democracy. In: Tshitshonga, N. and Tshabangu, I. (eds.). *Democratization of Africa and its Impact on the Global Economy*. USA: IGI Global. p.373-393. ISBN: 9798369304778.

Aiseng, K.M. and Fadipe, I.A. (ed.) (2024) *Public Health Communication Challenges to Minority and Indigenous Communities*. USA: IGI Global. ISBN: 9798369306253.

Aiseng, K.M., Fadipe, I.A. and Mpofu, P. (ed.) (2024) *Political Economy of Contemporary African Popular Culture: The Political Interplay*. Plymouth UK: Lexington Books. ISBN: 9781666955668.

Boshoff, P., Olivier, J.E. and Dalvit, L.

Boshoff, P., **Olivier, J.E.** and **Dalvit, L.** (2024) Murders of gay men in South Africa. An analysis of #justice for... hashtags. In: Mpofu, S. and Aiseng, K.M. (eds.). *Social Media and Gender in Africa: Discourses on Power and Politics of Everyday Life*. Plymouth UK: Lexington Books. p.195-209. ISBN: 9781666948028.

Dalvit, L.

Dalvit, L. (2024). "The Hidden Colonialities of Mobile Communication: Phone Uses by Women in a South African Rural Community". In Pei, X., Malhotra, P. and Ling, R. (Eds). *Under-the-radar Mobile Communication and Women's Agency.* Routledge. p. 24–34. ISBN: 978-1-003-30419-7.

Quin, L. and **Dalvit, L.** (2024). "The Racial Other: The Social Media Experience of Mixed-Race South Africans". In Gonçalves Lind, A., Paula Pinto, A. and Lambert, D. (Eds.) *The Process of Becoming Other in the Classical and Contemporary World: Philosophical, Cultural, and Humanistic Perspectives on Communication Across Difference.* Cham: Springer Nature Switzerland. p. 291–306. ISBN: 9783031623943.

McBrown, A. and **Dalvit, L.** (2024). "Othering, Afrophobia and Coloniality on Black South African Twitter". In Oliveira Martins, C., Ramos Villar, C. and Graziani, M. (Eds.) *Otherness in Literary and Intercultural Communication: Crossing Borders, Crossing Cultures.* Cham: Springer Nature Switzerland p. 201–215. ISBN: 978-3-031-60977-0.

Battisti, F. and **Dalvit, L.** (2024). "Exploring Methodological Challenges of Researching Disability and Social Media in South Africa". In Maiello, G. and Msullo, G. (Eds.) *Digital challenges and Innovative frontiers for social research.* McGraw Hill. p. 181–206. ISBN: 9788838613517.

Mukurunge, T. and **Dalvit, L.** (2024). "Online protests and government countermeasures in Zimbabwe: a decolonial perspective". In Tshuma, L., Mpofu, S., Mastilele, T. and Msimanga, M. (Eds) *Media, social movements and protest cultures in Africa.* Rowman and Littlefield. ISBN: 978-1-66697-013-5.

Fafowora, B.L.

Fafowora, B. L. (2024). Social media and the weaponisation of fake news: The Case of EndSARS protest. In Salawu, B., Amenaghawon, F., Okudolo, I.T.P., and Hove, M.L. (eds). *Social Media, Misinformation and Disinformation Studies and Perspectives from Africa.* p. 221-245, Ibadan: University Press Plc. ISBN: 9769787930250.



JMS colleagues attending the SACOMM conference held at Stellenbosch University in September 2024: Dr Taryn De Vega (third from left), Dr Quatro Mgogo (middle), Dr Chikezie Uzuegbunam (far right), Professor Anthea Garman (third from right), and Mr Max Masuku, PG student (second from right).

Photo: School of Journalism and Media Studies



JMS students covering an event on campus.
Photo: School of Journalism and Media Studies

Fafowora, B.L. (2024). Women, Violence, and Social Activism: From Aba Women's Protest to #EndSARS Protests. In: Sanni, J.S., Villet, C.M. (eds) *Philosophy of Violence: A Multidisciplinary Perspective.* p.95-115. Springer, Cham. ISBN: 9783031558801.

Uzuegbunam, C.E.
Uzuegbunam, C.E. (2024) *Children and Young Peoples Digital Lifeworld's: Domestication, Mediation, and Agency*. Switzerland: Palgrave Macmillan. ISBN: 9783031513022.

Uzuegbunam, C.E. (2024) "It empowers young participants to have control over how they represent their lives and communities": Perspectives on the ethical conundrums of decolonial research. In: Castro, T.S., de Carvalho, M.J.L. and Brites, M.J. (eds.). *Let's Talk about Ethics in Research with Young People: What Nobody Shared Online Until now*. Lisbon, Portugal: EUL - Lusophone University Editions. p.36-44. ISBN: 9789897572982.

Other Publications

Garman, A.
Garman, A. (2024). In: Finlay, A. (ed.). *Promoting Excellence in Journalism Education in Africa (A UNESCO initiative to set and implement standards for quality journalism education 2022-2024).* France: UNESCO.

Dalvit, L.
Battisti, F., and **Dalvit, L.** (2024). "#disabilitySouthAfrica: critical reflections on TikTok". In Culturas, Ativismos e Mudanças Culturais (pp. 201-210). Centro de Línguas, Literaturas e Culturas-CLLC.

Uzuegbunam, C.E.
Uzuegbunam, C.E. (2024). "Ethical Conundrums of Decolonial Research" Podcast episode, *YouNDigital – Young People, News, and Digital Citizenship*. Universidade Lusófona, Portugal. https://open.spotify.com/episode/6kOQeXjcwYzHyrSJFn4bfq

Peer Reviewed Subsidy-Earning Journal Research Publications

Adjin-Tettey, T.
Adjin-Tettey, T. and *et al,* (2024) From the Classroom to the African Newsroom: How Journalism Education Can Bridge the Gap between the Classroom and the Shrinking Newsroom. *African Journalism Studies*. 45 (3). p.178-195.

Adjin-Tettey, T., Amenaghawon, F., Adjin-Tettey, T.D. and *et al,* (2024) Countering the threats of dis/misinformation: Fact-checking practices of students of two universities in West Africa. *Online Journal of Communication and Media Technologies*. 14 (1). p.1-14.

Aiseng, K.M.
Aiseng, K.M. (2024) Indigenous African Language Media: Practices and Processes. *South African Journal of African Languages*. 44 (2). p.203-205.

Aiseng, K.M. (2024) Black Twitter and Digital Counter-publics in South Africa. *Studies in Media and Communication*. 12 (2). p.302-320.

Aiseng, K.M. (2024) Challenges and opportunities of Facebook during bereavement: experiences from Taung in South Africa. *Frontiers in Communication*. 9 (1). p.1-11.

Muringa, T.P., Sanele, G.J. and **Aiseng, K.M.** (2024) "We are not Ready for a 'she' President: Navigating Media Framing of Women Presidential Hopefuls. *Agenda*. 2024 (2024). p.1-18.

Khetoa, S., **Aiseng, K.M.**, Theledi, K. and Motinyane, M. (2024) Editorial: The centralization and racialization of language policy: implications for the below. *Frontiers in Communication*. 9 (2024). p.1-11.

Dalvit, L.
Dalvit, L. (2024) Decolonize How? Experiences from a master's Course in Digital Media at a South African University. *Journal of Ethnic and Cultural Studies*. 11 (5). p.193-210.

Dugmore, H.
Dugmore, H. (2024) Valorizing Credibility: Trust as Paradigm and Revenue Repair in South African News Organizations 2012?2022. *Global Perspectives*. 5 (1). p.1-11.

Garman, A.
Garman, A. (2024) Tropes have fangs: Elsa Dutton, 1883, 'Going Native', Adaptive Whiteness and Trope Resilience. *Journal of Literary Studies*. 40 (0). p.1.

Adjin-Tettey, T.D. and **Garman, A.** (2024) Navigating COVID-19: Non-Government Actors' Communication Interventions in South Africa. *Communicatio.* 50 (1). p.140-162.

Ndlovu, N.
Tshuma, B.B. and **Ndlovu, N.** (2024) Investigating the reception of mediated rape content by We the Future female writers in Zimbabwe. *Feminist Media Studies*. 11 (2024). p.1-17.

Rennie, G.
Rennie, G. "Patrick". In *Multilingual Margins: A Journal of Multilingualism from the Periphery*. Edited by Brown, D and Krog, A. Vol. 10, no. 1, 59-66, April 2024.

https://www.epubs.ac.za/index.php/mm/article/view/2181.
Rennie, G. "Five Hundred Grams". In *The Last Time I Lived Anywhere Real - Stories From Aerial 1998-2019*. Aerial Publishing: May 2024, 70.

Uzuegbunam, C.E.
Uzuegbunam, C.E. (2024) The Political Philosophy of AI: An Introduction. *International Journal of Communication*. 18 (2024). p.1-3.

Uzuegbunam, C.E. (2024) "Perceptions and practices of young people regarding COVID-19 health misinformation and the underlying interdependencies". *Cultures of Science*. 7(2_suppl), 87-106.

Peer-reviewed Subsidy-Earning Proceedings

Dalvit, L.
Dalvit, L. Fostering Exploratory Learning In A Critical Digital Media Undergraduate Course At A South African University. *21st International Conference on Cognition and Exploratory Learning in the Digital Age*. Celda, Zagreb. Croatia. October 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Boshoff, P.
Boshoff, P. The mysteries of power: gender, popular culture and the decolonial turn. *DUT Annual Research Conference 2024. Harmony in crisis: Critical Discussions towards social justice*. Capital Pearls Hotel, Durban. South Africa. September 2024.

Boshoff, P. Scandal! The Thabo Bester Saga. *SACOMM*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Boshoff, P., Uzuegbunam, C.E., Fafowora, B.L., Ndlovu, N. and Schoon, A.
Boshoff, P., **Uzuegbunam, C.E.**, **Fafowora, B.L.**, **Ndlovu, N.** and **Schoon, A.** Young people's digital and social lives in an unequal, hyperlocal context: A decolonial-exploratory study of youth in Makhanda, South Africa. *IAMCR*. Te Pae Christchurch Convention Centre, Christchurch. New Zealand. June 2024.

Dalvit, L.
Dalvit, L. (2024). "Entre discapacidad y colonialidad: problematización de las narrativas en línea sobre la crisis de salud mental en Sudáfrica" (Between disability and decoloniality: Problematising online narratives of the mental health crisis in South Africa). Paper presented. *4th INTRA-COM Conference.* 3–5 December 2024, Santa Cruz de Tenerife (Spain).

Dalvit, L. (2024). "Three ethical dilemmas pertaining to disability in the online domain: examples from South Africa". Paper presented. *8th International Congress on Media Ethics.* 9–12 July 2024, Coimbra (Portugal).

Dalvit, L. (2024). "Losing privileges, acquiring rights: digital communication by and about people who became blind". Virtual Presentation. *74th International Communication Association (ICA) Conference.* 20–24 June 2024, Gold Coast (Australia).

Brokensha, S., Weinberg, M., and **Dalvit, L.** (2024). "Establishing a shared understanding of the challenges of data and AI". Panel participation. *Rhodes University School of Journalism and Media Studies' Journalism Summit.* 4-6 April 2024, Grahamstown (South Africa).

Fafowora, B. L.
Fafowora, B. L. (2024). Disability, Media Literacy, and digital inclusion: A qualitative exploration of experiences of people with disability in Joza Township. Paper presented. *International Communication Association (ICA) in Africa Pre-conference.* Gold Coast, Australia 20 – 24 June 2024.

Fafowora B. L. and Ndlovu, N.
Fafowora, B. L. and **Ndlovu, N.** (2024). Does Meta AI Matter? An exploration of the emerging relationships between WhatsApp users and the Meta chatbot. Paper presented. *South African Communication Association (SACOMM) Conference.* Stellenbosch, South Africa, 9–13 September 2024.

Fafowora, B. L. and **Ndlovu, N.** (2024). Buddy or bother: exploring meaning-making and relational gratification in human-chatbot interactions. Paper presented. *Annual International Communication and Information Science (ICIS) Conference.* Bulawayo, Zimbabwe, 12–13 September 2024.

Garman, A.
Garman, A. Listening to and with the Body. *Southern African Communication Association*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Garman, A. Lovesong to and from the South. Keynote. *International Association of Literary Journalism Studies*. Macquarie University, Sydney. Australia. May 2024.

Garman, A. Heroes and fathers, and infinite games: Darrel Bristow-Bovey's exploration of the stories (and theories) we live by. *International Association of Literary Journalism Studies*. Macquarie University, Sydney. Australia. May 2024.

Garman, A. The use of the body for protest in the public sphere. *International Communication Association*. International Convention Centre, Gold Coast. Australia. June 2024.

Garman, A. Journalism as a public good, panel on Exploring a new path for journalism in South Africa. *Southern African Communication Association*. Stellenbosch University, Stellenbosch. South Arica. September 2024.

Garman, A. and Sethusa, P. Journalism education in Africa: a review of excellence in practice. *Southern Africa Communications Association*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Isaacs De Vega, T.J.
Isaacs De Vega, T.J. Media accountability mechanisms in South Africa. *South African Communications Association*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Isaacs De Vega, T.J. Media Accountability Mechanisms: A model for South African media councils in the digital age. Online Symposium Revisiting Media Models: Global Perspectives. University of Sterling, Stirling, Scotland. April 2024.

Isaacs De Vega, T.J. Media Accountability Mechanisms and the future of citizen participation in South Africa. University Capacity and Development Programme Colloquium. October 2024.

Isaacs De Vega, T.J., Garman, A., Uzuegbunam, C.E. and Schoon, A.
Isaacs De Vega, T.J., **Garman, A.**, **Uzuegbunam, C.E.** and **Schoon, A.** Exploring a new path for journalism in South Africa. *South African Communications Association Conference*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Price, L.
Price, L. Retroduction, pleasure and the reality principle: A transcendental realist theory of humour and its implications for research and emancipatory pedagogy. *International Association of Critical Realism Annual Conference*. n/a, Warwick. UK. July 2024.

Schoon, A. and Uzuegbunam, C.E.
Smit, A., Bosch, T., **Schoon, A.** and **Uzuegbunam, C.E.** Generative AI in South African Higher Education: Insights from Academic Staff. *2024: Annual Conference of the South African Communications Association (SACOMM), Politics of the Presen*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

Uzuegbunam, C.E.
Uzuegbunam, C.E. Precarious agency and the power of children with digital technology. *International conference of the International Communication Association (ICA), Communication & Global Human Rights*. Gold Coast Convention & Exhibition Centre, Gold Coast, Queensland. Australia. June 2024.

Uzuegbunam, C.E. Dialogical-Conversation as critical pedagogical tool: Experiences from second- and third-year modules in media studies. *Conference/Showcase of the Centre for Higher Education, Research, Teaching and Learning (CHERTL), Rhodes University*. Eden Grove Blue, Grahamstown. South Africa. November 2024.

Uzuegbunam, C.E., Fafowora, B.L., Ndlovu, N., Schoon, A. and Boshoff, P.
Uzuegbunam, C.E., **Fafowora, B.L.**, **Ndlovu, N.**, **Schoon, A.** and **Boshoff, P.** Youth, Digitality and Sociality in South Africa. *SACOMM*. Stellenbosch University, Stellenbosch. South Africa. September 2024.

FACULTY OF Law

Introduction

The year 2024 was a vibrant and productive one for research in the Faculty of Law. Both staff and students demonstrated excellence across various areas of scholarship. Academic staff actively participated in national and international conferences and made significant contributions to scholarly literature through textbooks, book chapters, and a wide range of journal articles.



Professor Michelle Karels
Faculty Dean

Photo: Jackie Grove

We hosted several interesting research seminars on a variety of topics, including presentations on *Research Visibility; The cab rank rule; Walking the tightrope: De-identification in technology enhanced pedagogy; Litigating budget decisions: a case study of Makhanda Circle of Unity; Theft of services; The offence of sexual acts with a corpse in light of the requirement of intention; Ethics in cause lawyering; Relationship-centred lawyering and its influence on the practice, teaching and assessment of consultation skills.*

We also hosted two (2) successful Research Pomodoro sessions during the course of the year, where staff could spend some quiet time focusing on research.

Postgraduates / Graduations

Two of our LLM students and Teaching Assistants at the Faculty presented papers at the Rhodes Postgraduate Conference, held on 13 - 14 September 2024. **Ms Blessings Chinganga** presented on: *What is the difference between progressively realisable and immediately realisable socio-economic rights?*

Ms Caitlin Stoltz's paper was on: *Enhancing workplace harmony: Severing the link between harassment and unfair discrimination.*

The Faculty also congratulated one of our LLM students and Teaching Assistants in the Faculty, Ms Caitlin Stoltz, who has been announced as the runner-up in the LLM category of the South African Law Reform Commission's National Legal Essay Writing Competition. The topic of her essay was: *Enhancing Workplace Harmony: Severing the Link Between Harassment and Unfair Discrimination.* The South African Law Reform Commission (SALRC) is engaging young legal minds in generating innovative ideas on issues of law reform. The competition aims to honour a range of South African legal achievers who have dedicated their lives to the advancement of our constitutional democracy. The competition is currently dedicated to the memory of the late Chief Justice Pius Nkonzo Langa, who served South Africa with dignity and distinction. Ms Stoltz attended an award ceremony with the Department of Justice and Constitutional Development dignitaries at the end of September 2024.

Distinguished Visitors / International Visits

On Tuesday, 27 February 2024, Visiting Professor and Judge of Appeal Nambitha Dambuza delivered a Public Lecture at the Faculty of Law with a paper titled *The Riddle of Customary Law and Land Tenure in South Africa: Allocation of Land by Traditional Leaders Pending Reform.*

On April 16 2024, the Faculty hosted a Public Lecture by Dr Nomalanga Mashinini from WITS University on: *Regulating Reality: Can Legislation stop Deepfakes from skewing Elections? A deconstruction of the Films and Publications Board Notice.* A cheese and wine function followed it in the Law Faculty quad.

Pat Ellis SC (co-author of the book *The South African Legal Practitioner*) gave a guest lecture to the final year Legal Ethics and Professional Responsibility class on 11 September 2024.

Judge Azhar Cachalia, chairperson of Freedom Under Law (FUL) and retired Supreme Court of Appeal judge, delivered a public lecture at Rhodes University on Tuesday, 6 August 2024, entitled: *Is the Judicial Service Commission "fit for purpose?" — A reflection over 15 years.*

Significant Research Aligned Events

The Faculty congratulated our colleague, **Dr Yolani Ndamase**, who graduated with her PhD from UCT on Tuesday, 3 September 2024. The title of her thesis was: *Reforming the Models of Competition Law and addressing Intersectional Discrimination in South Africa.* Her supervisor was **Emeritus Professor Dennis Davis**.

Academic staff actively participated in national and international conferences and **made significant contributions to scholarly literature** through textbooks, book chapters, and a wide range of journal articles.



Dr Yolani Ndamase.
Photo: Faculty of Law

Faculty of Law Publications



Public Lecture by Judge Dambuza.
Photo: Faculty of Law

Books/Chapters/Monographs

Lubaale, E.C.

Lubaale, E.C. (2024) Elimination of discrimination against women. In: Rudman, A., Musembi, C.N. and Makunya, T.M. (eds.). *The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa: A Commentary*. Pretoria: Pretoria University Law Press. p.56-73. ISBN: 9781776411788.

Lubaale, E.C. and Akia, B. (2024) Sexual and gender-based violence in Cabo Delgado: implications for international humanitarian law and international criminal law. In: Svicevic, M. and Bradley, M.M. (eds.). *Mozambique's Calbo Delgao Conflict*. London: Routledge. p.121-138. ISBN: 9781032329895.

Lubaale, E.C. (2024) Maternal Health Rights of Refugee Women in Uganda: Confronting the Multiple Layers of Vulnerability. In: Durojaye, E., Nanima, R.D., Idowu-Ojo, A. and Mirugi-Mukundi, G. (eds.). *Realising Socio-Economic Rights of Refugees and Asylum Seekers in Africa*. Switzerland: Springer International Publishing. p.213-246. ISBN: 9783031 165504.

Van Coller, H.

Van Coller, H. (2024) Administrative Law. In: Van de Vijver, L. and Tait, M. (eds.): p.47-80. ISBN: 9781485151630

Concerts, Exhibitions, Performances, Workshops, Events

Dhlamini, P.T.

Van Heerden, S.J.A., **Lotz-Sisitka, H.**, **Maqwelane, L.**, Castel-Branco, R. and **Dhlamini, P.T.** JET Skills, Social Protection, and Modelling Updates. Just Transition Consortium for Research on Employment and Work (PCC Project). *JET Skills, Social Protection, and Modelling Updates*. Wits University, Johannesburg. South Africa. 15 - 16 July 2024.



Public lecture Dr Nomalanga Mashinini.
Photo: Faculty of Law



Public lecture by Judge Cachalia. Photo: Faculty of Law

Peer Reviewed Subsidy-Earning Journal Research Publications

Katiyatiya, L.M.
Katiyatiya, L.M. and Lubisi, N. (2024) The current social protection discourse, gig economy within the advent of COVID-19: some emerging legal arguments. *Labor History*. 66 (1). p.1-13.

Lubaale, E.C.
Okeyo, J.R.A. and **Lubaale, E.C.** (2024) Beyond Legality: The Historical Disregard of the Principle of Legality and its Impact on Forced Marriage Prosecution in International Criminal Law. *Fundamina: a Journal of Legal History*. 30 (1). p.68-115.

Malahleka, M.
Malahleka, M. (2024) The Problem of Trans-Border Information Flows in the Protection of Personal Information. *Potchefstroom Electronic Law Journal*. 27 (1). p.1-40.

Mavindidze, T.N.
Mavindidze, T.N. (2024) "The Inadequately Married:" Extending the Putative Marriage Doctrine to Assist Vulnerable Parties in Invalid Customary Marriages. *Journal of Law, Society and Development*. 11 (2024). p.1-25.

McConnachie, C.J.C.
McConnachie, C.J.C. (2024) The Right to a Safe Environment, Here and Now. *Constitutional Court Review (CCR)*. 14 (1). p.283-319.

Ncamane, N.
Ncamane, N. (2024) An analysis of informal workers and the coverage of South Africa's Covid-19 Temporary Employee/ Employer Relief Scheme (TERS). *Law, Democracy & Development*. 28 (2024). p.288-311.

Okeyo, J.R.A. and Lubaale, E.C.
Okeyo, J.R.A. and **Lubaale, E.C.** (2024) Should Human-Rights Treaties Define the International Crime of Forced Marriage? *Obiter* 45 (4). p.1-17.

Van Coller, H.
Van Coller, H. (2024) Covenantal Pluralisms Enabling Conditions in South African Context: The Example of Multi-Faith Schools. *Review of Faith & International Affairs*. 22 (4). p.14-26.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Van Coller, H.
Van Coller, H. The role of the state in the selection and discipline of religious leaders in Africa. *Law, Religion, and Leadership in Africa*. Elephant Hills Hotel, Victoria Falls. Zimbabwe. May 2024.

Van Coller, H. Possibilities for Covenantal Pluralism in South Africa. *Freedom of Religion or Belief in a Democracy*. University of Johannesburg, Johannesburg. South Africa. April 2024.

DEPARTMENT OF Linguistics and Applied Language Studies

Introduction

In 2024, the Department of Linguistics and Applied Language Studies demonstrated continued progress toward research development and an enhanced international presence. By actively fostering collaborations with leading international and local scholars such as Dr Eva-Marie Bloom Ström (Gothenburg) and Professor Thera Crane (Helsinki), the Department strengthened its research profile and enriched scholarly exchange. The arrival of new Research Associates and visits from established academics further contributed to a vibrant intellectual community.



Professor Mark De Vos
Head of Department

Photo: Jackie Grove

Our commitment to supporting Postgraduate researchers remained steadfast, highlighted by a successful orientation week and a Postgraduate conference that showcased emerging research and fostered academic engagement. Throughout the year, departmental research seminars provided a research platform, featuring contributions from both internal and visiting scholars.

The Department also maintained a strong national presence. **Mark de Vos's** induction into the PANSALB ENLB marked a significant professional milestone, while **Professor Will Bennett's** participation in the Khoi-San Symposium reflected the Department's growing recognition in community-centred linguistic research. In addition, **Dr Siebörger** continued to publish regular linguistically focused articles in the *Mail & Guardian*, bringing linguistics to a wider audience.



Photo: Chris Marais

The Department **strengthened its research profile and enriched scholarly exchange** and the arrival of new Research Associates and visits from established academics further contributed to a vibrant intellectual community.

Together, these developments reflect a department advancing steadily in its mission to cultivate a supportive, research-rich environment, expand international collaborations, and contribute meaningfully to the field of linguistics.

Distinguished Visitors / International Visits

During 2024, the Department hosted and engaged with several distinguished visitors and scholars. Dr Eva-Marie Bloom Ström (Gothenberg) and Professor Thera Crane (Helsinki) visited the Department, enriching academic exchanges throughout the year.

Vivian de Klerk visited on 9 October to award the Vivian de Klerk Prize (Ling2).

Dr Maxine Schaefer, a Visiting Scholar, delivered a Departmental Research Seminar (DRS) talk, contributing to the Department's research discourse.

Professor Didier Demolin, a departmental Research Associate, adjusted his visit to Terms 3 and 4.

Dylan Nemaramba conducted a benchmarking visit to the Department; he was confirmed as a Research Associate in June 2024.

Michael James was also newly affiliated as a Research Associate during the year.

Research Associates

- Eva-Marie Bloom Ström
- Aaron Braver
- Didier Demolin
- Gbenga Ibileye
- Michael James
- Dylan Nemaramba

Postgraduates / Graduations

The Department held a Postgraduate Orientation Week from 5 - 9 February 2024, welcoming new Postgraduate students and introducing them to departmental resources and expectations. This was followed by a Postgraduate Conference from 26 - 28 August 2024, providing a platform for Postgraduate students to present their research and engage with peers and faculty.

Significant Research Aligned Events

The Department facilitated and participated in several significant research-related activities throughout the year:

Professor Mark de Vos was inducted into the PANSALB English National Lexicography Board (ENLB), marking a notable professional achievement.

The Departmental Research Seminar (DRS) and Departmental Teaching Seminar (DTS) series remained active, featuring notable sessions by **Professor Thera Crane**, **Dr Camilla Christie** (Research Associate), **Dr Maxine Schaefer**, **Professor Didier Demolin**, and **Dr Michael James**.

Professor Will Bennett attended a symposium on Khoi-San matters, held in Cape Town and hosted by the Commission on Khoi-San Matters. Rhodes University was one of five (5) institutions invited for collaboration, reflecting the potential establishment of a dedicated unit for Khoi-San studies and community engagement.

Department of Linguistics and Applied Language Studies Publications

Books/Chapters/Monographs

Simango, S.R.

Simango, S.R. (2024) Causative constructions. In: Marten, L., Hurst-Harosh, E. and Kula, N.C. (eds.). *The Oxford Guide to the Bantu Languages*. p.219-231. ISBN: 9780198808343.

Creative Writing

Sieborger, I.

Sieborger, I. (2024) The EFF exodus and the future of SA. In: *The EFF exodus and the future of SA*. Johannesburg: *Mail & Guardian* print newspaper.

Sieborger, I. (2024) The making and breaking of 'doomsday'. In: *The making and breaking of 'doomsday'*. 20th Ed. Johannesburg: *Mail & Guardian* print newspaper.

Sieborger, I. (2024) The mayor-go-round must stop. In: *The mayor-go-round must stop*. Johannesburg: *Mail & Guardian* print newspaper.

Sieborger, I. (2024) Baby steps towards a brighter future. In: *Baby steps towards a brighter future*. Johannesburg: *Mail & Guardian* print newspaper.

Sieborger, I. (2024) Coalition country: Time for South Africans to talk about our shared future. In: *Coalition country: Time for South Africans to talk about our shared future*. South Africa: *Mail & Guardian* Online Newspaper.

Peer Reviewed Subsidy-Earning Journal Research Publications

Abubakari, H.

Abubakari, H. and Issah, S.A. (2024) Metaphorical Personal Names in Mabia Languages of West Africa. *Languages*. 9 (5). p.1-22.

Adendorff, R.D.

Smith, J. and **Adendorff, R.D.** (2024) Speaking Truth or Power? Issues in Translation of South African Children's Picture Books. *African Journal of Inter/Multidisciplinary Studies*. 6 (1). p.1-12.

Bowles, T.N.

Long, K.A. and **Bowles, T.N.** (2024) No-fee school consistently outperforms Progress in International Reading and Literacy benchmarks: Presenting early grade reading data from a case in Makhanda, Eastern Cape. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-11.

Daries, M.D. and **Bowles, T.N.** (2024) Orthographic knowledge as a predictor of reading and spelling in isiXhosa third graders. *South African Journal of Childhood Education (SAJCE)*. 14 (1). p.1-13.

Christie, C.R.

Christie, C.R. (2024) Altyd? n snaakse woordjie tussen-in: Nama click consonants in post-shift Namaqualand Afrikaans. *Southern African Linguistics and Applied Language Studies*. 43 (X). p.1-11.

Christie, C.R. (2024) Khoekhoe Loanwords in isiXhosa and isiZulu. *Journal of Language Contact*. 17 (2). p.359-396.

Cox, P.S. and Bowles, T.N.

Cox, P.S. and **Bowles, T.N.** (2024) Expanding the neighbourhood watch: Orthographic neighbours in isiXhosa reading and spelling. *Reading & Writing*. 15 (1). p.1-12.

Slater, O.M.

Crane, T.M., Savic, S., **Slater, O.M.** and Bernander, R. (2024) Modal expressions in Xhosa, part I: Necessity. *Africana Linguistica*. 30 (2024). p.39-70.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Sieborger, I.

Sieborger, I. Using constellations to understand political stances: Positioning SA's Democratic Alliance. *Using constellations to understand political stances: Positioning SA's Democratic Alliance*. University of Witwatersrand, Johannesburg. South Africa. January 2024.

DEPARTMENT OF

Literary Studies in English



Professor Anton Krueger
Head of Department

Photo: Jackie Grove

Introduction

In 2024, student numbers in the Department of Literary Studies in English grew by 15%. To enrich the scholarly experience of our expanding student body, we hosted numerous notable academics and authors who offered workshops and seminars for students, as well as research presentations for the Faculty of Humanities. This dynamic research culture was reflected in the accomplishments of our staff.

Out of a relatively small cohort, no fewer than four (4) staff members were invited to give keynote addresses, and two (2) produced special collections, demonstrating the significant role our colleagues play in national and international literary communities.

Professor Lynda Spencer delivered her keynote address "Crime and the City: Creating female sleuths and solving crime in selected novels from South Africa" at the conference *Imagining the Ordinary City* held at the University of Cape Town. **Dr Thando Njovane** gave a keynote titled "Word, Wound, Subject: Policing the Psyche after Colonialism" at *The Colonial Wound and the Practice of Repair* Colloquium at the University of Stellenbosch. **Emeritus Professor Dan Wylie** gave the keynote address "Webs / A story; a posse of perspectives; a picture; a poem; and the prospect for hope," at the *20th Ecology, Literature and Heritage* Conference held at Amazwi, a conference which he inaugurated two decades ago. **Professor Sam Naidu** was also invited to deliver a keynote in 2025, which will feature in next year's report.

Two special publications highlighted members of our Department's contributions as editors and collaborators. **Professor Naidu** served as the guest editor of a Special Issue of the international journal *Clues - A Journal of Detection*, and **Professor Aretha Phiri** was the guest editor of the Routledge volume *Reframing the Black Atlantic: African, Diasporic, Queer and Feminist Perspectives*, which commemorated the thirtieth anniversary of Paul Gilroy's seminal text, *The Black Atlantic: Modernity and Double Consciousness*.

Staff, Associates and Postdoctoral Fellows also presented papers nationally, as well as in Italy, the USA, Germany, Australia, India, Kenya, Uganda and Sweden.

Postgraduates / Graduations

Nine (9) Honours students graduated in 2024. While we did not have any MAs or PhDs graduating this year, we found support for three (3) PhD candidates who had previously suspended their studies, ensuring that they could return to complete their degrees. Four (4) Postgraduates were in their final year of study, and we also gained a number of new MA students and PhD candidates, ensuring our commitment to facilitating quality Postgraduate research.



Literary Studies Honours students on their 2024 Karoo Trip.
Photo: Department of Literary Studies in English

To enrich the scholarly experience of our expanding student body, we hosted numerous notable academics and authors who offered workshops and seminars for students, as well as research presentations.

Distinguished Visitors / International Visits

We welcomed East Cape poet, Mxolisi Nyezwa, who presented a reading of his new work *Bhlawa's Inconsolable Spirits*. Mxolisi performed his work for first year students, gave a departmental reading, and led a memoir-writing workshop for Postgraduates. Local poet, Mthunzi Mbungwana, also offered a lively research seminar "Ukufikisana: Coming for Pleasure", on the writing of her first collection of poetry, *Unam Wena*.

We also welcomed longstanding Senior Research Associate Dr Edgar Nabutanyi from Makerere University, Kampala, who joined us for two (2) research residencies and offered a seminar during his stay. Other international guests who presented research seminars, readings and workshops for students include Professor Tsitsi Jaiji, Dr Dominic O'Key, Professor Kanika Batra, Professor Marzia Milazzo, and former student, Kathleen Samson.

A particular highlight was the visit of internationally renowned novelist Tsitsi Dangarembga, who discussed her work on a panel chaired by **Professor Lynda Spencer**, which also included Postdoctoral Fellow **Dr Joseph Kwanya**. The venue overflowed as enthusiastic students clamoured to see the acclaimed novelist and filmmaker. Students were especially eager to engage her on her most famous novel, Nervous Conditions, one of their prescribed texts.

Other Significant Research Aligned Events

Professor Anton Krueger performed extracts from his latest book of poetry, *Everybody is a Bridge*, at various events during the year, including the Bathurst Book Fair, the Richmond Book Festival, Exclusive Books in Pretoria, and on the Main programme of the National Arts Festival, where he performed extracts from the text accompanied by jazz legend Paul Hanmer.

Dr Njovane served as respondent at two major book launches hosted by the Faculty, one featuring guest Hugo Canham and the other, Professor Pedro Tabensky, Head of Allan Gray Centre for Leadership Ethics (AGCLE). Professor Lynda Spencer was a special guest of Uppsala University, Sweden and spent time there from June-August of 2024, also presenting a seminar and contributing towards their departmental research. This year, we also welcomed new Senior Research Associate Dr Brendon Nicholls.

Despite the significant growth in undergraduate numbers and the challenges this posed, our staff and associates continued to produce an excellent range of rigorous, relevant research.

Department of Literary Studies in English Publications

Books/Chapters/Monographs

Krueger, A.
Krueger, A. (2024) Connections Across Remoteness: Inter-Acting in Online Spaces at the South African Virtual National Arts Festivals (2021-2022). In: Igweonu, K. (ed.). *Routledge Handbook of African Theatre and Performance*. London: Routledge. p.201-213. ISBN: 9781032008400.

Nabutanyi, E.F.
Nabutanyi, E.F. (2024) The Trauma of War on Terror in Yvonne Owuor's The Dragonfly Sea. In: *Insidious Trauma in Eastern African and Cultures*. London: Routledge. p.1-12. ISBN: 9781032718552.

Nicholls, B.L.
Nicholls, B.L. (2024) The Möbius Strip as a Theory of Narrative? From Bessie Head's *Early Journalism* to *The Cardinals*. In: Klempe, S.H. and Madill, A. (eds.), *French Psychoanalysis Revisited, Annals of Theoretical Psychology.* 20th Ed. Cham: Springer. P. 1-11. ISBN: 9783031685330.

Nicholls, B.L. (2024) Zimbabwean Decolonialization and Colonial Education: Ubuntu (Hunhu) in Tsitsi and Dangarembga's *The Book of Not*. In: George, S. And Wyatt, J. (eds.). *Experimental Subjectivities in Global Black Women's Writing*. London: Bloomsbury. P. 59-74. ISBN: 9781350383470.

Njovane, T.
Njovane, T. and **Hlengwa, A.** (2024) Transformation beyond the Surface: Race, Power and Young Academics after #RhodesMustFall. In: Schramm, K. and Ndlovu-Gatsheni, S.J. (eds.). *Knowing - Unknowing African Studies at the Crossroads.* Leiden: Brill. p.158-170. ISBN: 9789004701441.

Phiri, A.
Phiri, A. (2024) Introduction: Reframing the Black Atlantic. In: Phiri, A.M.M. (ed.). *Reframing the Black Atlantic.* London: Routledge. p.1-13. ISBN: 9781032725440.

Naidu, S.
Naidu, S. (2024) How black is African Noir?: Defining blackness through crime fiction. In: Phiri, A.M.M. (ed.). *Reframing the Black Atlantic.* London: Routledge. p.1-13. ISBN: 9781032725440.

Concerts, Exhibitions, Performances, Workshops, Events

Krueger, A.
Krueger, A. Presenter. Primo Pensiero, Miglior Pensiero - Workshop serale di scrittura consapevole. *Mindfulness e creativita*. Kushi Ling, Arco. Italy. 18 June 2024.

Krueger, A. Performer. Piano & Poems: Everybody is a Bridge. *National Arts Festival (Main)*. Beethoven Room, Makhanda. South Africa. 26 - 29 June 2024.

Krueger, A. Writer / Reader. Anton Krueger is Off the Wall tonight. *Off the Wall*. Online, Cape Town. South Africa. 13 November 2024.

Krueger, A. Writer / Reader. ...you're always going.... *The Africa Migration Report Poetry Readings and Conversations*. Online / Zoom, Leistester. United Kingdom. 17 October 2024.

Njovane, T.
Tabensky, P. and **Njovane, T.** Speaker. Book Launch of a book recently published by me. *Camus and Fanon on the Algerian Question: An Ethics of Rebellion*. Amazwi, Makhanda. South Africa. 22 May 2024.

Njovane, T. Invited Speaker. Collective Intimacies: Biko and the Existential Black Condition. *CIRCoRe and Centre for Critical and Creative Thought*. Stellenbosch University, Stellenbosch. South Africa. 14 August 2024.

Njovane, T. Invited Speaker. Towards a Politics of Recognition: Biko and Racial Trauma. *CIRCoRe and Centre for Critical and Creative Thought*. Stellenbosch University, Stellenbosch. South Africa. 15 August 2024.

Njovane, T. and **Makandula, S.N.** Respondent. Book Launch. *Hugo Canham's Riotous Deathscapes*. Rhodes University, Makhanda. South Africa. 25 April 2024.

Njovane, T. Respondent. Responding to Olufemi Taiwo's "Against Decolonisation: Africa's Place in the Global Circuit of Ideas. *Annual Theme Lecture by Olufemi Taiwo*. University of Bayreuth, Bayreuth. Germany. 12 December 2024.

Spencer, L.G.
Spencer, L.G. Keynote address. Crime and the city: creating female sleuths and solving crime in selected novels from South Africa. *Imagining the Ordinary City.* University of Cape Town, Cape Town. South Africa. 28 - 29 October 2024.

Spencer, L.G. Presenter. Murder she wrote creating female sleuths and solving crime. *Departmental Research.* Stockholm University, Stockholm. Sweden. 3 June 2024.

Spencer, L.G. Roundtable participant. Makerere University, College of Humanities and Social Sciences. *Archive, Memory and Method from the Global South Colloquium*. Makerere University, Kampala. Uganda. 8 - 9 February 2024.

Spencer, L.G. Mentor. Makerere University, College of Humanities and Social Sciences. *Centre of Excellence in Research, Teaching and Learning CERTL publication peer-reviewing workshop.* Makerere University, Kampala. Uganda. 7 February 2024.

Spencer, L.G. Presenter. All Countries except South Africa. *Looking Back at the Future*. Stellenbosch University, Stellenbosch. South Africa. 23 - 24 May 2024.

Spencer, L.G. Presenter. Ten works of contemporary African literature nobody should miss, and why: *The Textual Worlds of South-Eastern Africa*. University of Southampton, Southampton. England. 6 March 2024.

Creative Writing

Krueger, A.
Krueger, A. (2024) "Seraphine" and "My Sister Sonia". In: *Best New African Poets 10th Anniversary*. Chitungwiza Zimbabwe: Mwanaka Media and Publishing.

Distinguished Visitors

Nabutanyi, E.F.
Dr EF Nabutanyi. Makerere University, Kampala, Uganda. *Research*. January 2024.

Spencer, L.G. and Kwanya, J.M.A.
Spencer, L.G. and **Kwanya, J.M.A.** Tsitsi Dangarembga, Makhanda, South Africa. *Lecture*. May 2024.

International Visits

Spencer, L.G.
Spencer, L.G. Uppsala University, Uppsala, Sweden. *Whispers from Vera*. 2 June - 9 August 2024.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Naidu, S.
Naidu, S. (2024) Ambiguous Female Figures in African Noir: Subversion or Submission? *CLUES - A Journal of Detection* 42 (2). p.85-97.

Peer Reviewed Subsidy-Earning Journal Research Publications

Abubakari, H.
Abubakari, H., Sandow, L. and Asitanga, S.A. (2024) A

structural analysis of personal names in Kusaal. *Language Sciences*. 104 (2024). p.1-14.

Cornwell, D.G.N.
Cornwell, D.G.N. (2024) Revisiting Richard Ford's The Sportswriter. *Critique-Studies in Contemporary Fiction*. 1 (2024). p.1-8.

Helgesson, A.S.
Helgesson, A.S. (2024) A Tale of Two Laureates Nadine Gordimer, J.M. Coetzee and the Swedish Press. *Journal of World Literature*. 9 (1). p.7-23.

Helgesson, A.S. (2024) World Literature and Decolonization. *Journal of Foreign Languages and Cultures*. 8 (1). p.55-67.

Krueger, A.
Krueger, A. (2024) All wounds speak: Performing trauma/witnessing grief. *South African Theatre Journal*. 2024 (1). p.1-10.

Kwanya, J.M.A.
Kwanya, J.M.A. (2024)? We are More Than This: Counter histories and Female Voices in Maaza Mengiste's *The Shadow King*. *Eastern African Literary and Cultural Studies*. 10 (3-4). p.1-17.

McGregor, J.A.
McGregor, J.A. (2024) Suffering and Greatness: Metaphor, Will and Self-reference in The Flying Dutchman. *English Studies in Africa*. 2024 (2024). p.1-13.

Nabutanyi, E.F.
Nabutanyi, E.F. (2024) Innovative register and feminist critique in Mark Behr's *The Smell of Apples*. *Tydskrif vir Letterkunde*. 61 (1). p.16-23.

Nabutanyi, E.F. (2024) The Subversion of Archipelagic Memory in Yvonne Oduor's *The Dragonfly Sea. Eastern African Literary and Cultural Studies*. 10 (2). p.108-121.

Nabutanyi, E.F. (2024) They Did and Taught: The Convergence of Craft and Pedagogy in the Work of Makerere Writer/Scholars. *Mawoza: Journal of the College of Humanities and Social Sciences*. 16 (1). p.7-22.

Okonkwo, G.K.
Okonkwo, G.K. (2024) Childhood Trauma and Remembrance: Weaponised PTSD in Glaydah Namukasa's *The Deadly Ambition*. *Eastern African Literary and Cultural Studies*. 2024 (2024). p.1-20.

Phiri, A.
Phiri, A. (2024) Literature at the Frontier of our Commonwealth. *Literature, Critique, and Empire Today*. 59 (1). p.53-62.

Spencer, L.G.
Spencer, L.G. (2024) "Walk Like a Chameleon": Reflecting on My Teaching Journey at a South African University. *Educare*. 1 (2024). p.192-215.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Barure, W.K.
Barure, W.K. From Oral Tradition to Digital Discourse: The Evolution of Folktales in Zimbabwe. *Forms and Formations of African Literature Conference*. Uppsala University, Uppsala. Sweden. March 2024.

Krueger, A.
Krueger, A. Cultivating Attention Through Literary Engagement: Creating a Mindful Reading Curriculum. *ISCR (International Society for Contemplative Research)*. University of Padua, Padua. Italy. January 2024.

Kwanya, J.M.A.

Kwanya, J.M.A. "Yat Madit": Dilman Dila's Imagination of a Post-dictatorial Uganda. *8th Eskia Colloquium*. Wits University, Johannesburg. South Africa. July 2024.

Kwanya, J.M.A. "Counterfactuals as a Method for Alternative Archiving in Africa". *Archiving Memory and Method from the Global South*. Makerere University, Kampala. Uganda. October 2024.

Phiri, A.
Phiri, A. Literature at the Frontier: A comparative reading of J M Coetzee's *Dusklands* and Damon Galgut's *The Promise*. *Dusklands at 50: An International Conference*. University of Adelaide, Adelaide. Australia. May 2024.



Literary Studies student studies Theo Face Fugard.
Photo: Department of Literary Studies in English

DEPARTMENT OF Management

Introduction

In 2024, the Department of Management continued to strengthen its reputation as a dynamic academic unit. Our commitment to advancing knowledge and addressing issues in management theory and practice remained a defining feature of our activities throughout the year.



Photo: Jackie Grove

Professor Nadine Oosthuizen
Head of Department

The Department placed particular emphasis on producing high-quality, impactful research that not only contributes to academic discourse but also informs and influences industry practices and policy development. Our research agenda has been shaped by the need to respond to business environments, including challenges related to sustainability, digital transformation, leadership, and organisational resilience.

A central priority during the year was the meaningful integration of research into the student learning experience. Postgraduate students participated in a comprehensive research methodology module designed to equip them with essential research skills, critical analytical abilities, and a mindset of independent inquiry. Through this structured support, students were empowered to develop and complete robust, relevant, and innovative treatises and dissertations that addressed real-world management problems.

This focus on cultivating research capacity among students not only enhanced their academic and professional development but also contributed to the Department's growing body of scholarly work. Some of these student research projects



Rhodes University Department of Management
Back, left to right; Professor Mark Bunting, Dr Shafeek Sha, Lisa Maholo, Lutando Ntelezi, Qondiwe Jali, Professor Lynette Louw and Trevor Amos.
Front, left to right; Dr Alyssa Williams, Unathi tyateka (Office Manager), Professor Nadine Oosthuizen (HoD) and Dr Xolile Antoni.
Photo: Department of Management

The Department placed particular emphasis on **producing high-quality, impactful research** that not only contributes to academic discourse but also informs and influences industry practices and policy development.

provided valuable insights into contemporary management challenges and were showcased at internal research colloquia and external academic conferences, further raising the Department's research profile.

Staff members demonstrated sustained productivity, contributing to a number of textbook chapters, six (6) journal articles, and four (4) conference papers during the year. Significant book contributions were made in the area of Strategic Management.

Beyond publications, departmental staff actively contributed to the wider academic community. Members served as journal editors and reviewers, conference reviewers and panel members, and acted as external examiners for theses at other universities. These roles underscore our commitment to scholarly leadership and quality assurance within the discipline.

The Department's research strength is built on the diverse range of expertise among staff. Key focus areas include Entrepreneurship, Financial Management, Financial Planning, Human Resource Management, Leadership, Marketing Management, Operations Management, Organisational Behaviour, Strategic Management, and Sustainable Business Practices. This diversity not only enriches our research agenda but also ensures broad relevance and impact across academic and industry contexts.

Looking ahead, the Department of Management remains dedicated to producing high-quality research outputs while continuing to integrate research into teaching and learning. Our holistic approach aims to inspire both staff and students to contribute meaningfully to addressing contemporary management challenges.

Postgraduates/graduations

In April 2024, the Department proudly celebrated the graduation of two (2) PhD candidates — both of whom are valued staff members in our Department — as well as three (3) Masters and sixteen (16) Honours students. We are extremely proud of the achievements of our colleagues who completed their doctoral studies, a testament to their dedication and the supportive research environment within the Department.

Furthermore, during the September graduation ceremony, we celebrated the graduation of an additional



From left: Loryn Michelle Williams graduating with her Honours Degree in Information Systems, Dr Alyssa William, Dr Shafeek Sha and Professor Adele Moodly.
Photo: Department of Management

two (2) Masters students, further highlighting the strength and vitality of our Postgraduate programmes.

Significant Research Aligned Events

Professor Lynette Louw has been involved in the Inter-institutional collaboration project on enhancing Postgraduate education in South Africa as the Commerce co-ordinator. This collaborative project provides an opportunity for sector-wide conversations about building Postgraduate education and is directed at making an institution-level impact for all who participate. The project aims to understand current practices of Postgraduate education across the sector and internationally, identify the constraints on retention and throughput at the Postgraduate level, and identify key quality indicators for Postgraduate education regarding curriculum and examination.

Distinguished Visitors / International Visits

Professor Lynette Louw was invited by the Directorate of Higher Education Reviews (DHR) at the National Authority for Qualifications and Quality Assurance of Education and Training (QQA) in Bahrain to review Degree Programmes offered by the Bahrain Polytechnic. She also lectured on the IEMS programme at the Shanghai University of International Business and Economy (SUIBE), Shanghai, China.

Department of Management Publications

Books/Chapters/Monographs

Amos, T.

Amos, T. (2024) strategy implementation: Strategic Leadership. In: *Strategic Management*. 5th Ed. South Africa: Oxford University Press. p.379 – 412. 05-49. ISBN: 9780190754013.

Louw, L.

Louw, L. (2024) Introduction: The nature of strategic management. In: *Strategic Management*. 5th Ed. South Africa: Oxford University Press. p.3-49. ISBN: 9780190754013.

Louw, L., Venter, P. and Boikanyo, D.H. (2024) Globalisation and international strategy. In: *Strategic Management*. 5th Ed. South Africa: Oxford University Press. p.345-354. ISBN: 9780190754013.

Creative Writing

Williams, A.S.

Mawonga, S. and **Williams, A.S.** (2024) Using translation to foster epistemic access in Management 1 and Management 1F. In: Adams, A., Booi, M., Mawonga, S., Nkomo, D., Nosilela, B. and Vorster, J. (eds.). *Embedding multi-lingualism in the curriculum: Using language as a resource for teaching and learning*. Grahamstown: Rhodes University.

Peer Reviewed Subsidy-Earning Journal Research Publications

Andangnui, Q. and Louw, L.

Andangnui, Q., **Louw, L.** and **Cattaneo, N.** (2024) Macro-locational determinants of Chinese foreign direct investment in Cameroon. *South African Journal of Economic and Management Sciences*. 27 (1). p.1-12.

Louw, L.

Mayer, C.H., **Louw, L.** and Larsen, J. (2024) Developing Intercultural Competences in the Study-Abroad Programme Semester at Sea (SAS). *Journal of Intercultural Communication*. 24 (1). p.1-12.

Osabutey, E.

Osabutey, E., Senyo, P.K. and Bampong, B. (2024) Evaluating the potential impact of online assessment on students' academic performance. *Information Technology and People*. 37 (1). p.152-170.

Osabutey, E. and Jackson, T. (2024) Mobile money and financial inclusion in Africa: Emerging themes, challenges and policy implications. *Technological Forecasting and Social Change*. 202 (2024). p.1-11.

Osabutey, E., Kan, K.A.S., Senyo, P.K., Arndt, F. and Roel, C. (2024) Technology Transfer Potential in Local and Foreign-Owned Firms in Emerging Economies. *British Journal of Management*. 35 (4). p.2063-2080.

Agyapong, A., Van Klyton, A., Aidoo, S.O. and **Osabutey, E.** (2024) Green Synergy: Unleashing creativity, innovation, dynamic capability, and performance of Smalland medium firms. *International Journal of Innovation Management*. 28 (7). p.1-34.

Peer-reviewed Subsidy – Earning Proceedings

Antoni, X.

Antoni, X., Goldman, D. and Phiri, F. 2024. The influence of financial socialisation techniques and financial knowledge on financial behaviour of young black individuals. *35th Annual South African Institute for Management Scientists Conference (SAIMS).* Stellenbosch Institute for Advanced Study, South Africa. September 2024.

Oosthuizen, N. and Williams, A.S.

Ngobeni, M.P.S., **Oosthuizen, N.** and **Williams, A.S.** Influencer charm: Building genuine connections to drive sales. *35th Annual Southern Africa Institute for Management Scientists conference (SAIMS).* Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa. September 2024.

Williams, A.S. and Oosthuizen, N.

Williams, A.S. and **Oosthuizen, N.** Virtual Temptations: The allure of e-WOMin satisfying South African e-commerce retail consumers. *35th Annual Southern Africa Institute for Management Scientists (SAIMS) Conference*. Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa. September 2024.

Louw, L. and Oosthuizen, N.

Siso, M., **Louw, L.** and **Oosthuizen, N.** Networking for performance: The influence of social ties on small and medium enterprises (SME) prosperity in South Africa. *35th Annual South African Institute for Management Scientist (SAIMS) Conference.* Stellenbosch University, Stellenbosch, South Africa. September 2024.



Photo: Chris Marais

DEPARTMENT OF

Mathematics (Pure and Applied)

Introduction

In 2024, the Department enjoyed the continuation of the extension of its research collaborations internationally and locally. Multiple international visits opened new avenues of collaborations. Local events targeting Postgraduates and early career researchers aimed at establishing new collaborative projects, in addition to the actual courses and research training.



Professor Eric Andriantiana

Head of Department

Photo: Jackie Grove

Distinguished Visitors / International Visits

Professor Denis Pollney was awarded a Marsden Fellowship from the University of Canterbury and spent two (2) months there as Visiting Fellow from July to August 2024.

Professor Claudiu Remsing spent six (6) weeks at the Universita degli Studi di Palermo (Unipa) in Palermo, Italy from June to July 2024.

Significant Research Aligned Events

Dr Mbekezeli Nxumalo organized the "Pure Mathematics Workshop" held in September 2024 at Rhodes University. The event was supported by the Rhodes University Research Office and the London Mathematical Society. Its primary objective was to encourage undergraduate students to pursue Postgraduate studies in Pure Mathematics. A total of twenty-eight (28) students participated, including twelve (12) from Nelson Mandela University (NMU) and sixteen (16) from Rhodes University (RU).



From left to right: Professor Wim de Villiers (Stellenbosch University), Professor Marcellin Atemkeng, Professor Chris Nhlapo (CPUT), and Mr Phillip Tshabalala (DHET).

Photo: Department of Mathematics (Pure and Applied)

Professor Eric Andriatiana led the organizing committee for the 4th edition of the Graph Theory Research Retreat, held from 1 - 3 December 2024 at Villa Jana in Pretoria. The event aimed to bring together recent PhD graduates, Postdoctoral Fellows, and early-career researchers for a three-day retreat focused on addressing open problems in Graph Theory and fostering inter-university research collaborations.

Professor Marcellin Atemkeng has successfully completed the Future Professors Programme (FPP), becoming the second academic from the Department of Mathematics to do so. The FPP is a flagship initiative of the Department of Higher Education and Training, aimed at cultivating a new generation of diverse, highly skilled professors committed to advancing innovation and excellence within South Africa's higher education sector.

On the 27 - 29 January 2024 Professor Eric Andriantiana organised a 3-days research retreat at the Mpekweni Beach Resort with his collaborators Dr Adriana Roux (Stellenbosch University), Dr Zekhaya Shozi (Sol Plaatjie University) and Dr Valisoa Rakotonarivo (University of Pretoria). The event was funded by the FPP.

Professor Claudiu Remsing attended the 9th European Congress of Mathematics (9ECM 2024) in Seville, Spain, and the Second Joint Meeting UMI–AMS, both on July 2024.

Department of Mathematics (Pure and Applied) Publications



Group photo of the 4th edition of the Graph Theory Research Retreat on the 1-3 December 2024 that took place in Villa Jana in Pretoria. Photo: Mark Wessels

Books/Chapters/Monographs

Atemkeng Teufack, M.

Atemkeng Teufack, M. (ed.) (2024) *Global Perspectives on the Applications of Computer Vision in Cybersecurity*. USA: IGI Global. ISBN: 9781668481271.

Atemkeng Teufack, M. (ed.) (2024) *Safe, Secure, Ethical, Responsible Technologies and Emerging Applications*. Switzerland: Springer Nature. ISBN: 9783031563966.

Peer Reviewed Subsidy-Earning Journal Research Publications

Andriantiana, E.O.D.

Andriantiana, E.O.D. and Shozi, Z.B. (2024) The number of 1-nearly independent vertex subsets. *Quaestiones Mathematicae*. 47 (12). p.1-11.

Atemkeng Teufack, M.

Tchokogoué, T., Noumsi, A.V., **Atemkeng Teufack, M.**, Yimga Fonkou, M.F. and Fono, L.A. (2024) A robust segmentation method combined with classification algorithms for field-based diagnosis of maize plant phytosanitary state. *Journal of Intelligent Systems*. 30 (1). p.1-18.

Nguembang Fadja, A., Che, S.R. and **Atemkeng Teufack, M.** (2024) Intelligent Vision System with Pruning and Web Interface for Real-Time Defect Detection on African Plum Surfaces. *Information (Switzerland)*. 15 (10). p.1-18.

Nhlapho, W., **Atemkeng Teufack, M.**, Brima, Y. and Ndogmo, J.C. (2024) Bridging the Gap: Exploring Interpretability in Deep Learning Models for Brain Tumor Detection and Diagnosis from MRI Images. *Information (Switzerland)*. 4 (15). p.1-21.

Atemkeng Teufack, M., Ngueajio, M., ARYAL, S., Washington, G. and Rawat, D. (2024) Decoding Fake News and Hate Speech: A Survey of Explainable AI Techniques. *ACM Computing Surveys*. 17 (3). p.1-42.

Yusuf, Y. and **Atemkeng Teufack, M.** (2024) Saliency-driven explainable deep learning in medical imaging: bridging visual explainability and statistical quantitative analysis. *Biodata Mining*. 17 (18). p.1-23.

Atemkeng Teufack, M. and Hamlomo, S.

Atemkeng Teufack, M., Osanyindoro, V., Rockefeller, R., **Hamlomo, S.**, Mulongo, J., Ansah-Narh, T., Tchakounté, F. and Fadja, A.N. (2024) Ensemble learning and deep learning-based defect detection in power generation plants. *Journal of Intelligent Systems*. 33 (1). p.1-20.

Atemkeng, M.T.
Varmantchaonala, C.M., Fendji, J.L.K.E., Schöning, J. and **Atemkeng, M.T.** (2024) Quantum Natural Language Processing: A Comprehensive Survey. *IEEE Access*. 12 (2024). p.99578-99598.

Bester, H.L.
Smirnov, O.M., Stappers, B.W., **Tasse, C.**, **Bester, H.L.**, Bignall, H.E., Walker, M., Caleb, M., Rajwade, K.M., Buchner, S., Woudt, P., Ivchenko, M., Roth, L., Noordam, J.E. and Camilo, F. (2024) The RATT Parrot: serendipitous discovery of a peculiarly scintillating pulsar in MeerKAT imaging observations of the Great Saturn – Jupiter Conjunction of 2020. Dynamic imaging and data analysis. *Monthly Notices of the Royal Astronomical Society*. 528 (4). p.6517-6537.

Bishop, N.T.
Barozi, V., Chakraborty, S., **Govender, S.A.**, **Morgan, E.C.**, **Ramahala, R.**, Graham, S., **Bishop, N.T.** and **Tastan Bishop, Ö.** (2024) Revealing SARS-CoV-2 Mpro mutation cold and hot spots: Dynamic residue network analysis meets machine learning. *Computational and Structural Biotechnology Journal*. 23 (2024). p.3800-3816.

Kakkat, V., **Bishop, N.T.** and Kubeka, A.S. (2024) Gravitational wave heating. *Physical Review D*. 109 (2). p.1-6.

Bishop, N.T. (2024) Interaction between gravitational waves and a viscous fluid shell on a Schwarzschild background. *Physical Review D*. 110 (10). p.1-7.

Bishop, N.T., **Naidoo, M.** and **Van Der Walt, P.J.**
Bishop, N.T., Kakkat, V., Kubeka, A.S., **Naidoo, M.** and **Van Der Walt, P.J.** (2024) The interaction of gravitational waves with matter. *International Journal of Modern Physics D*. 33 (15). p.1-12.

Bishop, N.T., **Van Der Walt, P.J.** and **Naidoo, M.**
Bishop, N.T., Kakkat, V., Kubeka, A.S., **Van Der Walt, P.J.** and **Naidoo, M.** (2024) Astrophysical and cosmological scenarios for gravitational wave heating. *Physical Review D*. 110 (8). p.11.

Iheanetu, K.
Iheanetu, K. and Obileke, K. (2024) Short-Term Forecasting of Photovoltaic Power Using Multilayer Short-Term Forecasting of Photovoltaic Power Using Multilayer Perceptron Neural Network, Convolutional Neural Network, and k-Nearest Neighbors? Algorithms. *Optics*. 5 (2). p.293-309.

Nxumalo, M.S.
Nxumalo, M.S. (2024) On maximal nowhere dense sub locales. *Applied General Topology*. 25 (2). p.331-361.

Nxumalo, M.S. (2024) On open maps and related functions over the salbany compactification. *Archivum Mathematicum*. 60 (1). p.21-33.

Nxumalo, M.S. (2024) Remoteness in the category of bilocales. *Filomat*. 38 (22). p.7991-8009.

Oloniiju , S.D. and **Tijani, Y.O.**
Oloniiju, S.D., **Tijani, Y.O.** and Otegbeye, O. (2024) Thermal analysis of extended surfaces using deep neural networks. *Open Physics*. 22 (1). p.1-11.

Oloniiju, S.D., **Mukwevho, N.** and **Tijani, Y.O.**

Oloniiju, S.D., **Mukwevho, N.**, **Tijani, Y.O.** and Otegbeye, O. (2024) Chebyshev Pseudospectral Method for Fractional Differential Equations in Non-Overlapping Partitioned Domains. *Applied Math*. 4 (3). p.950-974.

Tijani, Y.O.
Akolade, M.T., Samaila, G., Oni, M.O., Yusuf e, A., Malgwi, P.B., Yusuf, T. and **Tijani, Y.O.** (2024) Dynamics of accelerating and decelerating flows: A boundary layer examination with non-similar approach and convective boundary condition. *International Journal of Non-Linear Mechanics*. 161 (2024). p.1-10.

Akolade, M.T., **Tijani, Y.O.**, Adeosun, A.T., Farotimi, O.P. and Otegbeye, O. (2024) Enhancing synthesized engine oil thermal performance through the use of tri-hybrid nanofluids over a bi-directed sheet with Coriolis force. *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*. 10 (2024). p.1-14.

Yusuf, A., Akolade, M.T. and **Tijani, Y.O.** (2024) Nonlinear Mixed Convective Analysis of Thomson and Troian Slip Flow Conditions for Ag'Cu'TiO2/ H2O Hybrid Nanofluid Over a Riga Plate. *Journal of Computational and Theoretical Transport*. 10 (2024). p.1-24.

Tijani, Y.O.
Fauzi, F., Kasim, A.R.M., Waini, I., Kanafiah, S.F.H.M. and **Tijani, Y.O.** (2024) The Bibliometric Review on Convective Heat Transfer of Nanofluid. *Journal of Advanced Research in Micro and Nano Engineering*. 2024 (1). p.1-19.

Tijani, Y.O. and Oloniiju, S.D.
Tijani, Y.O. and **Oloniiju, S.D.** (2024) Bio-filtration of Organic Pollutants: Simulation and Mathematical Modelling of Toluene and n-propanol. *Chemistry Africa*. 8 (2024). p.357-368.

Zaza, S. and Atemkeng Teufack, M.
Zaza, S., **Atemkeng Teufack, M.** and **Hamlomo, S.** (2024) Wine feature importance and quality prediction: A comparative study of machine learning algorithms with unbalanced data. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*. 566 (1). p.308-327.

Peer-reviewed Subsidy – Earning Proceedings

Hokonya, W.
Hokonya, W. The Impact of Afterschool Mathematics Clubs on Learners' Mathematical Dispositions. *32nd Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education*. Tunana Hall, University of Namibia. Namibia. January 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Atemkeng Teufack, M.
Atemkeng Teufack, M. From Stars to Oceans: Challenges and Opportunities of Big Data Mining in African Astronomy and Marine Ecology. *Deep Learning Indaba Conference*. Amadou Mahtar Mbow University (UAM), Dakar. Senegal. September 2024.

Koch, K.J.
Raubenheimer, L., **Langston, A.F.** and **Koch, K.J.** The sustainability of a teacher/student support network for Mathematics. *Rhodes University Community Engagement Conference 2024: Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities*. Monument Building, Makhanda. South Africa. May 2024.



Photo: Chris Marais

DEPARTMENT OF

Music and Musicology

Introduction

The Department of Music and Musicology at Rhodes University experienced 2024 as a year marked by both deep loss and remarkable achievement. We mourned the passing of Professor Andrew Tracey, a towering figure in African musical scholarship and an inspirational force behind the International Library of African Music (ILAM). His lifelong commitment to the preservation, documentation, and celebration of African music left a legacy that continues to inspire and shape our academic and artistic endeavours.



Photo: Jackie Grove

Associate Professor Boudina McConnachie
Head of Department

Alongside this loss, we celebrated the steady rise of a new generation of African Musical Arts scholars. Both undergraduate and Postgraduate students graduated with distinction, contributing important new work in transcription, analysis, and creative practice. Our staff and students represented Rhodes University across the globe — performing and presenting research in Europe, the British Isles, the United States, and beyond. These engagements strengthened the department's international standing and affirmed our dedication to academic excellence in research, pedagogy, and performance.

The year also brought numerous individual accolades. **Associate Professor Boudina McConnachie** was awarded the Vice Chancellor's Distinguished Teaching Award for 2023 at the April 2024 Graduation Ceremony and was the recipient of two (2) prestigious national awards: the 2024 South African National

University Teaching Award and the Humanities and Social Sciences Award for Best Exhibition Catalogue. **Sibusiso Njeza** received a nomination for the esteemed KORA Award, in recognition of his contributions to African musical innovation. Meanwhile, undergraduate clarinettist **Musa Makgato** not only won the prestigious UNISA National Music Competition but was also awarded the UNISA South African Music Scholarship—highlighting the exceptional calibre of performance and talent nurtured within the Department.

We also marked the retirement of **Professor Jeffrey Brukman**, whose many years of service have left an enduring imprint on the Department. Although he formally stepped down at the end of 2024, Professor Brukman continues to play an active role through Postgraduate supervision and mentorship.

Postgraduates / Graduations

Postgraduate enrolment remained robust in 2024, with seventeen (17) PhD and eight (8) Masters candidates progressing well. Among the year's most notable achievements was the selection of PhD candidate **Thandeka Mfinyongo** as the RASC African Multiple Cluster Artist-in-Residence at the University of Bayreuth in Germany. Thandeka and **Dr Natalie Rungan** (Rhodes alumni) represented South Africa at the Hong Kong Performing Arts Expo as funded by the National Arts Council of South Africa (NAC) in October 2024 while another doctoral candidate, **Tshegofatso Makube**, presented research at the International Society for Music Education's World Conference in Helsinki. Additionally, two (2) PhD candidates—**Vuyelwa Moyo** and **Garreth Robertson**—were each honoured with Top 120 Awards for academic citizenship and contributions to arts, culture, and society.

A major Postgraduate highlight was the world premiere of *Rise of the Hunter*, an orchestral work by PhD candidate **Warren Bessey**. The work, dedicated to the First Nations of South Africa, concluded the Cape Town Philharmonic Orchestra's 2024 Winter Symphonies series with a performance at City Hall on 27th June 2024. The piece marked a significant contribution to South Africa's musical landscape and highlighted the important role of composition as critical commentary.

Distinguished Visitors / International Visits

The 2024 Rhodes University Music Colloquium series brought together international scholars and thought leaders in the field, with four public events offering a platform for critical engagement and exchange. In May, the Makana Community Orchestra, supported by Rhodes University, collaborated with the Soweto String Quartet in a landmark performance that combined high-profile musical excellence with meaningful local engagement. Staff members also expanded our international academic footprint: Associate Professor McConnachie travelled to Oregon State University and Queen's University, Belfast to present research on trans-disciplinary approaches to creative community wellness.

Our staff and students represented Rhodes University across the globe — performing and presenting research in Europe, the British Isles, the United States, and beyond.



Soweto String Quartet with Rhodes University staff and Makhanda community schools and musicians.
Photo: Department of Music and Musicology



Inkwenkwezi School of Artistry from Port Alfred performing at the Guy Butler Theatre in the RU Ensemble Festival.
Photo: Department of Music and Musicology

She also engaged in health communication research through music in Zanzibar, as part of the ZANZIACE project. In addition, **Professor Catherine Foxcroft** was invited to present piano workshops at the 16th World Piano Conference in Serbia, further extending our Department's international reach.

Significant Research-Aligned Events

Research and performance activities were deeply integrated throughout the year. The Department hosted the Pan African Society for Musical Arts Education's Southern Africa Sub-Regional Conference at the end of Term 1, attracting educators and scholars from across the continent. **Sibusiso Njeza's** compositions were performed by the Johannesburg Philharmonic Orchestra at the National Composer's Symposium, and he toured South Africa with the Rhodes University Chamber Choir. His collaboration with the NGO Choral Ignite brought valuable learning opportunities to community choirs.

Professor Catherine Foxcroft coordinated and performed in the RU120 Tribute to Performers and Composers concerts. These featured a performance by Dominic Daula who also led a public interview with three (3) Rhodes alumni composers, **Dr Bongani Ndodana-Breen**, **Dr Paul Hanmer** and our colleague **Sibusiso Njeza**, exploring creative practice in composition. Professor Foxcroft also presented piano masterclasses at the 9th Stellenbosch International Piano Symposium.

Dr William Fourie led a student delegation to the South African Society for Research in Music's annual conference and hosted the interdisciplinary Ex-scapes workshop. Associate Professor McConnachie and Professor Francesca Porri (SAIAB) collaborated on the NRF-funded Indigenous Marine Innovations for sustainable Environments and Economies (IMIsEE) project, exploring indigenous knowledge systems and ocean sustainability. Associate Professor McConnachie further expanded this work through facilitating the Green Spring School initiative with her Postgraduate students, where sound and science innovations were jointly developed with the high-school community of Hamburg in the Eastern Cape.



Thandeka Mfinyongo in Bayreuth, Germany.
Photo: Department of Music and Musicology

The Rhodes University Ensemble Festival, held in September 2024, brought together musicians from across Makhanda to perform at the Guy Butler Theatre. This event offered a platform for creative exchange and fostered valuable artistic and social collaborations. These and other activities continue to reflect the Department's core mission: to lead in African music research, promote interdisciplinary inquiry, and deliver socially engaged teaching and learning that resonates far beyond the university.

Department of Music and Musicology Publications

Books/Chapters/Monographs

McConnachie, B.

Porri, F., Wynberg, R., **McConnachie, B.** and **Lukwe, O.** (2024) Shifting from Development to Empowerment Through Eco-Creative Knowledge. In: *In Routledge Handbook of Arts and Global Development*. London: Routledge. p.477-492. ISBN: 9781003289838.

McConnachie, B., Ntshakaza, Y.L., McCarthy, H.M., Mathebula, P.N., Mavuso, B.L. and Makamure, T.

McConnachie, B., **Ntshakaza, Y.L.**, **McCarthy, H.M.**, **Mathebula, P.N.**, **Mavuso, B.L.** and **Makamure, T.** (2024) Sound Matters: Podcasting as a learning and teaching intervention to enhance reading and writing skills. In: de Klerk, D., Krull, G., Maleswena, T. and MacAlister, F. (eds.). *Reimagining South African Higher Education: Towards a Student-Centred Learning and Teaching Future*. Stellenbosch: Africa Sun Media. p.142-156. ISBN: 9781991260451.

Concerts, Exhibitions, Performances, Workshops, Events

Daula, D.H.H.

Daula, D.H.H. Adjudicator. Adjudicator. *Mini Maestros Competition presented by the South African Society of Music Teachers.* Kingswood College, Makhanda. South Africa. 17 May 2024.

Daula, D.H.H. Solo Piano Performance. Hubert du Plessis: Four Piano Pieces, opus 1. *RU 120 Tribute Concert: Music by Hubert du Plessis, Bongani Ndodana-Breen, Paul Hanmer, and Sibusiso Njeza. Sub-regional Conference of the Pan-African Society of Musical Arts Education, Makhanda*. Beethoven Room, Beethoven House, Department of Music and Musicology, Rhodes University, Makhanda. South Africa. 26 March 2024.

Daula, D.H.H. Invited talk. Solo Piano Music from South Africa. *Invited talk presented online to the Greater Memphis Music Teachers Association*. Online, Memphis. United Stated of America and South Africa. 19 October 2024.

Daula, D.H.H. Discussant. Reflections on the [African] origins of Human Music Making. Dominic Daula, discussant. Seminar presented by Carol Muller. *Ethnomusicology Symposium, Rhodes University, 28-31 August 2024*. 1820 Settlers Monument, Makhanda. South Africa. 31 August 2024.

Daula, D.H.H. Invited talk. Broadening Ones Horizons: Exploring Early Music for Intermediate to Advanced Piano Students. *South African Society of Music Teachers Café Talk.URL: https://youtu.be/PCCgQFGNXrA?si=mrcL5BmRumOV-HMc.* Online, Gqeberha. South Africa. 24 June 2024.

Daula, D.H.H. Interviewer. Pre-concert interview: Dominic Daula in conversation with Paul Hanmer, Bongani Ndodana-Breen, and Sibusiso Njeza. *RU 120 Tribute Concert - music by Michael Moerane, Paul Hanmer, Bongani Ndodana-Breen, and Sibusiso Njeza*. Beethoven Room, Beethoven House, Department of Music and Musicology, Rhodes University, Makhanda. South Africa. 13 July 2024.

Daula, D.H.H. Invited talk. Africa is My Name: Alan Bush's Interest in the Musical and Political Landscapes of Southern Africa. *Politics and International Studies Weekly Friday Seminar Series*. Department of Politics and International Studies, Rhodes University, Makhanda. South Africa. 4 October 2024.

Fourie, W.E.

Fourie, W.E. Seminar leader. Notes on Erin Manning's 'Minor Gesture'. *Music and Sound Seminar*. Stellenbosch University, Stellenbosch. South Africa. 26 February 2024.

Fourie, W.E. Seminar leader. Tim Ingold's 'Making'. *Music and Sound Seminar*. Stellenbosch University, Stellenbosch. South Africa. 20 May 2024.

Fourie, W.E. Seminar leader. Robin James' 'Sonic Episteme'. *Music and Sound Seminar*. University of the Western Cape, Cape Town. South Africa. 23 September 2024.

Fourie, W.E. Conference Organiser. 18th Annual Conference of the South African Society for Research in Music. *18th Annual Conference of the South African Society for Research in Music*. University of the Witwatersrand, Johannesburg. South Africa. 26 - 28 July 2024.

Fourie, W.E. Seminar leader. On Wounded Attachment. *Music and Sound Seminar*. Stellenbosch University, Stellenbosch. South Africa. 21 October 2024.

Irvine, P.M. and **Fourie, W.E.** Organiser. Ex-Scapes Workshop. *Ex-Scapes Workshop*. Rhodes University, Makhanda. South Africa. 8 August 2024.

Fourie, W.E. Seminar leader. Deleuze and Guattari's 'Minor Literature'. *Music and Sound Seminar*. Stellenbosch University, Stellenbosch. South Africa. 22 April 2024.

Foxcroft, C.

Foxcroft, C. Soloist. Piano recital. *Makhanda Music Society*. Beethoven Room, Makhanda. South Africa. 3 December 2024.

Foxcroft, C. Soloist. RU 120 Tribute to Composers and Performers (PASMAE Conference). *Performance of Isiko and Umdlalo Emlanjeni by Bongani Ndodana-Breen*. Beethoven Room, Makhanda. South Africa. 26 March 2024.

Foxcroft, C. Soloist. Piano recital. *Cicle de concerts Capella de Sant Martí de Capellada.* Capella de Sant Martí de Capellada, Besalu. Spain. 28 May 2024.

Foxcroft, C. Soloist. RU 120 Tribute to Composers and Performers. *Chamber performance of 2 piano quintets: The 3 banded Armadillo (P. Hanmer) and SAFIKA: Three Tales of African Migration (B. Ndodana-Breen)*. Beethoven Room, Makhanda. South Africa. 13 July 2024.

Foxcroft, C. Soloist. Piano recital. *Pianistes del Mon Art I Musica Concert Series, El Monegal, Spain*. Hotel El Monegal, El Monegal. Spain. 26 May 2024.

Foxcroft, C. Soloist. 16th World piano Conference. *Recital and lecture demonstration*. Isidor Bajic Music School, Novi Sad. Serbia. 22 May 2024.

Foxcroft, C. Faculty member. 16th World Piano Conference. *Public piano masterclass*. Isidor Bajic Music School, Novi Sad. Serbia. 24 May 2024.

Foxcroft, C. Faculty member. 9th Stellenbosch University International Symposium. *10 public masterclasses*. Conservatoire, Stellenbosch. South Africa. 3 - 7 April 2024.

Foxcroft, C. Soloist. 9th Stellenbosch International Piano Symposium. *Faculty Concert No 1. Solo performance of Isiko by B. Ndodana Breen*. Endler Hall, Stellenbosch. South Africa. 4 April 2024.

Foxcroft, C. Collaborator. 9th Stellenbosch International Piano Symposium. *Faculty Concert No 2: Romeo and Juliet by Tchaikovsky. 4 piano collaborations with M. Prins (UP), Tinus Botha (NWU) and Francois du Toit (UCT)*. Endler Hall, Stellenbosch. South Africa. 5 April 2024.

Foxcroft, C. Collaborator. 9th Stellenbosch University International Piano Symposium. *Faculty Concert No 3 - Extravaganza: Tchaikovsky William Tell 1812 Overture: Arranged for 10 pianos*. Endler Hall, Stellenbosch. South Africa. 6 April 2024.

Foxcroft, C. Adjudicator. Member of the Jury. *Hennie Joubert National Piano Competition*. Endler Hall, Stellenbosch. South Africa. 1 - 5 April 2024.

Foxcroft, C. Adjudicator. Member of the Jury. *Atterbury National Piano Competition*. Atterbury Theatre, Pretoria. South Africa. 23 - 27 October 2024.

Foxcroft, C. Adjudicator. Member of the Jury. *National Ensemble Competition*. RGJS, Cape Town. South Africa. 8 - 10 August 2024.

Makube, T.B.B. and Robertson, G.D.

Makube, T.B.B. and **Robertson, G.D.** Voice and piano. RU 120 Tribute to Composers and Performers (PASMAE Conference). *Performance of Wamuhle Mzantsi! and Winnie's Aria No 25 by S. Njeza*. Beethoven Room, Makhanda. South Africa. 26 March 2024.

McConnachie, B.
McConnachie, B. Curator and PI. Indigenous Marine Innovations for Sustainable Environments and Economies (IMIsEE) project. *Harmony of Science and Art, A Sound Postcard Series*. Rhodes University Library, Makhanda. South Africa. 25 January - 14 February 2024.

McConnachie, B. Curator and PI. Sound Box vii. *Harmony of Science and Art, A Sound Postcard Series*. Oregon State University, Corvallis. United State of America. 19 - 21 May 2024.

McConnachie, B. Co-ordinator. IMIsEE project Green School initiative with Keiskamma Music Academy and South African Institute for Aquatic Biodiversity. *Green School Initiative*. Keiskamma Trust, Hamburg. South Africa. 23 - 27 September 2024.

McConnachie, B., Fourie, W.E., Chirombo, I.E.C., Robertson, G.D., Mavela, S., Camp, R.T. and Wynne, D.
McConnachie, B., **Fourie, W.E.**, **Chirombo, I.E.C.**, **Robertson, G.D.**, **Mavela, S.**, **Camp, R.T.** and **Wynne, D.** Producer and performer. Soweto String Quartet with the Makana Community Orchestra. *An Odyssey of Stars*. Guy Butler Theatre, Makhanda. South Africa. 9 May 2024.

Njeza, S.S.
Njeza, S.S. Facilitator. Rhodes University Chamber Choir Tour. *RUCC on Tour: Western Cape.* George, Montagu, University of the Western Cape, Western Cape. South Africa. 18 - 24 August 2024.

Njeza, S.S. Facilitator. The art of choir management and conducting. *Workshop for Secondary School learners and Educators- George/Mossel Bay area.* Thembalethu Secondary School, George, Western Cape. South Africa. 21 August 2024.

Njeza, S.S. Member of Jury. Tiro Mpane National Choral Eisteddfod. *Tiro Mpane National Choral Eisteddfod*. Ellis Park Arena, Johannesburg. South Africa. 14 - 15 December 2024.

Njeza, S.S. Conductor. South African Conductors Extravaganza. *South African Conductors Extravaganza Concert*. ZK Matthews Hall, UNISA, Pretoria. South Africa. 8 June 2024.

Creative Writing

Daula, D.H.H.
Daula, D.H.H. (2024) Pain, Loss, and Reconciliation in Music and Society. URL: https://herri.org.za/10/dominic-daula/. In: Kaganof, A. (ed.). *Review of 'Nagmusiek [narrmüsik]'. Hendrik Hofmeyr: 'Two Birthday Songs', opus 139 (2011); 'Woorde in die wind', opus 216 (2021); 'Fantasia sopra Senzeni Na', opus 180 (2016). Arnold van Wyk: 'Nagmusiek' (1958); 'Van Liefde en Verlatenheid' (1953). Minette du Toit-Pearce, mezzo-soprano; Marika Hofmeyr, piano. Hendrik Hofmeyr, artistic director. Triton and Editions Hortus, TRIHORT577, 2023.* 10th Ed. Stellenbosch: herri.

Distinguished Visitors

Bull, A.
Dr A Bull. University of York, York, United Kingdom. *Rhodes University Music Colloquium*. September 2024.

Johnson-Williams, E.
Dr E Johnson-Williams. University of Southampton, Southampton, United Kingdom. *Rhodes University Music Colloquium*. March 2024.

Muller, C.
Professor C Muller. University of Pennsylvania, Makhanda, South Africa. *Keynote speaker: Ethnomusicology Symposium, Rhodes University, 1820 Settlers' Monument*. August 2024.

Stacey, C.
C Stacey. University of the Witwatersrand, Johannesburg, South Africa. *Rhodes University Music Colloquium*. August 2024.

Venter, C.
C Venter. Stellenbosch University, Stellenbosch, South Africa. *Rhodes University Music Colloquium*. April 2024.

International Visits

Fourie, W.E.
Fourie, W.E. University of Southampton, Southampton, United Kingdom. *Online Hartley residency*. 27 November 2024.

McConnachie, B.
McConnachie, B. Ministry of Health Zanzibar, Zanzibar City, Zanzibar. *Zanzibar Arts for Children's Eyesight (ZANZI-ACE II) pilot trial - Utilizing traditional and modern music performance in eye health education to improve child eye health service uptake in Zanzibar*. 26 October - 2 November 2024.

McConnachie, B. Oregon State University, Corvallis, United State of America. *Integrating Indigenous ways of knowing and being to promote individual and community wellness in research*. 29 - 31 May 2024.

McConnachie, B. Queens University, Belfast, Belfast, United Kingdom. *Integrating Indigenous ways of knowing and being to promote individual and community wellness in research*. 1 - 4 June 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Fourie, W.E.
Fourie, W.E. (2024) Lise Morrison-Lise Morrison, No grief without joy. Sawyer Editions, Bandcamp. *TEMPO*. 78 (307). p.90-91.

Fourie, W.E. (2024) Exzentrische Hermeneutik und die Artikulation von Geschichte im kolonialen Klangarchiv. *Zeitschrift für Medienwissenschaft*. 16 (2). p.68-80.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Daula, D.H.H.
Daula, D.H.H. Text, Style and Identity in the Eleven Preludes for Piano by Thomas Rajna. *Eighteenth Annual Congress of the South African Society for Research in Music*. University of the Witwatersrand, Johannesburg. South Africa. July 2024.

Daula, D.H.H. On Source Material Pertaining to the Duo Concertante for Viola and Piano by Arnold van Wyk. *Congress of the International Association of Music Libraries, Archives and Documentation Centres*. Fismer Hall, Konservatorium, University of Stellenbosch, Stellenbosch. South Africa. June 2024.

Fourie, W.E.
Fourie, W.E. Ex-Centric Hermeneutics and the Technological Mediation of Rupture. *18th Annual Conference: South African Society for Research in Music*. University of the Witwatersrand, Johannesburg. South Africa. July 2024.

Fourie, W.E., Roos, H., Olwage, G. and Muller, W. Triple book launch: Roos, Muller, Olwage. *18th Annual Meeting of the South African Society for Research in Music*. University of the Witwatersrand, Johannesburg. South Africa. July 2024.

Foxcroft, C. and Viljoen, J.F.
Foxcroft, C. and **Viljoen, J.F.** Gaze patterns of musicians when encountering accidentals while sight-reading. *16th World Piano Conference*. Isidor Bajic Music School, Novi Sad. Serbia. May 2024.

Makube, T.B.B. and Foxcroft, C.
Makube, T.B.B. and **Foxcroft, C.** The Use of Creative-Arts therapies to treat Trauma Related Mental Health Conditions in South Africa. *36th World Conference International Society of Music Education (ISME)*. Sibelius Academy, Helsinki. Finland. July 2024.

McConnachie, B.
McConnachie, B. Co-ordinator. *Pan African Society for Musical Arts Education - Sub Regional.* Department of Music and Musicology, Makhanda. South Africa. March 2024.

McConnachie, B. Building Bridges: Unleashing the Potential of Scholarship. *Rhodes University Postgraduate conference*. Rhodes University, Makhanda. South Africa. January 2024.

Njeza, S.S.
Njeza, S.S. The New Music of Sibusiso Njeza. *African composer's symposium.* University of the Witwatersrand, Johannesburg. South Africa. July 2024.

Njeza, S.S. The life and times of Sibusiso Njeza: A composer's reflection. *Voice Symposium*. Nelson Mandela University, Gqeberha. South Africa. November 2024.

International Library of African Music (ILAM)

Introduction

ILAM has continued on its journey in being the most advanced music archive on the continent. It is advanced in that it is the only music archive on the continent that is engaged in digitisation, research projects, training, publications, teaching, and the supervision of Postgraduate students in and beyond the borders of the university, the town and South Africa in general.



Dr Lee Watkins
Director

Photo: Jackie Grove

It is also advanced in that it follows a distinct trajectory which is influenced by the political in as far as it follows 'decolonial' or 'postcolonial' archival practices and their ensuing epistemologies. We are continuing with supporting digitisation efforts such as the one in Dar es Salaam conducted by ILAM's research partner, John Kitime (see https://tanzaniamusicarchive.blogspot.com); and community-based archiving projects such as the ones in Keiskammahoek and Riemvasmaak. Students, research partners in the community, and ILAM manage to sustain these efforts.

In January 2024, ILAM bid farewell to **Andrew Tracey** (5 May 1936 - 12 January 2024). The Tracey family is synonymous with the name and institution called the International Library of African Music. His departure is a great loss to the music scholarship of the continent as he had a tremendous amount of knowledge about the peoples of Africa, their languages and their music. We hope that the many terabytes of recordings of his performances and lectures will continue to inform and inspire all generations of African music students and enthusiasts.

Postgraduates / Graduations

Nontuthu Mtsini MMus: *Tradition and Change in the Imfene Dance of the amaMpondo in the Ntabankulu District of the Eastern Cape.*

Qhawekazi Giyose MMus: *Eastern Cape Jazz Heritage: Traditional Songs Recollected.*

Distinguished Visitors / International Visits

The Director of ILAM, **Lee Watkins**, presented papers at the following conferences in 2024:

The politics of analysing South African rap music style: Methods, methodologies, and doing the right thing as a music archivist. Goethe University, Frankfurt. 14 May.

The politics of analysing South African rap music style: Methods, methodologies, and doing the right thing. University of Basel, Switzerland. 22 May.

Significant Research Aligned Events

ILAM successfully hosted an Ethnomusicology conference in celebration of the 70th birthday of the International Library of African Music in 2024 and the life of Andrew Travers Norman Tracey. The dates for the Conference were 28 – 31 August, 2024. The theme was *The states of African traditional music: From the local to the global and into the virtual.* There were fifty-three (53) participants from Finland, the USA, Ghana, Mozambique, South Africa, Nigeria and India.

ILAM co-produced an album with a peer reviewed booklet in 2024. The music was recorded by **Jason Winikoff**, a PhD student at the University of British Columbia, and Raphael Kayombo Ngimbu and the Likumbi Lya Mize Cultural Association of the Luvale community in Zambia.

In 2024, we launched a project called ***Sounding Indigenous in South Africa: Music and Performance Heritage in Khoesan Revival***. The project is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC). Dr Lee watkins was invited by Lyndsey Copeland of Carleton University in Canada to collaborate on a project concerning the cultural heritage of an Indigenous community in South Africa. Team members of the project include Sharon Gabie of Nelson Mandela University and James Mapanka of the South African Nama Development Association (SANDEVA).

ILAM is the most advanced music archive on the continent. It is advanced in that it is the only music archive on the continent that is **engaged in digitisation, research projects, training, publications, teaching, and the supervision** of Postgraduate students in and beyond the borders of the university.

Xolile Madinda of The Black Power Station speaking to delegates of the ILAM conference. Photo: ILAM





Cover page of the album co-produced with Jason Winikoff, Raphael Kayombo Ngimbu and the *Likumbi Lya Mize* Cultural Association of the Luvale community in Zambia.
Photo: ILAM

The Keiskammahoek and the Ntinga Development Centre (NDC) heritage research project has come to a close. The project was from 2012 to around 2018. There are several terabytes of data. As far as I am aware, a significant output is that this is the first collection of cultural heritage recordings available with metadata in both English and isiXhosa. The collection was presented to the community in Keiskammahoek in September 2024. A hard drive of the catalogued recordings was given to Thabisa Mhlahlo, our main research partner in Keiskammahoek. See https://www.ru.ac.za/latestnews/ilamsmusicheritagearchiveprojectemphasisesaccessibilityandcommunityown.html

The research on the neo-traditional jazz heritage of the Eastern Cape from a developmental perspective project has also come to a close. The outputs were the following:

1. **A MMus thesis (Giyose)** – October 2024.
2. **Workshops on musicians' rights** on 12 March 2022 and on 29 October 2022. Another was conducted by the South African Music Rights Organisation (SAMRO) on 21 November 2020 in Queenstown.
3. **Three (3) concerts** on 30 October 2021, December 2022, and 16 March 2024.
4. **One documentary** - see:

https://youtu.be/RvinvZcCJOk?si=2urnaMbewbVos4jm.

FACULTY OF Pharmacy

Introduction

This report showcases a cross-section of the extraordinary work undertaken by our academic staff over the last year and celebrates the variety and impact of our activities across and between the four (4) distinct disciplines in the Faculty of Pharmacy. The 2024 academic year was marked by significant uncertainty across global markets and within the research landscape of universities.



Professor Sandile Khamanga

Head of Faculty

Photo: Jackie Grove

Economic instability, shifting political dynamics, tightening research budgets, and the rapid evolution of technology all played a role in reshaping our research priorities including traveling to international conferences and acquisition of research equipment. Notwithstanding, our students and staff made significant contributions in wastewater technology, anti-cancer strategies, community pharmacy, molecular science, diabetes and metabolomics, and drug design and formulation. Looking at the accomplishments of our Faculty, many of which are highlighted in this report, it is clear we adapted adequately to this adversity.

In addition, we have experienced considerable success in developing new research areas, largely due to the contributions of newly appointed academic staff. Their expertise, fresh perspectives, and collaborative efforts have significantly strengthened our research profile and opened promising avenues for innovation and interdisciplinary work. Several research areas highlighted in this report demonstrate the quality and range of our research. We have seen considerable success in expanding into new research areas, particularly in molecularly imprinted polymers (MIP), driven by the expertise of our international collaborators. This growth has enhanced our research capacity in the fields of targeted drug delivery, and selective molecular recognition, positioning us to contribute with impact in these areas of endeavour and has opened potential collaborations in both fundamental and applied sciences. The acquisition and use of an electronic tongue has significantly strengthened our research capabilities, particularly in the areas of palatability testing and taste masking, quality control, and formulation development. This advanced analytical tool has enabled more precise, reproducible, and high-throughput analysis, whilst enhancing the scientific rigour of our work and supporting innovation in pharmaceutical and food-related research.

The contributions of several of our staff have been highlighted by their presence at national and international platforms. This recognition is testament to the strength of our colleagues and the considerable contributions that they make.

Despite these fantastic achievements, everything is not all rosy. Our research efforts continued to face several challenges, including limited funding, delays in procurement of essential equipment, and difficulties in maintaining collaborative networks across institutions and borders. Administrative burdens and evolving



Professor M Mothibe and Postgraduates at the SASBCP.
Photo: Faculty of Pharmacy

compliance requirements, have also impacted the pace and flexibility of conducting research. Furthermore, capacity constraints, such as access to skilled technical support and up-to-date infrastructure, the move of the Biopharmaceutics Research Laboratory, that houses the Group, and many other research groups has hindered the ability to scale up projects or adopt cutting-edge methodologies. Despite these hurdles, our teams remain committed to advancing research through strategic partnerships, resource optimisation, and a strong culture of innovation and resilience. Coordinating with the contractors who were refurbishing our laboratories while ensuring safety and minimal disruption to laboratory-based operations has required careful planning and flexibility. The challenges introduced by the refurbishment continue to be high on our agenda. We have been liaising closely with the Department of Physics in this regard. Given we have long been recognised as a leader in pharmaceutical sciences we have been vocal about our concerns and are continuing to work with our colleagues to find solutions a positive way forward.

As the next pages of this report will demonstrate, we are nothing if not resilient and I am proud to be the Dean of this dynamic and incredible faculty.

Postgraduates / Graduations

We are proud to announce that **Dr Archibald Lesley Svogie** graduated with a PhD in Pharmacy. This remarkable achievement has not only brought pride to his family and the Faculty of Pharmacy but has also been met with great joy and celebration by the Kgetleng Sub-District and municipality in the North-West province, South Africa, where he is currently a manager. The accomplishment reflects the value of academic excellence and the potential for transformative impact through education. It serves as an inspiration to the broader community and reinforces the importance of investing in higher education and research for local and national development. His research illustrated the application of evidence-based data in performing Total Interpretive Structural Modelling (TISM) to supporting development and enhancing sustainability by addressing issues of strategic decision making in a medicine registration system through integration and solving complex decision-making challenges in an uncertain working environment.

Our students and staff made significant contributions in wastewater technology, anti-cancer strategies, community pharmacy, molecular science, diabetes and metabolomics, and drug design and formulation.

The Faculty continues to develop Postgraduate opportunities that emphasize multidisciplinarity, collaboration, and engagement as reflected in published manuscripts.

Distinguished Visitors / International Visits

ERASMUS-based collaboration with Rhodes University

Professer Roman Tandlich (Disaster Management and Ethics Research Group leader) started a collaboration with Professor Ágoston Restas (Head of the Institute of Disaster Management at the Ludovika University of Public Service from Budapest, Hungary) on Fire Disaster Management, and Policy Analysis in 2019. In 2024, Professor Restas and the Ludovika University of Public Service from Budapest, Hungary initiated an ERASMUS-based collaboration with Rhodes University. The collaboration started with a visit by Professor Restas to Makhanda in August 2024. They have co-supervised one Masters student to graduation to date. One new co-supervision has been initiated as part of the recent visit from Professor Restas.

Professor Pereira de Santana, Professor Leal and Professor Izzy Kanfer visited the Faculty of Pharmacy in September 2024.

Professor Pereira de Santana, Professor Leal and Professor Izzy Kanfer visited the Faculty of Pharmacy in September 2024.

Significant Research Aligned Events

The Faculty of Pharmacy was well represented at the International Pharmaceutical Federation (FIP) 82nd World Congress of Pharmaceutical Sciences conference which took place from 31 August to 05 September 2024 at the Cape Town International Convention Centre (CTICC).

Academic staff, Postgraduates and undergraduate students attended the conference. The conference theme was, “Innovating for the future of health care”.

Academic staff and Postgraduates from the Faculty of Pharmacy attended the 57th Annual South African Society for Basic and Clinical Pharmacology (SASBCP) conference which took place on the 15 – 17th September 2024 at Irene Country Lodge, Centurion, South Africa. The theme for this conference was, *“Pharmacology for Post-Pandemic Africa: Antifragility in Action.”*

The Faculty of Pharmacy hosted a successful Research Symposium on 21-22 November 2024, celebrating the diversity of research within the Faculty. The theme of the symposium was, “Innovative Pharmaceutical Research: Shaping the Future of Therapeutics”. The research event featured engaging presentations from academic staff and Postgraduate researchers. Adding to its distinction, the symposium included keynote presentations from research experts from the Departments of Chemistry, Zoology and Entomology, Human Kinetics and Ergonomics, and the Biotechnology Innovation Centre. This interdisciplinary lineup provided a valuable platform for knowledge exchange and collaboration, emphasizing the interconnected nature of scientific research.

Professor Ntethelelo Sibiya attended the 21st International Congress of Endocrinology-ICE 2024 in Dubai.

Standing from left to right, Professor Izzy Kanfer, Professor Pereira de Santana, Professor Sandile Khamanga, Professor Leal and Dr Carmen Oltmann.
Photo: Faculty of Pharmacy



Faculty of Pharmacy Publications

Peer Reviewed Subsidy-Earning Journal Research Publications

Bani, S. and Tandlich, R.
Bani, S., **Limson, J.L.**, **Zuma, B.M.** and **Tandlich, R.** (2024) Short Communication: Potential of Biochar and Clays as Sorbents for Treatment of Greywater and Related Wastewaters in South Africa. *Journal of Solid Waste Technology and Management*. 50 (2). p.577-589.

Bani, S., Matambo, C., Zuma, B.M. and Tandlich, R.
Bani, S., **Matambo, C.**, **Limson, J.L.**, **Zuma, B.M.** and **Tandlich, R.** (2024) Operation and Performance of The Lab and Pilotscale Greywater Treatment Systems: Biochar and Gravel Use in South Africa. *Journal of Solid Waste Technology and Management*. 50 (1). p.458-478.

Dasram, M.H., Naidoo, P., Walker, R.B. and Khamanga, S.M.
Dasram, M.H., **Naidoo, P.**, **Walker, R.B.** and **Khamanga, S.M.** (2024) Targeting the Endocannabinoid System Present in the Glioblastoma Tumour Microenvironment as a Potential Anti-Cancer Strategy. *International Journal of Molecular Sciences*. 25 (3). p.1-32.

Dowse, R.
Dowse R. Pharmaceutical pictograms in supporting health literacy. In: *Health Literacy in Medicines Use and Pharmacy. A Definitive Guide.* Awaisu A, Mansour EA, Aslani P, Hussain R, Babar ZUD, eds. London, United Kingdom. Elsevier Inc. 2024. Chapter 7, pp.105-122.

Egunlusi, A.O.
Egunlusi, A.O., Joubert, J. (2024) NMDA Receptor Antagonists: Emerging Insights into Molecular Mechanisms and Clinical Applications in Neurological Disorders. *Pharmaceuticals*. 17. p. 639.

Egunlusi A.O., Malan S.F., Palchykov V.A., Joubert J. (2024) Calcium Modulating Effect of Polycyclic Cages: A Suitable Therapeutic Approach Against Excitotoxic-induced Neurodegeneration. *Mini Review Medicinal Chemistry*. 24 (13). p. 1277-1292.

Glass, B.D.
Spinks, J.M., Lau, E.T.L., **Glass, B.D.** and Nissen, L.M. (2024) Evaluating the management of urinary tract infections by community pharmacists in Queensland, Australia. *Pharmacy Practice*. 22 (4). p.1-10.

Knott, G.J., Mylrea, F.M. and **Glass, B.D.** (2024) Pharmacist and student evaluation of a preceptor training program in a regional Australian University: a multi-method study. *BMC Medical Education*. 24 (1). p.1-11.

Davey, B.J., Lindsay, D., Cousins, J. and **Glass, B.D.** (2024) Strategizing the removal of barriers to community pharmacist's business management capabilities. *Currents in Pharmacy Teaching and Learning*. 16 (12). p.1-6.

Nona, R.A., Ray, R.A., Taylor, S.J. and **Glass, B.D.** (2024) Knowledge, attitudes, and practices of community pharmacists providing over-the-counter emergency hormonal contraception: a scoping review. *International Journal of Pharmacy Practice*. 33 (1). p.6-18.

Warren, R., Young, L., Carlisle, K., Heslop, I. and **Glass, B.D.** (2024) Identifying public health competencies for Australian pharmacists: A modified Delphi study. *Australian and New Zealand Journal of Public Health*. 49 (1). p.1-8.

Chaudhary, S., Ray, R., and **Glass, BD.** (2024) Answering the call for pharmacists to improve healthcare delivery to trans and gender diverse people: Design and implementation of an online education program in Australia. *Pharmacy*. 12 (1) 7.p.1-12.

Chaudhary, S., Lindsay, D., Robin Ray, and **Glass, B.D.** (2024) Evaluation of a transgender health training program for pharmacists and pharmacy students in Australia: a pre-post study. *Exploratory Research in Clinical and Social Pharmacy.* 13. p.1-7.

Isaacs, M.
MbossoTeinkela, J.E., Kedi, P.B.E., Fokou, P.V.T., **Isaacs, M.**, Ngando, L.P.Y., WeaTchepnou, G., Oumarou, H. and Noundou, X.S. (2024) In vitro anti-trypanosomal activity of crude extract and fractions of *Trichoscypha acuminata* stem bark, *Spathodea campanulata* flowers, and *Ficus elastica lianas* on *Trypanosoma brucei* brucei. *AIMS Molecular Science*. 11 (1). p.63-71.

Kanfer, I.
Wellington H, Rath S, **Kanfer I.** (2024) A comprehensively validated IVRT method reliably discriminates sameness and differences between several topical clotrimazole creams. *European Journal of Pharmaceutical Sciences.* 192 p.1-10.

Khamanga, S.M.
Sobiech, M., **Khamanga, S.M.**, Synoradzki, K., Bednarchuk, T.J., Sikora, K., Lulinski, P. and Giebultowicz, J. (2024) Molecularly Imprinted Drug Carrier for Lamotrigine -Design, Synthesis, and Characterization of Physicochemical Parameters. *International Journal of Molecular Sciences*. 25 (9). p.1-11.

Khanye, S.D.
Mhlanga, R., **Mbaba, M.**, **Tonui, R.**, **Edkins, A.L.**, **Khanye, S.D.** and **De La Mare, J.A.** (2024) *Ferrocenyl Aminocresols* display multimodal activity against triple-negative breast cancer cells in vitro. *Chemistry Select*. 9 (42). p.1-12.

Hulushe, S.T., **Watkins, G.M.** and **Khanye, S.D.** (2024) A cobalt(ii) coordination polymer-derived catalyst engineered via temperature-induced semi-reversible single-crystal-to-single-crystal (SCSC) dehydration for efficient liquid-phase epoxidation of olefins. *Dalton Transactions*. 53 (27). p.11326-11343.

Hulushe, S.T., **Watkins, G.M.** and **Khanye, S.D.** (2024) Enhanced Catalytic Activity of a Copper (II) Metalorganic Framework Constructed via Semi reversible Single-Crystal-to-Single-Crystal Dehydration. *ACS OMEGA*. 9 (7). p.7511-7528.

Kuretu, A., Mothibe, M.E. and Sibiya, N.H.
Kuretu, A., **Mothibe, M.E.**, Ngubane, P. and **Sibiya, N.H.** (2024) Elucidating the effect of drug-induced mitochondrial dysfunction on insulin signaling and glucose handling in skeletal muscle cell line (C2C12) *in vitro*. *PLOS ONE*. 19 (9). p.1-24.

Madikizela, P. and Tandlich, R.
Madikizela, P., **Limson, J.L.**, **Fogel, R.**, Ristvej, J. and **Tandlich, R.** (2024) A tool for the assessment of the risk drivers and public perception of WASH in South Africa. *Jàmbá: Journal of Disaster Risk Studies*. 16 (2). p.1-10.

Maguire, K.A. and Tandlich, R.
Bayne, R.J., **Pyle, D.**, **Maguire, K.A.**, **Oosthuizen, R.** and **Tandlich, R.** (2024) Examining water quality and transport implications of alternative supply during a drought in a South African municipality. *Air and Water Components of the Environment*. 1 (2024). p.221-241.

Msimang, A. and Tandlich, R.
Msimang, A., **Edwards, S.**, **Alloggio, S.** and **Tandlich, R.** (2024) Human wellbeing and animal welfare: Is there an ethical link to be implemented from the COVID19 pandemic into the practice of emergency management. *American journal of disaster medicine*. 19 (3). p.237-250.

Nhau, P.T. and Sibiya, N.H.
Nhau, P.T., Gamede, M. and **Sibiya, N.H.** (2024) COVID-19-Induced Diabetes Mellitus: Comprehensive Cellular and Molecular Mechanistic Insights. *Pathophysiology*. 31 (2). p.197-209.

Sibanda, U.M.
Ndongwe, T., Zhou, A., Ganga, N.P., Matawo, N., **Sibanda, U.M.**, Chidziwa, T.V., Witika, B., **Krause, R.W.M.**, Matlou, G. and Siwe-Noundou, X. (2024) The use of nanomaterials as drug delivery systems and anticancer agents in the treatment of triple-negative breast cancer: an updated review (year 2005 to date). *Discover Nano*. 19 (138). p.1-24.

Sibiya, N.H.
Ngcobo, N. and **Sibiya, N.H.** (2024) The Role of High Mobility Group Box-1 on the development of Diabetes Complications. *Diabetes and Vascular Disease Research*. 21 (5). p.1-14.

Dayanand, Y., Pather, R., Xulu, N., Booysen, I., **Sibiya, N.H.**, Khathi, A. and Ngubane, P. (2024) Exploring the biological effects of anti-diabetic vanadium compounds in the liver, heart and brain. *Diabetes, Metabolic Syndrome and Obesity*. 2024 (17). p.3267-3278.

Siboto, A., Ludidi, A., **Sibiya, N.H.**, Khathi, A. and Ngubane, P. (2024) Maternal prediabetes as a risk factor of pre-eclampsia and placental dysfunction in pregnant female Sprague-Dawley rats. *Journal of Obstetrics and Gynaecology*. 44 (1). p.1-9.

Sibiya, N.H., Kurlowicz, A. and Khathi, A. (2024) Editorial : Prediabetes-early interventions and prevention in insulin resistance. *Frontiers in Nutrition*. 11 (24). p.1-3.

Mosili, P., Mkhize, B.C., **Sibiya, N.H.**, Ngubane, P. and Khathi, A. (2024) Review of the direct and indirect effects of hyperglycemia on the HPA axis in T2DM and the co-occurrence of depression. *BMJ Open Diabetes Research & Care*. 12 (1). p.1-11.

Sibiya, N.H., Mugiya, T.C. and Mothibe, M.E.
Sibiya, N.H., **Mugiya, T.C.**, Khathi, A., Ngubane, P. and **Mothibe, M.E.** (2024) Glycaemic abnormalities induced by small molecule tyrosine kinase inhibitors: A review. *Frontiers in Pharmacology*. 1 (15). p.1-14.

Tandlich, R.
Bayne, R.J., Pyle, D., Chipumuro, M. and **Tandlich, R.** (2024) Rapid assessment of public interest in drought and its likely drivers in South Africa. *Journal of Emergency Management*. 22 (7). p.101-112.

Tandlich, R., Angala, A.N., Vhiriri, E.P., Moropa, K. and Ngqwala, N.
Tandlich, R., **Angala, A.N.**, **Vhiriri, E.P.**, **Moropa, K.**, **Ngqwala, N.** and **Zuma, B.** (2024) Disaster risk from diarrhoeal diseases and WASH in South Africa and Botswana in MDG time. *Jamba: Journal of Disaster Risk Studies*. 16 (2). p.1-11.

Peer-reviewed Subsidy – Earning Proceedings

Tandlich, R.
Ngcauzele, Z.R., **Limson, J.L.**, **Ngqwala, N.**, **Mutingwende, N.** and **Tandlich, R.** 353 Evaluation of physicochemical properties and implications for environmental security in the Eastern Cape Province of South Africa. *Solutions for crisis situations in specific environments*. University of ilin. Slovakia. October 2024.

Tsiu, N.A., Sebola, K.M., Maguire, K.A. and Tandlich, R.
Tsiu, N.A., **Sebola, K.M.**, Restas, A., **Maguire, K.A.** and **Tandlich, R.** Availability and types of data to assist for ethical drought assistance and management in South Africa. *17th International Scientific Conference Secure Slovakia and European Union*. Kosova 1, 040 01 Ko'ice. Slovakia. November 2024.

Tsiu, N.A., **Sebola, K.M.**, Restas, A., **Maguire, K.A.** and **Tandlich, R.** Availability and types of data to assist for ethical drought assistance and management in South Africa. *17th International Conference on Secure Slovakia and European Union*. Kostova 1, Ko'Ice. Slovakia. November 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Arineitwe, C. and Sibiya, N.H.
Arineitwe, C., Khathi, A. and **Sibiya, N.H.** An induced-insulin resistance state: Effects on DPP4 cellular expression and shedding invitro in skeletal muscle C2C12cell line. *57TH Annual SASBCP conference.* Irene Country Lodge, Centurion. South Africa. September 2024.

Chipomho, L., Sibiya, N.H. and Mothibe M.E
Chipomho, L., **Sibiya, N.H.** and **Mothibe M.E.** *In vitro* investigation of the potential of *Bidens Pilosa* extracts for anti-Alzheimer activity. *International Interdisciplinary Conference with the Celebration of African Traditional Medicine Day, Conference Centre*. North Campus, Nelson Mandela University, Gqeberha, South Africa, 29 August to 01 September 2024.

Chipomho, L., Sibiya, N.H. and Mothibe M.E
Chipomho, L., **Sibiya, N.H.** and **Mothibe M.E.** *In vitro* investigation of the potential of *Bidens Pilosa* extracts for anti-Alzheimer activity. *57 Annual SASBCP conference*. Irene Country Lodge, Cape Town. South Africa. September 2024.

Chiwundura, M., Khanye, S.D. and Sibiya, N.H.
Chiwundura, M., **Khanye, S.D.** and **Sibiya, N.H.** Investigation of Schiff Base Vanadium Complexes: Effects on Glucose Uptake, Cytotoxicity, and Inflammation in Insulin Target Cells. *57 Annual SASBCP conference*. Irene Country Lodge, Cape Town. South Africa. September 2024.

Kader, T., Sibiya, N.H. and Mothibe M.E
Kader, T., **Sibiya, N.H.** and **Mothibe M.E.** An investigation into the impact of geographical location on the phyto-chemical composition, pharmacological and toxicological activities of *Tulbaghia violacea* collected from the Eastern Cape and Gauteng province*. International Interdisciplinary Conference with the Celebration of African Traditional Medicine Day*. Conference Centre, North Campus, Nelson Mandela University, Gqeberha, South Africa, 29 August to 01 September 2024.

Kader, T., Sibiya, N.H. and Mothibe M.E
Kader, T., **Sibiya, N.H.** and **Mothibe M.E.** An investigation into the impact of geographical location on the phyto-chemical composition, pharmacological and toxicological activities of *Tulbaghia violacea* collected from the Eastern Cape and Gauteng province. *57 Annual SASBCP conference*. Irene Country Lodge, Cape Town. South Africa. September 2024.

Khamanga, S.M. and Walker, R.B.
Khamanga, S.M. and **Walker, R.B.** Application of experimental design and canonical analysis through the eigen value problem to drug release from micro-encapsulated microparticles. *The 82nd International Pharmacy Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences*. CTICC, Cape Town. South Africa. September 2024.

Khanye, S.D.
Khanye, S.D. Stages of drug discovery and development process: When to declare a clinical candidate? *Clinical Trials Symposium.* East London ICC, East London. South Africa. September 2024.

Kuretu, A., Mothibe, M.E. and Sibiya, N.H.
Kuretu, A., **Mothibe, M.E.**, Ngubane, P. and **Sibiya, N.H.** Drug-induced mitochondrial dysfunction: Effect on insulin sensitivity in skeletal muscle cells. *82nd FIP World Congress of Pharmacy and Pharmaceutical Sciences.* International Convention Centre, Cape Town. South Africa. January 2024.

Kuretu, A., **Mothibe, M.E.**, Ngubane, P. and **Sibiya, N.H.** Drug-induced mitochondrial dysfunction: effect on insulin sensitivity in the skeletal muscle cells in vitro. *NRF Next Generation and Emerging Researchers Symposium*. Birchwood, Boksburg. South Africa. October 2024.

Mothibe, M.E.
Mothibe, M.E. Characterisation of medicinal plant extracts for potential inhibition and induction of Cytochrome P450 enzymes. *International Interdisciplinary Conference with the Celebration of African Traditional Medicine Day, Conference Centre*. North Campus, Nelson Mandela University, Gqeberha, South Africa, 29 August to 01 September 2024.

Mothibe, M.E.
Mothibe, M.E. Systemic Review of commonly used Indigenous Medicines in the Eastern Cape- A case for Integrative Medicine. *International Interdisciplinary Conference with the Celebration of African Traditional Medicine Day*. Conference Centre, North Campus, Nelson Mandela University, Gqeberha, South Africa, 29 August to 01 September 2024.



Photo: Chris Marais

Mothibe, M.E.
Mothibe, M.E. Investigation of medicinal plant extracts for potential inhibition and induction of Cytochrome P450 enzymes. *57th Annual SASBCP conference*. Irene Country Lodge, Centurion. South Africa. September 2024.

Mtshare, T.E., Sibiya, N.H. and Khanye, S.D.
Mtshare, T.E., **Sibiya, N.H.** and **Khanye, S.D.** Design and synthesis of novel benzoxaborole-thiazolidinedione hybrid compounds for anti-cancer therapy. *57th Annual SASBCP Conference 2024*. Irene Country Lodge, Centurion. South Africa. September 2024.

Mugiya, T.C., Mothibe, M.E. and Sibiya, N.H.
Mugiya, T.C., **Mothibe, M.E.** and **Sibiya, N.H.** Examining the Impact of Small Molecule Tyrosine KinaseInhibitors on Glucose Metabolism in Primary Insulin Target issues *In-Vitro*. *57th Annual SASBCP conference.* Irene Country Lodge, Centurion. South Africa. September 2024.

Ndlovu, H., Khamanga, S.M. and Walker, R.B.
Ndlovu, H., **Khamanga, S.M.** and **Walker, R.B.** Development and validation of a stability indicating HPLC method for the determination of metronidazole in pharmaceutical dosages forms. *The 57thAnnual Conference of the Society for Basic and Clinical Pharmacology*. Irene Country Lodge, Centurion. South Africa. September 2024.

Nhau, P.T. and Sibiya, N.H.
Nhau, P.T. and **Sibiya, N.H.** Investigating the effects of COVID-19 main protease on glucose handling in skeletal muscle and hepatic cell lines, *in vitro*. *82nd FIP World Congress of Pharmacy and Pharmaceutical Congress*. International Convention Centre, Cape Town. South Africa. January 2024.

Nzuza, B.W., Khamanga, S.M. and Walker, R.B.
Nzuza, B.W., **Khamanga, S.M.** and **Walker, R.B.** Formulation and evaluation of a garlic and shea butter based natural shampoo. *The 82nd International Pharmacy Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences*. CTICC, Cape Town. South Africa. September 2024.

Sibanda, U.M., Walker, R.B. and Khamanga, S.M.
Sibanda, U.M., **Makoni, P.A.**, **Walker, R.B.** and **Khamanga, S.M.** HPLC method for the quantitation of ethionamide in pharmaceutical dosage forms. *The 82nd International Pharmacy Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences*. CTICC, Cape Town. South Africa. September 2024.

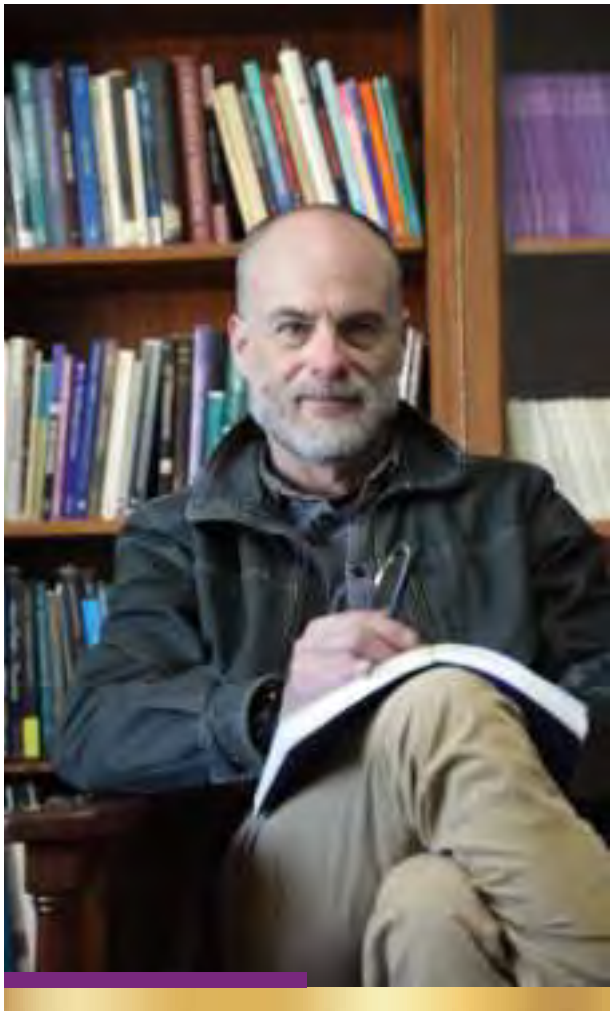
Sibiya, N.H.
Ludidi, A., **Sibiya, N.H.**, Khathi, A. and Ngubane, P. High-fat, high-carbohydrate diet-induced prediabetes preconception in Sprague Dawley rats as a risk factor for the development of preeclampsia: assessing changes in placental metabolic insults. *International Congress of Endocrinology 2024*. World Trade Centre, Dubai. United Emirates Arab. January 2024.

Walker, R.B.
Walker, R.B. Production of hand sanitizer during COVID: An academics story. *The 82nd International Pharmacy Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences*. CTICC, Cape Town. South Africa. September 2024.

DEPARTMENT OF Philosophy

Introduction

The Department of Philosophy continues to be active in research, both collaborative and individual.



Professor Ward Jones

Head of Department

Gama and **Dr Lembethe** received their PhDs in the past two (2) years, and both are writing and publishing. **Sabelo Ndwandwe** is completing his PhD at the University of Aberdeen. Philosophy staff at the Allan Gray Centre for Leadership Ethics continue to collaborate on numerous research projects.

Last year, **Dr Kelland** and **Professor Tabensky** took full advantage of an extended visit by a young anthropologist based at UCLA and Switzerland, Dr Anna Christen, resulting in multiple projects and papers. Having recently published a book, **Dr Bloom** left late last year to be a Scholar in Residence at Marquette University, where he is giving talks and starting another monograph.

Dr Jones spent last year finalizing drafts of two (2) long, ambitious papers, both of which are now under consideration.

The Department continues to own and edit Philosophical Papers, an international and general journal published three times per year by Taylor & Francis.

Distinguished Visitors / International Visits

Department visitor: Eleonora Roldán Mendívil (Universities of Kassel and the Witwatersrand).

Photo: Jackie Grove

Department of Philosophy Publications

Books/Chapters/Monographs

Christen, A.B.C.
Christen, A.B.C. (2024) Die Anthropologie des Körpers als Forschungspraxis der Anerkennung. In: Hirschmann, Edgar (ed.): *Karper und Anerkennung. Der Leib in der sozialen Dynamik. Mit einem wort van Axel Honneth*. Campus Verlag, Frankfu11 (2024).p.49-71. ISBN: 9735935816

Kelland, L.
Kelland, L. (2024) 'Corrective' Sexual Violence in South Africa: A Crime Against the Deviant Sexualised Other. In: Sanni, J.S. (ed.). *Philosophy of Violence: A Multidisciplinary Perspective*. Switzerland: Springer Nature Switzerland. p.61-94. ISBN: 9783031558801.

Concerts, Exhibitions, Performances, Workshops, Events

Kelland, L.
Kelland, L. Invited speaker. Using AI Critically for Humanity. *AI, Caffeine, and Chat*. Nelson Mandela University, Gqeberha. South Africa. 30 October 2024.

Tabensky, P.
Tabensky, P. and **Njovane, T.** Speaker. Book Launch of a book recently published by me. *Camus and Fanon on the Algerian Question: An Ethics of Rebellion*. Amazwi, Makhanda. South Africa. 22 May 2024.

Tabensky, P. Online Publication. The Challenges to Ethical Leadership in South Africa. *Published online: https://www.leadershipethics.africa/2024/10/the-challenge-to-ethical-leadership-in.html#more*. Online, online. Online. 1 January 2024.

Tabensky, P. Workshop Facilitator. *IiNtetho zoBomi*. *Allan Gray Makers yearly event*. Birchwood hotel, Johannesburg. South Africa. 6 September 2024.

Tabensky, P. Blog. Camus and Fanon. https://www.3-16am.co.uk/articles/camus-and-fanon. *3:16am*. Online, London. UK. 1 January 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Alloggio, S.
Msimang, A., **Edwards, S.**, **Alloggio, S.** and **Tandlich, R.** (2024) Human wellbeing and animal welfare: Is there an ethical link to be implemented from the COVID19 pandemic into the practice of emergency management. *American journal of disaster medicine*. 19 (3). p.237-250.

Christen, A.B.C.
Christen, A.B.C. and Wilby, M.W. (2024) New Perspective on Joint Attention. *Topoi*. 43 (0). p.243-245.

Christen, A.B.C. (2024) What Matters to Others: A High-Threshold Account of Joint Attention. *Topoi*. 43 (0). p.337-348.

Gama, R.
Gama, R. (2024) On the Importance of an Endogenous Ontological Account of Ancestors. *Philosophia Africana*. 23 (1). p.96-110.

Kelland, L.
Kelland, L. (2024) I See You, You See Me: Playful Self-Discipline in the South African Academy. *Theoria*. 71 (181). p.113-135.

Kelland, L., Lembethe, N.A., Maponya, M. and Tabensky, P.
Kelland, L., **Lembethe, N.A.**, **Maponya, M.** and **Tabensky, P.** (2024) A Pedagogy of Being: Humanising Learning Environments in the South African Tertiary Sector. *JALT Journal*. 7 (1). p.1-16.

Onah, G.O.
Onah, G.O. (2024) Albert Camus's Ethics of Revolution as a Model for Ethical Thinking on Violent Revolutions for Catholics. *Religions*. 15 (9). p.1-11.

Tabensky, P.
Tabensky, P. (2024) Fanon on Recognition and Solidarity. *Theoria*. 71 (181). p.40-58.

Tabensky, P. 'The Revolutionary Impetus', in Anke Graneß, Edwin Etieyibo, and Franz Gmainer-Pranzl (eds.), *African Philosophy in an Intercultural Perspective*. Stuttgart: J.B. Metzler, 2024.

Kelland, L., Lembethe, N., Maponya, M. and **Tabensky, P.** "A pedagogy of being: Humanising learning environments in the South African tertiary sector". *Journal of Applied Learning and Teaching,* Vol. 7 No. Sp. Iss. 1 (2024) https://doi.org/10.37074/jalt.2024.7.S1.7

Kelland, L. and **Tabensky, P.** (2024) '"*IiNtetho zoBomi*: Conversations About Life" – a different way to teach ethics' in *Metodo: International Studies in Phenomenology and Philosophy* - Special issue on the Didactics of Philosophy and Philosophical Practice https://metodo-rivista.eu/

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Christen, A.B.C.
Christen, A.B.C. Attention, Habit, and Institutional Culture: Challenges of Transforming Higher Education. *Why Still Education?* University of Belgrade, Belgrade. Serbia. October 2024.

Christen, A.B.C. The Ontological Burn: Theories of Attention and their Ontological Commitments. *Weapons of Mass Distraction Conference*. Royal Danish Academy of Science & Letters, Copenhagen. Denmark. November 2024.

Christen, A.B.C. What Matters to Others: A High-Threshold Account of Joint Attention. *Social Ontology Conference.* Duke University, Durham. United States. July 2024.

Christen, A.B.C. "Theory." Inaugural Issue of *Basel Anthropology Papers*. Meiu, George and Stasis, Michael (eds.), (2024).

Kelland, L.
Kelland, L. Philosophical Inculcation & Identity Development in the South African Academy. *Why Still Education*. University of Belgrade, Belgrade. Serbia. October 2024.

Kelland, L. Using AI Critically for Humanity. *Conference of the International Higher Education Teaching and Learning Association*. Boardwalk International Convention Centre, Gqeberha. South Africa. October 2024.

Kelland, L. The Ambiguity of Trust in Higher Education. *Higher Education Close Up 11*. Rhodes University, Makhanda. South Africa. July 2024.

Kelland, L. Vulnerability, heteronomy, and ethics: the heteronomy of our mutual vulnerability. *Philosophical Society of Southern Africa, annual conference*. STIAS, Stellenbosch. South Africa. January 2024.

Tabensky, P.
Tabensky, P. Invited panel discussion on humanising pedagogy. *HETL 2024*. Boardwalk Convention Centre, Gqeberha. South Africa. October 2024.

Tabensky, P. The Challenge to Ethical Leadership in South Africa. *Leadership Ethics in Africa: Research Network (LEA: RN) inaugural conference*. Online Global. Online. July 2024.

Tabensky, P. Knowledge's Work. *Public Philosophy*. Institute of Philosophy, Zagreb. Croatia. December 2024.

Tabensky, P. The Rise of the Hustler State. *PSSA Conference*. STIAS, Stellenbosch. South Africa. January 2024.

Tabensky, P. Scarcity Corruption. *12th Wild Coast Symposium*. Crawfords Hotel, Cintsa. South Africa. November 2024.

Tabensky, P. A Pedagogy of Being. *The North American Association for Philosophy and Education*. University of St Mary of the Lake, Chicago. United States. October 2024.

Tabensky, P. Attention in the Classroom. *Attending together*. Rhodes University, Makhanda. South Africa. May 2024.

Tabensky, P. and Lembethe, N.A.

Tabensky, P. and **Lembethe, N.A.** A Pedagogy of Being. *2024 International Higher Education Teaching and Learning Conference*. Boardwalk Convention Centre, Gqeberha. South Africa. October 2024.

DEPARTMENT OF

Physics and Electronics

Introduction

The Department of Physics and Electronics hosted the 68th annual conference of the South African Institute of Physics (SAIP2024) between 1 - 5 July 2024. The meeting, attended by three hundred and sixty (360) delegates, brought together students, professionals, teachers, and government officials.



Professor Makaiko Chithambo

Head of Department

Photo: Jackie Grove

The South African Institute of Physics (SAIP) itself was founded in 1955 and its main role is to promote research, teaching and application of physics in South Africa. The SAIP annual conferences, which are a fixture in the national physics calendar, offer a platform for not only sharing the latest developments in physics but also networking between students, early career- and established researchers. The programme for SAIP2024 consisted of plenary talks, parallel presentations and poster displays. The conference proper was preceded by a Winter School on the Physics of defects in solids held on 1 July 2024.

Dr Kwezi Mzilikazi, the Vice-Chancellor for Research and Innovation, gave the opening remarks. She was followed by Dr Rudolph Erasmus, President of the SAIP, who pointed to the role of the conference in fostering discourse and collaboration. The keynote address was given by the Acting Director General at the Department of Science and Innovation, Mr Takalani Nemaungani who reaffirmed government support for scientific research and innovation.

There were two (2) notable presentations related to the Department at the meeting. In a shared plenary presentation,



Group photo SAIP2024.
Photo: Department of Physics and Electronics

Professor Chithambo, Head of the Department of Physics and Electronics, and Professor Igle Gledhill, Visiting Adjunct Professor in Flow Physics at the University of the Witwatersrand, speculated on possible accomplish-ments in physics by the year 2124.

Professor Chithambo, who was also Chairman of SAIP's 2024 Local Organising Committee, picked out various topics and predicted a more efficient capture and use of sunlight for energy, a better understanding and exploitation of point and extended defects in defects that may spur new technologies including an expanded use of quantum computing.

Among other things, **Professor Gledhill** speculated on future discovery of a fourth neutrino, dark matter particle, and a better understanding of dark energy and expansion of the universe. **Dr Jennifer Williams**, Senior Lecturer in the Department, gave a plenary lecture entitled 'Helping science students learn how to learn: interventions with first-year science students at Rhodes University' during which she described programmes underway intended to deal with under-preparedness in incoming First Year students.

Professor David Roux, an Associate Professor in the Department, gave a conference presentation entitled "Something from nothing: the gamma-ray spectroscopy of uranium-231" at The 41st International Workshop on Nuclear Theory (IWNT) in Rila, Bulgaria. Professor Roux and colleagues studied the structure of the nucleus of uranium-231 at iThemba LABS, Western Cape, an accelerator laboratory outside Cape Town. Uranium-231 is the lightest uranium isotope to have been studied. The structure of this nucleus was unknown at the time of the experiment. A key outcome of this work is that the work discovered the first quantum mechanical structure of this light uranium isotope which is particularly difficult to study because it breaks apart as soon as it is created.

The SAIP annual conferences, which are a fixture in the national physics calendar, offer a platform for not only sharing the latest developments in physics but also **networking between students, early career- and established researchers.**

Distinguished Visitors / International Visits

Professor Makaiko Chithambo was invited to run a course on stimulated luminescence in the Department of Physics at the University of Sao Paulo, Brazil, in November 2024. The course which ran over five (5) days consisted of two (2) topics, namely, one (1) on *Phototransferred thermoluminescence* and the second *onTime-resolved luminescence*. The course was attended by students and staff at the university as well as participants online from various institutions in South America, India, South Africa and the USA.

Department of Physics and Electronics Publications

Books/Chapters/Monographs

Chithambo, M.L.
Chithambo, M.L. (2024) *Phototransferred Thermoluminescence*. England: IOP Publishing Ltd. ISBN: 9780750338295.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

White, S.V.
Slijepcevic, I.V., Scaife, A.M.M., Walmsley, M., Bowles, M., Wong, O.I., Shabala, S.S. and **White, S.V.** (2024) Radio galaxy zoo: towards building the first multipurpose foundation model for radio astronomy with self-supervised learning. *RAS Techniques and Instruments*. 3 (2024). p.19-32.

Peer Reviewed Subsidy-Earning Journal Research Publications

Abdalla, F.B.
dos Santos, M.V., Landim, R.G., Hoerning, G.A., **Abdalla, F.B.**, Queiroz, A., Abdalla, E., Wuensche, C.A., Wang, B.B., Barosi, L. and Villela, T. (2024) The BINGO Project IX. Search for fast radio bursts - A forecast for the BINGO interferometry system. *Astronomy and Astrophysics*. 681 (2024). p.1-13.

Novaes, C.P., de Mericia, E.J., **Abdalla, F.B.**, Wuensche, C.A., Santos, L., Delabrouille, J., Remazeilles, M., Liccardo, V., Abdalla, E. and Barosi, L. (2024) Cosmological constraints from low redshift 21cm intensity mapping with machine learning. *Monthly Notices of the Royal Astronomical Society*. 528 (2). p.2078-2094.

Akoto-Danso, A., Bernardi, G. and Smirnov, O.M.
Dean, R.P., Radcliffe, J.F., Njeri, A., **Akoto-Danso, A.**, **Bernardi, G.**, **Smirnov, O.M.**, Beswick, R., Garrett, M.A., Jarvis, M.J., Whittam, I.H., Bourke, S. and Paragi, Z. (2024) The VLBA Candels Goods-North Survey? Survey design, processing, data products, and source counts. *Monthly Notices of the Royal Astronomical Society*. 529 (3). p.2428-2442.

Andati, L.A.L., Baidoo, L., Ramaila, A., Smirnov, O.M., Makhathini, S. and Perley, R.A.
Andati, L.A.L., **Baidoo, L.**, **Ramaila, A.**, **Smirnov, O.M.**, **Makhathini, S.** and **Perley, R.A.** (2024) A spectro-polarimetric study of the radio galaxy Pictor A using MeerKAT. *Monthly Notices of the Royal Astronomical Society*. 529 (2). p.1626-1641.

Bernardi, G.
Pelliciari, D., **Bernardi, G.** and *et al*. (2024) The Northern Cross Fast Radio Burst project: IV. Multi-wavelength study of the actively repeating FRB 20220912A. *Astronomy and Astrophysics*. 690 (1). p.1-11.

Pignataro, G.V., Bonafede, A., **Bernardi, G.**, de Gasperin, F., Brunetti, G., Pasini, T., Vazza, F., Biava, N., de Jong, J.M.G.H.J., Cassano, R., Botteon, A., Brüggen, M., Röttgering, H.J.A., van Weeren, R.J. and Shimwell, T.W. (2024) Abell 0399 - Abell 0401 radio bridge spectral index: First multi-frequency detection. *Astronomy and Astrophysics*. 685 (2024). p.1-7.

Garsden, H., Bull, P., Wilensky, M.J., Abdurashidova, Z., Adams, T., Aguirre, J.E., Alexander, P., Ali, Z.S., Baartman, R. and **Bernardi, G.** (2024) A demonstration of the effect of fringe-rate filtering in the hydrogen epoch of reionization array delay power spectrum pipeline. *Monthly Notices of the Royal Astronomical Society*. 535 (4). p.3218-3238.

Murphy, G.G., Bull, P., Santos, M.G., Abdurashidova, Z., Adams, T., Aguirre, J.E., Alexander, P., Ali, Z.S., Baartman, R. and **Bernardi, G.** (2024) Bayesian estimation of cross-

Professor Makaiko Chithambo with some participants of the course on stimulated luminescence that he ran at the University of Sao Paulo. Photo: Department of Physics and Electronics



coupling and reflection systematics in 21cm array visibility data. *Monthly Notices of the Royal Astronomical Society*. 534 (3). p.2653-2673.

Keller, P.M., Thyagarajan, N., Kumar, A., Kanekar, N. and **Bernardi, G.** (2024) The radio-loud fraction of quasars at z > 6. *Monthly Notices of the Royal Astronomical Society*. 528 (4). p.5692-5702.

Bernardi, G. and Perley, R.A.
Murgia, M., Govoni, F., Vacca, V., Loi, F., Feretti, L., Giovannini, G., Melis, A., Concu, R., Carretti, E., **Bernardi, G.** and **Perley, R.A.** (2024) Sardinia Radio Telescope observations of the Coma cluster. *Monthly Notices of the Royal Astronomical Society*. 528 (4). p.6470-6495.

Bernardi, G. and Venturi, T.
Pignataro, G.V., Bonafede, A., **Bernardi, G.**, Balboni, M., Vazza, F., van Weeren, R.J., Ubertosi, F., Cassano, R., Brunetti, G., Botteon, A., **Venturi, T.**, Akamatsu, H., Drabent, A. and Hoeft, M. (2024) Mind the gap between A2061 and A2067: Unveiling new diffuse, large-scale radio emission. *Astronomy and Astrophysics*. 691 (2024). p.1-11.

Pignataro, G.V., Bonafede, A., **Bernardi, G.**, Riseley, C., Dallacasa, D. and **Venturi, T.** (2024) Probing diffuse radio emission in bridges between galaxy clusters with uGMRT. *Astronomy and Astrophysics*. 682 (2024). p.1-11.

Bester, H.L. and Smirnov, O.M.
Roth, J., Frank, P., **Bester, H.L.**, **Smirnov, O.M.**, Westermann, R. and Enßlin, T.A. (2024) Fast-resolve: Fast Bayesian radio interferometric imaging. *Astronomy and Astrophysics*. 690 (2024). p.1-23.

Blecher, T. and Heywood, I.
Deane, R.P., **Blecher, T.**, Obreschkow, D. and **Heywood, I.** (2024) On the implausible physical implications of a claimed lensed neutral hydrogen detection at redshift z = 1.3. *Monthly Notices of the Royal Astronomical Society: Letters*. 535 (1). p.70-75.

Blecher, T., Deane, R.P. and Heywood, I.
Blecher, T., **Deane, R.P.**, Obreschkow, D. and **Heywood, I.** (2024) Neutral hydrogen lensing simulations in the hubble frontier fields. *Monthly Notices of the Royal Astronomical Society*. 532 (3). p.3236-3251.

Charles, N., Bernardi, G., Bester, L. and Smirnov, O.M.
Charles, N., Kern, N.S., Pascua, R., **Bernardi, G.**, **Bester, L.**, **Smirnov, O.M.**, Acedo, E.D., Abdurashidova, Z., Adams, T. and Aguirre, J.E. (2024) Mitigating calibration errors from mutual coupling with time-domain filtering of 21cm cosmological radio observations. *Monthly Notices of the Royal Astronomical Society*. 534 (4). p.3349-3363.

Chithambo, M.L.
Ferreira, I.A., Nunes, M.C.S., Yoshimura, E.M., Trindade, N.M. and **Chithambo, M.L.** (2024) Optically stimulated luminescence in quartz pellets under blue and green illumination. *Brazilian Journal of Radiation Sciences*. 12 (4). p.1-17.

Ferreira, I.A., Nunes, M.C.S., Yoshimura, E.M., Trindade, N.M. and **Chithambo, M.L.** (2024) A first look at photo-transferred thermoluminescence of rose quartz. *Radiation Measurements*. 174 (0). p.107138.

Kalita, J.M. and **Chithambo, M.L.** (2024) Phosphorescence of beta irradiated Sr4Al14O25:Eu2+, Dy3+ - 9472; A persistent luminescence phosphor. *Journal of Luminescence*. 272 (0). p.120664.

Silva, A.O., Trindade, N.M. and **Chithambo, M.L.** (2024) A preliminary study of phototransferred thermoluminescence of alexandrite. *Journal of Luminescence*. 276 (1). p.1-2.

Nunes, M.C.S., Trindade, N.M., Yoshimura, E.M. and **Chithambo, M.L.** (2024) Optically stimulated luminescence of alexandrite. *Optical Materials*. 22 (1). p.1-6.

Ogundare, F.O., **Chithambo, M.L.**, Kwapa, P. and Mashaba, M. (2024) Characterization of natural soda ash for dosimetry using thermoluminescence technique. *Applied Radiation and Isotopes*. 217 (2025). p.1-11.

Chithambo, M.L. and Elago, F.
Chithambo, M.L. and **Elago, F.** (2024) Phototransferred thermoluminescence induced by 525 nm green light in X-Al2O3:C annealed at 1200oC. *Journal of Luminescence*. 278 (2025). p.1-5.

Dawson, J.
Popp, J.J., Dickinson, H., Serjeant, S., Walmsley, M., Adams, D., Fortson, L., Mantha, K., Mehta, V., **Dawson, J.**, Kruk, S. and Simmons, B.D. (2024) Transfer learning for galaxy feature detection: Finding giant star-forming clumps in low-redshift galaxies using Faster Region-based Convolutional Neural Network. *RAS Techniques and Instruments*. 3 (1). p.174-197.

Garland, I.L., Walmsley, M., Silcock, M.S., Potts, L.M., Smith, J.C., Simmons, B.D., Lintott, C.J., Smethurst, R.J., **Dawson, J.** and Keel, W.C. (2024) Galaxy Zoo DESI: Large-scale bars as a secular mechanism for triggering AGNs. *Monthly Notices of the Royal Astronomical Society*. 532 (2). p.2320-2330.

Habarulema, J.B.
Okoh, D., Cesaroni, C., **Habarulema, J.B.**, Migoya-Orue, Y., Nava, B., Spogli, L., Rabiu, B. and Benjamin, J. (2024) Investigation of the global climatologic performance of ionospheric models utilizing in-situ Swarm satellite electron density measurements. *Advances in Space Research*. 75 (5). p.1-17.

Habarulema, J.B., Okoh, D., Buresova, D., Rabiu, B., Scipion, D., Haggstrom, I., Erickson, P.J. and Milla, M.A. (2024) A storm-time global electron density reconstruction model in three-dimensions based on artificial neural networks. *Advances in Space Research*. 75 (5). p.1-20.

Hiyadutuje, A., **Habarulema, J.B.**, Kosch, M.J., Chen, X., Stephenson, J.A.E. and Matamba, T. (2024) Simultaneous Occurrence of Traveling Ionospheric Disturbances, Farley Buneman and Gradient Drift Instabilities Observed by the Zhongshan Super DARN HF Radar. *Journal of Geophysical Research: Space Physics*. 129 (2024). p.1-22.

Terefe, D.A., Nigussie, M. and **Habarulema, J.B.** (2024) The Effect of Energy Deposition Hemispherical Asymmetry on Characteristics of LSTIDs During 17 March 2015 Geomagnetic Storm. *Journal of Geophysical Research: Space Physics*. 129 (2024). p.1-16.

Fagundes, P.R., Pillat, V.G., **Habarulema, J.B.**, Tardelli, A. and Muella, M.T.A.H. (2024) Solar Flares and the Intricate Response of Earth's Outer Geomagnetic Field Variation. *Journal of Geophysical Research: Space Physics*. 129 (9). p.1-11.

Habarulema, J.B. and Katamzi-Joseph, Z.T.
Habarulema, J.B., Zhang, Y., Matamba, T., Buresova, D., Gang Lu, G., **Katamzi-Joseph, Z.T.**, Fagundes, P.R., Okoh, D. and Seemala, G. (2024) Absence of High Frequency Echoes from Ionosondes During the 23-25 April 2023 Geomagnetic Storm; What Happened? *Journal of Geophysical Research: Space Physics.* 129 (3). p.1-13.

Habarulema, J.B. and Matamba, T.M.
Hiyadutuje, A., Kosch, M.J., **Habarulema, J.B.**, Chen, X., Stephenson, J.A.E., **Matamba, T.M.** and Tshisaphungo, M. (2024) Observation of sporadic E layer altitude partially modulated by the Traveling Ionospheric Disturbances at high latitudes over Zhongshan station. *Journal of Atmospheric and Solar-Terrestrial Physics*. 265 (2024). p.1-15.

Heywood, I.
Heywood, I., Ponomareva, A.A., Maddox, N., Jarvis, M.J., Frank, B.S., Adams, E.A.K., Baes, M., Bianchetti, A., Collier, J.D., Deane, R.P., Glowacki, M., Jung, S.L. *et al.,* (2024) MIGHTEE-HI: deep spectral line observations of the Cosmos field. *Monthly Notices of the Royal Astronomical Society*. 534 (1). p.76-96.

Taylor, A.R., Sekhar, S., Heino, L., Scaife, A.M.M., Stil, J., Bowles, M., Jarvis, M.J., **Heywood, I.** and Collier, J.D. (2024) MIGHTEE polarization early science fields: the deep polarized sky. *Monthly Notices of the Royal Astronomical Society*. 528 (2). p.2511-2522.

Heywood, I. and Deane, R.P.
Jarvis, M.J., **Heywood, I.**, Jewell, S.M., **Deane, R.P.**, Klöckner, H.R., Ponomareva, A.A., Maddox, N., Baker, A.J., Bianchetti, A. and Hess, K.M. (2024) The discovery of a z = 0.7092 OH megamaser with the MIGHTEE survey. *Monthly Notices of the Royal Astronomical Society*. 529 (4). p.3484-3494.

Heywood, I. and Jozsa, G.I.G.
Koribalski, B.S., Veronica, A., Dolag, K., Reiprich, T.H.,

Bruggen, M., **Heywood, I.**, Andernach, H., Dettmar, R.J., Hoeft, M., Zhang, X. and **Jozsa, G.I.G.** (2024) MeerKAT discovery of a double radio relic and odd radio circle: connecting cluster and galaxy merger shocks. *Monthly Notices of the Royal Astronomical Society*. 531 (3). p.3357-3372.

Heywood, I. and Knowles, K.L.
Klutse, D.Y., Hilton, M., **Heywood, I.**, Smail, I., Swinbank, A.M., **Knowles, K.L.** and Sikhosana, S.P. (2024) MeerKAT observations of starburst galaxies and AGNs within the core of XMMXCS J2215.9?1738 at z = 1.46. *Monthly Notices of the Royal Astronomical Society*. 532 (2). p.2842-2859.

Heywood, I. and Legodi, P.P.
Ding, Y., Clements, D.L., Leeuw, L.L., **Heywood, I.**, Dannerbauer, H., Parmar, A., **Legodi, P.P.**, Ivison, R.J., Blake, R., Gutierrez, C.M., Carnero, A. and Sutherland, W. (2024) MeerKAT observations of Herschel protocluster candidates. *Monthly Notices of the Royal Astronomical Society*. 535 (1). p.370-391.

Heywood, I. and Liu, Z.
Pan, H., Jarvis, M.J., Zhu, M., Yin-Zhe, M.A.O., Santos, M.G., Ponomareva, A.A., **Heywood, I.**, Jing, Y., Chen, X.U., **Liu, Z.** and Chandola, Y. (2024) Deep extragalactic H I survey of the COSMOS field with FAST. *Monthly Notices of the Royal Astronomical Society*. 534 (1). p.202-214.

Heywood, I., Hugo, B., Jozsa, G.I.G., Jonas, J.L., Oozeer, N., Ramaila, A., Richter, L., Sirothia, S. and Smirnov, O.M.
Goedhart, S., **Heywood, I.**, **Hugo, B.**, **Jozsa, G.I.G.**, **Jonas, J.L.**, **Oozeer, N.**, **Ramaila, A.**, **Richter, L.**, **Sirothia, S.** and **Smirnov, O.M.** (2024) The SARAO MeerKAT 1.3 GHz Galactic Plane Survey. *Monthly Notices of the Royal Astronomical Society*. 531 (1). p.649-681.

Jozsa, G.I.G.
Maccagni, F.M., de Blok, W.J.G., Mancera Piña, P.E., Ragusa, R., Iodice, E., Spavone, M., McGaugh, S.S., Oman, K.A., Oosterloo, T.A., Koribalski, B.S., **Jozsa, G.I.G.** and *et al,* (2024) MHONGOOSE discovery of a gas-rich low surface brightness galaxy in the Dorado group. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Bassa, C.G., Vruno, F.D., Winkel, B., **Jozsa, G.I.G.**, Brentjens, M.A. and Zhang, X. (2024) Bright unintended electromagnetic radiation from second-generation Starlink satellites. *Astronomy and Astrophysics*. 689 (2024). p.1-11.

Deka, P.P., Gupta, N., Chen, H.W., Johnson, S.D., Noterdaeme, P., Combes, F., Boettcher, E., Balashev, S.A., Emig, K.L. and **Jozsa, G.I.G.** (2024) MALS discovery of a rare H i 21 cm absorber at z ?1.35: Origin of the absorbing gas in powerful active galactic nuclei. *Astronomy and Astrophysics*. 687 (A50). p.1-14.

Jozsa, G.I.G. and Knowles, K.L.
Deka, P.P., Gupta, N., Jagannathan, P., Sekhar, S., Momjian, E., Bhatnagar, S., Wagenveld, J., Klöckner, H.R., Balashev, S.A., Combes, F., Hilton, M., Borgaonkar, D., Emig, K.L., **Jozsa, G.I.G.**, Klutse, D.Y., **Knowles, K.L.** and *et al,* (2024) The MeerKAT Absorption Line Survey (MALS) Data Release I: Stokes I image catalogues at 1-1.4 GHz. *Astrophysical Journal, Supplement Series*. 270 (2). p.33.

Wagenveld, J.D., Klockner, H.R., Gupta, N., Sekhar, S., Jagannathan, P., Deka, P., Jose, J., Balashev, S.A., **Jozsa, G.I.G.**, Klutse, D.Y. and **Knowles, K.L.** (2024) The MeerKAT Absorption Line Survey Data Release 2: Wideband continuum catalogues and a measurement of the cosmic radio dipole. *Astronomy and Astrophysics*. 690 (A163). p.1-11.

Jozsa, G.I.G. and Ramatsoku, M.
Serra, P., Oosterloo, T.A., Kamphuis, P., **Jozsa, G.I.G.**, de Blok, W.J.G., Bryan, G.L., van Gorkom, J.H., Iodice, E., Kleiner, D., Loni, A., Loubser, S.I., **Ramatsoku, M.** and *et al,* (2024) The MeerKAT Fornax Survey: III. Ram-pressure stripping of the tidally interacting galaxy NGC 1427A in the Fornax cluster. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Karastergiou, A.
Lower, M.E., Kramer, M., Shannon, R.M., Breton, R.P., Wex, N., Johnston, S., Bailes, M., Buchner, S. and **Karastergiou, A.** (2024) A MeerKAT view of the double pulsar eclipses: Geodetic precession of pulsar B and system geometry. *Astronomy and Astrophysics*. 682 (2024). p.1-13.

Karastergiou, A., Johnston, S., Posselt, B., Oswald, L.S., Kramer, M. and Weltevrede, P. (2024) The Thousand-Pulsar-Array programme on MeerKAT? XV. A comparison of the radio emission properties of slow and millisecond pulsars. *Monthly Notices of the Royal Astronomical Society*. 532 (3). p.3558-3566.

Johnston, S., Mitra, D., Keith, M.J., Oswald, L.S. and **Karastergiou, A.** (2024) The Thousand-Pulsar-Array programme on MeerKAT? XIV. On the high linearly polarized pulsar signal. *Monthly Notices of the Royal Astronomical Society*. 530 (4). p.4839-4849.

Keith, M.J., Johnston, S., **Karastergiou, A.**, Weltevrede, P., Lower, M.E., Basu, A., Posselt, B., Oswald, L.S., Parthasarathy, A., Cameron, A.D., Serylak, M. and Buchner, S. (2024) The Thousand-Pulsar-Array programme on MeerKAT - XIII. Timing, flux density, rotation measure, and dispersion measure time series of 597 pulsars. *Monthly Notices of the Royal Astronomical Society*. 530 (2). p.1581-1591.

Basu, A., Weltevrede, P., Keith, P., Johnston, S., **Karastergiou, A.**, Oswald, L.S., Posselt, B., Song, R. and Cameron, A.D. (2024) The Thousand-Pulsar-Array programme on MeerKAT? XII. Discovery of long-term pulse profile evolution in seven young pulsars. *Monthly Notices of the Royal Astronomical Society*. 528 (4). p.7458-7476.

Knowles, K.L.
Qu, F.J., Sherwin, B.D., Madhavacheril, M.S., Han, D., Crowley, K.T., **Knowles, K.L.** and *et al,* (2024) The Atacama Cosmology Telescope: A Measurement of the DR6 CMB Lensing Power Spectrum and its Implications for Structure Growth. *Astrophysical Journal*. 962 (2). p.112.

Madhavacheril, M.S., Qu, F.J., Sherwin, B.D., MacCrann, N., Li, Y., **Knowles, K.L.** and *et al,* (2024) The Atacama Cosmology Telescope: DR6 Gravitational Lensing Map and Cosmological Parameters. *Astrophysical Journal*. 962 (2). p.113.

Orlowski-Scherer, J., Venterea, R.C., Battaglia, N., Naess, S., Bhandarkar, T., Biermann, E., Calabrese, E., Devlin, M., Dunkley, J., **Knowles, K.L.** and *et al,* (2024) The Atacama Cosmology Telescope: Millimeter Observations of a Population of Asteroids or: ACTeroids. *Astrophysical Journal*. 964 (2). p.138.

Coulton, W., Madhavacheril, M., **Knowles, K.L.** *et al.* (2024) Atacama Cosmology Telescope: High-resolution component -separated maps across one-third of the sky. *Physical Review D*. 109 (6). p.63530-63540.

Doze, P., Hilton, M., Hughes, J.P., Keeton, C.R., **Knowles, K.L.**, Moodley, K., Mroczkowski, T., Partridge, B., Raney, C.A., Sifon, C., Sikhosana, S.P., Vargas, C. and Wollack, E.J. (2024) A Multiwavelength Approach to Constraining the Merger Properties of ACT-CL J0034.4+0225. *Astrophysical Journal*. 974 (1). p.1-11.

Shaikh, S., Harrison, I., van Engelen, A., Marques, G.A. and **Knowles, K.L.** (2024) Cosmology from cross-correlation of ACT-DR4 CMB lensing and DES-Y3 cosmic shear. *Monthly Notices of the Royal Astronomical Society*. 528 (2). p.2112-2135.

van Marrewijk, J., Di Mascolo, L., Gill, A.S., Battaglia, N., Battistelli, E.S., Bond, J.R., Devlin, M., Doze, P., Dunkley, J., **Knowles, K.L.** and *et al, a.l.* (2024) XLSSC 122 caught in the act of growing up Spatially resolved SZ observations of a z = 1.98 galaxy cluster. *Astronomy and Astrophysics*. 689 (2024). p.1-11.

Cook, R.H.W., Davies, L.J.M., Rhee, J., Hale, C.L., Bellstedt, S., Thorne, J.E., Delvecchio, I., Collier, J.D., Dodson, R. and **Knowles, K.L.** (2024) DEVILS/MIGHTEE/GAMA/DINGO: the impact of SFR timescales on the SFR-radio luminosity correlation. *Monthly Notices of the Royal Astronomical Society*. 531 (1). p.708-727.

Kolokythas, K.K.
OSullivan, E., Rajpurohit, K., Schellenberger, G., Vrtilek, J.M., David, L.P., Babul, A., Olivares, V., Ubertosi, F., **Kolokythas, K.K.**, Babyk, I. and Loubser, I. (2024) A Hot Core in the Group-dominant Elliptical Galaxy NGC 777. *Astrophysical Journal*. 970 (65). p.1-15.

Rajpurohit, K., O'Sullivan, E., Schellenberger, G., Brienza, M., Vrtilek, J.M., Forman, W., David, L.P., Clarke, T., Botteon, A., **Kolokythas, K.K.** and *et al,* (2024) A Deep Dive into the

NGC 741 Galaxy Group: Insights into a Spectacular Head-tail Radio Galaxy from VLA, MeerKAT, uGMRT, and LOFAR. *Astrophysical Journal*. 976 (1). p.1-11.

Liritzis, I.
Liritzis, I., Cazottes, S., Douillard, T., Veron, M. and *et al,* (2024) Nano-microcrystals revealed on Tang dynasty gilded bronze using advanced TEM-SEM and synchrotron methods. *Nanoscale*. 16 (33). p.58-69.

Liritzis, I., Vafiadou, A., Polymeris, G., Kitis, G., Iliopoulos, I. and Xanthopoulou, V. (2024) Luminescence dating of limestone walls and pottery from ithaca (school of homer); first ages. *Scientific Culture*. 10 (2). p.15-33.

Andronache, I., Papageorgiou, I., Alexopoulou, A., Makris, D., Bratitsi, M., Ahammer, H., Radulovic, M. and **Liritzis, I.** (2024) Can complexity measures with hierarchical cluster analysis identify overpainted artwork? *Scientific Culture.* 10 (1). p.1-11.

Polymeris, G.S., Geraga, M., Papatheodorou, G., Iliopoulos, I., Pluhacek, T., Lemr, K., Qin, Z., Sergiou, S., Dimas, X. and **Liritzis, I.** (2024) Climate-driven versus anthropogenic induced erosion of the last 3000 years from an ancient lake in the Southern Phokis Plain (Desfina), Greece. *Holocene*. 34 (12). p.1775-1789.

Mabote, T.S.
Mathebula, D., Amankwah, A., Amouzouvi, K., Assamagan, K.A., Azote, S., Fajemisin, J.A., Fankame, J.B.F., **Mabote, T.S.** and *et al,* (2024) Modelling the impact of vaccination on COVID-19 in African countries. *PLoS Computational Biology*. 20 (10). p.1-11.

Medved, A.J.M.
Brustein, R. and **Medved, A.J.M.** (2024) Frozen stars: Black hole mimickers sourced by a string fluid. *Physical Review D*. 110 (3). p.104004010-10400406.

Brustein, R., **Medved, A.J.M.**, Shindelman, T. and Simhon, T. (2024) Black Holes as Frozen Stars: Regular Interior Geometry. *Fortschritte der Physik*. 72 (1). p.18-12.

Brustein, R., **Medved, A.J.M.** and Shindelman, T. (2024) Defrosting frozen stars: Spectrum of nonradial oscillations. *Physical Review D*. 110 (3). p.12406701-12406720.

Brustein, R., **Medved, A.J.M.** and Simhon, T. (2024) Kerr black hole mimickers sourced by a string fluid. *Journal of Cosmology and Astroparticle Physics*. 2024 (11). p.44-66.

Brustein, R., **Medved, A.J.M.** and Simhon, T. (2024) Thermodynamics of Frozen Stars. *Physical Review D*. 110 (2). p.20406601-20406614.

Nsengiyumva, S.
Thethwayo, C.T., Mtshali, C.B., Khumalo, Z.M., Segola, K., **Nsengiyumva, S.**, Mongwaketsi, N., Ndlangamandla, C.L. and Biyela, P.N. (2024) Analysis of structural stability of AR ion-implanted Pd/Zr/Pd/Ti/ Pd multilayer stack in hydrogen annealing environment. *Heliyon*. 10 (2024). p.1-12.

Raja, R. and Smirnov, O.M.
Raja, R., Rahaman, M., Datta, A. and **Smirnov, O.M.** (2024) A Multifrequency View of the Radio Phoenix in the A85 Cluster. *Astrophysical Journal*. 975 (1). p.1-11.

Raja, R., Smirnov, O.M. and Venturi, T.
Raja, R., **Smirnov, O.M.**, **Venturi, T.**, Rahaman, M. and Rahaman, H.Y.K. (2024) uGMRT Sub-GHz View of the Sausage Cluster Diffuse Radio Sources. *Astrophysical Journal*. 977 (1). p.1-11.

Roux, D.G.
Guo, R.J., Wang, S.Y., Liu, C., Bark, R.A., Meng, J., Zhang, S.Q., Qi, B., Rohilla, A., Hua, H., Chen, Q.B. and **Roux, D.G.** (2024) Evidence for Chiral Wobbler in Nuclei. *Physical Review Letters*. 142 (9). p.1-7.

Roux, D.G. and Uwitonze, P.
Roux, D.G., Bark, R.A., Lawrie, E.A., Lawrie, J.J., Ntshangase, S.S., Diniko, T.S., Easton, J.L., Jones, P., Kheswa, B.V., Khumalo, N.A., Majola, S.N.T., Masiteng, L.P., Negi, D., Noncolela, S.P., Ndayishimye, J., Sharpey-Schafer, J.F., Shirinda, O. and **Uwitonze, P.** (2024) First observation of rotational bands in the nucleus U. *European Physical Journal A*. 60 (118). p.1-12.

Photo: Chris Marais



Sirothia, S. and Pal, S.
White, G.J., Barrufet, L., Serjeant, S., Pearson, C.P., Sedgwick, O., Shimwell, T.W., **Sirothia, S.**, Chiu, P., Oi, N., Takagi, T. and **Pal, S.** (2024) A GMRT 610 MHz radio survey of the North Ecliptic Pole (NEP, ADF-N) / Euclid Deep Field North. *Monthly Notices of the Royal Astronomical Society*. 535 (2). p.1406-1425.

Smirnov, O.M. and Tasse, C.
Smirnov, O.M., Stappers, B.W., **Tasse, C.**, **Bester, H.L.**, Bignall, H.E., Walker, M., Caleb, M., Rajwade, K.M., Buchner, S., Woudt, P., Ivchenko, M., Roth, L., Noordam, J.E. and Camilo, F. (2024) The RATT Parrot: serendipitous discovery of a peculiarly scintillating pulsar in MeerKAT imaging observations of the Great Saturn – Jupiter Conjunction of 2020. Dynamic imaging and data analysis. *Monthly Notices of the Royal Astronomical Society*. 528 (4). p.6517-6537.

Smirnov, O.M. and Trehaeven, K.S.
Merluzzi, P., Busarello, G., **Venturi, T.**, Di Gennaro, G., Giacintucci, S., Casasola, V., Krajnovi and 263; D., Vernstrom, T., Carretti, E., **Smirnov, O.M.**, **Trehaeven, K.S.**, Anderson, C.S., Chesters, J., Heald, G., Hopkins, A.M. and Koribalski, B. (2024) Ram-pressure stripped radio tails detected in the dynamically active environment of the Shapley Supercluster. *Monthly Notices of the Royal Astronomical Society*. 533 (22). p.1394-1411.

Tasse, C.
Drake, A.B., Smith, D.J.B., Hardcastle, M.J., Best, P.N., Kondapally, R., Arnaudova, M.I., Das, S., Shenoy, S., Duncan, K.J., Rottgering, H.J.A. and **Tasse, C.** (2024) The LOFAR two metre sky survey data release 2: probabilistic spectral source classifications and faint radio source demographics. *Monthly Notices of the Royal Astronomical Society*. 534 (2). p.1107-1126.

Biava, N., Bonafede, A., Gastaldello, F., Botteon, A., Brienza, M., Shimwell, T.W., Brunetti, G., Bruno, L., Rajpurohit, K. and **Tasse, C.** (2024) First evidence of a connection between cluster-scale diffuse radio emission in cool-core galaxy clusters and sloshing features. *Astronomy and Astrophysics*. 686 (2024). p.1-33.

Cornu, D., Salomé, P., Semelin, B., Marchal, A., Freundlich, J., Aicardi, S., Lu X, X., Sainton, G., Mertens, F., Combes, F. and **Tasse, C.** (2024) YOLO-CIANNA: Galaxy detection with deep learning in radio data: I. A new YOLO-inspired source detection method applied to the SKAO SDC1. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Pasini, T., de Gasperin, F., Brüggen, M., Cassano, R., Botteon, A., Brunetti, G., **Tasse, C.** and *et al,* (2024) Ultra-low-frequency LOFAR spectral indices of cluster radio halos. *Astronomy and Astrophysics*. 689 (2024). p.1-11.

Dan Hu, H., Zajacek, M., Werner, N., Grossova, R., Jachym, P., Roberts, I.D., Ignesti, A., Kenney, J.D.P., Plsek, T. and **Tasse, C.** (2024) Ram-pressure stripped radio tail and two ULXs in the spiral galaxy HCG 97b. *Monthly Notices of the Royal Astronomical Society*. 527 (1). p.1062-1080.

Bhardwaj, N., Schwarz, D., Hale, C.L., Duncan, K.J., Camera, S., Heneka, C.S., Nakoneczny, S.J., Röttgering, H.J.A., Siewert, T.M., Tiwari, S.P., Zheng, J., Miley, G. and **Tasse, C.** (2024) Flux dependence of redshift distribution and clustering of LOFAR radio sources. *Astronomy and Astrophysics*. 692 (2024). p.1-11.

Venkattu, D., Lundqvist, P., Torres, M.P., Bonnassieux, E., **Tasse, C.**, Melchior, A.L. and Combes, F. (2024) SN 1885A and Supernova Remnants in the Centre of M31 with LOFAR. *Astrophysical Journal*. 976 (2). p.1-12.

Haoyang Ye, H., Sweijen, F., van Weeren, R.J., Williams, W., de Jong, J., Morabito, L.K., Rottgering, H., Shimwell, T.W., Best, P.N., Bondi, M., Brüggen, M., de Gasperin, F. and **Tasse, C.** (2024) 1-arcsecond imaging of the ELAIS-N1 field at 144MHz using the LoTSS survey with the international LOFAR telescope. *Astronomy and Astrophysics*. 691 (2024). p.1-18.

Erceg, A., Jelic, V., Haverkorn, M., Lovorka, G., Hardcastle, M.J., Shimwell, T.W. and **Tasse, C.** (2024) Faraday tomography of LoTSS-DR2 data: III. Revealing the Local Bubble and the complex of local interstellar clouds in the high-latitude inner Galaxy. *Astronomy and Astrophysics*. 688 (2024). p.1-16.

Bondi, M., Scaramella, R., Zamorani, G., Ciliegi, P., Vitello, F. and **Tasse, C.** (2024) LOFAR HBA observations of the Euclid Deep Field North (EDFN). *Astronomy and Astrophysics*. 683 (2024). p.1-12.

Arnaudova, M.I., Smith, D.J.B., Hardcastle, M.J., Das, S., Drake, A.B., Duncan, K., Gurkan, G., Magliocchetti, M., Morabito, L.K. and **Tasse, C.** (2024) Exploring the radio loudness of SDSS quasars with spectral stacking. *Monthly Notices of the Royal Astronomical Society*. 528 (3). p.4547-4567.

Venturi, T.
Bruno, L., Brienza, M., Zanichelli, A., Gitti, M., Ubertosi, F., Rajpurohit, K., **Venturi, T.** and Dallacasa, D. (2024) From 100 MHz to 10 GHz: Unveiling the spectral evolution of the X-shaped radio galaxy in Abell 3670. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Bruno, L., **Venturi, T.**, Dallacasa, D., Brienza, M., Ignesti, A., Brunetti, G., Riseley, C., Rossetti, M. and *et al,* (2024) Ageing and dynamics of the tailed radio galaxies in Abell 2142. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Koribalski, B.S., Duchesne, S.W., Lenc, E., **Venturi, T.**, Botteon, A., Shabala, S.S., Vernstrom, T., Carretti, E., Norris, R.P. and Anderson, C. (2024) ASKAP reveals the radio tail structure of the Corkscrew Galaxy shaped by its passage through the Abell 3627 cluster. *Monthly Notices of the Royal Astronomical Society*. 533 (1). p.608-620.

Giacintucci, S., **Venturi, T.**, Markevitch, M., Brunetti, G., Clarke, T.E. and Kale, R. (2024) Are Radio Minihalos Confined by Cold Fronts in Galaxy Clusters? Minihalos and Large-scale Sloshing in A3444 and MS 1455.0+2232. *Astrophysical Journal*. 961 (1). p.961-133.

Ubertosi, F., Schellenberger, G., OSullivan, E., Vrtilek, J.M., Giacintucci, S., David, L.P., Forman, W., Gitti, M., **Venturi, T.**, Jones, C. and Brighenti, F. (2024) Jet Reorientation in Central Galaxies of Clusters and Groups: Insights from VLBA and Chandra Data. *Astrophysical Journal*. 961 (134). p.1-19.

Santra, R., Kale, R., Giacintucci, S., Markevitch, M., De Luca, F., Bourdin, H., **Venturi, T.**, Dallacasa, D., Cassano, R., Brunetti, G. and Buch, K.D. (2024) A Deep uGMRT View of the Ultra-steep Spectrum Radio Halo in A521. *Astrophysical Journal*. 962 (1). p.1-11.

Roberts, I.D., van Weeren, R.J., Lal D.V., D., Sun, M., Chen, H., Ignesti, A., Brüggen, M., Lyskova, N., **Venturi, T.** and Yagi, M. (2024) Radio-continuum spectra of ram-pressure-stripped galaxies in the Coma Cluster. *Astronomy and Astrophysics*. 683 (2024). p.1-58.

Balboni, M., Gastaldello, F., Bonafede, A., Botteon, A., Bartalucci, I., Bourdin, H., Brunetti, G., Cassano, R., De Grandi, S., De Luca, F. and **Venturi, T.** (2024) CHEX-MATE: A LOFAR pilot X-ray - Radio study on five radio halo clusters. *Astronomy and Astrophysics*. 686 (2024). p.1-21.

Bartalucci, I., Rossetti, M., Boschin, W., Girardi, M., Nonino, M., Baraldi, E., Balboni, M., D. Coe, C., De Grandi, S., Gastaldello, F. and **Venturi, T.** (2024) PSZ2 G282.28+49.94, a recently discovered analogue of the famous Bullet Cluster. *Astronomy and Astrophysics*. 689 (2024). p.1-14.

Botteon, A., van Weeren, R.J., Eckert, D., Gastaldello, F., Markevitch, M., Giacintucci, S., Brunetti, G., Kale, R. and **Venturi, T.** (2024) The prototypical major cluster merger Abell 754: I. Calibration of MeerKAT data and radio/X-ray spectral mapping of the cluster. *Astronomy and Astrophysics*. 690 (2024). p.1-11.

Santra, R., Kale, R., Giacintucci, S., Wik, D.R., **Venturi, T.**, Dallacasa, D., Cassano, R., Brunetti, G. and Joshi, D.C. (2024) The Radio Halo in PLCKESZ G171.94-40.65: Beacon of Merging Activity. *Astrophysical Journal*. 976 (1). p.1-12.

Ubertosi, F., Giacintucci, S., Clarke, T., Markevitch, M., **Venturi, T.**, OSullivan, E. and Gitti, M. (2024) Multi-epoch jet outbursts in Abell 496: Synchrotron ageing and buoyant X-ray cavities draped by warm gas filaments. *Astronomy and Astrophysics*. 691 (2024). p.1-14.

Schellenberger, G., O'Sullivan, E., David, L.P., Vrtilek, J.M., Romero, C., Petitpas, G., Forman, W., Giacintucci, S.,



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Gurwell, M., Jones, C., Rajpurohit, K., Ubertosi, F. and **Venturi, T.** (2024) Probing the High-frequency Variability of NGC 5044: The Key to Active Galactic Nucleus Feedback. *Astrophysical Journal*. 976 (2). p.1-12.

White, S.V.

Shan, C., Xu Haiguang, H., Zhu, Y., Zhao, Y., **White, S.V.**, Jack, L., Line, B., Zheng, D., Zhu, Z., Dan Hu, H., Zhang, Z. and Xiangping Wu, X. (2024) An evaluation of source-blending impact on the calibration of SKA EoR experiments. *Monthly Notices of the Royal Astronomical Society*. 534 (3). p.2037-2061.

García-Pérez, A., Peña-Herazo, H., Jimenez-Gallardo, A., Chavushyan, V., Massaro, F., **White, S.V.**, Capetti, A., Balmaverde, B., Forman, W. and Cheung, C.C. (2024) Powerful Radio Sources in the Southern Sky. III. First Results of the Optical Spectroscopic Campaign. *Astrophysical Journal, Supplement Series*. 271 (8). p.1-10.

Peer-reviewed Subsidy - Earning Proceedings

Chithambo, M.L.

Chithambo, M.L. and Gledhill, I. Physics in the next 100 years in South Africa: remarks on foresight. *The 68th Annual Conference of the South African Institute of Physics.* Rhodes University, Makhanda. South Africa. July 2024.

Cossa, V.S., Knowles, K.L. and Smirnov, O.M.

Cossa, V.S., **Knowles, K.L.** and **Smirnov, O.M.** Searching for high-redshift radio galaxies with the MeerKAT Galaxy Cluster Legacy Survey. *68th Annual Conference of the South African Institute of Physics*. Rhodes University, Makhanda. South Africa. July 2024.

Knowles, K.L.

Homera, B. and **Knowles, K.L.** Cataloguing Compact Sources for Star Formation Rate studies in MERGHERS Pilot Fields. *68th Annual Conference of the South African Institute of Physics*. Rhodes University, Makhanda. South Africa. July 2024.

Kuja, S.O. and Kwawu, M.

Kuja, S.O., **Kwawu, M.** and Molteno, T. Modelling a Nonlinearly Spaced 24-Element Array Radio Telescope. *2024 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)*. Hyderabad international convention centre, Hyderabad. India. December 2024.

Opoku, K.A. and Chithambo, M.L.

Opoku, K.A. and **Chithambo, M.L.** Further studies in phototransferred thermoluminescence of tanzanite. *68th Annual Conference of the South African Institute of Physics*. Rhodes University, Makhanda. South Africa. July 2024.

Williams, J.A.

Williams, J.A. Helping science students learn how to learn: interventions with first-year science students at Rhodes University. *68th Annual Conference of the South African Institute of Physics*. Rhodes University, Makhanda. South Africa. December 2024.

Williams, J.A. and Cobbing, K.M.

Williams, J.A., **Sewry, J.D.** and **Cobbing, K.M.** The introduction and adaptation of the Investigative Science Learning Environment (ISLE) approach in a South African high school. *Proceedings of SAIP 2024, the 68th Annual Conference of the South African Institute of Physics*. Rhodes University, Grahamstown. South Africa. January 2024.

DEPARTMENT OF

Political and International Studies

Introduction

The Department of Political and International Studies aims to be a place of thoughtful enquiry and dynamic intellectual debate. To this end, we ran our weekly Friday seminar series. These seminars, always chaired by one (1) of our Postgraduate students, provide an opportunity for visiting scholars as well as colleagues and Postgraduate students from Rhodes University to present papers.



Professor Eduard Jordaan

Head of Department

Photo: Jackie Grove

We ran our usual week-long Teach-in, during which we bring visitors to give lunch-time open lectures on a topical subject. The theme for 2024 was on the question of Palestine. Dr Naledi Pandor, former Minister of International Relations and Cooperation, was one of the four (4) speakers.

Postgraduates / Graduations

Of the one hundred and thirty (130) third year students that graduated, three (3) passed with distinction. All three were awarded the Terence Beard Award for the Best Student in Political and International Studies, which is awarded to the student with the highest average mark in Politics 3. The winners were **Retshidisitswe Lesoro**, **Naledi Madikane**, and **Kristen Wehr**.

Of the thirty-nine (39) Honours students who graduated, nine (9) passed with distinction. **Sinalo Jako** was awarded the John Daniel Award for the Best Postgraduate Honours Student in Political and International Studies. During the April graduation, four (4) Masters students and one (1) doctoral student graduated.

Distinguished Visitors / International Visits

We welcomed back the 2023-2024 Nelson Mandela Visiting Professor Visiting, Professor Nkiru Nzegwu, who is the SUNY Distinguished Professor of Africana Studies at Binghamton University in the United States. Professor Nzegwu teaches and researches in feminist and African philosophy; African intellectual traditions; African and African diaspora art and aesthetics; artificial intelligence and racism; and race, philosophy and the law, among others. She is the author and editor of seven (7) books, including *Family Matters: Feminist Concepts in African Philosophy of Culture* (2006), *Issues in Contemporary African Art* (1998) and *Onitsha at the Millennium: Legacy, History and Transformation* (2013), among others. She taught a course titled “Family Matters: Feminist Concepts in Africa Philosophy” and delivered the Nelson Mandela Public Lecture titled “In a Season of Anomie: The Brilliant Leadership of Odogwu Aloisea Inyumba.”



From left tot right: Chuma Songelwa, Zikho Dana, Sivuyile Sitole.
Photo: Department of Political and International Studies

The Department of Political and International Studies **aims to be a place of thoughtful enquiry and dynamic intellectual debate**. To this end, we ran our weekly Friday seminar series.

We received three (3) visiting lecturers, who teach a course on African Peace and Conflict: Dr Anna Mensah from the Kofi Annan International Peacekeeping Training Centre in Ghana; Dr Andrews Atta-Asamoah from the Institute for Security Studies (ISS) in Pretoria, who is based in Addis Ababa, Ethiopia; and Ms Faith Mabera, a Senior Researcher at the Institute for Global Dialogue in Pretoria.

Significant Research Aligned Events

Following the publication of her book, *Guerrillas and Combative Mothers: Women and the Armed Struggle in South Africa*, **Professor Siphokazi Magadla** was awarded the Rhodes University Vice-Chancellor's Book Award for 2023 and a National Institute for the Humanities and Social Sciences (NHISS) Humanities and Social Sciences Award. Her book was also shortlisted for the University of Johannesburg Prize for South African Writing in English.

Department of Political and International Studies Publications

Books/Chapters/Monographs

Acharya, A.
Acharya, A. (2024) *TRAGIC NATION BURMA Why and how democracy failed*. SEA: Penguin Random House SEA. ISBN: 9789815266276.

Acharya, A. and Pardesi, M.S. (2024) *Divergent Worlds - What the Ancient Mediterranean and Indian Ocean Can Tell Us About the Future of International Order*. USA: Yale University Press. ISBN: 9780300281170.

Catsam, D.
Catsam, D. (2024) Introduction- Anti Apartheid Movements on Campus: Personal, Political, and Historical. In: Catsam, D.C. (ed.). *Struggle for a Free South Africa Campus Anti-Apartheid Movements in Africa and the United States, 1960? 1994*. London: Routledge. p.5-10. ISBN: 9781032684086.

Jordaan, E.
Jordaan, E. (2024) Still a Mutual Praise Society the African Group at the Universal Periodic Review. In: Etone, D., Nazir, A. and Storey, A. (eds.). *Human Rights and the UN Universal Periodic Review Mechanism: A Research Companion*. London: Routledge. p.199-214. ISBN: 9781032524184.

Magadla, S.
Magadla, S. (2024) *Guerrillas and Combative Mothers: Women and the Armed Struggle in South Africa*. London: Routledge. ISBN: 9781032597249.

Magadla, S., Magoqwana, B. and Masola, A. (2024) *Inyathi ibuzwa kwaba phambili*: African women's intellectual traditions in South Africa. In: Magoqwana, B., Magadla, S. and Masola, A. (eds.). *Inyathi Ibuzwa Kwabaphambili: Theorising South African Women's Intellectual Legacies.* Gqeberha: Mandela University Press. p.1-20. ISBN: 9781998959068.

Alonso-Marks, E. and **Magadla, S.** (2024) Developing Intercultural Sensitivity and Discomfort Through Collaborative Virtual Exchange. In: Mmmadova, T. (ed.). *Academic Mobility through the Lens of Language and Identity, Global Pandemics, and Distance Internationalization*. London: Routledge. p.243-255. ISBN: 9781003366942.

Magadla, S. (ed.) (2024) *Inyathi Ibuzwa Kwabaphambili: Theorising South African Women's Intellectual Legacies.* Gqeberha: Mandela University Press. ISBN: 9781998959068.

Magadla, S.
Magadla, S., **Dana, Z.** and **Nkomo, D.** (2024) Multilingual teaching and assessment: Towards an endogenous Political and International Studies at a South African university. In: Vogt, K. and Antia, B.E. (eds.). *Multilingual Assessment-Finding the Nexus?* Berlin: Peter Lang. p.185-220. ISBN: 978363 1861592.

Matthews, S.
Matthews, S. (2024) Recreating Knowledge About Africa in the Shadow of the Colonial Library. In: Wai, Z. (ed.). *Africa Beyond Inventions: Essays in Honour of V.Y. Mudimbe*. Switzerland: Palgrave Macmillan. p.171-192. ISBN: 978303157 1206.

Matthews, S. (2024) Recreating knowledge about Africa in the shadow of the colonial library. In: Wai, Z. (ed.). *Africa Beyond Inventions: Essays in Honour of V.Y. Mudimbe*. Switzerland: Palgrave Macmillan. p.171-192. ISBN: 97830315 71206.

Nyoka, B.
Nyoka, B. (2024) Bernard Magubane on the Political Economy of Race and Class in South Africa. In: Levenson, Z. (ed.). *The South African Tradition of Racial Capitalism*. London: Routledge. p.80-98. ISBN: 9781032766164.

Souare, I.
Souare, I. (2024) Patterns and Case Studies of Military Coups in Contemporary Africa: 1952-2022. In: *The Resurgence of Military Coups and Democratic Relapse in Africa*. New York: Palgrave Macmillan Cham. p.113-135. ISBN: 9783031510182.

Thumbran, J.D. and Gillam, K.E.
Thumbran, J.D. and **Gillam, K.E.** (2024) Until the people govern: The Black Students' Movement at Rhodes University in the 1980s. In: Catsam, D.C. (ed.). *Struggle for a Free South Africa Campus Anti-Apartheid Movements in Africa and the United States, 1960-1994*. London: Routledge. p.11-18. ISBN: 9781032684086.

Other Publications

Jordaan, E.
Jordaan, E. (2024). In: *African States on the UN Human Rights Council, 2006–2022*. Johannesburg: South African Institute of International Affairs.

Tselapedi, T.
Tselapedi, T. (2024) BRICS Business Councill Maeket Intelligence Report. In: *Brics Plus: Opportunities & Challenges in a Multipolar World*. Grahamstown: Rhodes University.

Peer Reviewed Subsidy-Earning Journal Research Publications

Acharya, A.
Acharya, A. (2024) Turning the idea of the Indo-Pacific into reality. *East Asia Forum Quarterly*. 16 (1). p.21-22.

Bell, J.B. and Matthews, S.
Bell, J.B. and **Matthews, S.** (2024) Fairtrade Wine in South Africa: Does Fairtrade Labelling Guarantee Social Upgrading for Farmworkers? *Journal of Southern African Studies.* 49 (5-6). p.907-925.

Diaz Pabon, F.A.
Diaz Pabon, F.A., Shifa, M., Ranchhod, V. and Machemedze, T. (2024) Climate change-related shocks, assets and welfare outcomes in South Africa. *South African Journal of Economics*. 92 (1). p.93-104.

Jordaan, E.
Jordaan, E. (2024) A "'willing accomplice'"? Evaluating South Africa's response to China's positions on international human rights. *South African Journal of International Affairs, The*. 31 (2). p.191-214.

Nedziwe, C.L.
Nedziwe, C.L. (2024) A Socio-Historical Approach to Regional Organizational Relations? NGOs in Gender Security in the SADC Region. *Politikon*. 57 (2024). p.5-28.

Tselapedi, T.
Tselapedi, T. (2024) Dislodging the hegemony of the white epistemological frame. *Third World Quarterly*. 45 (7). p.1291-1308.

Peer-reviewed Subsidy – Earning Proceedings

Monethi, T.B.R.

Monethi, T.B.R. Policy Pathways for Reducing Dependency through Technological Innovation: Lessons from Kenya's Use of Artificial Intelligence (AI) and Blockchain in Healthcare. *ACM International Conference Proceeding Series*. Pretoria, Pretoria. South Africa. December 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Matthews, S.
Matthews, S. Shifting the Politics of Knowledge Production on and from Africa. *Global Partnership Network Conference 2025*. Jawaharlal Nehru University, Delhi. India. March 2024.

DEPARTMENT OF Psychology

Introduction

The 2024 report of the Psychology Department offers a reflective account of a year marked by academic achievement, international scholarship, and research-driven engagement. The report captures key developments across Postgraduate training, distinguished academic visits, and research-aligned events, each contributing to the department's evolving impact within and beyond the university.



Dr Elron Fouten

Head of Department

Photo: Jackie Grove

Highlights include the graduation of a vibrant cohort of Postgraduate students, cross-continental collaborations, and participation in global conferences and fellowships. Together, these activities illustrate the Department's steadfast commitment to excellence in education, psychological research, and transformative community partnerships.

Postgraduates / Graduations

In 2024, the Psychology Department celebrated the graduation of fifty-eight (58) Postgraduate students across various levels. This cohort included five (5) doctoral (PhD) candidates, twelve (12) Masters graduates, and forty-one (41) Honours students. Of the total graduates, fifty-three (53) were female and nine (9) were male.

Distinguished Visitors / International Visits

The Department sustained a dynamic international presence in 2024, engaging in high-impact scholarly exchanges and collaborations that enhanced its global research footprint.

In May 2024, **Professor Megan Campbell** represented the Department at the South Africa–Sweden University Forum (SASUF), where she presented a poster exploring theoretical approaches to Intimate Partner Violence (IPV) through psychological, sociological, and historical perspectives. Her participation underscored the department's interdisciplinary approach to complex social challenges.

In June 2024, **Professor Campbell** attended the Emotion-Focused Therapy (EFT) World Summit in Amsterdam. Although she did not present, her engagement with this globally recognized event enriched professional development and broadened exposure to contemporary therapeutic practices.

In October 2024, **Dr Duane Booysen** completed a Visiting Scholar Fellowship at Emory University School of Medicine, hosted by Professor Sheila A.M. Rauch. The fellowship focused on strengthening collaborative research and exploring strategies for implementing prolonged exposure therapy in resource-constrained communities affected by post-traumatic stress disorder (PTSD).

Between September 2023 and May 2024, **Dr Sizwe Zondo** was a Visiting Fellow at Harvard University, where he worked closely with faculty in the Neuroscience Division. His fellowship supported the completion of his



Four members from the CSSR, Cassandra Robertson, Yamini Kalyanaraman, Nicola Jeary-Graham, and Megan Reuvers attended the International Society of Critical Health Psychology (ISCHP) conference at the University of Galway 1 - 4 July 2024 in person, and two members participated onlline, Distinguished Professor Catriona Macleod and Yanela Ndabula.

Photo: Department of Psychology

The year's highlights include the **graduation of a vibrant cohort of Postgraduate students**, cross-continental collaborations, and participation in global conferences and fellowships.

dissertation and fostered research into the intersection of cognitive neuroscience and mental health advancements in paediatric and adolescent HIV populations.

Significant Research Aligned Events

Research-led engagement continued to be a cornerstone of the department's activities, highlighting its dedication to culturally informed and collaborative inquiry.

In May 2024, Professor Megan Campbell held a visiting academic appointment at the University of the Basque Country, Spain, within the Department of Clinical and Health Psychology and the Research Methods Unit. During her visit, she conducted intensive data analysis for the *Predictors of IPV in African Couples* project, contributing substantively to cross-national research efforts.

The collaborative partnership between **Dr Duane Booysen** and Professor Sheila A.M. Rauch of Emory University, active since 2021, continued to evolve in 2024, advancing research into effective treatment modalities for PTSD within underserved communities.



Four members from the CSSR, Cassandra Robertson, Yamini Kalyanaraman, Nicola Jeary-Graham, and Megan Reuvers attended the International Society of Critical Health Psychology (ISCHP) conference at the University of Galway 1st to 4th July 2024 in person and two members participated onlline, Distinguished Professor Catriona Macleod and Yanela Ndabula.

Photo: Department of Psychology

Department of Psychology Publications

Books/Chapters/Monographs

Booysen, D.D.

Booysen, D.D. (2024) Global and Socioeconomic Considerations in the Delivery of PE: The Role of Task Shifting. In: Goetter, E.M. and Mclean, C.P. (eds.). *Prolonged Exposure for PTSD: Innovations to Improve Access, Engagement, and Outcomes*. Switzerland: Springer Nature. p.85-100. ISBN: 9783031727207.

Du Plessis, U. and Macleod, C.I.

Du Plessis, U. and **Macleod, C.I.** (2024) *Abortion services and reproductive justice in rural South Africa*. Johannesburg: Wits University Press. ISBN: 9781776148738.

Edwards, D.J.A.

Edwards, D.J.A. (2024) Case study research in counselling and psychotherapy. In: *Handbook of Case Study Research in the Social Sciences*. UK: Edward Elgar Publishing Limited. p.51-66. ISBN: 9781803920313.

Jacobs, L.

Jacobs, L. (2024) *Rocklands - On Becoming the First Generation Of Black Psychologists In Post-Apartheid South Africa*. Cape Town: African Minds. ISBN: 9781928502890.

Kangaude, G. and Macleod, C.I.

Kangaude, G., and **Macleod, C.I.** (2024). The nexus between COVID-19 and sexual and reproductive health of adolescents. In E. Durojaye & R. Mahadew (Eds.), *COVID-19 and the Right to Health in Africa.* (pp. 247-270). Routledge. ISBN: 9781032671437.

Macleod, C.I.

Macleod, C.I., Bhatia, S., and Liu, W. (2024). Féminismes et décolinisation de la psychologie: possibilités et défis. In D. fonte, and S.Lelaurain (Eds.), Épistémologies feminists et psychologie: Savoirs situés, pratiques situées. (pp. 79-112). Hermann Éditeurs. [trans Nadir Khanfour]. ISBN: 9791037031877.

International Visits

Booysen, D.D.

Booysen, D.D. Department of Psychiatry and Behavioural Science, School of Medicine, Emory University., Atlanta, United States of America. *Visiting Scholar*. 1 - 31 October 2024.

Other Publications

Macleod, C.I.

Macleod, C.I. (2024). *Strategic assessment of unsafe abortion, unintended pregnancies and contraception in Lesotho:* South Africa. United Nations Population Fund (UNFPA) & World Health Organisation (WHO).



"Is this pregnancy legitimate because it was (un)intended?: Intersections between reproductive legitimacy and agency and their implications for pregnancy supportability" - Megan Reuvers at The International Society of Critical Health Psychology (ISCHP) conference at the University of Galway.
Photo: Department of Psychology

Peer Reviewed Subsidy-Earning Journal Research Publications

Akhurst, J.E.

Akhurst, J.E. (2024) Clinical Psychologists' Experiences of "Community Service" in South Africa: Community-Based Service Learning and Primary Healthcare. *Social and Health Sciences (SaHS)- Formerly African Safety Promotion - A journal of Injury and violence Prevention*. 22 (2). p.1-20.

Akhurst, J.E., Van Vuuren, C., Maritz, A. and Human, J.S.

Akhurst, J.E., **Van Vuuren, C.**, **Maritz, A.** and **Human, J.S.** (2024) Working with adults towards systemic change to meet learners' needs at various phases of education. *Journal of Education*. 96 (2024). p.38-59.

Bazana, S.

Bazana, S. (2024) Exploring worker subjectivity: shaping industrial and organizational psychology in post-apartheid South Africa. *South African Journal of Psychology*. 54 (4). p.567-580.

Booysen, D.D.

Coetzee, B., **Booysen, D.D.**, Padmanabhanunni, A. and Kagee, A. (2024) Demographic correlates of indices of psychological well-being and COVID-19 related distress among South African university students. *International Journal of Mental Health*. 53 (2). p.192-211.

Kaminer, D.B., **Booysen, D.D.**, Ellis, K.E., Kristensen, C.H.K., Patel, A.P., Robjant, K.R. and Sardana, S.S. (2024) Improving access to evidence-based interventions for trauma-exposed adults in low- and middle-income countries. *Journal of Traumatic Stress*. 37 (4). p.563-573.

Kagee, A., Padmanabhanunni, A., Coetzee, B., **Booysen, D.D.** and Kidd, M. (2024) Sense of coherence, social support, satisfaction with life, and resilience as mediators between fear of COVID-19, perceived vulnerability to disease and depression. *South African Journal of Psychology*. 54 (3). p.300-313.

Booysen, D.D. and Haine, P.C.

Booysen, D.D. and **Haine, P.C.** (2024) Perceptions of primary mental health care in a semi-rural setting in the Eastern Cape of South Africa: a qualitative inquiry. *South African Journal of Psychology*. 2024 (0). p.1-14.

Booysen, D.D., Shabangu, P.N.N. and Leboho, L.

Booysen, D.D., Rauch, R.S., **Shabangu, P.N.N.** and **Leboho, L.** (2024) Task-Shifting of Prolonged Exposure for Primary Care (PE-PC) for PTSD in a Semi-rural Setting in South Africa: A Pilot Implementation Study. *Psychological Services*. 2024 (1). p.2-13.

Du Toit, R.D. and Macleod, C.I.

Du Toit, R.D. and **Macleod, C.I.** (2024) Demanding doctor ability for abortion on request: a conversation analysis of pre-abortion counselling in public hospitals in the Eastern Cape, South Africa. *BMJ Sexual & Reproductive Health*. 50 (4). p.278-284.

Groenewald, C.

Fluks, L. **Groenewald, C.**, Qoza, P., Isaacs, N., Essop, R., Couch, M., Essack, Z., and van Rooyen, H. (2024).

Policymaking in favour of women: Learning from the gendered impact of COVID-19. Social Work/Maatskaplike Werk.

Isaacs, N., Ntinga, X., Keetsi, T., Bhembe, L., Mthembu, B., Cloete, A., and **Groenewald, C.** (senior author) (2024). Are mHealth Interventions Effective in Improving the Uptake of Sexual and Reproductive Health Services among Adolescents? A Scoping Review. *International Journal of Environmental Research and Public Health*. 21(2), 165. https://doi.org/10.3390/

Haine, P.C., Young, C. and Booysen, D.D.
Haine, P.C., **Young, C.** and **Booysen, D.D.** (2024) Across the professional lifespan: comparing the workforce trends of early career and established counselling psychologists in South Africa. *Counselling Psychology Quarterly*. 1 (2024). p.1-19.

Lynch, I.
Lynch, I., Middleton, L., Fluks, L., Isaacs, N., Essop, R. and Van Rooyen, H. (2024) Catalysing gender transformation in research through engaging African science granting councils. *South African Journal of Science*. 120 (7/8). p.1-3.

Lynch, I., Isaacs, N., Fluks, L., Manderson, L., Essop, R., Praphasawat, R., Middleton, L. and Naemiratch, B. (2024) Gender and equity considerations in AMR research: a systematic scoping review. *Monash Bioethics Review*. 42 (1). p.1-25.

Lynch, I., Macleod, C.I., Chiweshe, M. and Moore, S.
Lynch, I., **Macleod, C.I.**, **Chiweshe, M.** and **Moore, S.** (2024) Vulnerable Youth or Vulnerabilising Contexts? A Critical Review of Youth Sexual and Reproductive Health and Rights (SRHR) Policies in Eastern and Southern Africa. Sexuality Research and Social Policy. *Sexuality Research and Social Policy*. 21 (3). p.1-13.

Macleod, C.I.
Macleod, C.I., Reynolds, J. H., and Delate, R. (2024). Violence against women who sell sex in eastern and southern Africa: a scoping review. *Trauma, Violence, & Abuse*, 25(1), 691-703. https://doi.org/10.1177/15248380231160847

Macleod, C.I. and Du Plessis, U.
Macleod, C.I. and **Du Plessis, U.** (2024) Teaching comprehensive sexuality education in a traumatized society: recognizing teachers as sexual, reproductive, and mental health frontline workers. *Frontiers in Education*. 9 (2024). p.1-11.

Macleod, C.I. and Du Toit, R.D.
Macleod, C.I. and **Du Toit, R.D.** (2024) Contraceptive Coercion in Pre-Abortion Counseling: A Conversation Analysis, Women's Reproductive Health. *Women's Reproductive Health*. 12 (1). p.246-265.

Macleod, C.I. and Mthethwa, T.
Macleod, C.I. and **Mthethwa, T.** (2024) Refining out-of-school youth sexualities empowerment programmes using a sexual and reproductive citizenship lens: the Masizixhobise toolkit... *Sex Education*. 24 (6). p.1-17.

Macleod, C.I., Du Plessis, U. and Mogonong, L.C.
Macleod, C.I., **Du Plessis, U.** and **Mogonong, L.C.** (2024) Decolonisation and South African Psychology research 30 years after democracy. *South African Journal of Psychology*. 54 (4). p.488-502.

Ndabula, Y., Macleod, C.I., Du Plessis, U. and Moore, S.
Ndabula, Y., **Macleod, C.I.**, **Du Plessis, U.** and **Moore, S.** (2024) South African government responses to Trump's Global Gag Rule: Silence, ignorance, and avoidance. *Critical Social Policy*. 45 (1). p.72-293.

Macleod, C.I., Kalyanaraman, Y. and Mogonong, L.C.
Macleod, C.I., **Kalyanaraman, Y.** and **Mogonong, L.C.** (2024) Enacting Reproductive Justice: The Development and Refinement of Person Centered Abortion Counseling Training. *International Perspectives in Psychology: Research, Practice, Consultation*. 13 (3). p.153-163.

Morison, T.
Healy-Cullen, S. and **Morison, T.** (2024) Extending sexual scripting theory through critical discursive psychology: An analytical approach to explore the performance of sexual identities. *Theory and Psychology*. 34 (6). p.1-11.

Healy-Cullen, S., Taylor, K. and **Morison, T.** (2024) Youth, Pornography, and Addiction: A Critical Review. *Current Addiction Reports*. 11 (2024). p.265-274.

Msomi, N.N. and Akhurst, J.E.
Msomi, N.N. and **Akhurst, J.E.** (2024) Bonds and Bridges between Community-Based Organisations and the Education Sector: The Case of GADRA Education. *Journal of Educational Studies*. 23 (1). p.131-146.

Nkosi, B.
Thondhlana, G. and **Nkosi, B.** (2024) Campus sustainability at Rhodes University, South Africa: perceptions, awareness level, and potential interventions. *Frontiers in Sustainability*. 5 (1). p.1-10.

Nkosi, S.
Nkosi, S., Ratele, K., Sikweyiya, Y. and Morojele, N. (2024) Exploring hypermasculinity as a moderator between sexual violence victimization and adverse mental health effects among sentenced incarcerated men. *Journal of Men's Health*. 20 (10). p.89-100.

Ayieko, P., Kisanga, E., Mshana, G., **Nkosi, S.**, Hansen, C.H., Parry, C.D.H., Weiss, H.A., Grosskurth, H., Hayes, R.J., Morojele, N.K. and Kapiga, S.H. (2024) Epidemiology of alcohol use and alcohol use disorders among people living with HIV on antiretroviral therapy in Northwest Tanzania: implications for ART adherence and case management. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*. 36 (5). p.652-660.

Nkosi, S. (2024) "Men Take Care of Each Other": Evaluation of a Community-Based Model for Pre-exposure Prophylaxis Services Among Male Bar Patrons in Rural South Africa. *AIDS Patient Care and STDs*. 39 (1). p.3-11.

Pinto, P., Macleod, C.I. and Jones, M.
Pinto, P., **Macleod, C.I.** and **Jones, M.** (2024) Regimes of truth regarding "sexual justice" in academic literature from 2012 to 2022: a scoping review. *Culture, Health & Sexuality*. 2024 (2024). p.1-16.

Shabalala, S.B. and Campbell, M.M.
Shabalala, S.B. and **Campbell, M.M.** (2024) Unpacking Epistemic Genderism: An Investigation on Trans Women's Encounters with the Gender Binary within South African Knowledge Systems: What Are You Doing Here? You Are Not Supposed to Be Here! *Journal of Research in Gender Studies*. 14 (1). p.34-57.

Truter, S.
Fernandez, A.L. and **Truter, S.** (2024) Cross-cultural comparison of the performance on the Five-Point test between highly educated comparable samples of Argentina and South Africa. *Applied Neuropsychology: Adult*. 2024 (2024). p.1-7.

Wannenburg, N.
Wannenburg, N. (2024) Comparative medicine review of immune-mediated nephrotic syndrome due to *babesia* infection. *Student's Journal of Health Research Africa (SJHR- Africa)*. 5 (3). p.1-9.

Wannenburg, N. and Gasson, J.M.
Wannenburg, N., **Gasson, J.M.** and van Niekerk, R. (2024) Narrative review and Erikson an-synthesis of lessons from animals: mutuality of recognition in the age of the pseudo species. *Student's Journal of Health Research Africa (SJHR-Africa)*. 5 (3). p.1-11.

Young, C.
Young, C., Nagdee, M. and Pieterse, A. (2024) The dose-effect relationship in PTSD: the South African Constitutional Court Case of AK v. Minister of Police (2022). *Psychiatry, Psychology and Law*. 2024 (2024). p.1-9.

Nagdee, M., Artz, L., Subramaney, U., **Young, C.**, Pieterse, A. and Pettitt, J. (2024) The gendered context of women charged with violent offences in the forensic psychiatric setting. *South African Journal of Psychiatry*. 30 (2024). p.1-11.

Saville-Young, L. and Macleod, C.I.
Saville-Young, L., **Ndabula, Y.** and **Macleod, C.I.** (2024) Employing Reflexivity in Sexuality Socialisation Research: A Methodological Contribution from Psychosocial Studies. *Qualitative Report*. 29 (7). p.1-24.

Zgambo, T.
Zgambo, T. (2024) The Politics of Christianity in Shaping the Political Dynamics of Zambia. *Religions*. 15 (11). p.1-11.

Zondo, S.
Zondo, S., Ferreira-Correia, A. and Cockcroft, K. (2024) A Feasibility Study on the Efficacy of Functional Near-Infrared

Spectrometry (fNIRS) to Measure Prefrontal Activation in Paediatric HIV. *Journal of Sensors*. 2024 (1). p.1-14.

Zondo, S., Cockcroft, K. and Ferreira-Correia, A. (2024) Brain plasticity and adolescent HIV: A randomised controlled trial protocol investigating behavioural and hemodynamic responses in attention cognitive rehabilitation therapy. *MethodsX*. 13 (1). p.1-15.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Akhurst, J. E.
Akhurst, J. E. Structured Peer-Group Supervision: Opportunities for creativity. British Psychological Society's Division of Counselling Psychology conference. Glasgow, UK, 5-6 July, 2024.

Booysen, D.D
Booysen, D.D. Equity-cantered Traumatic Stress Research among Marginalized Communities in the U.S. and South Africa. *International Society of Traumatic Stress Studies (ISTSS) 40th Annual Meeting, Marriot Copley, Boston, MA, 25-28 September 2024*. Marriot Copley Hotel, Boston, MA. USA. September 2024.

Booysen, D.D. Sharing Power and Impact with Marginalized Global Communities in Trauma Research: Community-engaged Research Practices and Innovation. *International Society of Traumatic Stress Studies (ISTSS) 40th Annual Meeting, September 25-28, 2024, in Boston, MA, USA.* Marriot Copley, Boston, Boston. MA, USA. September 2024.

Du Plessis, U.

Du Plessis, U. Supportability as a tool for identifying reproductive injustices in South Africa. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Feltham-King, T.
Feltham-King, T. Deconstructing deviance: The construction of teenaged pregnant women as illegitimate pregnant subjects. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Graham, N.S.J.
Graham, N.S.J. Precious babies and sinful mommies: governance apparatuses which shaped an alcohol and pregnancy intervention. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Kalyanaraman, Y.
Kalyanaraman, Y. Sin and kin: the role of abortion providers as hinderers and enablers of reproductive justice. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.



"Navigating action research aimed at promoting reproductive justice: Musings of a reflective practitioner". Yamini Kalyanaraman at The International Society of Critical Health Psychology (ISCHP) conference at the University of Galway.
Photo: Department of Psychology

Kalyanaraman, Y., Reuvers, M.J. and Bottoman, P.E.
Kalyanaraman, Y., **Reuvers, M.J.** and **Bottoman, P.E.** "He's not bothered with the pregnancy": Gendered dynamics in partner support during pregnancy in low resource settings of South Africa. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Lewis, C. and Akhurst, J.E.
Lewis, C. and **Akhurst, J.E.** *At South African Association for Counselling and Development in Higher Education (SAACDHE) conference*. Durban. South Africa. September 2024.

Macleod, C.I.
Macleod, C.I. Sexual and reproductive health amongst women who sell sex and women who inject drugs in Eastern and Southern Africa. *The Consultative Meeting for Key Population Organisations in East and Southern Africa for the Joint United Nations Regional SRHR Fund*. Johannesburg, Johannesburg. South Africa. June 2024.

Macleod, C.I. Demanding doctor ability for abortion on request: a conversation analysis of pre-abortion counselling in South Africa. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Macleod, C.I. Shifting the narrative: from intendedness to supportability. *In Sickness and in Health conference, Auckland, New Zealand*. Auckland, Auckland. New Zealand. February 2024.

Macleod, C.I., Kalyanaraman, Y. and Mogonong, L.C.
Macleod, C.I., **Kalyanaraman, Y.** and **Mogonong, L.C.** "So what?" Putting Critical Health Psychology to work in creating health justice: the example of an abortion counselling project in South Africa. *Invited presentation, Massey University, Victoria University of Wellington, New Zealand, March 2024.* Massey University, Victoria University of Wellington, Wellington. New Zealand. March 2024.

Msomi, N.N. and Akhurst, J.E.
Msomi, N. N. and **Akhurst J.E.** The wood and the trees: the value of SQUIN methodology for culturally responsive enquiry. British Psychological Society's Division of Counselling Psychology conference. Glasgow, UK, 5-6 July, 2024.

Msomi, N.N. and **Akhurst, J.E.** 30 years after apartheid: A community psychology perspective of an NGO's techniques of resistance in Makhanda's educational landscape. *At Psychological Society of South Africa (PsySSA) congress, Johannesburg.* Johannesburg, Johannesburg. South Africa. October 2024.

Ndabula, Y.
Ndabula, Y. "I pulled it out": An exploration of narrated accounts on decision-making and power differentials in the prescription and use of long-acting reversible contraceptives. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Reuvers, M.J.
Reuvers, M.J. "Stop having babies if you can't afford them!" Intersections between reproductive agency, responsibility and affordability and their implications for pregnancy supportability. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Robertson, C.A.
Robertson, C.A. Discourses of empowerment in a sexual and reproductive health intervention. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Shaik, S.
Shaik, S. Empowering Women's Reproductive Health: Exploring CBD as a Novel Therapy for PCOS and Endometriosis Management. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Zgambo, T.
Zgambo, T. Colonialism and Evangelical Sexual Politics in Women's Reproductive Health Matters in Africa: The Zambian Case. *Re-worlding Reproduction: Emerging Knowledges, Politics, and Practices of Justice.* University of Pretoria, Pretoria. South Africa. September 2024.

Rhodes Business School

Introduction

At Rhodes Business School, our research is a vital expression of our commitment to *Leadership for Sustainability*. Guided by our Knowledge Wheel and its core promise ***Transformative Value Creation through Integrative Thinking, Acting, and Being***, we pursue research that not only informs our teaching, learning, and curriculum, but also contributes meaningfully to the societies and ecosystems we serve, as well as the impact they have on us.



Professor Owen Skae

Director

Photo: Jackie Grove

Our aim is to cultivate research that empowers students, academics, practitioners, and policymakers to think integratively, act as principled leaders, and be engaged citizens. Anchored in our 4E Model, Economy, Ethics, Ecology, and Equity, our scholarship supports holistic, systems-based insights that navigate paradox, uphold ethical leadership, and foster shared value creation.

Our research priorities reflect our evolving focus areas such as responsible leadership, governance, entrepreneurship with a social focus, and the broader challenge of sustainable business transformation. We encourage scholarship that balances academic rigour with real-world relevance, contributing both to the scholarly community and to purposeful change in business and society.

Congratulations to Professor Noel Pearse on obtaining a NRF rating (C2).

Postgraduates / Graduations

Nine (9) Master of Business Administration (MBA), twelve (12) Postgraduate Diploma in Enterprise Management (PGDipEntMgt), sixteen (16) Postgraduate in Business Analysis (PGDipBusAnalysis), and fifty-nine (59) Advanced Diploma in Business Analysis (AdvDip-BusAnalysis) students, graduated, giving a total of ninety-six (96), our highest ever.

We had several distinctions. **Eleanor Van Den Berg-McGregor** obtained the MBA with distinction. **Tristan Comley**, **Ubuhle De Bees**, **Magdeline Kola**, **Andy Mngceke**, **Deone Roodt**, **Matthew Strachan** and **Ntone Tsehlana** obtained the PGDipBusAnalysis with distinction. **Kevin Adams**, **Eunice Chabalala**, **Rory Crawford**, **Renette Kleinhans**, **Mammoto Laka**, **Sabela Makhubo**, **Travisen Mashaba**, **Kabelo Mmoledi**, **Bruce Mthiyane**, **Rajeev Nagar**, **Nomonde Ndongeni**, **Gabriel Ngcobo**, **Ryno Schoeman** and **Anthony Southern** obtained the AdvDipBusAnalysis with distinction.

Distinguished Visitors / International Visits

Kieswetter, E.
Mr Edward Kieswetter, Archbishop Thabo Makgoba Development Trust, Annual Lecture 26th August 2024.



Professor Noel Pearse

Photo: Jackie Grove

Values-Based Leadership:

Lessons from Rebuilding SARS

At the 10th annual Rhodes Business School lecture on 26 August 2024, SARS Commissioner Edward Kieswetter shared insights on rebuilding the South African Revenue Service as a model of values-based leadership. His core message: integrity, accountability, and ethical decision-making are essential for institutional resilience and societal impact.

From Collapse to Credibility

Under state capture, SARS was severely compromised. Governance failed, public trust eroded, and leadership lost its ethical compass. This decline underscored the risks of abandoning core values.

> Our aim is to cultivate research that empowers students, academics, practitioners, and policymakers to **think integratively**, act as principled leaders, and be engaged citizens.

Rebuilding on Values

Kieswetter outlined four (4) key strategies used to restore SARS:

1. **Fighting Financial Crime:** AI and data science helped prevent R370 billion in fraud and recover R261.1 billion through compliance.
2. **Transparency Through Big Data:** SARS processes 13 petabytes of data—enough to stream Netflix for 988 years—demonstrating scale and openness.
3. **Civic Accountability:** Encouraging voluntary compliance and responsible tax behaviour.
4. **Human Capital Investment:** Training cleaning staff into customs officers shows the power of ethical leadership and upskilling.

Confronting Corruption

Corruption, like a virus, can't be eradicated but can be resisted. Kieswetter urged leaders to:

- Stay anchored in their values.
- Speak out against wrongdoing.
- Hold enablers of corruption accountable.

Long-Term Commitment

Rebuilding SARS was not a quick fix. It required sustained effort, principled leadership, and a focus on long-term outcomes over short-term wins.

Inspiring Future Leaders

Kieswetter encouraged students to view leadership as a service to society—building systems rooted in trust and ethics, not personal gain.

Final Message

True leadership means doing what's right, even when difficult. SARS' turnaround shows the transformative power of values-based leadership to build trustworthy, resilient institutions.

Rhodes Business School Publications

Peer Reviewed Subsidy-Earning Journal Research Publications

Cuthbert, C. and Pearse, N.J.
Cuthbert, C., **Pearse, N.J.** and **Bradshaw, K.** (2024) Data Visualization of Budgeting Assumptions: An Illustrative Case of Trans-Disciplinary Applied Knowledge. *Journal of Systemics, Cybernetics and Informatics*. 22 (1). p.130-149.

Engelke, K., Pearse, N.J. and Skae, F.O.
Engelke, K., **Pearse, N.J.**, Correa, F.M. and **Skae, F.O.** (2024) The Relationship between Culture, Sustainable Use of Resources, and Financial Performance: An Institutional and Natural-Resource Based Perspective. *Economic and Business Review*. 26 (2). p.61-80.

Mohapeloa, M.M.E.
Boateng, I.A. and **Mohapeloa, M.M.E.** (2024) Access to Microfinancing and Growth of Women-Led Micro-enterprises in Madina Market: The Moderating Effect of Women's Business Networks. *Information and Knowledge Management*. 14 (2). p.1-10.

Mtotywa, M.M.
Mtotywa, M.M. and Motaung, M. (2024) Effects of poverty challenges on youth learnership success. *Development Southern Africa*. 41 (3). p.628-648.

Mtotywa, M.M., Seabi, M., Manqele, T., Ngwenya, S.P. and Moetsi, M. (2024) Critical factors for restructuring the education system during the era of the fourth industrial revolution in South Africa. *Development Southern Africa*. 41 (1). p.16-37.

Pearse, N.J.
Kotlyar, I., **Pearse, N.J.** and Krasman, J. (2024) Understanding cross-country differences in assessment simulations: insights from South African and Canadian students. *Discover Education*. 3 (41). p.1-23.

Peer-reviewed Subsidy – Earning Proceedings

Moodly, A.L.
Moodly, A.L. Reflecting on the Journeys of Women in Higher Education Leadership: A Case Study in South Africa. *20th European Conference on Management, Leadership and Governance*. Universidade Llusofoa, Lisbon. Portugal. November 2024.

Mtotywa, M.M.
Mtotywa, M.M. Use of Artificial Intelligence in Business Education: Bibliometric analysis and future agenda. *17th International Business Conference.* Protea Hotel by Marriott, Stellenbosch. South Africa. September 2024.

Pearse, N.J. and Mohapeloa, M.M.E.
Tessendorf, C., **Pearse, N.J.** and **Mohapeloa, M.M.E.** Artistic Creative Archetypes and their Entrepreneurial Profiles. *17th International Business Conference*. Marriot Protea Hotel, Stellenbosch. South Africa. September 2024.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Pearse, N.J.
Pearse, N.J. and **Matyobeni, T.** Community engagement and structural holes theory. *2024 Community Engagement Conference: Community Engagement and The Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities*. Settlers Monument, Makhanda. South Africa. May 2024.



Knowledge Wheel.
Photo: Rhodes Business School

SCHOOL OF

Languages and Literatures

Introduction

The School of Languages and Literatures experienced a vibrant and productive academic year, marked by numerous significant research aligned activities. From organizing impactful local and international workshops and conferences to contributing to scholarly publications, the School continued to demonstrate academic leadership and research excellence.



Dr Bulelwa Nosilela
Head of School

Photo: Jackie Grove

Several staff members and students were recognized for their outstanding achievements, including awards, scholarships, and further academic qualifications. Notably, the year witnessed the completion of doctoral research, successful student participation in international competitions, and involvement in high level global academic networks.

The School's research output has grown, as is evident in its commitment to fostering a dynamic research culture. This is reflected in the diversity of its engagements: publication of books, chapters, and journal articles; Postgraduate supervision; international collaboration; and the successful mobilization of students through global academic initiatives.

Postgraduates / Graduations

A major academic milestone was achieved this year when a staff member of Classical Studies, **Peta Fox** successfully completed a PhD in Ancient Greek titled, *'A House Accursed: Reconsidering Sophocles' Sisters, Antigone and Ismene'*. Another highlight was when the CEO of the isiXhosa Dictionary Unit **Wababa, Z.R.** was awarded a Doctor of Philosophy degree under the supervision of Professor Dion Nkomo. The title of the thesis, *Dictionaries as Pedagogic Tools: A Case Study of Selected Schools in Makhanda, Eastern Cape*, offers a valuable contribution to the fields of lexicography, language education, and curriculum development. The research provides empirical insights into the use of dictionaries as educational resources in isiXhosa-speaking classrooms and proposes recommendations for integrating lexicographic tools in pedagogical contexts. This achievement not only reflects the strength of the School's supervisory capacity but also the strategic importance of promoting research that intersects language development and educational access.

Distinguished Visitors / International Visits

In celebration of Africa Month and in commemoration of Rhodes University's 120th anniversary, the School of Languages and Literatures, in partnership with the NRF SARChI Chair for the Intellectualisation of African Languages, Multilingualism and Education, the Faculty of Humanities, and the Global Engagement Division, hosted a series of high-level events from the 13th to the 16th of May 2024. These gatherings brought together prominent scholars, writers, and cultural thinkers to engage in deep reflection on the richness of African heritage and the future of African intellectual traditions.

The programme opened with a public lecture by **Emeritus Professor Kwesi Kwa Prah**, titled *"Culture, Language and Africa's Future."* Professor Prah, a leading Pan-African sociologist and linguist, is renowned for his founding of the Centre for Advanced Studies of African Society (CASAS) and his ground breaking work on mother-tongue education and African language development, alongside the late Neville Alexander. His lecture addressed the role of language in cultural identity and African development, urging the academic community to prioritise the intellectualisation of African languages in education and scholarship.

In addition to the public lecture, Professor Prah held an in-depth Masterclass with Postgraduate students in African Language Studies, where he explored the theoretical and practical imperatives of advancing African languages as vehicles of knowledge production. The engagement offered students an opportunity to interact directly with one of the continent's most influential language scholars, strengthening the School's commitment to mentoring future African intellectuals.

Another highlight of the Africa Month programme was a compelling public lecture delivered by Tsitsi Dangarembga, the award-winning Zimbabwean novelist, cultural activist, and filmmaker, titled *"Decolonising the Southern African Subject: What We Are Up Against and How to Push Back at It."* Dangarembga's landmark novel *Nervous Conditions* continues to feature prominently in the undergraduate and Postgraduate curricula of the Department of Literary Studies in English at Rhodes. Her lecture provoked critical reflection on the intersections of colonial legacies, cultural narratives, and literary resistance in Southern Africa.

Further deepening the conversation, Dangarembga participated in a lunch-time dialogue session with **Dr Ignatius Mabasa**, Research Associate in the School and the first scholar to write a PhD thesis in Shona, as well as Professor Douglas Mpondi, Visiting Professor in African Studies. The conversation centred on Mabasa's Shona translation of *Nervous Conditions*, offering rare insights into the challenges and transformative potential of literary translation in African languages. This event epitomized the School's ongoing efforts to promote multilingual literary scholarship and translational research.

In the same month, the Creative Writing section of the School welcomed Professor Antjie Krog as an Andrew W. Mellon Foundation Scholar-in-Residence, continuing a fruitful academic collaboration with the University of the Western Cape, particularly in relation to the promotion and development of Kaaps. During her visit, Professor Krog presented a thought provoking lecture titled *"Some Characteristics and Contributions to the Development of Kaaps"*, highlighting the historical and contemporary significance of Kaaps as a linguistic and literary form. She was joined by fellow poets Nathan Trantraal and Ronelda Kamfer for an evening of poetry readings, creating an engaging literary atmosphere that celebrated linguistic diversity, poetic resistance, and cultural belonging.

Professor Krog's residency was further marked by a significant milestone in the completion of a novel manuscript demonstrating how visiting scholars can produce meaningful research and creative output during their engagement with the university. Her presence not only elevated the visibility of Afrikaans dialectal literature but also reinforced the School's role as a nurturing space for creative and scholarly innovation.

Significant Research Aligned Events

The School expanded its influence through academic leadership at a global level. **Professor Undine Weber** has been appointed by DAAD (German Academic Exchange Service) to serve as an "expert adviser" on the steering committee of the newly founded SANDD (Network for German as a Foreign Language Digitally in sub-Saharan Africa), comprised of the University of Augsburg (Germany), Kenyatta University (Kenya), Université de Kara (Togo), University of Namibia (Namibia) and University of Paderborn (Germany). The network aims to develop a digital infrastructure, providing training and further education for teachers and lecturers to strengthen German as a foreign language in the Sub-Saharan Africa region. This includes strengthening digital skills and digital capacity building regarding multilingualism, technical and career-relevant language, primarily for university lecturers, but also for students and teachers in the field of German as a foreign language. The project supports young researchers in the areas of research methods and academic writing and interns on their career path as teachers of German as a foreign language.

Students also excelled as three (3) students from the Chinese Studies programme were named winners in the South African finals of the 23rd Bridge Chinese Proficiency Competition for Foreign College Students, a prestigious contest organized by the Chinese Embassy in South Africa. This remarkable accomplishment reflects both the students' dedication and the quality of instruction offered within the Chinese language programme. The competition is known for its rigorous linguistic and cultural components, and the students' success showcases the School's contribution to promoting global language competencies.

In the realm of French Studies, one of the School's Francophone students was awarded a competitive scholarship to study at the Université de Strasbourg in northeastern France. Strasbourg, a city renowned for its cultural richness and academic excellence, will provide the student with a fully immersive experience, further strengthening the School's international partnerships and advancing student mobility. This achievement is testament to the academic readiness and potential of the School's students to thrive in highly competitive international environments.

Conclusion

I take immense pride in reflecting on a year that has been both productive and inspiring. The School has distinguished itself through robust research engagement, academic advancement, and meaningful international collaborations. From ground breaking doctoral research and the intellectualisation of African languages, to student success on global platforms and partnerships with internationally acclaimed scholars, we have seen the fruits of collective dedication and scholarly passion. The convergence of these activities underscores our unwavering commitment to excellence in research and teaching. It also highlights the School's evolving role as a key contributor to national and continental conversations on language, culture, decoloniality, and education.

School of Languages & Literatures Publications

Books/Chapters/Monographs

Malamis, D.

Malamis, D. (2024) *The Orphic Hymns: Poetry & Genre, with a Critical Text and Translation.* Netherlands: Brill. ISBN: 9789004714083.

Mlambo, O.B.

Mlambo, O.B. and Chitando, E. (2024) *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. ISBN: 9783031407536.

Chitando, E., **Mlambo, O.B.**, Mfecane, S. and Ratele, K. (2024) *The Palgrave Handbook of African Men and Masculinities*. Switzerland: Palgrave Macmillan. ISBN: 9783031 491665.

Mlambo, O.B. and Chitando, E. (2024) Conclusion In obert Bernad Mlambo and Ezra Chitando. In: Mlambo, O.B. and Chitando, E. (eds.). *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. p.1151-1154. ISBN: 9783 031407536.

Chitando, E., **Mlambo, O.B.**, Mfecane, S. and Ratele, K. (2024) Introduction: African Men and Masculinities. In: Chitando, E., Mlambo, O.B., Mfecane, S. and Ratele, K. (eds.). *The Palgrave Handbook of African Men and Masculinities*. Switzerland: Palgrave Macmillan. p.1-30. ISBN: 9783031491665.

Mwatwara, A. and **Mlambo, O.B.** (2024) Technologies of Violence in Africa. In: Mlambo, O.B. and Chitando, E. (eds.). *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. p.99-118. ISBN: 9783031407536.

Chitando, E. and **Mlambo, O.B.** (2024). I Have Got Stamina! Yoweri K. Museveni, Masculinity and the Physical Right to Rule in Uganda. In: Chitando, E., Mlambo, O.B., Mfecane, S. and Ratele, K. (eds.). *The Palgrave Handbook of African Men and Masculinities*. Switzerland: Palgrave Macmillan. p.297-312. ISBN: 9783031491665.

Chitando, E. and **Mlambo, O.B.** (2024) Violence in Africa: Reflecting on a Broad Concept. In: Mlambo, O.B. and Chitando, E. (eds.). *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. p.23-52. ISBN: 978303 1407536.

Mlambo, O.B. and Chitando, E. (2024) Violence in Africa: A General Introduction. In: Mlambo, O.B. and Chitando, E. (eds.). *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. p.1-20. ISBN: 9783031407536.

Mlambo, O.B. and Mlambo, K.M. (2024) Violence against Nature in African Traditional Thought and Practice. In: Mlambo, O.B. and Chitando, E. (eds.). *The Palgrave Handbook of Violence in Africa*. Switzerland: Palgrave Macmillan. p.541-558. ISBN: 9783031407536.

Mlambo, O.B. (2024) Religion, Politics and Veteran Masculinities in Post-Mugabe Zimbabwe. In: Chitando, E., Togarasei, L. and Tarusarira, J. (eds.). *Religion-Regime Relations in Zimbabwe*. London: London: University of London – SOAS, Routledge, Taylor & Francis Group. p.182-191. ISBN: 978100 3332435.

Mlambo, O.B. and Chitando, M. (2024). Liberation War Veterans? Masculinity and African Traditional Religion in Zimbabwe: Insights into Holistic Health and Well-being. In: Chitando, E., Mlambo, O.B., Mfecane, S. and Ratele, K. (eds.). *The Palgrave Handbook of African Men and Masculinities*. Switzerland: Palgrave Macmillan. p.803-822. ISBN: 9783031491665.

Chitando, E., **Mlambo, O.B.**, Mfecane, S. and Ratele, K. (2024) Liberation War Veterans and Masculinity in Zimbabwe. In: Chitando, E., Mlambo, O.B., Mfecane, S. and Ratele, K. (eds.). *The Palgrave Handbook of African Men and Masculinities*. Switzerland: Palgrave Macmillan. p.657-676. ISBN: 9783031491665.

Mukenge, A.N.

Mukenge, A.N. (2024) *Clémentine ou l'inconvénient d'être née femme*. Paris: Collection Clair d'Afrique. ISBN : 9787521 312255.

Mukenge, A.N. (2024) La trajectoire de l'écriture de P. Ngandu-Nkashama. In: *Kasala ka P. Ngandu-Nkashama: Melanges D'hommages*. Enghien/Belgium: Les Editions du Pangolin. p.37-76. ISBN: 9782874671516.

Mwepu, P.K.

Mwepu, P.K. (2024) China-Africa: An Exploration of Education Cooperation in South Africa. In: Fendler, U. (ed.). *Asia-Africa Multifaceted Engagement in the Contemporary World*. Cham: Palgrave Macmillan. p.127-142. ISBN: 97898 19706952.

Mwepu, P.K. (2024) Introduction. In: Fendler, U. and Mwepu, P. (eds.). *Medialities*. Bielefeld: Transcript / Media Studies. p.1-7. ISBN: 9783837674194.

Mwepu, P.K. (2024) Accessing the Invisible Through the eyes of the Artist. In: Fendler, U. and Mwepu, P. (eds.). *Medialities*. Bielefeld: Transcript / Media Studies. p.93-113. ISBN: 9783837674194.

Fendler, U., **Mwepu, P.K.** and Ritzer, I. (ed.) (2024) *Medialities*. Bielefeld: Transcript / Media Studies. ISBN: 9783837 674194.

Nkomo, D.

Magadla, S., **Dana, Z.** and **Nkomo, D.** (2024) Multilingual teaching and assessment: Towards an endogenous Political and International Studies at a South African university. In: Vogt, K. and Antia, B.E. (eds.). *Multilingual Assessment-Finding the Nexus?* Berlin: Peter Lang. p.185-220. ISBN: 97836 31861592.

Nkomo, D. (2024) Power to the minorities: Ndebele L1 speaking teachers in Tonga-speaking communities in Zimbabwe. In: Cenoz, J. and Gorter, D. (eds.). *The Minority Language as a Second Language: Challenges and Achievements*. London: London: University of London – SOAS, Routledge, Taylor & Francis Group. p.16-38. ISBN: 9781003817277.

Nkomo, D. and Maseko, D.

Nkomo, D. and **Maseko, D.** (2024) Family Language Policy in a Xenophobic Context: The Case of Kalanga Transnational Families in South Africa. In: Mutula, S.M. (ed.). *The Diasporean I: The Southern African Perspectives*. Pietermaritzburg: CSSALL Publishers (Pty) Ltd. p.109-135. ISBN: 9780986993756.

Concerts, Exhibitions, Performances, Workshops, Events

Weber, U.S.

Weber, U.S. Expert Advisor/ Task Team. SANDD Auftakttreffen und Fortbildungen. *Digitale Kompetenzen; KI/ AI und Schreibförderung; Mehrsprachigkeit*. University of Namibia, Windhoek. Namibia. 1 - 3 October 2024.

Kwatsha, L.L.

Kwatsha, L.L. Eastern Cape Universities Postgraduate Workshop. Hybrid: Rhodes University: 2 August 2024.

International Visits

Mwepu, P.K.

Mwepu, P.K. Jinan University, Guangzhou, China. *Global Conference on Chinese language and Searching on Chinese Museums*. 14 - 22 November 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Abubakari, H.
Abubakari, H., Sandow, L. and Asitanga, S.A. (2024) Names of seasons as expressions of climatic conditions and agrarian practices. *Cogent Arts and Humanities*. 11 (1). p.1-11.

Abubakari, H., Amankwah, A.S. and Mensah, A.O. (2024) Kusaal Folktales: Communicative Tools for Preserving Indigenous Cultural Values in Ghanaian Marriages. *Folklore*. 135 (2). p.276-299.

Abubakari, H., Amankwah, A.S. and Mensah, A.O. (2024) Communication through popular culture: Analysing a google performance on early marriage among the Kusaas of Ghana. *Language and Communication*. 99 (2024). p.90-106.

Engelbrecht, N.
Engelbrecht, N. (2024). Situating affect and assessment at the center of self-regulated learning practices – A first-year German foreign language course at a South African university. *Acta Germanica.* 52(1).p.122 -141.

Mona, G.V.
Mona, G.V. (2024) Post-Apartheid IsiXhosa Written Poetry's Commentary on the Neoliberal Policies of the Democratic South Africa. *Journal of Literary Studies*. 40 (2024). p.1-23.

Mona, G.V. (2024) Mqhayi's *UDon Jadu* as a contribution to the Native Republic Policy? discourse. *South African Journal of African Languages*. 44 (1). p.50-55.

Mwepu, P.K.
Mwepu, P.K. (2024) Beyaert-Geslin, Anne. 2021. L'Invention de l'Autre. Le Juif, le Noir, le paysan, l'Alien. *French Studies in Southern Africa*. 54 (1). p.263-267.

Mwepu, P.K. (2024) La <<mort » de Chaka ou la naissance de l'< Aigle envoûtant >»? Une lecture comparée des poèmes de Léopold Sédar Senghor et de Julien Kilanga Musinde. *French Studies in Southern Africa*. 54 (2). p.90-106.

Ndhlovu, K.
Lebese, S.J. and **Ndhlovu, K.** (2024) South African court interpreters - perceptions of the phenomenon of interpreting. *Southern African Linguistics and Applied Language Studies*. 42 (1). p.239-257.

Nhongo, R. and Nkomo, D.
Nhongo, R. and **Nkomo, D.** (2024) Issues with corpus planning in Zimbabwe's previously marginalised languages in Matabeleland. *Journal of Multilingual and Multicultural Development*. 45 (2024). p.1-13.

Ouma, M.O.
Ouma, M.O. (2024) When the longer route leads to the point: Circumlocution as a strategy in the male reproductive health clinic in Kenya. *SSM: Qualitative Research in Health*. 5 (1). p.1-9.

Ouma, M.O. and Chai, F. (2024) Handling bad news in a male reproductive health clinic: a speech act perspective. *Southern African Linguistics and Applied Language Studies*. 42 (4). p.531-541.

Weber, U.S.
Weber, U.S. (2024) Acta Germanica. German Studies in Africa. Co-Editor of the 2024 Volume 52 *Acta Germanica, German Studies in Africa*. 52 (1). p.1-186.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Kwatsha, L.L
Kwatsha, L.L. Uhlalutyonzulu lwesathaya njengesimbo sokubhala kwibali elifutshane elichongiweyo kwincwadi kaMbena-Bilatyi ethi Zatshintsh'Izinto. *African Language Association of Southern Africa (ALASA)*. University of KwaZulu Natal, KwaZulu Natal. South Africa. July 2024.

Malamis, D.
Malamis, D. Formulae and Resonance: the 'Orphic Hymns' and the 'Sinai Palimpsest'. *Discovering Dionysus in the Sinai Palimpsest Conference*. Bryn Mawr College, Bryn Mawr, PA. United States of America. March 2024.

Mukenge, A.N.
Mukenge, A.N. Henri Djombo : une personnalité à deux visages. *Luvre de Henri Djombo et les enjeux des sociétés contemporaines*. Université Marien Ngouabi, Brazzaville. Congo. June 2024.

Mukenge, A.N. Un jeu de mets ou les mets dans l'univers de Condé. *French-Caribbean woman writer, a legend of books who inspired many writers*. Université de Yaoundé I, Yaoundé. Cameroun. May 2024.

Mukenge, A.N. L'exil ou l'émigration dans Une enfant de Poto-Poto? *Luvre de Henri Djombo et les enjeux des sociétés contemporaines* Université Mohammed V, Rabbat. Morocco. April 2024.

Mwepu, P.K.
Mwepu, P.K. Linsécurité et le chaos en Afrique: le passé qui explique le présent et lavenir? *Reconfigurer les études africaines dans le partenariat nord-sud et sud-sud : quelles perspectives?* University of Parakou, Parakou. Benin. November 2024.

Mwepu, P.K. The artistic Representation of Accumulation. *Accumulation and Inequalities*. University of Lagos, Lagos. Nigeria. January 2024.

Mwepu, P.K. Entre l'authenticité et la métamorphose : Lopes à la recherche contrastée des Afriques. *Journée Henri Lopes*. Université Mohammed V de Rabat, Rabat. Morocco. April 2024.

Mwepu, P.K. Characterization and branding of Confucius Institute at Rhodes University (CIRU). *Joint Conference of Confucius Institutes in Africa*. University of Nairobi, Nairobi. Kenya. May 2024.

Mwepu, P.K. Entre l'inclusion et l'authenticité : l'écriture africaine à la recherche des Afriques . *Association for French Studies in Southern Africa (AFSSA)*. University of the Free State, Bloemfontein. South Africa. August 2024.

Mwepu, P.K. Intercultural Competences in Modern Africa: Exploring Sino-African Cultural Exchange. *Exploring Intercultural Competences in an African Context*. University of Strathmore, Nairobi. Kenya. October 2024.

Mwepu, P.K. La vision de Nelson Mandela à travers la littérature : l'héritage mitigé d'une Afrique du Sud multiraciale avant et après l'Apartheid . *Être Noir : Entre l'héritage et la solution d'un problème*. University of Mbujimayi, Mbujimayi. Democratic Republic of Congo. November 2024.

Nosilela, B.B.
Nosilela, B.B. The replacement of noun class 11 by class 5 in some isiXhosa nouns, is it a matter of historical prescriptivism or language change. *African Language Association of Southern Africa (ALASA)*. University of KwaZulu-Natal, KwaZulu-Natal. South Africa. July 2024.

Nosilela, B.B. and Nkomo, D.
Nosilela, B.B. and **Nkomo, D.** 'Asititshi siXhosa, sititsha isayensi': A Potential Blind Spot in the Intellectualisation of African Languages. *Southern African Linguistics and Applied Linguistics Society*. University of Johannesburg, Johannesburg. South Africa. June 2024.

DEPARTMENT OF

Sociology and Industrial Sociology

Introduction

The Department had another successful year in terms of research output and Postgraduate throughput. While all staff members and Associates contributed to this success, special mention must be made of the outstanding contribution to the Department's research output by Professor Emeritus Kirk Helliker.



Professor Gilton Klerck

Head of Department

Photo: Jackie Grove

Meanwhile, the academic staff in the Department continued their extraordinary higher degree supervision record with thirty (30) Postgraduate students successfully completing their degrees.

Postgraduates / Graduations

Fourteen (14) Honours, thirteen (13) Masters, and three (3) Doctoral students completed their studies in 2024. The range of topics addressed in the different dissertations and theses from Honours to PhD level testifies to the multiple areas in which the discipline is engaged and in which the Department has supervisory capacity. The doctoral theses, for instance, explored the following topics: A comparative analysis of land, labour and gender in a communal area and fast track farm in Zvimba rural district, Zimbabwe; Protecting and organising the Apartheid and post-Apartheid precarious municipal workforce: The Cape Town Municipal Workers Association and the South African Municipal Workers Union in Cape Town; and the Zimbabwe National Gender Policy and Women's Economic Empowerment: A study of small-scale gold miners in Bubi and Gwanda Districts, Matabeleland, Zimbabwe.

Distinguished Visitors / International Visits

The Department hosted the following international scholars: Associate Professor Lincoln Addison (Queens College at Memorial University in Canada) and Dr Andrew Bowman (University of Edinburgh in Scotland).

Significant Research Aligned Events

Research units and projects in the Department continued their significant contribution to its research output and profile. The Eastern Cape Agricultural Research Project's (ECARP) research partnership with the Institute for Economic Justice (IEJ) at Wits University on the just transition in South Africa's food systems culminated in a working paper and policy brief. ECARP and the IEJ co-hosted a webinar on the policy brief, which government officials, academics, and civil society organisations attended. The ECARP-Memorial University (Queens College) joint research programme gained momentum in 2024 with the first round of in-depth interviews with citrus workers from the Sundays River Valley conducted by ECARP staff and Professor Lincoln Addison. The research explores worker-driven labour and tenure audits in the citrus sector in the Eastern Cape. Dr Lalitha Naidoo, the ECARP director, also participated in several virtual research meetings as part of a partnership with Dr Atenchong Talleh Nkobou from the Royal Agricultural University in Edinburgh, and a team of researchers and community land activists from the United Kingdom,

South Africa, Scotland, and Tanzania. *The Reversing the Gaze: Knowledge Stories and the Struggles for Community Land Rights in Scotland* research delves into similarities and variances in land struggles in Scotland, South Africa, and Tanzania.

The Neil Aggett Labour Studies Unit (NALSU), directed by **Professor Lucien van der Walt**, had a very successful 2024. NALSU is a hub of labour studies research, policy work, and workers' education. NALSU's Labour History Project created an archive of materials for veterans of the former South African Allied Workers Union (SAAWU) who were interested in writing a history of their union. Professor Lucien van der Walt and Mr Mlulami Mike Ntutela ran this project. It also wrapped up work with the South African Municipal Workers Union (SAMWU) on the union's upcoming official history. This multi-year project involved NALSU's Professor Lucien der Walt and NALSU Affiliate, Professor Nicole Ulrich (University of Fort Hare). Professor Ulrich is driving NALSU's Labouring Lives Oral History Project, including Mr Ntutela, and work on trade unionist and Umkhonto we Sizwe commander Vuyisile Mini, by Ncebakazi Makwetu at Fort Hare. Professor Ulrich also presented on 'Writing Rebellion from the Transnational World of the Nineteenth-Century Cape of Good Hope' at the Southern African Historical Association conference in 2024. NALSU's Labour History Project also helped compile the posthumous bibliography of the writings of the late Ayanda Kota of the Unemployed Peoples' Movement (UPM) and digitise several texts. Ayanda Kota, who was doing his Masters degree on UPM history with NALSU – and who was a NALSU Affiliate – tragically died in February 2024.

Two (2) projects, commissioned by the Department of Employment and Labour, were presented to the National Minimum Wage Commission (NMWC). These projects explored the earnings threshold and earnings inequality and were partly implemented by the NMWC. They were conducted by NALSU's Professor Mike Rogan, along with his colleagues Dr Tamaryn Friderichs, Dr Sandie Phakathi and Ms Nwabisa Malimba. Professor Rogan has also been working with PhD student **Vanray Nel** on a project commissioned by the Presidential Climate Commission to model the labour market implications of South Africa's 'net zero' pathway options. Professor Rogan was awarded a five-year research grant to continue research on informal sector taxation in a selection of middle- and low-income countries. He was also appointed as a Research Affiliate at the International Centre for Tax and Development at the Institute for Development Studies (University of Sussex).

NALSU associates Siviwe Mhlana (currently doing a PhD at SOAS) and Dr Laura Alfers were among those published in the ground-breaking 2024 book, *COVID-19 and the Informal Economy: Impact, Recovery and the Future*, co-edited by Professor Rogan, along with Marty Chen (WIEGO) and Professor Kunal Sen (UNU-WIDER). NALSU's Dr Alfers is also Director of WIEGO's Social Protection Programme.

Professor Emeritus Lloyd Sachikonye, of the University of Zimbabwe, gave the Annual Neil Aggett Labour Studies Lecture on 29 October 2024 in Makhanda, 'The Labour Movement and Struggles for Democracy and Livelihoods in Zimbabwe.' Professor Sachikonye shows how Zimbabwe's unions have been at the heart of struggles for democracy and livelihoods over the past 30 years. NALSU affiliate Dr Mattie Webb presented work on trade unions and the international anti-apartheid movement, and published "'An Exercise in the Art of the Possible': Waging a Battle Against Apartheid in the South African Workplace," in *Enterprise and Society*.

A Memorandum of Understanding between Hainan University and Rhodes University, under Professor Kirk Helliker's initiative, was signed, with research collaboration to focus on green agriculture and rural revitalisation in Hainan Province and the Eastern Cape Province. In addition, Dr Joshua Matanzima (University of Queensland, Australia and a Research Associate in Sociology) and **Professor Helliker** established the Africa Research & Knowledge Hub (ARKH). The Hub is a virtual platform for facilitating discussion and debate around key issues currently facing the African continent. It involves a webinar series and short popular pieces (blogs). The Hub has a website (https://khaafrica.org/) and a YouTube channel (www.youtube.com/channel/UCf0q2MxAUJlobY9x3tyDNQQ). Professor Helliker also attended the May 7th launch in Stellenbosch of the South African Agroecology Knowledge Network (AEKN), initiated under the leadership of Professor Rachel Wynberg, SARChI Bioeconomy Research Chair at the University of Cape Town. Professor Helliker was appointed as a member of the Network's Organising Committee and attended the launch of the AEKN in Harare, Zimbabwe, in September 2024.

Finally, two (2) recent initiatives were consolidated in 2024. First, the Sociology Seminar Series: **Professor Sonwabile Mnwana** and other colleagues conceptualised the Seminar Series in 2023. It is an ongoing quarterly seminar series that aims to showcase new research and critically engage with some emerging issues and ideas in the social sciences and humanities. Second, the Public Lectures are part of an International Senior Scholars' Programme initiated by Professors Sonwabile Mnwana and **Enocent Msindo**. Senior international scholars in the humanities deliver the lectures. The Department of Sociology, in collaboration with the Rhodes African Studies Centre (RASC), hosts a prominent scholar once a term. The scholar is expected to (among others) give a seminar to Postgraduate students, interact with colleagues, discuss research collaboration opportunities, and give a public lecture. The following public lectures, facilitated by Professor Mnwana, took place in 2024: Dr Andrew Bowman (University of Edinburgh) presented a paper titled 'Latecomer development and value capture in the emerging medical cannabis global value chain: The case of South Africa', in September 2024. Professor Jörn Ahrens (Justus Liebig University, Giessen, Germany) presented a paper titled , 'Global climate change, the idea of sustainability, and the emergence of a third nature' in October 2024.

Department of Sociology and Industrial Sociology Publications

Books/Chapters/Monographs

Chiweshe, M.K.

Chiweshe, M.K. (2024) Soccer betting in peri-urban spaces in Zimbabwe: experiences from Domboshava. In: Chiweshe, M.K. (ed.). *Football, gambling, and everyday life in Zimbabwe.* London: Routledge. p.98-111. ISBN: 9781032578866.

Chiweshe, M.K. (2024) Playing the odds: the rise of soccer betting houses as a livelihood option in Harare, Zimbabwe. In: Chiweshe, M.K. (ed.). *Football, gambling, and everyday life in Zimbabwe.* London: Routledge. p.17-31. ISBN: 9781032 578866.

Chiweshe, M.K. (2024) Becoming a betting nation: an introduction. In: Chiweshe, M.K. (ed.). *Football, gambling, and everyday life in Zimbabwe.* London: Routledge. p.1-16. ISBN: 9781032578866.

Drewett, M.

Drewett, M. (2024) Controversy and beyond. In: *Queen and Sun City*. London: Bloomsbury. p.1-10. ISBN: 9798765103258.

Drewett, M. (2024). Censorship in an age of cancel culture. In: Luis, R. and Fernandes, A. (eds.) *Censura: O que nos falta perguntar?* Lisbon: Imprensa de História contemporânea.

Helliker, K.

Mazwi, F., Mudimu, G.T. and **Helliker, K.** (Eds.). 2024. *Chinese Investment in Africa: Its Variegated and Contradictory Character in Relation to Land, Agriculture, Mining and Infrastructure.* Cham: Springer. ISBN: 9783031528149.

Matanzima, J., Chadambuka, P. and **Helliker, K.** (Eds.) (2024). *Natural Resource-Based Conflicts in Rural Zimbabwe.* London: Routledge. ISBN: 9781003424697.

Helliker, K., Matanzima, J. and Chadambuka, P. (2024) Natural resource-based conflicts in Zimbabwe. In: Helliker, K., Matanzima, J. and Chadambuka, P. (Eds.). *Natural resource-based conflicts in Zimbabwe.* London: Routledge. p.1-16. ISBN: 9781003424697.

Mazwi, F., Mudimu, G.T. and **Helliker, K.** (2024). Framing the complexities of Chinese investments in Africa. In: Mazwi, F., Mudimu, G.T. and Helliker, K. (Eds.). *Chinese Investment in Africa: Its Variegated and Contradictory Character in Relation to Land, Agriculture, Mining and Infrastructure.* Cham: Springer. ISBN: 9783031528149.

Price, L.

Price, L. (2024) Finding effective and humane ways to approach social care: An argument for interdisciplinarity. In: Nyhus, L., Avdem, J. and Maelen, E.N. (eds.). *Samarbeid om folkehelse og livsmestring I' skole- og kommunesamfunnet*. unknown: Oplandske Bokforlag. p.39-66. ISBN: 9788275182904.

Concerts, Exhibitions, Performances, Workshops, Events

Alfers, L.

Alfers, L. Presentation. Organising self-employed workers in Africa and Asia: Alliances, power, and projects. *Vuyisile Mini Workers School*. Graham Hotel, Makhanda. South Africa. 28 October - 1 November 2024.

Klerck, G.

Klerck, G. Presentation. 'Neoliberalism': Still a useful framework for analysis? *Vuyisile Mini Workers School* Graham Hotel, Makhanda. South Africa. 28 October - 1 November 2024.

Van der Walt, L.

Van der Walt, L. Presentation. The Industrial and Commercial Workers Union of Africa: The Challenge of Globalisation-from-Below in a Fractured Regional Working-Class. *Global Labour University: Labour History programme*. Online (MOOC), Online. Global. 1 September 2024.

Van der Walt, L. Presentation. The Contested Relationship between Labour Movements and Democracy. *Vuyisile Mini Workers School (Neil Aggett Labour Studies Unit, Rhodes University)*. Graham Hotel, Makhanda. South Africa. 28 October - 1 November 2024.

Van der Walt, L. Presentation on panel. Workers' Movements in Repressive Situations, from Haymarket to Apartheid to Odessa: The Impact of Popular Solidarity and an Alternative Press. *Colloquium: The Odessa Massacre of Trade Union Leaders in Ukraine - The 10th Year Commemoration of a Tragic Event (Kwezi Institute in partnership with Chris Hani Institute)*. Online, Johannesburg. South Africa. 15 May 2024.

Van der Walt, L. Presentation. Workers' Movements and Democracy: Change, Challenges, and Critique. *Global Labour University: Labour History programme*. Online, online (MOOC). Global. 1 August 2024.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Chiweshe, M.K.

Dube, B., **Chiweshe, M.K.** and Mapara, J. (2024) A Thematic Review on the African Perspective on Caregiver Experiences. *Kuveza Nekuumba*. 3 (1). p.7-30.

Siamena, E., Mapara, J. and **Chiweshe, M.K.** (2024) IDEWS and the Building of Resilient Communities in the Eastern Highlands of Zimbabwe. *Journal of African History, Archaeology and Tourism*. 2 (1). p.75-97.

Muchabaiwa, C., **Chiweshe, M.K.** and Mapara, J. (2024) Gendered Impact of Contextual Shocks Increasing Vulnerability of Female Youth and the Role of Technical and Vocational Education and Training and Life Skills Interventions in Resilience Building: A Case of Mwenezi and Chiredzi. *Journal of the Kenya National Commission for UNESCO*. 4 (2). p.1-16.

Van der Walt, L.

Visser, W.P., Hyslop, J. and **Van der Walt, L.** (2024) Archie Crawford, South Africa: Early Twentieth Century Global Labour Activist. *Scottish Labour History Journal*. 59 (0). p.85-97.

Peer Reviewed Subsidy-Earning Journal Research Publications

Bowman, A.

Bowman, A. and Chisoro, S. (2024) Inclusive agro-industrial development and sectoral systems of innovation: insights from South Africa. *Innovation and Development*. 2024 (2024). p.1-30.

Chiweshe, M.K.

Chiweshe, M.K. and Dandah, G. (2024) social media, Fake News and Covid-19 Vaccine Hesitancy in Zimbabwe. *Africa Review*. 16 (1). p.14-31.

Nyathi, D., Ndlovu, C.N., Maphosa, F., Dzvimbo, M.A., Ndlovu, J. and **Chiweshe, M.K.** (2024) Goat Rearing for a Resilient Future: Enhancing Climate Adaptation among Smallholder Farmers in Umguza District, Zimbabwe. *African Journal of Inter/Multidisciplinary Studies*. 6 (1). p.1-12.

Muchabaiwa, C., **Chiweshe, M.K.** and Mapara, J. (2024) Technical and Vocational Education and Training (TVET) and Life Skills for Resilience-building among Female Youths in Chiredzi and Mwenezi, Zimbabwe. *Commonwealth Youth and Development*. 21 (2). p.1-20.



Photo: Chris Marais

Chiweshe, M.K. (2024) Africa united: exploring the fandoms around the African Men's Qatar 2022 World Cup teams among fans in Harare, Zimbabwe. *Soccer and Society*. 25 (4-6). p.1-13.

Chiweshe, M.K. and Choto, T. (2024) "Our Golden Girl": Race, Politics, and Sport in the Creation of Identity in Post-colonial Zimbabwe. *African Studies Quarterly*. 22 (4). p.24-45.

Gordon, L.

Gordon, L. (2024) Anti-Blackness and Other Fears of Black Consciousness. *SMALL AXE*. 28 (1(73)). p.164-175.

Helliker, K.

Chadambuka, P. and **Helliker, K.** (2024) Culture, politics and material landscaping as strategies of belonging: the case of ex-farm workers of foreign origin in Bushu communal areas, Zimbabwe. *Canadian Journal of African Studies*. 58 (1). p.199-216.

Mazwi, F., Mudimu, G.T. and **Helliker, K.** (2024) Framing the Complexities of Chinese Investments in Africa. *Economic Geography*. 1 (19). p.1-19.

Jha, P.

Jha, P. (2024) Growing Restiveness of the Peasantry in Contemporary India: Context and Challenges. *Agrarian South*. 13 (1). p.41-61.

Akrong, R., Akorsu, A.D., **Jha, P.** and Agyenim, J.B. (2024) Global gap certification and working conditions of workers on smallholder mango farms in Ghana. *Agriculture and Human Values*. 42 (2024). p.405-419.

Matanzima, J.

Aswani, S. and **Matanzima, J.** (2024) Human-crocodile interactions in the western Solomon Islands: the importance of local data for reducing attacks on people. *ORYX*. 58 (3). p.344-346.

Matanzima, J. (2024) "Disempowered by the transition": Manipulated and coerced agency in displacements induced by accelerated extraction of energy transition minerals in Zimbabwe. *Energy Research and Social Science*. 117 (2024). p.1-16.

Nenjerama, T.T. and **Matanzima, J.** (2024) Spiritualisation of the Coronavirus in Africa Comparative Analysis of Zimbabwe's Prophet Emmanuel Makandiwa and Nigeria's Prophet TB Joshua. *Journal of Religion in Africa*. 55 (2024). p.1-20.

Matanzima, J. (2024) The ecology of Nkolola girls- initiation rites in the Middle Zambezi Valley, northwestern Zimbabwe. *African Identities*. 2024 (2024). p.1-23.

Matanzima, J. (2024) Displaced by the transition: The political ecology of climate change mitigation, displacements and Lithium extraction in Zimbabwe. *Extractive Industries and Society*. 20 (2024). p.1-13.

Matanzima, J. (2024) Human-Wildlife Conflict, Drought and Chieftainship Illegitimacy in the Zambezi Valley, Northwestern Zimbabwe. *Journal of Southern African Studies*. 50 (1). p.91-109.

Matanzima, J. and Nyachega, N. (2024) From Displacement to Marginalization: Tonga-Goba Wartime Experiences in the Mid-Zambezi Valley, 1976?1979. *Journal of Asian and African Studies*. 2024 (1). p.1-18.

Matanzima, J., Dhodho, C.G., Muguti, T., Mweembe, C. and Mederedzi, J. (2024) Socio-Economic Flux and Tonga Rituals in Rural Zimbabwe. *Mankind Quarterly*. 64 (3). p.1-11.

Matanzima, J. and Nhiwatiwa, T. (2024) COVID-19, Politico-Economic Crises and the Precarity of Actors in the Tourism Industry in Kariba Resort Town, C 2000?2021. *Journal of Asian and African Studies*. 59 (3). p.916-934.

Matanzima, J. and Loginova, J. (2024) Sociocultural risks of resource extraction for the low-carbon energy transition: Evidence from the Global South. *Extractive Industries and Society*. 18 (2024). p.1-11.

Mnwana, S.
Manona, S., Kepe, T., **Mnwana, S.** and Forsland, D. (2024). Unsustainability entanglements in the planning of the N2 Wild Coast Highway Project, South Africa. *Transformation: Critical Perspectives on Southern Africa*. 113 (1), pp. 5-30.

Oppong, N.
Oppong, N. (2024) Aiding stakeholder capitalism: donors and the contentious landscape of transparency reform in Ghana. *Canadian Journal of Development Studies*. 45 (2024). p.651-670.

Patel, R.
Patel, R. and Thallamo, V.K. (2024) Subsidy transition bonds as a funding mechanism for agroecological transformation. *Nature Food*. 5 (2024). p.445-446.

Sipungu, T.A.
Hellemann, P.C. and **Sipungu, T.A.** (2024) Aunty with a key: Aunties' power, status and authority in African traditional ceremonies. *Inkanyiso*. 16 (1). p.1-10.

Sipungu, T.A. (2024) Cultural pathways to a respectable manhood masculinity for visibly physically disabled Xhosa men. *The Journal of Men's Studies*. 32 (3). p.399-420.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Drewett, M.
Drewett, M. Johnny Clegg and the cultural boycott in the United Kingdom. *South African Society for Research in Music 18th Conference*. Johannesburg, South Africa. July 2024.

Mnwana, S.
Mnwana, S. Rethinking land conflict and corruption in South Africa's rural mining frontiers. *LANDac Annual International Conference 2024*. Utrecht University, Utrecht. Netherlands. July 2024.

Mnwana, S. Not all that is 'customary' is 'communal': Rethinking conflict, land tenure and 'community' in rural South Africa. Keynote Address. *The Social Impact of Land and Knowledge: Transformation of Land Distribution, Utilisation, and Knowledge in Post-colonial Southern Africa*. University of Fort Hare, East London, South Africa, September 2024.

Sibuyi, L.
Sibuyi, L. The African Peer Review Mechanism (APRM) in a Belvedere. *South African Sociological Association annual conference*. Stellenbosch University, Stellenbosch. South Africa. July 2024.

Sishuta, B.
Sishuta, B. Resource rights, conflict and social justice: A case of Pelargonium Sidoides in the Eastern Cape, South Africa. *South African Sociological Association annual conference*. Stellenbosch University, Stellenbosch. South Africa. July 2024.

Sishuta, B. and **Dias, S.** The political economy of bio-diversity in rural frontiers of extraction in the Eastern Cape, South Africa. *International interdisciplinary knowledge system conference*. Nelson Mandela University, Gqeberha. South Africa. August 2024.

Van der Walt, L.
Van der Walt, L. Labour Unions and the 'Road to Democracy in South Africa': Lost Visions of Democracy, and the Popular Roads not Taken. *30 Years of Democracy Celebration: Reflections on the Road to Democracy (South African Heritage Resource Agency /SAHRA).* Constitution Hill, Johannesburg. South Africa. May 2024.

DEPARTMENT OF Statistics

Introduction

The Department of Statistics continued pursuing a broad range of teaching and research interests and activities during 2024.



Mr Jeremy Baxter
Head of Department

Photo: Jackie Grove

In partnership with industry partner SAS, **Dr Izally** and **Mr Prolad** successfully coordinated and presented the three (3) day, four-part Effective Maths Teaching Programme that is accredited by the SA Council of Educators at CM Vellem Primary School in Makhanda. Professor Raubenheimer and Dr Langston presented on the sustainability of a teacher/student support network for Mathematics at the Rhodes University Community Engagement Symposium in May 2024. The main theme of the symposium was 'Community Engagement and the trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities'.

Postgraduates / Graduations

Ms Kamogelo Ngakane, a second-year student, was awarded a South African Statistical Association (SASA) Third-Year Bursary for the 2025 academic year. Eleven (11) students passed Mathematical Statistics 3; **Mr Nicholas Szczawinski** attained a distinction. Three (3) students graduated with a Bachelor of Science Honours.

Dr Izally successfully completed his PhD, which focused on the application of Bayesian methods to Cronbach's coefficient alpha—an important measure of internal consistency in psychometric testing. His research involved the development of several objective priors and the corresponding posterior distributions for Cronbach's alpha, using both the one-way

random effects model and a three-component hierarchical model. Through rigorous mathematical derivations and comprehensive simulation studies, Dr Izally demonstrated that Bayesian approaches yield more accurate and robust estimates of reliability than conventional methods, across both small and large sample sizes.

Distinguished Visitors / International Visits

Associate Professor Thron, of the Department of Science and Mathematics at Texas A&M University-Central Texas, presented a Machine Learning course to the Honours class.

Significant Research Aligned Events

Mr Jurie Schoeman and the BSG team discussed the BSG internship and graduate placement programs with the senior undergraduate and Postgraduate students. Mr Andre Zitzke, Manager of SAS's Global Academics Programme Africa introduced the senior undergraduate and Postgraduate students to SAS, discussed a number of interesting statistical industry solutions and provided SAS's short term industry outlook.

Professor Raubenheimer attended the conference for the International Society of Bayesian Analysis (ISBA) in July 2024, hosted by the University of Venice in Venice, Italy. She co-presented a paper with Dr Izally and another paper with collaborator Dr Smit from North-West University. The Venice meeting was the 17th world meeting, with nearly eight hundred and fifty (850) participants. Professor Raubenheimer attended the International Symposium on Nonparametric Statistics (ISNPS) hosted by the University of Minho in Braga, Portugal. She co-presented a paper with Dr Smit from North-West University. The focus of the conference was on recent advances and trends in several areas in nonparametric statistics.

Dr Langston was awarded her Doctor of Philosophy in Mathematical Statistics from the University of the Free State in December 2024. She attended the Royal Statistical Society conference held in Brighton, United Kingdom, and presented a contributed talk. She attended the pre-conference workshop hosted at this conference designed for early career statisticians and data scientists. Dr Langston presented at the 65th annual South African Statistical Association (SASA) conference held in Stellenbosch, South Africa, in November 2024. She attended the pre-conference workshops and was asked to judge the 2024 iteration of the Young Statistician Oral Competition at this conference. Dr Langston also gave research presentations as an invited speaker at Stellenbosch University and on the South African Statistical Association: Young Statistician Webinar. Dr Langston also remained a reviewer for the Reliability Engineering and System Safety journal.



Dr Langston at her PhD graduation.
Photo: Department of Statistics

In addition to successfully completing his PhD, Dr Izally presented his research at the annual South African Statistical Association (SASA) conference, in Stellenbosch, South Africa. **Mr Hamlomo** attended the Center for High-Performance Computing (CHPC) 2024 National Conference in Gqeberha. He attended the NSF AI Institute for Artificial Intelligence and Fundamental Interaction (IAIFI) Summer School, held in Cambridge, Massachusetts, USA. He presented his work on applying local low-rank matrix approximation to large-scale medical imaging at the workshop.

Department of Statistics Publications

Concerts, Exhibitions, Performances, Workshops, Events

Hamlomo, S.
Hamlomo, S. Presentation. Efficient Data Compression in Large-scale Medical Imaging through Local Low-rank Matrix Approximation. *Institute for Artificial Intelligence and Fundamental Interactions Summer School*. MIT, Stata Centre (32 Vassar Street, Cambridge, MA), Room 155, Cambridge, Massachusetts. United States of America. 5 - 9 August 2024.

Langston, A.F.
Langston, A.F. and Finkelstein, M. Presentation. A General Multiple Repair-Attempt Process and its Application to Optimal Age Replacement. *South African Statistical Association: Young Statistician Webinar.* Online. 1 October 2024.

Peer Reviewed Subsidy-Earning Journal Research Publications

Hamlomo, S.
Zaza, S., **Atemkeng Teufack, M.** and **Hamlomo, S.** (2024) Wine feature importance and quality prediction: A comparative study of machine learning algorithms with unbalanced data. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*. 566 (1). p.308-327.

Atemkeng, M., Osanyindoro, V., Rockefeller, R., **Hamlomo, S.**, Mulongo, J., Ansah-Narh, T., Tchakounté, F. and Fadja, A.N. (2024) Ensemble learning and deep learning-based defect detection in power generation plants. *Journal of Intelligent Systems.* 33(1). pp. 20230283. https://doi.org/10.1515/jisys-2023-0283

Izally, S.R. and Raubenheimer, L.
Izally, S.R., van der Merwe, A.J. and **Raubenheimer, L.** (2025) A comparison of objective priors for Cronbach's coefficient alpha using a balanced random effects model. *Communications in Statistics - Theory and Methods*. 54 (2). p.575-603.

Langston, A.F.
Langston, A.F., Finkelstein, M. and Cha, J.H. (2024) On the point process with finite memory and its application to optimal age replacement. *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*. 238 (6). p.1184-1194.

Langston, A.F. and Finkelstein, M. (2024) A general multiple-repair-attempt process and its application to optimal age replacement. *South African Statistical Journal*. 58 (2). p.81-98.

Mbiva, S.M.
Mbiva, S.M. and Correa, F.M. (2024) Machine Learning to Enhance the Detection of Terrorist Financing and Suspicious Transactions in Migrant Remittances. *Journal of Risk and Financial Management*. 17(5) (181). p.1-19.

Raubenheimer, L.
Raubenheimer, L. (2024) Discussion of "Specifying prior distributions in reliability applications". *Applied Stochastic Models in Business and Industry*. 40 (1). p.115-116.

Smit, N., **Raubenheimer, L.**, Mazzuchi, T. A., Soyer, R. (2024). A Bayesian generalised Eyring-Weibull accelerated life testing model. *Quality and Reliability Engineering International.* 40(2), p. 1110 – 1125.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Izally, S.R. and Raubenheimer, L.
van der Merwe, A.J., **Izally, S.R.** and **Raubenheimer, L.** Bayesian estimation of Cronbach's alpha in the case of more than one balanced random effects model. *The International Society for Bayesian Analysis (ISBA) Conference*. The University of Venice, Venice. Italy. June 2024.



Professor Raubenheimer (Supervisor) and Dr Izally at graduation. Photo: Department of Statistics

Izally, S.R., van der Merwe, A.J. and **Raubenheimer, L.** Fiducial and Bayesian estimation of Cronbach's alpha. *The South African Statistical Association (SASA) Conference*. Techno Park, Stellenbosch. South Africa. November 2024.

Langston, A.F.
Langston, A.F., Finkelstein, M. and Cha, J.H. A combined point process for better-than-minimal, minimal, and worse-than-minimal repairs. *65th Annual Conference of the South African Statistical Association*. Protea Hotel and Conference Centre Techno Park, Stellenbosch. South Africa. November 2024.

Langston, A.F., Finkelstein, M. and Cha, J.H. On point processes for modelling repairable systems: from better-than-minimal to minimal and worse-than-minimal repairs. *Royal Statistical Society's 2024 International Conference*. Brighton Metropole, Brighton. United Kingdom. September 2024.

Raubenheimer, L.
Raubenheimer, L. and Smit, N. Approximate Bayesian computation for Arrhenius relationship accelerated life tests. *The International Symposium on Nonparametric Statistics (ISNPS)*. Braga, Braga. Portugal. June 2024.

Smit, N. and **Raubenheimer, L.** Comparing life distributions in Bayesian accelerated life testing for generalized Eyring models. *The International Society for Bayesian Analysis (ISBA) Conference*. The University of Venice, Venice. Italy. July 2024.

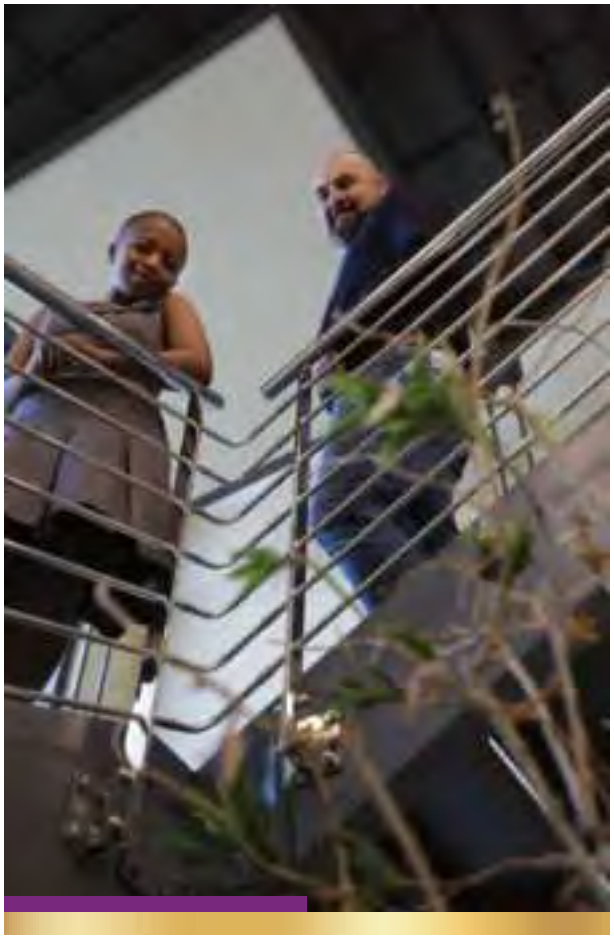
Mazzuchi, T., Sarkani, S. and **Raubenheimer, L.** Development of k-out-of-n failure time distributions in dependent environments. *International Conference on Ordered Statistical Data (OSD2024)*. Coimbra, Coimbra. Portugal. June 2024.

Raubenheimer, L. and Langston, A.F.
Raubenheimer, L., **Langston, A.F.** and **Koch, K.J.** The sustainability of a teacher/student support network for Mathematics. *Rhodes University Community Engagement Conference 2024: Community Engagement and the Trajectory of Community-University-Society Relationship: Past, Present and Future Possibilities*. Monument Building,

DEPARTMENT OF Zoology and Entomology

Introduction

The Department of Zoology and Entomology performed exceptionally well during 2024. We showcased our research 'live' through one hundred and thirty-seven (137) conference papers in Austria, Brazil, Canada, Costa Rica, Czech Republic, Italy, Namibia, South Africa, Spain, the United Kingdom and the United States of America. In print, we published eight (8) book chapters and more than one hundred and forty (140) peer-reviewed subsidy-earning journal articles!



Professor Ben Smit
Head of Department

Dr Nokubonga Mgqatsa
Deputy Head of Department

Our staff, associates, and students have energy to spare, and we are proud of every researcher involved in expanding the endeavors of the Department. Collaborations run strong, and new connections are made every day. We hosted visitors from or visited Australia, Argentina, Botswana, Canada, France, Germany, Italy, Kenya, Namibia, Portugal, and Saudi Arabia. The sky is the limit!

Postgraduate/Graduations

We are extremely proud of our Postgraduates completing during 2024: eight (8) Honours, eight (8) Masters, and eleven (11) PhDs. Every Postgraduate student holds a special place in the hearts of the people that make up the Department. We have space for a few special mentions here:

Dr Chipo Mungenge, who completed a thesis on "Plankton and macroinvertebrate dynamics in the Khakhea-Bray transboundary aquifer region". This PhD thesis has made substantial contributions to our understanding of water quality dynamics in temporary pans of the North-West Province. Chipo's project was developed alongside the Southern African Development Community and was informed through extensive engagement with community members and leaders in the area, facilitating reciprocal benefits.

Mr Raynold Moagi, who completed an MSc thesis on "An assessment of the status of psylloid species (Hemiptera: *Psylloidea*) as potential pests of commercial citrus in southern Africa: Implications for pest management". An examiner noted that this research was significant not only for the citrus industries in southern Africa, but also in other regions of the world.

Mr Bruce Roestof, who wrote a thesis on "A review of African praying mantises (Dictyoptera: *Mantodea*) incorporating molecular and morphological data". This thesis provides a decades-overdue review of the diversity, identification and molecular systematics of the praying mantises of the whole of Africa, a neglected continent. It revisits the identification of over 1000 species of these ecologically significant predators in a modern framework.

Distinguished Visitors / International Visits

Professor Mark Brigham visited from University of Regina, Saskatchewan, Canada to co-supervise Postgraduate students at Rhodes University.



Zizonke Dlamini and Blossom Nhlangulela at work on the rocky shore. Photo: Professor Nicole Richoux

Professor Martine Hausberger visited from CNRS, Integrative Neuroscience and Cognition Centre, Paris, France, and Professor Alban Lemasson visited from the Université de Rennes, France. These visits were reciprocated by Professor Adrian Criag, Dr Nokubonga Mgqatsa and Ms Tara Naeser of the DZE, who visited Professors Hausberger and Lemasson in Rennes, France.

We enjoyed another annual visit from the students of Dalhousie University, Nova Scotia, Canada, for their African Ecology Course exchange.

Dr Clarke van Steenderen (Centre for Biological Control) and Emma Sandenbergh (CBC) travelled to Brisbane, Australia, to work with Dr Dean Brookes from CSIRO to learn a new method for analysing population genetics.

Nicolas Salinas, a young researcher from FUEDEI, Argentina, visited the CBC, presented a seminar, and participated in field ventures.

Professor Iain Paterson and Dr Guy Sutton travelled to Kenya with colleagues from the USDA (Greg Wheeler, Rene Sforza) to search for biocontrol agents of cogon grass in collaboration with CABI Kenya.

Dr Grant Martin travelled to Portugal to work on the galling Trichilogaster of Acacia longifolia with collaborators at Polytechnic Institute of Coimbra.

Nicholas Denize-Proust from Sorbonne University, France, visited the molecular lab of Professor Edwards on a research collaboration trip.

Dr Guy Sutton travelled to Kenya to collect a small fly that galls the base of Guinea grass plants at Arabuko Sokoke Forest near Malindi.

Philip Ivey and David Kinsler visited Botswana and Namibia to collaborate with research partners on the shared Neltuma invasion.

Delegates from the Kingdom of Saudi Arabia visited South Africa to learn more about invasive species management and biological control. Philip Ivey and Kim Weaver facilitated this visit.

Professor Martin Hill travelled to the FAO Open-ended workshop on biological control agents and biostimulants in Rome, Italy, where he contributed to important discussions around biological control.

Dr Reyard Mutamiswa attended the DFG (German Research Foundation) status workshop in Bonn, Germany.

Significant Research Aligned events

Professor Julie Coetzee commenced a NRF SAIAB/RU SARChI Research Chair focusing on the ecology and management of aquatic invasive species. Julie has retained her affiliation with Rhodes University's Centre for Biological Control (CBC) in the Department of Zoology and Entomology and continues to research the biological control of invasive aquatic plants. She plans to expand her research into other groups of invasive aquatic species. Professor Coetzee was viewed by a wide audience on *Carte Blanche* when she spoke about her research. Professor Coetzee also presented her Vice-Chancellor's Distinguished Research Award Lecture at Rhodes University during 2024.

Professor Iain Paterson presented his 2022 Vice-Chancellors Distinguished Research Award Lecture at Rhodes University during 2024.

Well wishes to the incoming HoD team for 2025: **Professor Ben Smit** and **Dr Nokubonga Mgqatsa**.

Department of Zoology and Entomology Publications

Books/Chapters/Monographs

Bute, T.F.
Dalu, T., **Bute, T.F.**, Mpopetsi, P. and Mangadze, T. (2024) Microbes and phytoplankton. In: Dalu, T. and Masese, F.O. (eds.). *Afrotropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.377-406. ISBN: 9780443238987.

Chari, L.D.
Dalu, T., **Chari, L.D.**, **Keates, C.**, Munyai, L.F., Mutoti, M.I. and Mpopetsi, P. (2024) Rivers of North Africa. In: Dalu, T. and Masese, F.O. (eds.). *Afrotropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.163-193. ISBN: 9780443238987.

Masese, F.O., Wanderi, E.W., Dalu, T., **Chari, L.D.** and McClain, M. (2024) Food web dynamics. In: Dalu, T. and Masese, F.O. (eds.). *Afrotropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.519-557. ISBN: 9780443238987.

Coetzee, J.A. and Hill, M.P.
Shelton, J.M., **Broom, C.J.**, **Coetzee, J.A.**, **Hill, M.P.**, Motitsoe, S., Jacobs, S., van der Walt, J.A., **Weyl, O.L.F.** and Esler, K.J. (2024) Restoring freshwater ecosystems: Lessons from case studies on riparian vegetation, aquatic weeds and freshwater fish. In: Dalu, T. and Masese, F.O. (eds.). *Afrotropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.617-636. ISBN: 9780443238987.

Martin, G.D.
Clark, V.R. and **Martin, G.D.** (2024) Risks and vulnerabilities to and from Africa's major mountain ranges (Africa-Introduction). In: Schneiderbauer, S., Pisa, P.F., Shroder Jr, J.F. and Szarzynski, J. (eds.). *Safeguarding Mountain Social-Ecological Systems*. 2nd Ed. The Netherlands: Elsevier Ltd. p.65-72. ISBN: 9780443328244.

Clark, V.R., Ah-Peng, C., Arevalo, J.R., Backes, A.R., Haider, S., Rouget, M. and **Martin, G.D.** (2024) Africa's Mountainous Islands: Archipelagos of fire, water, and problem species. In: Schneiderbauer, S., Pisa, P.F., Shroder Jr, J.F. and Szarzynski, J. (eds.). *Safeguarding Mountain Social-Ecological Systems*. 2nd Ed. The Netherlands: Elsevier Ltd. p.97-107. ISBN: 9780443328244.

Petruzzella, A.
Bergallo, H.G., dos Santos, L.N., Barros, F., **Petruzzella, A.**, Figueiredo, B.R.S., Pereira, A.D., Latini, A.O., Lopes, A.V., Rosa, C., Vieira Filho, E.A., Evangelista, E.F., Dias, G.M., Ortega, J.C.G., Chapel, C.C. and Abreu, R.C.R. (2024) Vetores de mudança diretos e indiretos que afetam a introdução, o estabelecimento e a disseminação de espécies exóticas invasoras. In: Dechoum, M.A., Junqueira, A.O.R. and Orsi, M.L. (eds.). *Relatório temático sobre espécies exóticas invasoras no Brasil: sumário para tomadores de decisão*. Sao Carlos: Editora Cubo. p.92-132. ISBN: 9786500872286.

Villet, M.H.
Villet, M.H. (2024) Insect biodiversity helps solve African wildlife crimes. 2nd ed. In: Wilson JW, Primack R (Eds), *Conservation Biology in Sub-Saharan Africa*. Open Book Publishers, 442–443.

Peer Reviewed Subsidy-Earning Journal Research Publications

Aigbedion-Atalor, P.O., Upfold, J.K., Coombes, C.A., Moore, S.D. and Hill, M.P.
Aigbedion-Atalor, P.O., **Upfold, J.K.**, **Coombes, C.A.**, **Moore, S.D.** and **Hill, M.P.** (2024) Sexual selection in *Thaumatotibia leucotreta* (Meyrick) is shaped by contrasting geographic adaptations, but does it matter for area-wide sex pheromone control tools? *Annals of Applied Biology*. 184 (2024). p.202-212.

Aigbedion-Atalor, P.O., Upfold, J.K., Moore, S., Hill, M.P. and Coombes, C.A.
Aigbedion-Atalor, P.O., Heiduk, A., **Upfold, J.K.**, Shuttleworth, A., **Moore, S.**, **Hill, M.P.** and **Coombes, C.A.** (2024) Geographic variation in genetic composition, sexual communication and mating compatibility of the False Codling Moth, *Thaumatotibia leucotreta* for optimisation of area-wide control. *Frontiers in Ecology and Evolution*. 12 (1). p.1-12.

Akamagwuna, F.C. and Richoux, N.B.
Akamagwuna, F.C., **Odume, N.O.** and **Richoux, N.B.** (2024) Impact of agricultural land-use on functional feeding groups of Afrotropical *Ephemeroptera*, *Plecoptera* and *Trichoptera* in the Kat River, Eastern Cape, South Africa. *African Journal of Aquatic Science*. 49 (2024). p.298-311.

Barnes, R.S.K.
Barnes, R.S.K. and Seath, J.L. (2024) The occurrence of a rich subtidal macrobenthic fauna in through-flow residential marina canals, and the potential of such systems to be managed as biodiversity assets. *Ocean & Coastal Management*. 254 (2024). p.1-11.

Barnes, R.S.K. and Cottrell, L.G. (2024) Do stingray feeding pits enhance intertidal macrobenthic biodiversity? *Hydrobiologia.* 851 (2024). p.3403-3412.

Barnes, R.S.K., Hamylton, S.M. and Borburgh, L. (2024) Microscale dispersion of intertidal seagrass macrofauna. *Marine Environmental Research*. 196 (2024). p.1-13.

Bellingan, T.A. and Midgley, J.M.
Jordaens, K., De Meyer, M., Van Nuffel, M., Kirk-Spriggs, A.H., Sabuni, C., Mwatawala, M., Mujabwa, R., Kabota, S., **Bellingan, T.A.**, **Midgley, J.M.** *et al.* (2024) A best way forward to the organisation of entomological training courses in sub-Saharan Africa. *International Journal of Educational Development*. 107 (2024). p.1-18.

Bernard, A.T.F.
Smit, K.P., Sink, K.J., Shannon, L.J., **Bernard, A.T.F.** and Lombard, A.T. (2024) Ground truthing cumulative impact assessments with biodiversity data: Testing indicators and methods for marine ecosystem condition assessments in South Africa. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 34 (2). p.1-19.

Bates, A.E., Davies, M., Stuart-Smith, R.D., Lazzari, N., Lefcheck, J.S., Ling, S.D., Mellin, C., Mouillot, D., **Bernard, A.T.F.** *et al.* (2024) Overcome imposter syndrome: Contribute to working groups and build strong networks. *Biological Conservation*. 293 (2024). p.1-7.

Goetze, J., Heithaus, M.R., MacNeil, M.A., Harvey, E., Simpfendorfer, C.A., Heupel, M., Meekan, M.G., Wilson, S.A., Bond, M.E. and **Bernard, A.T.F.** (2024) Directed conservation of the world's reef sharks and rays. *Nature Ecology and Evolution*. 8 (6). p.1118-1128.

Bernard, A.T.F. and Mann, B.Q.
Martinez, S., **Bernard, A.T.F.**, Speed, C., **Mann, B.Q.**, Olbers, J.M., Maggs, J.Q., Floros, C., Meekan, M.G. and Yon, A. (2024) Elasmobranch assemblage structure on protected high-latitude coral reefs of southeast Africa. *Marine Ecology Progress Series*. 749 (2024). p.87-107.

Booth, J.M.
Fusi, M., Barausse, A., **Booth, J.M.**, Chapman, E., Daffonchio, D., Sanderson, W., Diele, K. and Giomi, F. (2024) The predictability of fluctuating environments shapes the thermal tolerance of marine ectotherms and compensates narrow safety margins. *Scientific Reports*. 14 (1). p.1-11.

Brigham, R.M.
Klug-Baerwald, B.J., Lausen, C.L., Burns, S.M. and **Brigham, R.M.** (2024) Physiological and behavioural adaptations by big brown bats hibernating in dry rock crevices. *Journal of Comparative Physiology B*. 194 (2024). p.203-212.



Dr Gregory Wheeler (front, USDA) and Dr Guy Sutton (back, CBC) searching for possible biocontrol agents on Cogon grass near Kwale in eastern Kenya.

Bute, T.F., Wyness, A.J., Wasserman, R.J. and Keates, C.
Bute, T.F., **Wyness, A.J.**, **Wasserman, R.J.**, Dondofema, F., **Keates, C.** and Dalu, T. (2024) Microbial community and extracellular polymeric substance dynamics Inari zone temporary pan ecosystems. *Science of the Total Environment*. 932 (2024). p.1-12.

Canavan, K.
Lazaro-Lobo, A., Andrade, B.O., **Canavan, K.**, Ervin, G.N., Essl, F., Fernández-Pascual, E., Follak, S., Richardson, D.M., Moles, A.T., Visser, V., Wyse, S.V. and JiménezAlfaro, B. (2024) Monographs on invasive plants in Europe N°8: Cortaderia selloana (Schult. & Schult. f.) Asch. & Graebn. *Botany Letters*. 1 (1). p.1-26.

Canavan, K. and Sutton, G.F.
Mapaura, A., **Canavan, K.**, Richardson, D.M., Clark, V.R., **Sutton, G.F.** and Steenhuisen, S. (2024) The impact of Nassella trichotoma (Nees) Hack. ex Arechav. on plant diversity, richness and soil properties in South Africa. *South African Journal of Botany*. 173 (2024). p.175-183.

Chari, L.D.
Moyo, S., **Chari, L.D.** and Tambara, E. (2024) Navigating the? Anthropocene: Trends and opportunities in modern organismal biology. *South African Journal of Science*. 120 (2024). p.1-3.

Chikowore, G. and Martin, G.D.
Chikowore, G., Weyl, P.S.R. and **Martin, G.D**. (2024) First record of *Robinia hispida* L. (Fabaceae) in South Africa. *Biological Invasions*. 26 (2024). p.3981-3987.

Chikowore, G., Bologo, N., Steenhuisen, S. and **Martin, G.D.** (2024) Montane grassland recovery: lessons from 25 years of the Working for Water program on the northern Drakensberg Escarpment, South Africa. *Restoration Ecology*. 33 (1). p.1-11.

Chikowore, G. and Mutamiswa, R.
Mukwevho, L., Ndlovu, M., **Chikowore, G.**, Dalu, T., **Mutamiswa, R.** and Chidawanyika, F. (2024) Responses of Ground-Dwelling Arthropods to Long-Term Prescribed Fire Regimes in a Savanna-Protected Area. *Rangeland Ecology & Management*. 95 (2024). p.46-55.

Coetzee, J.A.
van Valkenburg, J.L.C.H., Beyer, J., Champion, P., **Coetzee, J.A.**, Diadema, K., Kritzinger-Klopper, S., Marchante, E., Piet, L., Richardson, D.M. and Schonberger, I. (2024) Naturalised Hakea. What species are we actually talking about in Europe? *Botany Letters.* 171 (3). p.357-370.

Koleszar, C., Lukacs, B.A., **Coetzee, J.A.**, Korponai, J. and Szabo, S. (2024) Warming induced shade tolerance to become a key trait in invasion success of free-floating plant Pistia stratiotes over the native *Hydrocharis morsus-ranae*. *Aquatic Botany*. 194 (2024). p.1-10.

Coetzee, J.A., Motitsoe, S.N. and Petruzzella, A.
Schneider, S.C., **Coetzee, J.A.**, Galvanese, E.F., Harpenslager, S.F., Hilt, S., Immerzeel, B., Kohler, J., Misteli, B., **Motitsoe, S.N.**, Padial, A., **Petruzzella, A.**, Schechner, A., Thiebaut, G., Thiemer, K. and Vermaat, J.E. (2024) Causes of macrophyte mass development and management recommendations. *Science of the Total Environment*. 931 (2024). p.1-13.

Compton, S.G.
Deng J-Y., van Noort S., **Compton S.G.**, Chen Y. and Greeff J.M. 2025. The population genetic structure of *Ficus craterostoma* in South Africa. *South African Journal of Botany.* 178: 235-243.

Koutsoukos, E., **Compton, S.G.**, van Noort, S., Avtzis, D.N. and Askew, R.R. (2024) A new species of *Ormyrus* Westwood (Hymenoptera, Ormyridae) developing in figs of *Ficus microcarpa* in Europe. *European Journal of Taxonomy*. 917 (2024). p.170-193.

Koutsoukos, E., Demetriou, J., Georgiadis, C., Mitroiu, M.D., **Compton, S.G.** and Martinou, A.F. (2024) Highlighting overlooked biodiversity through online platforms: The Chalcid Wasps of Cyprus? website. *Biodiversity Data Journal*. 12 (2024). p.1-11.

Wong, D.M., Fan, S., **Compton, S.G.** and Yu Hui, H. (2024) A New Species of *Ceratosolen* (Agaonidae) Associated with *Ficus hispida* L. and Proposed Changes in Status of Two Other Pollinator Fig Wasps. *Indian Journal of Entomology*. 86 (1). p.16-25.

Koutsoukos, E., Demetriou, J., Martinou, A.F., **Compton, S.G.**, Avtzis, D.N. and Rasplus, J.Y. (2024) Playing both fig sides: the presence and host-switch of *Pleistodontes imperialis* (Hymenoptera: Agaonidae) is confirmed in Greece and Cyprus. *Phytoparasitica*. 52 (2). p.1-7.

Wang, R., Liu, C., Segar, S.T., Jiang, Y., Zhang, K., Jiang, K., Wang, G., Cai, J., Chen, L., **Compton, S.G.**, *et al.* (2024) Dipterocarpoidae genomics reveal their demography and adaptations to Asian rainforests. *Nature Communications*. 15 (1). p.1-11.

Huang, W., Ding, Y., Fan, S., Liu, W., Chen, H., Segar, S., **Compton, S.G.** and Yu Hui, H. (2024) A high-quality chromosome-level genome assembly of *Ficus hirta*. *Scientific Data*. 11 (1). p.1-11.

Coombes, C.A., Hilliar, S., Moore, S. and Hill, M.P.
Coombes, C.A., **Hilliar, S.**, **Moore, S.** and **Hill, M.P.** (2024) The addition of molasses to the *Cryptophlebia leucotreta* granulovirus formulation improves its efficacy against *Thaumatotibia leucotreta* Meyrick (Lepidoptera: Tortricidae), a pest of citrus in South Africa. *African Entomology*. 32 (2024). p.1-7.

Craig, A.J.F.K.
Craig, A.J.F.K. and Dean, W.R.J. (2024) South African birds in a Canadian museum: the legacy of colonial service by Lionel E Taylor. *Ostrich*. 95 (2). p.83-86.

Craig, A.J.F.K. (2024) Anton Reichenow and the birds of Africa. *Ostrich*. 95 (2). p.125-128.

Craig, A.J.F.K. and Edwards, S.
Craig, A.J.F.K. and **Edwards, S.** (2024) Counting Common Starlings: is *Sturnus vulgaris* invasive in rural South Africa? *Ostrich.* 95 (1). p.1-9.

Edwards, S.
Keates, C., Conradie, W. and **Edwards, S.** (2024) Phylogeographic structuring in a widespread southern African Grass Snake (Psammophiidae: *Psammophylax rhombeatus*). *African Journal of Herpetology*. 73 (2). p.210-235.

Msimang, A., **Edwards, S.**, **Alloggio, S.** and **Tandlich, R.** (2024) Human wellbeing and animal welfare: Is there an ethical link to be implemented from the COVID19 pandemic into the practice of emergency management. *American Journal of Disaster Medicine*. 19 (3). p.237-250.

Edwards, S. and Bessinger, R.
Edwards, S. and **Bessinger, R.** (2024) Morphological variations of auditory bullae in otomyine rodents (Rodentia: Otomyini) in southern African biomes. *Journal of Morphology*. 285 (2). p.1-12.

Edwards, S. and De La Fontaine, B.
Edwards, S. and **De La Fontaine, B.** (2024) Are larger termite mounds more resistant to fire? A study of two southern African termites (Isoptera: Termitidae). *Austral Entomology*. *63 (2). p.262-269.*

Githae, M.M., Coombes, C.A., Mutamiswa, R., Moore, S.D. and Hill, M.P.
Githae, M.M., **Coombes, C.A.**, **Mutamiswa, R.**, **Moore, S.D.** and **Hill, M.P.** (2024) Suitability of false codling moth eggs from different sterile to fertile moth ratios in the sterile insect technique programme, to parasitism by *Trichogrammatoidea cryptophlebiae*. *Crop Protection*. 182. (2024) 106744.

Gusha, M.N.C. and McQuaid, C.D.
Gusha, M.N.C. and **McQuaid, C.D.** (2024) Life History Strategies Drive Meso-Scale Distribution Patterns in Coastal Benthic Macroinvertebrates. *Ecology and Evolution*. 14 (10). p.1-11.

Hausberger, M.M.T.
Grandgeorge, M., Lerch, N., Delarue, A. and **Hausberger, M.M.T.** (2024) From Human Perception of Good Practices to Horse (*Equus caballus*) Welfare: Example of Equine-Assisted Activities. *Animals*. 14 (17). p.1-11.

Gallo, A., Gojceta, R., Boye, M., Lemasson, A. and **Hausberger, M.M.T.** (2024) Effects of experience and familiarity on visual attention and behaviours of bottlenose dolphins (*Tursiops truncatus*) in presence of humans. *Scientific Reports*. 14 (1). p.1-11.

Gallo, A., Schmidt-Kuntzel, A., Lea, P., Moya, M.J., Marker, L., Lemasson, A. and **Hausberger, M.M.T.** (2024) Agenda of Early Life Experience and Its Association with Sensitivity to Human Presence and Familiarity in Wild-Born Orphaned Captive Cheetahs. *Animals*. 14 (22). p.1-11.

Vidas-Guscic, N., Jonckers, E., Van Audekerke, J., Orije, J., Hamaide, J., Majumdar, G., Henry, L., **Hausberger, M.M.T.**, Verhoye, M. and Van der Linden, A. (2024) Adult auditory brain responses to nestling begging calls in seasonal songbirds: an fMRI study in non-parenting male and female starlings (*Sturnus vulgaris*). *Frontiers in Behavioural Neuroscience*. 18 (2024). p.1-11.

Hill, M.P.
Townsend, G., van Rooyen, E., **Hill, M.P.**, de Beer, W. and Roets, F. (2024) Invasion of an Afrotemperate forest complex by the polyphagous shot hole borer beetle. *Entomologica Experimentalis et Applicata*. 172 (4). p.354-369.

Baso, N.C., Bownes, A., Paynter, Q., Cartier, A., **Hill, M.P.** and **Coetzee, J.A.** (2024) Biogeographical comparison of *Lagarosiphon major* between native South Africa and invaded New Zealand: A natural enemy release case study. *Biological Control*. 196 (Sep 2024). p.1-8.

Hodgson, A.N.
Buckland Nicks, J. and **Hodgson, A.N.** (2024) Distinctive spermiogenesis in Aplacophora (Mollusca) has phylogenetic implications. *Zoomorphology*. 144 (6). p.1-19.

Hodgson, A.N. and Buckland-Nicks, J. (2024) Comparative sperm morphology of 15 species of limpet (Mollusca: Patellogastropoda: Lottioidea) and correlation with current systematics and phylogenies. *Journal of Molluscan Studies*. 90 (3). p.1-13.

Castejon, D., **Hodgson, A.N.**, Nakano, T., Hawkins, S.J. and Andrade, C.A.P. (2024) Editorial: True limpets as living resources - biology, ecology, exploitation and sustainability. *Frontiers in Marine Science*. 11 (2024). p.1-11.

Hoppe, H.C.
Oyeneyin, O.E., Moodley, R., Mashaba, C., Garnie, L.F., Omoboyowa, D.A., Rakodi, G.H., Maphoru, M.V., Balogun, M.O., **Hoppe, H.C.**, Egan, T. and Tukulula, M. (2024) *In vitro* antiplasmodium and antitrypanosomally activities, B-haematin formation inhibition, molecular docking and DFT computational studies of quinoline-urea-benzothiazole hybrids. *Heliyon*. 10 (19). p.1-11.

Ivey, P.J., Van Staden, G., Weaver, K.N. and Hill, M.P.
Ivey, P.J., **Van Staden, G.**, Harding, G., Oosthuizen, E., Hoft, E., van Staden, P., Antlnonissen, E., **Weaver, K.N.**, **Hill, M.P.** and Shackleton, R. (2024) Local and national stakeholders collaborate to take on *Prosopis* invasions with biological control and biomass use in South Africa. *South African Journal of Science*. 120 (9/10). p.1-9.

Keates, C. and Wasserman, R.J.
Keates, C., **Wasserman, R.J.**, Conradie, W., Dondofema, F., Munyai, L.F., Riddell, E.S. and Dalu, T. (2024) Frogs of the Makuleke Contractual Park, northern Kruger National Park. *KOEDOE*. 66 (1). p.1-9.

Kinsler, D.L.
Herbert, L., Zanga, A., **Kinsler, D.L.**, Ayala, V., Kamla, A.T. and Diaz, R. (2024) Optimizing aquatic weed management in Lake Ossa, Cameroon: Harnessing the power of biological control and real-time satellite monitoring. *Biological Control*. 199 (Dec 2024). p.1-10.

Kirkman, W., Moore, S.D. and Sutton, G.F.
Marsberg, T., Peyper, M., **Kirkman, W.**, **Moore, S.D.** and **Sutton, G.F.** (2024) The effect of permanent protective netting on insect pest prevalence in citrus orchards in South Africa. *African Entomology*. 32 (2024). p.1-9.

Leighton, G.
Leighton, G. and Serieys, L.E.K. (2024) Wild Cats on the Internet: The Role of Social Media in Popularising Caracals in South Africa. *Environmental Communication*. 19 (1). p.87-101.

Leighton, G. and Froneman, P.W.
Leighton, G., **Froneman, P.W.**, Serieys, L.E.K. and Bishop, J.M. (2024) Sustained use of marine subsidies promotes niche expansion in a wild felid. *Science of the Total Environment*. 914 (2024). p.1-11.

Lukubwe, M.S. and Craig, A.J.F.K.
Lukubwe, M.S., Velarde-Garcez, D., Sequeira, F., Lopez, S., **Craig, A.J.F.K.** and Mata, V. (2024) Feeding ecology and interactions with mammal hosts in a symbiotic genus of birds (*Buphagus* spp.) in Namibia. *Avian Research*. 15 (2024). p.336-344.

Mangan, R.
Mangan, R., Gareeb, M., Boeno, M., Da Silva, C., Cowie, B., Teles, A.M., Silveiraa, M. and Zachariades, C. (2024) Risk assessment of the laboratory host range and a molecular characterisation determining the field host range of *Lixus aemulus*, for the biological control of *Chromolaena odorata* in South Africa. *Biological Control*. 197 (Oct24). p.1-12.

Mann, B.Q.
Cliff, G., Booyens, N.G., **Daly, R.**, Jordaan, G.L., Nkabi, N., Parker, D. and **Mann, B.Q.** (2024) Biology and ecology of the African blackspot shark *Carcharhinus humani* on the east coast of South Africa. *African Journal of Marine Science*. 46 (1). p.65-76.

Mantshi, H.T.
Dabrowski, J., Meyer-Milne, E., **Mantshi, H.T.**, **Majingo, Z.**, **Bills, R.** and **Mlambo, M.** (2024) Diversity, occurrence, and conservation status of large branchiopods (Crustacea: *Anostraca*, *Notostraca*, *Laevicaudata* and *Spinicaudata*) in Northern Cape province, South Africa. *Journal of Crustacean Biology*. 44 (4). p.1-9.

Martin, G.D.
Gwate, O., Dlomu, M.G., Toucher, M., le Roux, P.C., **Martin, G.D.** and Clark, V.R. (2024) Endemic darling or global change menace? A review of the woody encroacher *Leucosidea sericea* on the eastern Great Escarpment of southern Africa. *South African Journal of Botany*. 174 (2024). p.307-317.

Sieben, E.J.J., Steenhuisen, S., Vidal, J.D., **Martin, G.D.** and le Roux, P.C. (2024) Modelling landscape-scale occurrences of common grassland species in a topographically complex mountainous environment. *Plant Ecology*. 225 (2024). p.1095-1108.

Medzihorsky, V., Mally, R., Trombik, J., Turcani, M., Medzihorsky, M., Shoda-Kagaya, E., **Martin, G.D.**, Sopow, S., Kochi, K. and Liebhold, A. (2024) The demise of enemy release associated with the invasion of specialist folivores on an invasive tree. *Ecography*. 2024 (5). p.1-11.

Moloi, K.T., Steenhuisen, S., Adams, L.D., Downs, C.T. and **Martin, G.D.** (2024) Only doing half the job: Frugivorous birds facilitate the spread but not the germination rate of invasive *Cotoneaster pannosus*. *South African Journal of Botany*. 173 (2024). p.60-67.

McQuaid, C.D.

Pocwierz-Kotus, A., **McQuaid, C.D.**, Lipinski, M.R., Zbawicka, M. and Wenne, R. (2024) SNPs Analysis Indicates Non-Uniform Origins of Invasive Mussels (*Mytilus gallo provincialis* Lamarck, 1819) on the Southern African Coast. *Animals*. 14 (21). p.1-14.

McQuaid, C.D. and Buresch, M.

McQuaid, C.D. and **Buresch, M.** (2024) Coastal topography and rates of mussel recruitment: a comparison of bay versus open coast sites. *African Journal of Marine Science*. 46 (2). p.149-153.

McQuaid, C.D. and Chambers, R.J.

McQuaid, C.D. and **Chambers, R.J.** (2024) Life history strategy and intertidal distribution in sympatric pulmonate marine limpet species. *African Journal of Marine Science*. 46 (4). p.299-310.

McQuaid, C.D. and Matumba, T.G.

McQuaid, C.D. and **Matumba, T.G.** (2024) Thermal tolerances of littorinid snails from temperate and subtropical South Africa. *African Journal of Marine Science*. 46 (1). p.1-9.

Mgqatsa, N.

Mgqatsa, N., Jama, K., Landman, M. and Kerley, G.I.H. (2024) Understanding resource use of an invasive species: Diet of the common warthog in Eastern Cape succulent thicket. *Journal of Arid Environments*. 222 (2024). p.1-6.

Midgley, J.M.

Midgley, J.M., Goergen, G. and Jordaens, K. (2024) A revision of the Afrotropical hover fly genus *Afroxanthandrus* Kassebeer, 2000 (Diptera, Syrphidae), with the description of two new species and one new synonymy. *European Journal of Taxonomy*. 968 (2024). p.60-85.

De Meyer, M., Goergen, G., **Midgley, J.M.** and Jordaens, K. (2024) On the identity of the Afrotropical species of *Mallota* Meigen (Diptera: Syrphidae). *European Journal of Taxonomy*. 958 (2024). p.242-290.

Minuti, G.M.

Zilio, M.I., Sanchez Restrepo, A.F., Gervazoni, P., **Minuti, G.M.**, Muzon, J., Djamila, D., Mc Kay, F. and Sosa, A. (2024) Economic loss of ecosystem services caused by yellow flag iris and white ginger lily, two invasive alien plants in natural ecosystems of Argentina. *Journal for Nature Conservation*. 84 (2025). p.1-9.

Mlambo, M.C.

Epele, L.B., Williams-Subiza, E.A., Bird, M.S., **Mlambo, M.C.**, *et al.* (2024) A global assessment of environmental and climate influences on wetland macroinvertebrate community structure and function. *Global Change Biology* 30. p. e17173.

Bilton, D.T. and **Mlambo, M.C.** (2024) A distinctive new species of *Protozantaena* Perkins, 1997 from lowland Namaqualand, South Africa (Coleoptera, Hydraenidae). *Zootaxa.* 5424 (3), 383-388.

Bilton, D.T. and **Mlambo, M.C.** (2024) A new, apparently lotic species of *Relictorygmus* from the Northern Cape Kamiesberg, South Africa (Coleoptera, Hydrophilidae, Cylominae). *Zootaxa.* 5448 (1), 143-150.

Bilton, D.T., Turner, C.R. and **Mlambo, M.C.** (2024) The phylogenetically isolated South African endemic diving beetle *Caperhantus cicurius* (Fabricius, 1787): redescription and range extensions (Coleoptera, Dytiscidae, Colymbetinae). *Check List* 20. (5), 1149-1156.

Mnqeta, Z. and Paterson, I.D.

Mnqeta, Z. and **Paterson, I.D.** (2024) Biological control against *Opuntia aurantiaca* Lindley (Cactaceae) and the perceptions of land-users in the Eastern Cape Province of South Africa. *Biocontrol Science and Technology*. 34 (12). p.1165-1177.

Moffat, R., Coetzee, J.A. and Hill, M.P.

Moffat, R., van Noort, S., **Coetzee, J.A.** and **Hill, M.P.** (2024) Biotic resistance towards *Hydrellia egeriae*, a biological control agent for the aquatic weed *Egeria densa*, in South Africa. *African Entomology*. 32 (2024). p.1-6.

Moffat, R., Weaver, K.N., Ngxande-Koza, S., Sebola, K.M., English, K., Kinsler, D.L. and Coetzee, J.A.

Moffat, R., **Weaver, K.N.**, **Ngxande-Koza, S.**, **Sebola, K.M.**, **English, K.**, **Kinsler, D.L.** and **Coetzee, J.A.** (2024) Bridging boundaries: six years of community engagement with biological control implementation and monitoring of water hyacinth on Hartbeespoort dam, South Africa. *Biological Control*. 194 (2024). p.1-9.

Moore, S.D.

Cardinez, M.C., Hertog, M., **Moore, S.D.** and Nicolai, B. (2024) Detection of false codling moth (*Thaumatotibia leucotreta* Meyrick) infestation in 'Midknight Valencia' fruit (*Citrus sinensis* L. Osbeck) using SIFT-MS. *Acta Horticulturae*. 1396 (2024). p.115-118.

Moore, S.D. and Sutton, G.F.

Moore, S.D., Ehlers, R.-. U., Manrakhan, A., Gilbert, M.J., Kirkman, W., Daneel, J.H., de Waal, J., Nel, R., **Sutton, G.F.** and Malan, A. (2024) Field-scale efficacy of entomopathogenic nematodes to control false codling moth, *Thaumatotibia leucotreta* (Lepidoptera: Tortricidae), in citrus orchards in South Africa. *Crop Protection*. 179 (1). p.1-13.

Mpanza, N.P. and Wasserman, R.J.

Mpanza, N.P., Cuthbert, R.N., Pegg, J. and **Wasserman, R.J.** (2024) Assessing biological invasion predatory impacts through interaction strengths and morphological trophic profiling. *Biological Invasions*. 26 (2024). p.4165-4177.

Muskett, P.C., Sutton, G.F. and Paterson, I.D.

Muskett, P.C., **Sutton, G.F.** and **Paterson, I.D.** (2024) Long-term post-release evaluation shows *Hypogeococcus* sp. is an effective biological control agent for queen of the night cactus in South Africa. *Biocontrol Science and Technology*. 34 (10). p.915-920.

Mutamiswa, R.

Meltus, Q.J., Mudereri, B.T., **Mutamiswa, R.**, Abdel-Rahman, E.M., Matunhu, J., Musundire, R., Niassy, S. and Tonnang, H.E.Z. (2024) Host tree-based scenario modelling for predicting a key edible insect, mopane worm *Gonimbrasia belina* (Westwood, 1894) distribution in Southern Africa. *Journal of Insects as Food and Feed*. 10 (2024). p.1-9.

Naidoo, T..

Munien, S,, Adhikari, P.L., Reycraft, K., Mays, T,J,, **Naidoo, T.**, Pruitt, Arena, J., Sershen, 2024. Application and efficacy of management interventions for the control of microplastics in freshwater bodies. *Water.* 1-34.

Nawa, N. and Wasserman, R.J.

Nawa, N., South, J., Ellender, B.R., Pegg, J., Madzivanzira, T.C. and **Wasserman, R.J.** (2024) Complex selection processes on invasive crayfish phenotype at the invasion front of the Zambezi floodplains ecoregion. *Freshwater Biology*. 69 (9). p.1322-1337.

Nicastro, K., McQuaid, C.D. and Zardi, G.I.

Kolzenburg, R., Ragazzola, F., Tamburello, L., **Nicastro, K.**, **McQuaid, C.D.** and **Zardi, G.I.** (2024) Photosynthetic response to a winter heatwave in leading and trailing edge populations of the intertidal red alga *Corallina officinalis* (Rhodophyta). *Acta Oceanologica Sinica*. 43 (7). p.70-77.

Nicastro, K., Seuront, L.J.J., McQuaid, C.D. and Zardi, G.I.

Cozzolino, L., **Nicastro, K.**, Detree, C., Gribouval, L., **Seuront, L.J.J.**, **McQuaid, C.D.**, **Zardi, G.I.** and Lima, F. (2024) Intraspecific variations in oyster (*Magallana gigas*) ploidy does not affect physiological responses to microplastic pollution. *Chemosphere*. 364 (2024). p.1-8.

Nicastro, K., Zardi, G.I. and Seuront, L.J.J.

Uguen, M., Gaudron, S.M., **Nicastro, K.**, **Zardi, G.I.**, Spilmont, N., Henry, S. and **Seuront, L.J.J.** (2024) The tolerance of a keystone ecosystem engineer to extreme heat stress is hampered by microplastic leachates. *Biology Letters*. 1 (7). p.20-2024.

Nyamukondiwa, C.

Mpofu, P., Machekano, H., Airs, P.M. and **Nyamukondiwa,**



Visiting Zoology students from Dalhousie University, Canada. Photo: Department of Zoology and Entomology

C. (2024) Transgenerational cross-susceptibility to heat stress following cold and desiccation acclimation in the Angoumois grain moth. *Physiological Entomology*. *49 (4). p.366-378.*

Mlambo, S., Machekano, H., Mvumi, B.M., Moatswi, C., Makopa, T., Engl, T. and **Nyamukondiwa, C.** (2024) First record of the occurrence of the larger grain borer, *Prostephanus truncatus* (Horn) (Coleoptera: Bostrichidae) in Botswana. *Bio Invasions Records*. 13 (4). p.909-925.

Cooke, A., Machekano, H., Gwiriri, L.C., Tinsley, J.H.I., Silva, G.M., **Nyamukondiwa, C.**, Safalaoh, A., Morgan, E. and Lee, M.R.F. (2024) The nutritional feed gap: Seasonal variations in ruminant nutrition and knowledge gaps in relation to food security in Southern Africa. *Food Security*. 10 (2024). p.73-100.

Cooke, A., Machekano, H., Ventura Cordero, J., Louro Lopez, A., Joseph, V., Gwiriri, L.C., Takahashi, T., Morgan, E.R., Lee, M.R.F. and **Nyamukondiwa, C.** (2024) Opportunities to improve goat production and food security in Botswana through forage nutrition and the use of supplemental feeds. *Food Security*. 16 (3). p.607-622.

Mlambo, S., Machekano, H., Mvumi, B.M., Cuthbert, R.N. and **Nyamukondiwa, C**. (2024) Trait-dependent plasticity erodes rapidly with repeated intergenerational acclimation in an invasive agricultural pest. *Physiological Entomology*. 49 (3). p.202-215.

Mlambo, S., Mubayiwa, M., Tarusikirwa, V.L., Machekano, H., Mvumi, B.M. and **Nyamukondiwa, C.** (2024) The Fall Armyworm and Larger Grain Borer Pest Invasions in Africa: Drivers, Impacts and Implications for Food Systems. *Biology-Basel*. 13 (3). p.1-28.

Birkhofer, K., Alfeus, M., Arvidsson, F., Bird, T., Buxton, M., Djoudi, E.A., Fabiano, E., Kasinda, E., Machekano, H., Mpofu, P., Nghipunya, E.N., Segaiso, B.A. and **Nyamukondiwa, C.** (2024). Smallholder agriculture in African dryland agro-ecosystems has limited impacts on trophic group composition but affects arthropods' provision of ecosystem services. *Agriculture, Ecosystems and Environment.* 363. 108860.

Chidawanyika F., Akutse K.S., Musvuugwa T., Yusuf, A.A. and **Nyamukondiwa, C.** (2024). Editorial: Invasive pathogens and arthropods: biogeography, drivers of invasion success, impacts on indigenous forest trees and emerging management strategies. *Frontiers in Forests and Global Change.* 7.

Paper, M.K., Hill, M.P. and Coetzee, J.A.

Righetti, T., de la Fuente, D., **Paper, M.K.**, Brentassi, M.E., **Hill, M.P.**, **Coetzee, J.A.**, Salinas, N.A., Bruzzone, O.A. and Sosa, A. (2024) Effects of elevated CO2 on the water hyacinth-biocontrol agent *Megamelus scutellaris* (Hemiptera: Delphacidae) and its yeast-like symbiotes. *Biological Control*. 188 (January). p.1-8.

Parkinson, M.C.

Elston, C., **Murray, T.**, Rogers, T., **Parkinson, M.C.**, **Mann, B.Q.**, **Daly, R.**, **Filmalter, J.D.** and **Cowley, P.D.** (2024) Diamond *Gymnura natalensis* and duckbill *Aetomylaeus bovinusrays* undertake nationwide coastal migrations. *Journal of Fish Biology*. 2024 (1). p.1-16.

Paterson, I.D.

Paterson, I.D. and Cabrera Walsh, G. (2024) Editorial: The XVI international symposium on biological control of weeds. *Biological Control*. 198 (2024). p.1-3.

Hinz, H.L., Cabrera Walsh, G., **Paterson, I.D.**, Paynter, Q., Schwarzlander, M., Smith, M. and Weyl, P. (2024) Enhancing pre-release studies for weed biocontrol agents: A review of existing and emerging tools. *Biological Control*. 198 (2024). p.1-13.

Paterson, I. D., Motitsoe, S. N., Coetzee, J. A., and Hill, M.P.

Paterson, I. D., **Motitsoe, S. N.**, **Coetzee, J. A.**, and **Hill, M. P.** (2024). Recent post-release evaluations of weed bio-control programmes in South Africa: A summary of what has been achieved and what can be improved. *BioControl* 69:279-291.

Petruzzella, A.

Wood, K.A., Jupe, L.L., Aguiar, F.C., Collins, A., Davidson, S.J., Freeman, W., Kirkpatrick , L., Lobato-de Magalhaes, T., McKinley, E., Nuno, A., Pages, J.F., **Petruzzella, A.**, Pritchard, D., Reeves, J.P., Magela Thomaz, S., Thornton, S.A., Yamashita, H. and Newth, J.L. (2024) A global systematic review of the cultural ecosystem services provided by wetlands. *Ecosystem Services*. 70 (2024). p.1-17.

Porri, F.

Oliver, J-C., **Porri, F.**, Emami-Khoyi, A. and Teske, P.R. (2024) Unexpected mismatches in population structure among marine mussel life-history stages reveal the true scales of planktonic larval dispersal. *Limnology and Oceanography Letters*. 9 (6). p.806-814.

Rapetsoa, M.C.

Kumschick, S., Fernandez Winzer, L., McCulloch-Jones, E.J., Chetty, D., Fried, J., Govender, T., Potgieter, L., **Rapetsoa, M.C.**, Richardson, D.M., van Velden, J., Van der Colff, D., Miza, S. and Wilson, J.R.U. (2024) Considerations for developing and implementing a safe list for alien taxa. *Bioscience*. 74 (2). p.97-108.

Reid, M.K., Coetzee, J.A. and Hill, M.P.

Reid, M.K., **Coetzee, J.A.**, Gettys, L.A. and **Hill, M.P.** (2024) The importance of multigeneration host specificity testing: rejection of a potential biocontrol agent of Nymphaea Mexicana (Nymphaeaceae) in South Africa. *Florida Entomologist*. 107 (1). p.1-9.

Reid, M.K., Sutton, G.F. and Hill, M.P.

Reid, M.K., **Sutton, G.F.**, **Coetzee, J.A.**, Gettys, L. and **Hill,**



Chipo Mungenge at work. Photo: Department of Zoology and Entomology

M.P. (2024) Distribution and host preference of a potential biocontrol agent with a new association for the alien water lily *Nymphaea mexicana* in South Africa. *African Journal of Aquatic Science*. 49 (2024). p.132-144.

Roberts, P.J. and Mgqatsa, N.
Roberts, P.J., Druce, D.J., **Mgqatsa, N.** and Parker, D.M. (2024) Using photo by-catch data to reliably estimate spotted hyaena densities over time. *Mammalia*. 88 (2). p.1-8.

Rono, B.J.
Roy, H.E., Pauchard, A., Stoett, P.J., Renard Truong, T., Meyerson, L.A., Bacher, S., Galil, B.S., Hulme, P.E., **Rono, B.J.** and **Weyl, O.L.F.** (2024) Curbing the major and growing threats from invasive alien species is urgent and achievable. *Nature Ecology and Evolution*. 8 (7). p.1-11.

Sandenbergh, E., Petruzzella, A. and Coetzee, J.A.
Sandenbergh, E., **Petruzzella, A.** and **Coetzee, J.A.** (2024) Distribution and sexual reproductive potential of *Iris pseudacorus* L. (Iridaceae) in South Africa. *South African Journal of Botany*. 167 (2024). p.31-39.

Sebola, K.M., Coetzee, J.A., Petruzzella, A. and Motitsoe, S.N.
Vermaat, J.E., Thiemer, K., Immerzeel, B., Schneider, S.C., **Sebola, K.M.**, **Coetzee, J.A.**, **Petruzzella, A.**, **Motitsoe, S.N.**, Baldo, M., Misteli, B., Thiebaut, G., Hilt, S., Kohler, J. and Harpenslager, S.F. (2024) Does Perceived Nuisance Abundance of Water Plants Match with Willingness-to-Pay for Removal? Contrasts Among Different User Categories. *Environmental Management*. 75 (2024). p.464-476.

Vermaat, J.E., Thiemer, K., Immerzeel, B., Schneider, S.C., **Sebola, K.**, **Coetzee, J.A.**, **Petruzzella, A.**, **Motitsoe, S.N.**, Baldo, M., Misteli, B., Thiebaut, G., Hilt, S., Köhler, J. and Harpenslager, S.F. (2024) Mass development of aquatic plants: Effects of contrasting management scenarios on a suite of ecosystem services. *Journal of Applied Ecology* 61:76-89.

Seuront, L.J.J.
Seuront, L.J.J. (2024) A Tale of Many Marine Stations: 150 Years of Marine Ecology in the Eastern English Channel. *Limnology and Oceanography Bulletin*. 33 (4). p.141-148.

Uguen, M., Gaudron, S.M. and **Seuront, L.J.J.** (2024) Plastic pollution and marine mussels: Unravelling disparities in research efforts, biological effects and influences of global warming. *Science of the Total Environment*. 959 (2025). p.1-26.

Sutton, G.F.
Madire, L.C., Olckers, T., **Sutton, G.F.** and Simelani, D.O. (2024) Predicted impact, establishment and distribution of *Heikertingerella* sp. (Coleoptera, Chrysomelidae), recently released for the biological control of *Tecoma stans* in South Africa. *Agricultural and Forest Entomology*. 26 (3). p.410-420.

Tsatsu, S.K., **Sutton, G.F.**, Serfontein, L., Addison, P., De Meyer, M., Virgilio, M. and Manrakhan, A. (2024) Distribution and host ranges of *Ceratitis rosa* and *Ceratitis quilicii* (Diptera: Tephritidae) in South Africa. *Bulletin of Entomological Research*. 114 (4). p.503-513.

Van Steenderen, C.J.M. and Sutton, G.F.
Van Steenderen, C.J.M. and **Sutton, G.F.** (2024) Climate covariate selection influences Maxent model predictions and predictive accuracy under current and future climates. *Ecological Modelling*. 498 (2024). p.1-10.

Van Steenderen, C.J.M., Mauda, E., Kirkman, W., Faulkner, K. and **Sutton, G.F.** (2024) The Asian Citrus Psyllid (*Diaphorina citri*) in Africa: using Maxent to predict current and future climatic suitability, with a focus on potential invasion routes. *African Entomology*. 32 (2024). p.1-10.

Villet, M.H.
Martínez-Sánchez, A., Szpila, K., **Villet, M.H.**, Stahls, G., Thomas-Cabianca, A., Velasquez, Y., Parrott, J.J. and Rojo, S. (2024) Morphology, biology and molecular characterisation of the endemic Canary Islands blowfly *Calliphora splendens* Macquart, 1838 (Diptera: Calliphoridae). *Medical and Veterinary Entomology*. 5

Villet, M.H. (2024) *Bactricia* nematodes Kby., 1894 (Phasmida, Diapheromeridae, Diapheromerinae) is a nomen nudum. *African Invertebrates*. 65 (1). p.1-7.

Groth, O.C., Strassberger, A., Hoft, V., Schusterbauer, I., Rahaus, S., Adetimehin, D.D., Grawe, M.A. and **Villet, M.H.** (2024) Exploring unified methods of killing and storing insect samples for forensic entomotoxicology using diazepam in *Lucilia sericata* (Meigen, 1826) (Diptera: Calliphoridae) larvae. *Forensic Science International*. 365 (2024). p.1-13.

Szpila, K., Williams, K., Soszyńska, A., Ekanem, M., Heyns, M., Dinka, M.D., **Villet, M.H.** (2024) Key for the identification of third instar larvae of African blowflies (Diptera: Calliphoridae) of forensic importance in death investigations. *Forensic Science International.* 354: 111889

Wasserman, R.J.
Munyai, L.F., Mugwedi, L., **Wasserman, R.J.**, Dondofema, F., Riddell, E.S., **Keates, C.** and Dalu, T. (2024) Water and sediment chemistry drivers of chlorophy- a dynamics within a Ramsar declared floodplain pan wetland system. *Environmental Science and Pollution Research*. 31 (2024). p.28549-28563.

Mutshekwa, T., Mugwedi, L., **Wasserman, R.J.**, Dandofema, F., Cuthbert, R.N. and Dalu, T. (2024) Aquatic macroinvertebrate community colonisation and succession in macadamia orchard and communal area reservoirs: a case study of Luvuvhu River valley, South Africa. *Water SA*. 50 (2). p.137-147.

Wasserman, R.J., Bute, T.F. and Wyness, A.
Bute, T.F., **Wyness, A.**, Dondofema, F., **Wasserman, R.J.**, Dondofema, F., **Keates, C.**, Dalu, T. (2024). Microbial community and extracellular polymeric substance dynamics in arid–zone temporary pan ecosystems. *Science of the Total Environment*. 932, 173059.

Wasserman, R.J. and Keates, C.
Keates, C., **Wasserman, R.J.**, Conradie, W., Dondofema, F., Munyai, L., Riddell, E.S., Dalu, T. (2024). *Frogs of the Makuleke Contract Park, northern Kruger National Park.* Koedoe. 66, a1785.

Wasserman, R.J. and Mpanza, .P.
Mpanza, N.P., Cuthbert, R.N., Pegg, J. and **Wasserman, R.J.** (2024) Assessing biological invasion predatory impacts through interaction strengths and morphological trophic profiling. *Biological Invasions.* 26 (2024). p.4165-4177.

Wasserman, R.J., and Mungenge, C.
Mungenge, C., **Wasserman, R.J.**, Cuthbert, R.N., Dalu, T. (2024). Salinisation of arid temporary pools alters crustacean hatching success but not phenology dynamics. Hydrobiologia. 851, 181-193.

Wasserman, R.J. and Nawa, N.
Nawa, N., Ellender, B.R., South, J., Pegg, J., Madzivanzira, T.C., **Wasserman, R.J.** (2024). Complex selection processes on invasive crayfish phenotype at the invasion front of the Zambezi floodplains ecoregion. *Freshwater Biology.* 69, 1322-1337.

Williams, K.A.
Williams, K.A. and Snyman, L.P. (2024) The state of the genus *Hybomitra* Enderlein (Diptera: Tabanidae) in the Afrotropic including phylogenetic analysis and the description of a new species from South Africa. *African Entomology*. 32 (2024). p.1-10.

Yell, L.D., Sutton, G.F., Van Steenderen, C.J.M., Canavan, K. and Paterson, I.D.
Yell, L.D., **Sutton, G.F.**, **Van Steenderen, C.J.M.**, **Canavan, K.**, McConnachie, A. and **Paterson, I.D.** (2024) Field-based surveys and laboratory tests indicate that candidate biocontrol agents for African lovegrass from South Africa are not suitable for release in Australia. *Biocontrol Science and Technology*. 34 (2). p.203-224.

Zardi, G.I., Monsinjon, J.R., Seuront, L.J.J., McQuaid, C.D. and Nicastro, K.
Zardi, G.I., **Monsinjon, J.R.**, **Seuront, L.J.J.**, Spilmont, N., **McQuaid, C.D.** and **Nicastro, K.** (2024) Symbiotic endolithic microbes reduce host vulnerability to an unprecedented heatwave. *Marine Environmental Research*. 199 (2024). p.1-5.

Zardi, G.I., Nicastro, K., Froneman, P.W. and Seuront, L.J.J.
Zardi, G.I., **Nicastro, K.**, Lau Truong, S., Decorse, P., Nozak, S., Chevillot-Biraud, A., **Froneman, P.W.**, Akoueson, F., Duflos, G. and **Seuront, L.J.J.** (2024) Microplastic leachates inhibit small-scale self-organization in mussel beds. *Science of the Total Environment*. 914 (2024). p.1-7.

Zardi, G.I., Seuront, L.J.J. and Nicastro, K.
Zardi, G.I., **Seuront, L.J.J.**, Gevaert, F. and **Nicastro, K.** (2024) Plastiskin: A new form of plastic pollution affecting rocky shore organisms. *Marine Pollution Bulletin*. 209 (2024). p.1-5.

Zardi, G.I., Seuront, L.J.J., Froneman, P.W. and Nicastro, K.
Zardi, G.I., **Seuront, L.J.J.**, Spilmont, N., **Froneman, P.W.** and **Nicastro, K.** (2024) Leachates from pyroplastics alter the behaviour of a key ecosystem engineer. *Estuarine, Coastal and Shelf Science*. 301 (2024). p.1-7.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Barry, M. and Wasserman, R.J.
Barry, M. And **Wasserman, R.J.**, Bizani, M, and Deyzel S.H.P. Using Zooscan software to quantify effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Barry, M., **Wasserman, R.J.**, Bizani, M. and Deyzel S.H.P. Using Zooscan software to quantify effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *6TH Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Bell, M.J., Naidoo, T., Hendricks, E and Wasserman, R.J.
Bell, M.J., **Naidoo, T.**, **Hendricks, E.** and **Wasserman, R.J.** Are temporary wetlands predator free? Insight from insect phenology dynamics across a temporary wetland hydroperiod. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Bell, N., **Naidoo, T.**, **Hendricks, E.** and **Wasserman, R.J.** Are temporary wetlands predator free? *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Boon, E.A., Coombes, C.A., Hill, M.P. and Moore, S.D.
Boon, E.A., **Coombes, C.A.**, **Hill, M.P.** and **Moore, S.D.** Bioprospecting for entomopathogenic fungi for use against foliar citrus pests. 12th Citrus Research Symposium. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Brigham, R.M.
Brigham, R.M. Thermoregulation: Convergence between bats and nightjars. *Thermoregulation: Convergence between bats and nightjars*. Thompson Rivers University, Kamloops BC. Canada. February 2024.

Brigham, R.M. Heterothermy: a perspective based on nightjars. *Plenary talk for Global Nightjar network annual meeting*. Virtual, Virtual. Virtual. November 2024.

Bute, T.F., Wasserman, R.J. and Coetzee, J.A.
Bute, T.F., **Wasserman, R.J.** and **Coetzee, J.A.** Does heavy metal pollution from acid mine drainage undermine the biological control of water hyacinth (*Pontederia crassipes*) in invaded East Rand wetland systems? *National Wetlands Indaba.* Cape St Francis Resort, Cape St Francis. South Africa. October 2024.

Canavan, K.
Mbele, T., Steenhuisen, S. and **Canavan, K.** The invasive status of *Cortaderia* species in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Chikodza, T., Strange, E., Wasserman, R.J. and Coetzee, J.A.
Chikodza, T., **Strange, E.**, **Wasserman, R.J.** and **Coetzee, J.A.** Do invasive aquatic plants cause an increase in

mosquitoes? Concerns for public health. *6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Coetzee, J.A.

Baso, N.C. and **Coetzee, J.A.** Fostering trophic resistance to climate change and biological invasions in African freshwater ecosystems. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Coetzee, J.A. Aquatic weed biological control: prospects and challenges. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Coetzee, J.A. and Hill, M.P.
Reid, M., Smith, M., Gettys, L., **Coetzee, J.A.** and **Hill, M.P.** South Africa vs. south Florida: mass rearing and inundative releases of *Megamelus scutellaris* to manage water hyacinth (*Pontederia crassipes*). *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Coombes, C.A., Hill, M.P. and Moore, S.D.
Luphondo, K.C., **Jukes, M.D.**, **Coombes, C.A.**, **Hill, M.P.** and **Moore, S.D.** Effect of netting on the FCM granulovirus for the management of false codling moth in citrus orchards. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Luphondo, K.C., **Jukes, M.D.**, **Coombes, C.A.**, **Hill, M.P.** and **Moore, S.D.** Effect of netting on the FCM granulovirus for the management of false codling moth in citrus orchards. *6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Coombes, C.A., Hilliar, S., Moore, S.D. and Hill, M.P.
Coombes, C.A., **Hilliar, S.**, **Moore, S.D.** and **Hill, M.P.** Boosting FCM control: Molasses enhances *Cryptophlebia leucotreta* granulovirus formulatio effectiveness. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Cooper, F.R. Smit, B. and Mgqatsa, N.
Cooper, F.R., **Smit, B.** and **Mgqatsa, N**. The unexplored part of South Africa: mammal species diversity in Camdeboo National Park, Eastern Cape. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. September 2024.

Cousins, L.E. and Moore, S.D.
Heiduk, A., Shuttleworth, A., Johnson, S.D., Peyper, M., **Cousins, L.E.** and **Moore, S.D.** Temperature-dependent release rates of false codling moth (FCM) pheromone dispensers used for mating disruption. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Marsberg, T., Peyper, M., Nkomo, S., **Cousins, L.E.**, De Klerk, J., Young, A. and **Moore, S.D.** Development of new cold treatments for FCM and their effect on larval survival. *12th Citrus Research Symposium.* Champagne Sports Resort, Makhanda. South Africa. August 2024.

Cousins, L.E., Mommsen, W.T., Van Son, E.J.H., Simba, V., Mushore, T.G. and Moore, S.D.
Cousins, L.E., **Mommsen, W.T.**, **Van Son, E.J.H.**, **Simba, V.**, Saccaggi, D., Mngomezulu, N., Marsberg, T., Peyper, M., Nkomo, S., **Mushore, T.G.**, **Makitla, T.** and **Moore, S.D.** Understanding the mealybug parasitoid biocontrol complex: How does it work and when does it fail? *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

De Beer, E.F.L., Hill, M.P. and Moore, S.D.
De Beer, E.F.L., **Hill, M.P.**, Marsberg, T., Peyper, M., **Moore, S.D.**, Maree, H. and **Bester, R.** Augmentation of *Aphytis melinus* for the control of red scale in citrus. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

De La Fontaine, B., Mdiza, W., Sutton, G.F. and Paterson, I.D.
De La Fontaine, B., **Mdiza, W.**, **Sutton, G.F.** and **Paterson, I.D.** Field surveys and phylogenetics narrow the search for a suitable biological control agent for Guinea grass (*Megathyrsus maximus*). *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Doherty, J.E. and Coetzee, J.A.
Doherty, J.E., **Coetzee, J.A.** and Underhill, L.G. Understanding the impact of water hyacinth invasion on avian diversity. *National Wetlands Indaba.* Cape St Francis Resort, Cape St Francis. South Africa. October 2024.

Doherty, J.E., **Coetzee, J.A.** and Underhill, L.G. Understanding the impact of water hyacinth invasion on avian diversity. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

English, K.F., Kinsler, D.L. and Coetzee, J.A.
English, K.F., **Kinsler, D.L.**, **Baso, N.C.** and **Coetzee, J.A.** Biological control, the answer to mitigating the invasion of water hyacinth on Hartbeespoort Dam? *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Githae, M.M., Coombes, C.A., Mutamiswa, R., Moore, S.D. and Hill, M.P.
Githae, M.M., **Coombes, C.A.**, **Mutamiswa, R.**, **Moore, S.D.** and **Hill, M.P.** Susceptibility to parasitism of false codling moth eggs from different sterile to fertile release ratios. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Harvey, O.R., Balmer, N.L, and Smit, B.
Harvey, O.R., **Balmer, N.L**, and **Smit, B.** Piospheres: Unravelling the Ecological Interaction of Arthropods and Birds in the Kalahari Desert. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. January 2024.

Hausberger, M.
Henry L., Leroux M., Lange L., Naas I., Querré E., **Craig A.**, and **Hausberger M.** (2024) Testing dialects as potential community markers in congeneric African starlings. *4th Conference of the Bioacoustics Scientific African Community*. Cape Town. South Africa. Septermber 2024.

Grandgeorge, M., Lerch, N., Delarue, A., and **Hausberger, M.** (2024) From human perception of good practices to horse *(Equus caballus)* welfare: the example of equine-assisted activities. *57th ISAE Congress*. Curitiba. Brazil. August 2024.

Gallo A., de Moura Lima A., Boye M., **Hausberger M.**, and Lemasson A. (2024) Context-sensitive emission of acoustic signals in bottlenose dolphins *(Tursiops truncatus)* under human care. *Congress of the European Association on Marine Mammals*. Ténériffe. Spain, March 2024.

Gueguen, L., **Hausberger, M.**, and Henry, S. (2024) Horse's perception of humans: a major site effect. *57th ISAE Congress (International Society for Applied Ethology).* Curitiba. Brasil. August 2024.

Lemasson, A., Henry, S., and **Hausberger, M.** (2024). How does a happy horse sound? *57th ISAE Congress*. Curitiba. Brazil. August 2024.

Grandgeorge M, Gautier Y, Mossu H, and **Hausberger, M.** (2024) Pet dog versus pet cat interactions with children with typical development or autism spectrum disorder: same or différent visual attention patterns? *32nd International Society for Anthrozoology Conference*. Hartpury University. United Kingdom. June 2024.

Toutain, M., Malivoir, M., Brugaillères, P., Tiercelin, I., Jacq, C., Gautier, Cagnot, C., Péchard, A., Jubin, R., Henry, L.,**Hausberger, M.** and Grandgeorge, M. (2024) I Prefer to Look at an Animal Rather than at a Human: Visual Attention of Neurotypical Children and Children with Autism Spectrum Disorder (ASD) During One-Time First Exposure to an Assistance Dog. 32nd *International Society for Anthrozoology Conference*. Hartpury University. United Kingdom. June 2024.

Hendricks, E.R., Bell, M., Naidoo, T. and Wasserman, R.J.
Hendricks, E.R., **Bell, M.**, **Naidoo, T.**, Mofu, L., and **Wasserman, R.J.** Zooplankton phenology and shifting community dynamics over a hydroperiod in temporary wetlands. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Hendricks, E., **Bell, M.**, **Naidoo, T.**, Mofu, L. and **Wasserman, R.J.** Zooplankton hatching phenology dynamics in fishless temporary wetlands. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Hill, M.P.
Hill, M.P., Sheppard, A., Hinz, H.L., Rafter, M.A. and Raghu, S. Panel Discussion: Biological control in a national and



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international policy context. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Hill, M.P. and Compton, S.G.

Langa, S., **Hill, M.P.** and **Compton, S.G.** Agents sans frontiers: cross border aquatic weed biological control. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Hill, M.P. and Moore, S.D.

Phoswa, S.L., **Hill, M.P.**, **Moore, S.D.**, **Jukes, M.D.** and **Knox, C.** Cloning and expression of a truncated protein, gp37, from the litchi moth nucleopolyhedroviral (CrpeNPV) in a bacterial system for improvement of false codling moth granulovirus (CrleGV) infectivity. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Tole, S., **Hill, M.P.**, **Moore, S.D.**, **Jukes, M.D.** and **Knox, C.** Evaluating baculovirus mixtures against false codling moth *Thaumatotibia leucotreta* Meyrick. (Lepidoptera: Tortricidae). *12th Citrus Research Symposium*. Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Hill, M.P., Moore, S.D. and Coombes, C.A.

Ngxekisa, S., **Hill, M.P.**, **Moore, S.D.** and **Coombes, C.A.** Evaluation of potential repellents for false codling moth, *Thaumatotibia leucotreta* (Meyrick) (Lepidoptera: Tortricidae). *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Ivey, P.J.

Kleinjan, C. and **Ivey, P.J.** Promising gall-forming insects from Argentina for management of *Neltuma* (previously *Prosopis* section Algarobia) in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Wilson, J., Faulkner, K., Fernández Winzer, L., McCulloch-Jones, E., van Wilgen, B., Blanchard, R., Carbutt, C., Dechoum, M., Foxcroft, L.C., Greve, M., Hui, C., **Ivey, P.J.**, Kgope, B., Kumschick, S., le Roux, P., Masehela, T., Measey, G.J., Mize, S., Mogapi, T., Mpikanisi, F., Mulaudzi, L., Nelukalo, K., Nnzeru, L., Nsikani, M., Pattison, Z., Rahlao, S., Richardson, D.M., Robinson, T.B., Shackleton, R.T., Tererai, F., Tshidada, N., Tshikhudo, P., Tshivhandekano, I., Wanjau, K., Ziller, S. and Zengeya, T.A. A South African perspective on the 2023 IPBES Thematic Assessment Report on Invasive Alien Species and their Control. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Ivey, P.J. and Hill, M.P.

Ivey, P.J. and **Hill, M.P.** Raising awareness of invasive species and biological control in the social media era. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Ivey, P.J., Weaver, K.N. and Hill, M.P.

Ivey, P.J., **Weaver, K.N.** and **Hill, M.P.** Engaging communities to tackle thorny problem. *Community Engagement Conference.* Rhodes University, Makhanda. South Africa. May 2024.

Jeme, A. and Paterson, I.D.

Jeme, A., **Paterson, I.D.**, Kumschick, S. and Wilson, J. Should effective management lead to a change in the regulatory status of an invasive species: classical biological control as a case study. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Kilian, W.M., and Wasserman, R.J.

Kilian, W.M. Murray, T.S., Filmater, J.D., Cowley, P., Næsje, T., and **Wasserman, R.J.** The movement behaviour of adultleervis in the Breed Estuary: Insights from acoustic telemetry. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Kilian, W.M. Murray, T.S., Filmater, J.D., Cowley, P., Næsje, T., and **Wasserman, R.J.** The movement behaviour of adultleervis in the Breed Estuary: Insights from acoustic telemetry. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Kinsler, D.L.

Kinsler, D.L., Diaz, R., Snook, J. and Meng, X. Development of a real-time monitoring tool for Roseau cane health in the Lower Mississippi River Delta. *6th Annual Roseau Cane Research Summit.* LSU Hilltop Arboretum, Louisiana. USA. May 2024.

Diaz, R., **Kinsler, D.L.**, Ayala, V., Shackelford, D., Wahl, C., Woodley, S. and Ortiz, J. Lessons on recovery: Contrasting the impact of biological control of giant salvinia (*Salvinia molesta*) in tropical and subtropical regions. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Ayala, V., Herbet, L., **Kinsler, D.L.**, Gentimis, T. and Diaz, R. Biocontrol meets AI: Implementation of real-time satellite monitoring for detection and management of giant salvinia (*Salvinia molesta*). *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Kinsler, D.L. and Ivey, P.J.
Kinsler, D.L. and **Ivey, P.J.** Can remote sensing effectively monitor *Prosopis* (*Neltuma*) invasions in Southern Africa? Broader implications for monitoring biological invasions. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Main, G. and Mgqatsa, N
Main, G. and **Mgqatsa, N.** *Spatial and temporal partitioning among insectivorous mammals within Camdeboo National Park, South Africa. Southern African Wildlife Management Association Conference.* Windhoek, Namibia. October 2024.

Kolisi, S., Motitsoe, S., Wasserman, R.J. and Mlambo, M.
Kolisi, S., **Motitsoe, S.**, **Wasserman, R.J.** and **Mlambo M.** *Tarebia granifera* invasions in South Africa. *National symposium on Biological Invasions.* 9-12 September 2024.

Maneli, S., Muskett, P.C. and Paterson, I.D.
Maneli, S., **Muskett, P.C.** and **Paterson, I.D.** Assessing the potential for biocontrol of the Brazilian cactus (*Brasiliopuntia brasiliensis*) by evaluating the efficacy of cochineal lineages primarily used for controlling other species in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Mantshi, H.T., Hill, M.P., Coetzee, J.A., Mlambo, M.C. and Petruzzella, A.
Mantshi, H.T., Motitsoe, S., **Hill, M.P.**, **Coetzee, J.A.**, **Mlambo, M.C.** and **Petruzzella, A.** Short-term effects of invasive free-floating aquatic plant control on macro-invertebrate communities in South Africa. *6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Mantshi, H.T., Motitsoe, S., **Hill, M.P.**, **Coetzee, J.A.**, **Mlambo, M.C.** and **Petruzzella, A.** Short-term effects of invasive free-floating aquatic plant control on macro-invertebrate communities in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Mantshi, H.T., Coetzee, J.A., Cuthbert, R.N., and Wasserman, R.J.

Mantshi, H.T., **Coetzee, J.A.**, Strange, E., **Cuthbert, R.N.**, and **Wasserman, R.J.** Exploring mosquito interactions with floating aquatic invasive plants. *NRF-SAIAB Student Symposium*. Makhanda, South Africa. November 2024.

Martin, G.D.
Martin, G.D., Mashamba, T., Steenhuisen, S. and Payne, S. Beauty and the Beast: A story of *Salix* species in South Africa's Grassland Biome. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Zachariades, C. and **Martin, G.D.** Invasive alien *Rubus* species in South Africa: which species to target for biological control, current status and the way forward. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Adams, L.D., **Martin, G.D.**, Steenhuisen, S. and Downs, C. The use of ground level imagery to determine fleshy-fruited invasive alien shrubs population change over time along roadsides of South African grasslands. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Martin, G.D. Update on biological control options for invasive trees in the Grassland Biome. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Martin, G.D. and Chikowore, G.
Martin, G.D., Weyl, P. and **Chikowore, G.** First record of *Robinia hispida* L. (Fabaceae) in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Martin, G.D. and Ivey, P.J.
Martin, G.D. and **Ivey, P.J.** Resolving conflict situations when using biological control against economically useful invasive tree species. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Martin, G.D., Chikowore, G., Musedeli, J.N., Hill, M.P., Ivey, P.J. and Canavan, K.
Martin, G.D., **Chikowore, G.**, **Musedeli, J.N.**, Stafford, L., Watson, K., Turner, A., Richardson, D., De Lange, W., Bugan, R., Muir, D., **Hill, M.P.**, Slippers, B., Hurley, B., **Ivey, P.J.**, Harding, G., Heath, R., **Canavan, K.**, Du Toit, B. and van Wilgen, B. Managing wilding pines in the Cape Floristic Region, South Africa: progress and prospects. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Masalesa, T.V., Wasserman, R.J. and Coetzee, J.A.
Masalesa, T.V., **Wasserman, R.J.** and **Coetzee, J.A.** Assessing ecological interactions between invasive aquatic plants and mosquito populations using an outdoor mesocosm approach. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Masalesa, T.V., **Coetzee, J.A.**, **Strange, E.**, and **Wasserman, R.J.** Assessing ecological interactions between invasive aquatic plants and mosquito populations using an outdoor mesocosm approach. *NRF-SAIAB student symposium*. Makhanda, South Africa. November 2024.

Memela, S.P., Wasserman R.J., and Bernard, A.
Memela, S.P., **Bernard, A.**, Julius, D. and **Wasserman, R.J.** A comparison of the effectiveness of baited remote underwater stereo-video systems versus diver-operated stereo-video systems in surveying reef fish populations. *Building Bridges: Unleashing the Potential of Scholarship.* Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Memela, S.P., **Bernard, A.**, Julius, D. and **Wasserman, R.J.** A comparison of the effectiveness of baited remote underwater stereo-video systems versus diver-operated stereo-video systems in surveying reef fish populations. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Midgley, J.M.
Midgley, J.M., Goergen, G., Jordaens, K. The genus *Afroxanthandrus* Kassebeer, 2000 now contains four valid species. *12th International Symposium on Syrphidae*. Pruhonice Castle in Pruhonice, Pruhonice. Czech Republic. September 2024.

Midgley, J.M., Jordaens, K., *et al.* The first confirmed female of *Mesembrius ingratus* (Loew, 1858) (Diptera: Syrphidae) from KwaZulu-Natal, South Africa. *12th International Symposium on Syrphidae*. Pruhonicy, Pruhonicy. Czech Republic. October 2024.

Midgley, J.M., **Bellingan, T.A.**, Goergen, G., *et al.* Overview of recent achievements in Afrotropical hoverfly (Syrphidae) taxonomy and phylogeny. *12th International Symposium on Syrphidae*. Pruhonicy, Pruhonicy. Czech Republic. January 2024.

Midgley, J.M., **Bellingan, T.A.**, Muller, B.S. Rapid invasion of the Afrotropics by the New World Florida Calligrapher, *Toxomerus floralis* (Fabricius, 1798), and the potential for its spread in the palaeotropics. *12th International Symposium on Syrphidae*. Pruhonicy, Pruhonicy. Czech Republic. October 2024.

Midgley, J.M., Jordaens, K., De Meyer, M. Syrphidae and the diversity of pollinating Diptera in Afrotropical biodiversity hotspots. *12th International Symposium on Syrphidae*. South African Armour Museum, Bloemfontein. South Africa. September 2024.

Midgley, J.M., *et al.* A best way forward to the organisation of entomological training courses in sub-Saharan Africa. *88th Conference and Annual General Meeting of the South African Museums Association*. Bloemfontein, Bloemfontein. South Africa. October 2024.

Midgley, J.M., Goergen, G. Rapid invasion of the Afrotropics by the New World Florida Calligrapher, *Toxomerus floralis*: a case study on the importance of digitised specimen data. *88th Conference and Annual General Meeting of the South African Museums Association*. Bloemfontein, Bloemfontein. South Africa. October 2024.

Minuti, G.M., Boon, E.A. and Coetzee, J.A.
Minuti, G.M., Gervazoni, P., Nicolo, R., Delange, O., Cantarelli, M., **Boon, E.A.**, Franceschini, C., Sosa, A., Stiers, I. and **Coetzee, J.A.** Stick to your grubs: a flea beetle to combat the seedling recruitment of *Iris pseudacorus* (Iridaceae), an invasive wetland plant in the Southern Hemisphere. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Mnciva, S.T., Coetzee, J.A. and Hill, M.P.
Mnciva, S.T., **Coetzee, J.A.** and **Hill, M.P.** Integrated management of *Pontederia crassipes* using a combination of sublethal herbicide concentrations and the classical biocontrol agent, *Megamelus scutellaris*. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Moagi, R. and Hill, M.P.
Moagi, R., Mauda, E., Mukwevho, L. and **Hill, M.P.** An assessment of the status of psylloid species as potential pests of commercial citrus in southern Africa: implications for pest management. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Mokanyane, L., and Smit, B.
Mokanyane, L., and **Smit, B.** The effects of body condition and behaviour on torpor use in Cape horseshoe bats (*Rhinolophus capensis*). *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. January 2024.

Moore, S.D.
Sekgele, W., **Moore, S.D.** and Marsberg, T. Combining SIT and baculovirus application in an integrated approach to management of the false codling moth. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Nkomo, S., Marsberg, T. and **Moore, S.D.** Challenges in laboratory rearing of *Agathis bishop*, a larval endoparasitoid of false codling moth. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Swanepoel, L., Foord, S., Cory Toussaint, D., Thivheleli, K. and **Moore, S.D.** The role of bats as natural pest control agents of moth pests (false codling moth and carob moth) in citrus orchards. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Moore, S.D., Oosthuyse, S., Otto, H., van der Grijp, A. and Beetge, L. Earlier initiation of FCM mating disruption in the warm northern citrus production areas. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Cardinez, M.C., **Moore, S.D.**, Hertog, M. and Nicolai, B. Volatile profile changes in false codling moth-infested citrus towards development of a postharvest detection technology. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Oosthuizen, R. and **Moore, S.D.** Postharvest detection of false codling moth infested fruit using detection canines: building towards commercial application. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Daneel, J.H. and **Moore, S.D.** Improving packhouse delivery inspections. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Mavasa, R.W., Heiduk, A., Johnson, S.D., **Moore, S.D.** and Shuttleworth, A. Understanding false codling moth oviposition on citrus: analysis of chemical cues used to locate fruit. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Moore, S.D. and Cousins, L.E.
Heiduk, A., Johnson, S.D., **Moore, S.D.**, Peyper, M., **Cousins, L.E.** and Shuttleworth, A. Applying chemical ecology methods to improve FCM management strategies. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Moore, S.D. and Hill, M.P.
Jukes, M.D., Marsberg, T., **Moore, S.D.**, **Knox, C.**, **Hill, M.P.** and Rabalski, L. *Cryptophlebia peltastica* nucleopolyhedroviral: A single approach for multiple pests. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Kambani, T.K.T., **Jukes, M.D.**, **Knox, C.**, **Moore, S.D.** and **Hill, M.P.** Evaluating effects of *Cryptophlebia peltastica* nucleopolyhedroviral and *Cydia pomonella* granulovirus mixtures against *Thaumatotibia leucotreta*. *6th Annual Postgraduate Conference.* Rhodes University, Makhanda. South Africa. September 2024.

Moore, S.D., Goddard, M.K., Hill, M.P., Iita, P.P. and Taylor, D.G.
Moore, S.D., **Jukes, M.D.**, Mouton, C., Lombard, T., **Goddard, M.K.**, **Hill, M.P.**, **Iita, P.P.**, **Taylor, D.G.**, **Tole, S.**, **Knox, C.** and Steenkamp, D. Challenges and solutions to viral contamination in mass rearing of codling moth and false codling moth for the sterile insect technique. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Moore, S.D., Kirkman, W., Cousins, L.E., Simba, V., Mushore, T.G. and Van Der Merwe, M.
Peyper, M., **Moore, S.D.**, **Kirkman, W.**, Marsberg, T., **Cousins, L.E.**, Nkomo, S., **Simba, V.**, **Mushore, T.G.** and **Van Der Merwe, M.** A library of cold-treatment shipping efficacies for the false codling moth systems approach. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Moore, S.D., Van Der Merwe, M., Goddard, M.K. and Hill, M.P.
Moore, S.D., Opoku-Debrah, J.K., Marsberg, T., **Jukes, M.D.**, **Van Der Merwe, M.**, Lombard, T., **Goddard, M.K.**, Groblar, A., Booyens, W., **Knox, C.** and **Hill, M.P.** Innovative mass production and novel formulation of baculovirus biopesticides for false codling moth management. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology*. Technical University of Vienna, Vienna. Austria. July 2024.

Mphokane, K., and Villet, M.H.
Mphokane, K., and **Villet, M.H.** Identifying African blowfly larvae using their muscle attachment sites (MAS). *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt, Makhanda. South Africa. September 2024.

Mukhawana, J., Paterson, I.D. and Sandenbergh, E.
Mukhawana, J., **Paterson, I.D.**, **Sandenbergh, E.** and Moran, P.J. Population genetics of the stem-mining weevil, *Lixus carinerostris*, a potential biocontrol agent for invasive crystalline ice-plant, *Cryophytum crystallinum*. *National Symposium on Biological Invasion.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Muleya, N., Moore, S.D. and Hill, M.P.
Muleya, N., **Phoswa, S.L.**, **Knox, C.**, **Moore, S.D.**, **Hill, M.P.** and **Jukes, M.D.** The expression of CrpeNPV gp37 as a formulation additive for improved infectivity with CrleGV against *Thaumatotibia leucotreta*. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Mushore, T.G., Coombes, C.A., Hill, M.P. and Moore, S.D.
Mushore, T.G., **Coombes, C.A.**, **Hill, M.P.** and **Moore, S.D.** Biology and management of the fruit-piercing moth, *Serrodes partita*, in citrus orchards. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Mushore, T.G., Hill, M.P. and Moore, S.D.
Bennett, T.T., **Mushore, T.G.**, **Hill, M.P.**, **Moore, S.D.**, **Jukes, M.D.** and **Knox, C.** The isolation, identification, and characterisation of a novel Alphabaculovirus isolated from *Serrodes partita*. *International Congress on Invertebrate Pathology and Microbial Control and 56th Annual Meeting of the Society for Invertebrate Pathology.* Technical University of Vienna, Vienna. Austria. July 2024.

Bennett, T.T., **Mushore, T.G.**, **Hill, M.P.**, **Moore, S.D.**, **Jukes, M.D.** and **Knox, C.** The isolation, identification, and characterisation of a novel Alphabaculovirus isolated from the fruit piercing moth, *Serrodes partita*. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Muskett, P.C., Sutton, G.F. and Paterson, I.D.
Muskett, P.C., **Sutton, G.F.** and **Paterson, I.D.** A long-term, post-release evaluation showing that *Hypogeococcus* sp. is an effective biocontrol agent for queen of the night cactus. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Naeser, T., Mgqatsa, N., Craig, A. and Hausberger, M.
Naeser, T., **Mgqatsa, N.**, **Craig, A.**, Lemasson, A.,

Hausberger, M. and Versfeld, W. Are there geographical variations in the loud calls of rock hyraxes in North Western Namibia? *African Bioacoustics Community Conference*. Cape Town, South Africa. September 2024.

Paterson, I.D.
Mayonde, S.G., Byrne, M.J. and **Paterson, I.D.** An assessment of the density, distribution, and ecological impacts of the invasive *Opuntia engelmann* in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Paterson, I.D., Muskett, P.C., Griffith, T.C. and Sexton, W.T.
Paterson, I.D., **Muskett, P.C.**, **Griffith, T.C.** and **Sexton, W.T.** Selecting the most damaging biocontrol agents for invasive alien Cactaceae in sub-Saharan Africa. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Porri, F. and Puccinelli, E.
Mbandzi-Phorego, N., **Porri, F.**, **Ndaba, J.**, and **Puccinelli, E.** Bioaccumulation of metals in marine invertebrates: Ecological risk assessment in coastal harbours and natural rocky shores along the South African south coast. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Sandenbergh, E., Van Steenderen, C.J.M., Webb, C.J. and Paterson, I.D.
Sandenbergh, E., **Van Steenderen, C.J.M.**, Moran, P.J., **Webb, C.J.** and **Paterson, I.D.** Using genetic matching to enhance the prospects for the biological control of *Cryophytum crystallinum* L. (Aizoaceae). *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Sexton, W.T., Muskett, P.C. and Paterson, I.D.
Sexton, W.T., **Muskett, P.C.**, McConnachie, A., Portillo, L.M., Viguearas, A.L. and **Paterson, I.D.** Prospects for biocontrol of the thistle cholla cactus, *Cylindropuntia pallida* (Cactaceae) in South Africa. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Simba, V., Moore, S.D. and Hill, M.P.
Simba, V., **Moore, S.D.** and **Hill, M.P.** Development of parasitism-related intervention thresholds for the management of red scale on citrus. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Sutton, G.F. and Paterson, I.D.
Morrison, C., Plowes, R., Woolley, J., Rhodes, A., **Sutton, G.F.**, **Paterson, I.D.**, Martin, D. and Gilbert, L. Tri-trophic plant-herbivore-parasitoid assemblages and diet breadth across native and introduced grasses. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Sutton, G.F., Van Steenderen, C.J.M., Canavan, K., Yell, L.D., Chari, L.D. and Paterson, I.D.
Sutton, G.F., **Van Steenderen, C.J.M.**, **Canavan, K.**, **Yell, L.D.**, Day, M., Taylor, T., McConnachie, A., **Chari, L.D.**, Plowes, R., Rhodes, A., Goolsby, J.A. and **Paterson, I.D.** Biological control of invasive African grasses: progress and prospects. *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Van Der Merwe, M., Moore, S.D. and Hill, M.P.
Van Der Merwe, M., **Jukes, M.D.**, Mumwell, E., **Knox, C.**, **Moore, S.D.** and **Hill, M.P.** Development of an advanced qPCR technique for enhanced and accurate enumeration of



Photo: Chris Marais

the baculovirus biopesticide CrleGV-SA. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu Natal. South Africa. August 2024.

Van Steenderen, C.J.M., Kirkman, W. and Sutton, G.F.
Van Steenderen, C.J.M., Mauda, E., **Kirkman, W.**, Faulkner, K. and **Sutton, G.F.** The Asian Citrus Psyllid (*Diaphorina citri*) in Africa: using MaxEnt to predict current and future climatic suitability, with a focus on potential invasion routes. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Vershiyi, D.T., Coombes, C.A., Hill, M.P., Mutamiswa, R. and Moore, S.D.
Vershiyi, D.T., **Coombes, C.A.**, **Hill, M.P.**, **Mutamiswa, R.** and **Moore, S.D.** Low-temperature limits of the mealybugs, *Planococcus citri* and *Pseudococcus longispinus* (Hemiptera: Pseudococcidae) towards developing a cold treatment schedule. *12th Citrus Research Symposium.* Champagne Sports Resort, KwaZulu-Natal. South Africa. August 2024.

Villet, M.H. and James, H.
Kirkaldy, A.P., **Villet, M.H.**, **James, H.** Africa comptongains two new families: the value of vouchered survey samples in Plecoptera systematics. *International Joint Meeting on Ephemeroptera and Plecoptera*. Dipartimento di Scienze della Vita e Biologia dei Sistemi, Università di Torino, Turin. Italy. July 2024.

Wasserman, R.J. and Barry, M.
Barry, M., **Wasserman, R.J.**, Bizani, M, and Deyzel S.H.P. Using Zooscan software to quantify effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Barry, M., **Wasserman, R.J.**, Bizani, M, and Deyzel S.H.P. Using Zooscan software to quantify effects of warming and upwelling events on zooplankton community structure in Algoa Bay. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J., Memela, S.P. and Bernard, A.T.F.
Memela, S.P., **Bernard, A.**, Julius, D. and **Wasserman, R.J.** A comparison of the effectiveness of baited remote underwater stereo-video systems versus diver-operated stereo-video systems in surveying reef fish populations. *Building Bridges: Unleashing the Potential of Scholarship.* Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Memela, S.P., **Bernard, A.**, Julius, D. and **Wasserman, R.J.** A comparison of the effectiveness of baited remote underwater stereo-video systems versus diver-operated stereo-video systems in surveying reef fish populations. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J.,B ell, M.J. Naidoo, T., and Hendricks, E.
Bell, M.J., **Naidoo, T.**, **Hendricks, E.** and **Wasserman, R.J**. Are temporary wetlands predator free? Insight from insect phenology dynamics across a temporary wetland hydroperiod. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Bell, N., **Naidoo, T.**, **Hendricks, E.** and **Wasserman, R.J.** Are temporary wetlands predator free? *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J., Masalesa, T.V., and Coetzee, J.A.
Masalesa, T.V., **Wasserman, R.J.** Strange, E. and **Coetzee, J.A.** Assessing ecological interactions between invasive aquatic plants and mosquito populations using an outdoor mesocosm approach. *National Symposium on Biological Invasions.* Sol Plaatje University, Kimberley. South Africa. September 2024.

Masalesa, T.V., **Coetzee, J.A.**, **Strange, E.**, and **Wasserman, R.J.** Assessing ecological interactions between invasive aquatic plants and mosquito populations using an outdoor mesocosm approach. *NRF-SAIAB student symposium*. Makhanda, South Africa. November 2024.

Wasserman, R.J., and Killian, W.
Kilian, W.M., Murray, T.S., Filmater, J.D., Cowley, P., Næsje, T., and **Wasserman, R.J** The movement behaviour of adultleervis in the Breed Estuary: Insights from acoustic telemetry. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Kilian, W.M., Murray, T.S., Filmater, J.D., Cowley, P., Næsje, T., and **Wasserman, R.J.** The movement behaviour of adult leervis in the Breed Estuary: Insights from acoustic telemetry. *6th Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Wasserman, R.J., Kolisi, S. and Motitsoe, S.N.
Kolisi, S., **Motitsoe, S.**, **Wasserman, R.J.** and Mlambo, M. *Tarebia granifera* invasions in South Africa. *National symposium on Biological Invasions*. Sol Plaatjies University, Kimberly. South Africa. December 2024.

Wasserman, R.J., Hendricks, E., Bell, M. and Naidoo, T.
Hendricks, E., **Bell, N.**, **Naidoo, T.**, Mofu, L., and **Wasserman, R.J.** Zooplankton hatching phenology dynamics in fishless temporary wetlands. *Southern African Linefish Symposium*. Mpekweni Beach Resort, Port Alfred. South Africa. August 2024.

Hendricks, E.R., **Bell, M.**, **Naidoo, T.**, Mofu, L., and **Wasserman, R.J.** Zooplankton phenology and shifting community dynamics over a hydroperiod in temporary wetlands. *Building Bridges: Unleashing the Potential of Scholarship*. Rhodes University, Barratt Seminar Room 1, Makhanda. South Africa. September 2024.

Wasserman, R.J., Mantshi, H.T., and Coetzee, J.A.
Mantshi, H.T., **Coetzee, J.A.**, Strange, E., **Cuthbert, R.N.**, and **Wasserman, R.J.** Exploring mosquito interactions with floating aquatic invasive plants. *NRF-SAIAB Student Symposium*. Makhanda, South Africa. November 2024.

Weaver, K.N., Coetzee, J.A., English, K.F., Egli, D. and Ngxande-Koza, S.W.
Weaver, K.N., **Coetzee, J.A.**, **English, K.F.**, **Egli, D.** and **Ngxande-Koza, S.W.** The Centre for Biological Control's contributions to clean water for all. *Community Engagement Conference.* Rhodes University, Makhanda. South Africa. May 2024.

Weaver, K.N., Martin, G.D., English, K.F., Ngxande-Koza, S.W., Ivey, P.J., Paterson, I.D. and Coetzee, J.A.
Weaver, K.N., **Martin, G.D.**, **English, K.F.**, **Ngxande-Koza, S.W.**, **Ivey, P.J.**, **Paterson, I.D.** and **Coetzee, J.A.** Promoting biological control leads to improved implementation and long- term sustainability? *The Third International Congress of Biological Control (ICBC3).* Barceló Hotel San José, San José. Costa Rica. June 2024.

Williams, K.A.
Williams, K.A. The state of the genus *Hybomitra* Enderlein (Diptera: Tabanidae) in the Afrotropics including the discovery of a new species from South Africa. *In the proceedings of Ento 24*. Liverpool, Liverpool. Liverpool. September 2024.



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Dr Phumlani Cimi
Director

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Postgraduates / Graduations

Three (3) Postgraduate students associated with the museum graduated in 2024. MSc student under **Rob Gess**, **Ms Caitlin Reddy** graduated *cum laude* from Rhodes University in 2024 (based on research on seaweed fossils from Waterloo Farm). Two (2) other students (**Ms Kaylee Campbell** and **Dr Ina Ferreira**) based at the Department of Freshwater Invertebrates graduated with a Masters and a PhD respectively.

Distinguished Visitors / International Visits

Professor Nicolas Rabet from Sorbonne University and National Museum of Natural History, Laboratory of Biology of Aquatic Organisms and Ecosystems (BOREA), Paris, France, gave a public seminar entitled: “Hydrobiological collaboration between France and South Africa: new approaches for studying freshwater shrimps”.



Mr Sive Kolisi casting a net at Van Graan Dam, Mpumalanga to collect fish for genetic analysis.

Photo: Dr Nompumelelo Baso-Mdiza.

Professor Kate Trinajstic of Curtin University visited to work with Dr Gess and Mr Nel on placoderm (armour-plated fish) fossils from Waterloo Farm, which are the subject of Mr Nel's PhD dissertation.

Professor Per Ahlberg of Uppsala University visited to work with Dr Gess on Rhizodont and Onychodont sarcopterygian material in the Waterloo Farm collection. Both Professor Trinajstic and Professor Ahlberg gave public talks at Rhodes during their visits.

Dr Rob Gess chaired the session on palaeoecology on the 17th International Symposium on Early and Lower Vertebrates (ISELV) in Canada, and also visited major collections and fossil localities in eastern Canada, including the Canadian Museum of Nature, in Ottawa, the Royal Ontario Museum, the Miguasha lagerstätte in Quebec and the Joggins cliffs and associated museums.

Significant Research Aligned Events

From the Department of Entomology and Arachnology, specimen loans were supplied for ongoing research: seventeen (17) "Spitting Spiders" family *Scytodidae* (Aranea), were sent to Professor Charles Haddad (University of the Free State); fifty (50) "Leaf Cutter" bees family *Megachilidae* (Hymenoptera) taken by retired Professor Connal Eardley (North West University); sixty-six (66) "Darwin Wasps" *Netelia* (Hymenoptera: Ichneumonidae) were sent to Dr Mikhaila Gordon (Iziko Museum); eleven (11) "Spider Flies" *Africaterphis* (Diptera: Acroceridae), to Dr Genevieve Theron (ARC, Pretoria); one hundred and twenty-five (125) *Diptera* specimens were loaned to John Dr Midgley (KZN Museum).

Albany Museum Publications



Aerial view of water pools in Sehlabathebe National Park, Lesotho, during fieldwork led by Mr Musa C. Mlambo and Dr Thendo Mutshekwa. Photo: Dr Thendo Mutshekwa

Peer Reviewed Subsidy-Earning Journal Research Publications

Bellingan. T.A.

Bellingan. T.A., Jordaens, K., De Meyer, M., Van Nuffel, M., Kirk-Spriggs, A.H., Sabuni, C., Mwatawala, M., Mujabwa, R., Kabota, S., **Bellingan, T.**, Goergen, G., Mansell, M., Manrakhan, A., Sinzogan, A., Schutze, M.K., Thomas-Cabianca, A., Copeland, R., Muller, B., Virgilio, M., Bert, E., November, E. and Midgley, J.M. 2024. A best way forward to the organisation of entomological training courses in sub-Saharan Africa. *International Journal of Educational Development*. 107, p.103026.

Gess, R.W.

Gess, R.W. and Reddy, C. (2024) Oldest ophiuroid fossils in South Africa's Baviaanskloof Formation offer insights into Malvinoxhosan Realm. *South African Journal of Science.* 120 (11/12): p.1-4.

Gess, R.W. and Berry, C. (2024) *Archaeopteris* trees at high southern latitudes in the late Devonian. *Review of Palaeobotany and Palynology.* 331(1): p.1-10.

Marshall, J., Blom, H., Niedźwiedzki, G., Qvarnström, M., **Gess, R.**, Whiteside, J. and Ahlberg, P. (2024) The palaeoenvironmental record through a Devonian-Carboniferous boundary super-monsoon lake. *Geologica Balcanica.* 53 (3). p. 91-94.

Gess, R.W. and Burrow, C.J. (2024) A new gyracanthid (stem Chondrichthyes) from the Late Devonian (Famennian) of the Eastern Cape, South Africa. *Journal of Vertebrate Paleontology.* 43(4). p. 1-12.

Majingo, Z., Bills, R. and Mlambo, M.

Dabrowski, J., Meyer-Milne, E., **Mantshi, H.T.**, **Majingo, Z.**, **Bills, R.** and **Mlambo, M.** (2024) Diversity, occurrence, and conservation status of large branchiopods (Crustacea: Anostraca, Notostraca, Laevicaudata and Spinicaudata) in Northern Cape province, South Africa. *Journal of Crustacean Biology*. 44 (4). p.1-9.

Mlambo, M.C.

Bilton, D.T., Turner, R.C. and **Mlambo, M.C.** (2024) The phylogenetically isolated South African endemic diving beetle *Caperhantus cicurius* (Fabricius, 1787): redescription and range extensions (Coleoptera, Dytiscidae, Colymbetinae). *Check List*. 20 (5). p.1149-1156.

Foulquier, A., Datry, T., Corti, R., von Schiller, D., Tockner, K., Stubbington, T., Gessner, M.O., Boyer, J.-. F., Ohlmann, M., **Mlambo, M.C.** and *et al,* (2024) Unravelling large-scale patterns and drivers of biodiversity in dry rivers. *Nature Communications*. 15 (2024). p.1-15.

Bilton, D.T. and **Mlambo, M.C.** (2024) A distinctive new species of Protozantaena Perkins, 1997 from lowland Namaqualand, South Africa (Coleoptera, Hydraenidae). *Zootaxa.* 5424 (3). p.383-388.

Bilton, D.T. and **Mlambo, M.C.** (2024) A new, apparently lotic species of Relictorygmus from the Northern Cape Kamiesberg, South Africa (Coleoptera, Hydrophilidae, Cylominae). *Zootaxa.* 5448 (1). p.143-150.

Epele, L.B., Williams-Subiza, E.A., Bird, M.S., Boissezon, A., Boix, D., Demierre, E., FAIR, E., García, P.E., Gascón, S. and **Mlambo, M.C.** (2024) A global assessment of environmental and climate influences on wetland macroinvertebrate

community structure and function. *Global Change Biology*. 30 (2). p.1-15.

Mutshekwa, T.
Mutshekwa, T., Mugwedi, L., **Wasserman, R.J.**, Dandofema, F., **Cuthbert, R.N.** and Dalu, T. (2024) Aquatic macroinvertebrate community colonisation and succession in macadamia orchard and communal area reservoirs: a case study of Luvuvhu River valley, South Africa. *Water SA*. 50 (2). p.137-147.

Munyai, L.F., Dondofema, F., **Mutshekwa, T.**, Gumbo, J.R., Zlatkovic, S. and Mutoti, M.I. (2024) Growth Inhibition of Algae in Aquaculture Fishponds Using Banana Peel Powder: A Mesocosm Experiment. *Journal of Environmental and Earth Sciences*. 7 (1). p.113-122.

Prevec, R.
Prevec, R., McLoughlin, S., Phillipe, M. and Cariglino, B. (2024) Revision and biostratigraphic implications of Thore Halle's Permian plant fossils from the Falkland (Malvinas) Islands. *Palaeontologia Africana*. 58 (0). p.53-93.

Balarino, M.L., Gutiérrez, P.R., **Prevec, R.**, Rey, L.R. and Cariglino, B. (2024) First palynological record for the Lebombo Basin, South Africa with implications for Guadalupian (middle Permian) palaeofloras and palaeo-environments. *Gondwana Research.* 130. p.100-115.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Kolisi, S., Mlambo, M.C., Wasserman, R.J., Motitsoe,S.N.
Kolisi, S., Zengeya, T., **Mlambo, M.C.**, **Wasserman, R.J.**, **Motitsoe, S.N.** Predicting the potential distribution of a notorious Thiaridae snail, T*arebia granifera*, in South Africa using ensemble models. *Southern African Society of Aquatic Scientists (SASAqS) and Setac Southern African Regional Joint Conference.* Gold Reef City, Johannesburg, 23-26 June 2024.

Motitsoe,S.N., Mutshekwa,T., and Mlambo, M.C.
Maravha T., **Motitsoe,S.N.**, **Mutshekwa,T.**, **Mlambo, M.C.** Microplastic debris from temporary wetlands of the Sehlabathebe National Park: Source-Sink, Distribution and Ecological impacts. *Southern African Society of Aquatic Scientists (SASAqS) and Setac Southern African Regional Joint Conference.* Gold Reef City, Johannesburg, 23-26 June 2024.

Mutshekwa, T., **Motitsoe, S.N.**, **Naidoo, T.**, **Mlambo, M.C.** Assessing microplastics pollution in South African subterranean freshwater caves. *Southern African Society of Aquatic Scientists (SASAqS) and Setac Southern African Regional Joint Conference.* Gold Reef City, Johannesburg, 23-26 June 2024.

Goodfellow K., **Motitsoe, S.N.**, **Mlambo, M.C.** Aquatic invertebrate succession in Temporary wetlands of Sehlabathebe National Park, Lesotho. *Southern African Society of Aquatic Scientists (SASAqS) and Setac Southern African Regional Joint Conference.* Gold Reef City, Johannesburg, 23-26 June 2024.

Gess, R.
Gess, R. A symmoriid (stem holocephalan) from the Devonian of South Africa offers insight into the origins of post End Devonian Extinction recovery faunas. *Abstract book of 22nd Biennial Conference of the Palaeontological Society of southern Africa*. 8-12 September 2024, Graaff-Reinet, Eastern Cape.

Harris, C., **Gess, R.**, Penn-Clarke, C. and Jinnah, Z. A trans-gressive model for the Waterloo Farm black shale lagerstätte (Late Devonian Period). *Abstract book of 22nd Biennial Conference of the Palaeontological Society of southern Africa*. 8-12 September 2024, Graaff-Reinet, Eastern Cape.

Nel, R., Trinajstic, K. and **Gess, R.** New morphological insights on adult and juvenile arthrodire placoderm from the Late Devonian, Famennian deposits of Waterloo Farm. Abstract book of 22nd *Biennial Conference of the Palaeontological Society of southern Africa*. 8-12 September 2024, Graaff-Reinet, Eastern Cape.

Gess, R.W. A symmoriid (stem holocephalan) with a Damocles-like spine from the Devonian of South Africa. 17th International Symposium on Early and Lower Vertebrates (Rimousli-Miguasha, Quebec, Canada. June 2024). *Ichthyolith Issues Special Publication.* 16. ISSN 1302-1314.

Lukševičs, E., Ahlberg, P.E., Niedźwiedzki, G., Alksnītis, V., **Gess, R.W.**, Stinkulis, Ģ. Ventastega and a new tetrapod from the Upper Famennian of Latvia. 17th International Symposium on Early and Lower Vertebrates (Rimousli-Miguasha, Quebec, Canada. June 2024). *Ichthyolith Issues Special Publication.* 16. ISSN 1302-1314.

Mutshekwa, T.
Mutshekwa, T. Assessing microplastics pollution in South African subterranean freshwater caves. *NRF Next Generation and Emerging Researchers Symposium.* Birchwood Hotel and OR Tambo Conference Centre, Boksburg. 23-25 October 2024.

Mutshekwa, T. Assessing microplastics pollution in South African subterranean freshwater caves. *Microplastic Workshop 2024.* Idstein, Germany. 8-13 September 2024.

Majingo. Z.
Majingo. Z., Dabrowski, J., Meyer-Milne, E., Mantshi, H.T., Bills, D., **Mlambo, M.C.** Diversity, Occurrence, and Conservation Status of Large Branchiopods in Northern Cape, South Africa. *Kimberly Biodiversity Research Symposium 2024.* Sol Plaatjie University. 18 September 2024.

Majingo, Z. and **Mutshekwa, T.** Plastics underground microplastics pollution in South African freshwater caves and associated biota. *CPGS, Rhodes University Postgraduate Conference Programme.* 13-14 September 2024.

Bellingan, T.A.
Bellingan, T.A., **Midgley, J.M.**, Muller, B., And Jordaens, K. 2024. A best way forward to the organization of entomological training courses in sub-Saharan Africa. *88th SAMA National Conference.* South African Armory Museum, Bloemfontein, South Africa. 2-5 September 2024. Oral Presentation. Talk awarded "Best first time speaker" prize.



Ms Kayla Goodfellow (Wits University) sampling for macroinvertebrates inside a rock pool, while in the background Mr Sive Kolisi (Rhodes University) and Dr Thendo Mutshekwa (Albany Museum and Rhodes University) are filtering surface water for microplastic analysis in Sehlabathebe National Park, Lesotho.

Photo: Albany Museum

Institute of the Study of the Englishes of Africa (ISEA)

Introduction

The Institute of the Study of the Englishes of Africa (ISEA) has been a driving force in advancing language education, literacy development, and scholarly research. To this end, the Bachelor of Education in English Language Teaching is offered to in-service teachers in the Northern Cape and Limpopo. The Bachelor of Education (Honours) in Bilingual Education for Diversity and Access is provided in the Eastern Cape.



Professor Deyi Mbelani
Head of Institute

Photo: Jackie Grove

In addition, staff supervise Postgraduate scholars whose projects focus on critical issues on languages, literature, and literacies in basic education and higher education. Moreover, the ISEA is a publishing house for three journals: *English is Africa*, *Shakespeare in Southern Africa*, and *New Coin*.

Postgraduates / Graduations

Three (3) PhD candidates and four (4) MEd students were supervised at various stages at the ISEA. Once every second Tuesday, online seminars were held. There were also five-day contact seminars offered at Rhodes University, which provided structured support and offered scholarly engagement with topical issues in languages, literature, and literacies.

Thanks to the supervision provided by ISEA staff, five (5) MEds graduated at Rhodes University in April and October 2024.

Institute of the Study of the Englishes of Africa Publications

Concerts, Exhibitions, Performances, Workshops, Events

Leff, C.
Leff, C. exhibition. *CyanoTides*. Bushman's River Town Hall Verandah, Bushman's River. South Africa. 21-23 December 2024.

Creative Writing

Leff, C.
Leff, C. (2024). Paralytic Grief. In: skinner, d.r. (ed.). Cape Town: Stanzas.

Leff, C. (2024). Mourning Coffee. In: skinner, d.r. (ed.). Cape Town: Stanzas.

Leff, C. (2024). Prohibited Goods. In: Marais, s. (ed.). South Africa: Aerial Publishing.

Leff, C. (2024). The Mulberry Tree. In: Marais, s. (ed.). South Africa: Aerial Publishing.

Leff, C. (2024). Flashbacks. In: Marais, s. (ed.). South Africa: Aerial Publishing.

Leff, C. (2024). This Table. In: skinner, d.r. (ed.). Online: Avbob Poetry Project.

Leff, C. (2024). The Big Sleep. In: skinner, d.r. (ed.). Online: Avbob Poetry Project.

Leff, C. (2024). Red Earth. In: skinner, d.r. (ed.). Cape Town: Stanzas.

Leff, C. (2024). Tree of Life. In: skinner, d.r. (ed.). Online: Avbob Poetry Project.

Peer-Reviewed Subsidy-Earning Journal Research Publications

Bahar, F.A.
Bachiri, B., Rahmoun, K. and **Bahar, F.A.** (2024) Enhancing photovoltaic performance through interfacial Engineering: A comparative analysis of bismuth iodide (BiI3) and Cs2BiAgI6 as interlayer materials in the design of perovskite solar cells. *Solar Energy*. 278 (2024). p.1-10.

Hendricks, M.
Hendricks, M. and Xeketwana, S. (2024) Translanguaging for learning in selected English First Additional Language secondary school classrooms. *Reading & Writing*. 15 (1). p.1-11.

Mawela, R.
Mahna, J.P., **Mawela, R.**, Gougou, M., Oyore, M. (2024). Investigating Internationalization of Higher Education in the Post-Epidemic Era. In *International Journal of Research Studies in Education*. 13 (13). p.73-88.

In addition, **staff supervise Postgraduate scholars whose projects focus on critical issues** on languages, literature, and literacies in basic education and higher education.

Other Publications

Mawela, R.
Effiong, O., Engelbrecht, S., and **Mawela, R.** (2024). Cultivating Positive Attitudes and Reading Comprehension with Grade 8 Learners. *K-12 Volume.*

Mawela, R. (2024). Addressing the Displacement of African Indigenous Languages. In: *Embedding Multilingualism in the Curriculum: Using Language as a Resource for Teaching and Learning*. (Eds.) Adams, A., Booi, M., Mawonga, S., Nkomo, D., Nosilela, B. and Vorster, J. Rhodes University.

ISEA Publications

English in Africa 51.1 (May 2024). Eds. Renée Schatteman and Meg Vandermerwe. pp. 139.

English in Africa 51.2 (October 2024). Eds David Attwell, Tony Voss, and Gail Fincham. pp. 112.

English in Africa 51.3 (December 2024). Eds. David Attwell and Gail Fincham. (forthcoming).

New Coin 60.1 (June 2024) Ed. Kyle Allan. pp. 90.

New Coin 60.2 (December 2024) Ed. Kyle Allan. pp. 81.

Institute for Social and Economic Research (ISER)

Introduction

Having focused on consolidating key projects and administrative processes during 2022 and 2023, the ISER directed its attention to producing research outputs during 2024. To this end, the ISER set up a writing community group, hosted workshops on improving skills to write reviews and analyse data, and kept track of writing activities and outputs. The ISER produced at least thirty-three (33) research outputs with only two (2) permanently employed academic staff members.



Professor Cyril Mbatha
Director

Photo: Jackie Grove

The Future Earth Africa Hub Leadership Centre (FEAHLC), co-hosted by Rhodes University and University of Pretoria, strengthened its leadership by appointing **Dr Daniel Nyanganyura** as Director and **Dr Faten Attig-Bahar** as Deputy Director. Both the FEAHLC and the ISER-led Land and Investment Science Cluster (LISC), which is associated with Future Earth Africa Hub, contributed to building new partnerships, with the aim of advancing sustainability science and interdisciplinary research across Africa. A number of visits, both locally and internationally, were used to bolster strategic partnerships and build relationships with regional nodes, engage with a variety of communities and stakeholders, and contribute towards capacity development programmes aimed at supporting emerging researchers.

Two (2) projects were successfully completed during 2024: firstly, the final summary report of the case study on Grass-Fed Beef Value Chains in the Matatiele area was submitted in February 2024; secondly, an assessment for the HSRC's Democracy @ 30 was conducted across older and newer neighbourhoods of Rhini in Makhanda East.

The staff complement of the *Journal of Contemporary African Studies (JCAS)* grew further with the appointment of Professor Bhaso Ndzendze as Deputy Chief Editor. In addition to the standard four (4) JCAS issues, with one (1) being a special issue focused on "Moral Economies of Distribution in Africa", researchers associated with the Land and Investment Science Cluster (LISC) are currently working on a special issue with the theme "Recent land management policies and impacts on livelihoods of marginal communities: lessons across Africa".

During 2024, the third intake of the formal ISER's Interdisciplinary Honours Degree in Development Studies in the Humanities faculty consisted of twelve (12) students registered for the ISER module and four (4) registered for the ISER Honours degree in Inter-disciplinary Studies. The programme saw a high number of applications from across the country, which highlights the effectiveness of advertising through social media like Facebook.

In 2024, the ISER approached the School of Journalism to find a suitably qualified candidate to document the evolution of this Honours Degree using a multimedia approach. The data analysis training course that is aimed

at assisting emerging researchers is now compulsory for students registered for the Honours Degree and was held in June 2024.

Media engagement was not of first concern during 2024, considering the commitments by the ISER to focus on improving research outputs and engaging with stakeholders and communities associated with the work done by / for the FEAHLC. However, the US elections and projections about the outlook for trade in Africa were discussed (see *News24* editorial coverage).

Postgraduates / Graduations

The ISER provides student research supervision or co-supervision across the university, but in 2024 also provided supervision to students registered only in the ISER for the Honours, Masters and PhD degrees.

Honours Degree

a) **Ms Luleka Mkhanya**
Supervisors: Dr Frans Mothupi and Dr Mzukisi Kuse

b) **Ms Bukho Gwayena**
Supervisor: Dr Reesha Kara

c) **Ms Lusanda Mabandla**
Supervisor: Prof. V. Møller

d) **Mr Zanoxolo Nyangiwe**
Supervisor: Dr Ola Adeniyi

Masters Degrees

Title:

A framework to identify and valuate benefits to support communal land small farmers in the Eastern Cape province. A case of mobile livestock auctions in the Umzimvubu Catchment.

Student:
Mr Kgabane Lengane
Supervisor: Professor Cyril Mbatha
(Research theme: Environmental Resources Management)

Title:

What role do Technical Vocational Education and Training colleges play in Human Capital Development and Youth Unemployment.

Student:
Ms Siyamthanda Nomoyi
Supervisors: Professor Martin Gustafsson and Professor Cyril Mbatha

(Research theme: Education and Skills Development)

Doctoral Degrees

Title:

Public Partnership Projects in Uganda.

Student:
Ms Hudah Namurenge
Co-supervised for a PhD in Commerce: Professor Pantaleo Rwelamila and Professor Cyril Mbatha

ISER set up a writing community group, **hosted workshops on improving skills** to write reviews and analyse data, and kept track of writing activities and outputs.

New Distinguished / Research Professors / Research Fellows and Associates

Visiting Research Fellow – Dr Ben Roberts is a Research Director in the Developmental, Capable and Ethical State (DCES) research division at the Human Sciences Research Council (HSRC) and has coordinated the HSRC's South African Social Attitudes Survey (SASAS) series since its inception in 2003.

Research-aligned Events

The ISER held a number of events aimed at promoting research findings with the broader public, as well as a training workshop on Quantitative Data Analysis using public datasets.

A Round Table Discussion on Sustainability Science and the Future Earth Africa Hub Leadership Centre in and for Africa

Date: 14 February 2024

This event was also the official launch of the Future Earth Africa Hub Leadership Centre at Rhodes University and the following speakers took part in the discussion:

What are Future Earth and Global Research Hubs?

Dr Daniel Nyanganyura (FEAHLC Deputy Director at UP, FA), **Mr M. Nxumalo** (NRF) and **Dr Faten Attig-Bahar** (FEAHLC support).

What is the FEAH Leadership Centre at Rhodes and UP?

Professor C.N. Mbatha (RU, ISER Director and FEAHLC Acting Director at the time).

What is Sustainability Science and Practice globally and what can it be in Africa?

Distinguished Professor Heila Lotz-Sisitka (NRF SARChI Chair, ELRC).

How can we support and conduct Sustainability Science in Africa? And how do we do this through Science Cluster networks?

Rhodes University Team (ELRC, IWR, ISER).

Discussion on ways for promoting Sustainability Science and Practice in Africa

Rhodes University Community

Sustainable Public Private Partnerships (PPP) for Public Strategic Projects in South Africa – Lessons from Others

Research area: Economic Development Issues

Date: 26 March 2024

Guest Speaker:
Professor P.D. Rwelamila
(Professor Emeritus of Project Management & Procurement Systems, UNISA).

Respondent:
Professor N.J. Pearse
(Research Coordinator at the Rhodes Business Shool).

Chair:
Dr Reesha Kara
(Researcher, ISER, RU).

Africa's Youth: More Educated, Less Employed, Still Unheard in Policy and Development

Research area: Education and Skills Development

Date: 12 June 2024

Guest Speaker:
Ms Asafika Mpako
(Communications Coordinator for Southern Africa at Afrobarometer).

Respondent:
Professor Nomalanga Mkhize
(Director of the School of Governance in the Humanities College, Nelson Mandela University).

Chair:
Dr Sam Sadian
(Research Fellow, ISER, RU).

Market Access for Common Land Farmers: The Case of the Eastern Cape Province and Implications for SA's Land Reform Project

Research area: Use and Management of Environmental Resources

Date: 1 August 2024

Speaker:
Professor C.N. Mbatha
(RU, ISER Director).

Discussant:
Dr Binganidzo Muchara
(Senior Lecturer, School of Business Leadership, UNISA).

Chair:
Dr Sam Sadian
(Research Fellow, ISER, RU).

Valerie Møller
Valerie Møller. 2024, was invited by the Human Sciences Research Council (HSRC) to serve on the expert panel tasked with the review of the Developmental, Capable, and Ethical State (DCES) division. 1 August 2024, Pretoria, South Africa.

Valerie Møller. 2024, was presented a glass plaque with the inscription: 'Pioneer in Quality-of-Life ~ Awarded by the Regional ISQOLS Conference in Africa ~ Valerie' on the final day of the International Society for Quality of Life Studies (ISQOLS) Conference Africa. 3-5 October 2024, Irene, South Africa.

Valerie Møller. 2024, was informed that the ISQOLS board had decided that the ISQOLS fellowship for a Postgraduate researcher would in future bear her name. The ISQOLS Valerie Møller Fellowship supports a Postdoctoral researcher from a developing country conducting research in quality of life, happiness, or well-being studies, with a full year membership, conference registration, travel funding, and mentorship (https://isqols.org/ISQOLS-Valerie-Moller-Fellowship).

Honours Degree Research Projects

Mkhanya, L.
Mkhanya, L. (2024) The Impact of Gender in Household Agricultural Activities and its Implications for Food Security in the Eastern Cape. ISER, Rhodes University, Makhanda.

Gwayena, B.
Gwayena, B. (2024). Happiness and Well-being of South Africa's Youth. ISER, Rhodes University, Makhanda.

Mabandla, L.
Mabandla, L. (2024). Personal Wellbeing in Post-graduate Students. ISER, Rhodes University, Makhanda.

Nyangiwe, Z.
Nyangiwe, Z. (2024). Skills Mismatch in South Africa, to What Extent Does it Impact Unemployment, Specifically Youth Unemployment? ISER, Rhodes University, Makhanda.

2024 Honours Degree Policy Briefs

Mdleleni, P.
Mdleleni, P. (2024). Investigate the Relationship between Household Agriculture and Food Security in South Africa. ISER, Rhodes University, Makhanda.

Ikutiminu, S.
Ikutiminu, S. (2024). Explore the Link Between Gender of Household Head and Food Insecurity in South Africa. ISER, Rhodes University, Makhanda.

Zondo, M.K.
Zondo, M.K. (2024). Is There a Gendered Profile to Education in South Africa? ISER, Rhodes University, Makhanda.

Fulela, E.
Fulela, E. (2024). What are the Challenges to Accessing Tertiary Education in South Africa? ISER, Rhodes University, Makhanda.

Giba, K.
Giba, K. (2024). What are the Main Modes of Transport used by Scholars to Attend School? Expound on the Rsks Linked to Walking to School. ISER, Rhodes University, Makhanda.

Majodina, S.
Majodina, S. (2024). An Overview of Social Grants in South Africa – Which are the Most Common Grants That are Collected? ISER, Rhodes University, Makhanda.

Masisi, K.
Masisi, K. (2024). What is the demographic profile of individuals who work in the informal sector in South Africa? ISER, Rhodes University, Makhanda.

Masinga, N.
Masinga, N. (2024). Employment in South Africa – who are being employed in the stagnant economy? ISER, Rhodes University, Makhanda.

Makhanya, L.
Makhanya, L. (2024). Understanding the educational, age and gender differences among the unemployed in the country. ISER, Rhodes University, Makhanda.

Gwayena, B.
Gwayena, B. (2024). Youth unemployment – to what extent can a mismatch of skills be attributed to the high levels of unemployment among youth in the country? ISER, Rhodes University, Makhanda.

Mabandla, L.
Mabandla, L. (2024). Happiness among South Africans – what are the dynamics of household happiness in South Africa? ISER, Rhodes University, Makhanda.

Nyangiwe, Z.
Nyangiwe, Z. (2024). A glimpse into household agricultural activities – understanding the characteristics of households who engage in agricultural activities in SA. Is there a difference in the provincial distributions of these households? ISER, Rhodes University, Makhanda.

Institute for Social and Economic Research Publications

Books/Chapters/Monographs

Grapsa, G.
Chen, M., **Grapsa, G.**, Ismail, G., Reed, S., **Rogan, M.** and Valdivia, M. (2024) COVID-19 and Informal Work: Degrees and Pathways of Impact in 11 Cities around the World. In: Chen, M.A., Rogan, M.J. and Sen, K. (eds.). *COVID-19 and the Informal Economy: Impact, Recovery and the Future*. Oxford: Oxford University Press. p.23-48. ISBN: 9780198887041.

Mchunu, T. and Roberts, B.J.
Mchunu, T. and **Roberts, B.J.** (2024) The Economic Freedom Fighters: Stagnant or Resurgent? In: *Election 2024, South Africa: Countdown to Coalition.* South Africa: Jacana Media (Pty) Ltd - Fanele. p.149-168. ISBN: 9781431434534.

Mokiwa, H.O. and Adeniyi, O.O.
Mokiwa, H.O. and **Adeniyi, O.O.** (2024). Creating Liberating Universities: Engaging Communities in Participatory Action Research. In: Msila, V. (Ed.) *Creating Liberating Universities: Engaging Communities in Participatory Action Research*. African Sun Media under the the SUN Press imprint, Stellenbosch, South Africa (Chapter 9). ISBN: 9781991260499.

Roberts, B.J. and Moller, V.
Roberts, B.J., Davids, Y.D., Struwig, J., Mokomane, Z. and **Moller, V.** (2024) Quality of Life and Wellbeing. State of the



Photo: Chris Marais

Natio. In: *State of the Nation? Quality of Life and Wellbeing*. Boulder: Lynne Rienner. p.215-243. ISBN: 9780796926630.

Roberts, B. and Mchunu, B.
Roberts, B. and **Mchunu, B.** (2024). The Economic Freedom Fighters: Stagnant or Resurgent? In Schulz-Herzenberg, C. & Southall, R. (Eds.) *Election 2024 South Africa: Countdown to Coalition*. Jacana and Konrad Adenauer Stiftung (pp.149-168).

Peer Reviewed Subsidy-Earning Journal Research Publications

Bahar, F.A.
Sioen, G.B., McGreevy, S., Ungvari, J., **Bahar, F.A.** and Juhola, S. (2024) Charting the course for the next decade of sustainability research and innovation. *Global Sustainability*. 7 (46). p.1-6.

Kara, R.A.
Pillay, M., **Kara, R.A.**, Govindasamy, P. and Motala, R. (2024) Food security and disability in South Africa: an analysis of General Household Survey data. *Disability and Rehabilitation*. 1 (1). p.1-9.

Mbatha, N.C.
Mbatha, N.C. (2024) Engaging with human-to-land relationships for engaged science: A complex-systems view for African land studies. *South African Journal of Science*. 120 (9/10). p.1-3.

Møller, V., Roberts, B.J. and Zani, D.
Møller, V., **Roberts, B.J.** and **Zani, D.** (2024) 'Born Free' Dreams: South African Township Youth Discuss Their Hopes for a Better Life in Future. *Applied Research in Quality of Life*. 19 (2024). p.1681-1709.

Otterbach, S.
Singer, J., Wohr, A. and **Otterbach, S.** (2024) Gambling Operators' Use of Advertising Strategies on Social Media and Their Effects: A Systematic Review. *Current Addiction Reports*. 11 (3). p.437-446.

Roberts, B.J.
Struwig, J. and **Roberts, B.J.** (2024) Exploring Environmentalism Across Nations: Understanding the Influence of Societal Social Progress on Environmental Values, Norms, and Behaviour. *International Journal of Sociology*. 54 (5-6). p.1-29.

Sayed, Y.
Sharma, G. and **Sayed, Y.** (2024) Global governance and a new social contract for education: Addressing power asymmetries. *Prospects*. 54 (2). p.351-360.

Sayed, Y., Chandran, M. and Pappu, R. (2024) Education Policy Imaginary and Crises: The Case of EdTech and the COVID-19 Crisis. *Contemporary Education Dialogue*. 21 (1). p.135-142.

Møller, V., Roberts, B.J. and Zani, D.

Møller, V., **Roberts, B.J.** and **Zani, D.** (2024). 'Born Free' Dreams: South African Township Youth Discuss Their Hopes for a Better Life in Future. *Applied Research Quality Life.* 19, 1681–1709.

Kara, R.
Pillay, M., **Kara, R.**, Govindasamy, P., and Motala, R. (2024). Food security and disability in South Africa: an analysis of General Household Survey data. *Disability and Rehabilitation.* 37(8). p. 1–9.

Singer, J., Wöhr, A. and Otterbach, S.
Singer, J., **Wöhr, A.** and **Otterbach, S**. (2024). Gambling Operators' Use of Advertising Strategies on Social Media and Their Effects: A Systematic Review. *Current Addiction Report.*

Sioen G.B., McGreevy S., Ungvari J., Attig-Bahar F. and Juhola S.
Sioen G.B., **McGreevy S.**, **Ungvari J.**, **Attig-Bahar F.** and **Juhola S.** (2024). Charting the course for the next decade of sustainability research and innovation. *Global Sustainability 7*. e46, 1–6.

Struwig, J. and Roberts, B.
Struwig, J. and **Roberts, B.** (2024). Exploring Environmentalism Across Nations: Understanding the Influence of Societal Social Progress on Environmental Values, Norms, and Behaviour', *International Journal of Sociology*. 447–475.

Other Publications

Kara, R. and Mbatha, C.N.
Kara, R. and **Mbatha, C.N.** (2024). Future Proofing the Grass-Fed Beef Value Chain (GFBVC): A Case Study in the Matatiele area of the uMzimvubu Water Source Area in the Eastern Cape province, South Africa. ISER Summary Report, WWF-SA.

Mbatha, C.N.
Mbatha, C.N. (2024). Market Access for Communal Land Farmers in South Africa: A Complex Systems Case of the Eastern Cape Province and some Implications for Research and Extension Support. *ISER Working Paper Series No, 1/2024.* Rhodes University, Makhanda.

Moloto, A. and Kara, R.
Moloto, A. and **Kara, R.** (2024). The usage of Drones for Crop Farming Efficiency: Lessons from tropical countries to Enhance Farming Practices in South Africa. *ISER Working Paper Series No, 2/2024.* Rhodes University, Makhanda.

Mothupi, F. and Kara, R.
Mothupi, F. and **Kara, R.** The Impact of Subsistence Agriculture on Household Food Security in the Eastern Cape: Insights from the 2023 General Household Survey. *ISER Working Paper Series No, 03/2024.* Rhodes University, Makhanda.

Adeniyi, O. and Kara, R.
Adeniyi, O. and **Kara, R.** Women's inclusion in Agriculture: An analysis of relevant South African Policies. *ISER Working Paper No, 04/2024.* Rhodes University, Makhanda.

Concerts, Exhibitions, Performances, Workshops, Events

Mbatha, C.N.
Mbatha, C.N. Presented the Land & Investments Science Cluster Science at the Research and Innovation (SRI) Congress. 10-14 June 2024. Helsinki, Finland.

Mbatha, C.N. Presented the Land & Investments Science Cluster Science at the Research and Innovation (SRI) Africa Satellite Congress. 21-24 June 2024. Durban, South Africa.

Mbatha, C.N. Presented the Land & Investments Science Cluster Science at the Future Earth Swedish Hub. Stockholm, Sweden.

Møller, V. and Ben Roberts, B.
Møller, V. And **Roberts, B.** 2024. 'Born-Free' Dreams: South African township youth discuss their hopes for a better life in future. *International Society for Quality of Life Studies (ISQOLS) Conference.* 25-28 June 2024, Kota Kinabalu, Malaysia.

Møller, V. And **Roberts, B.** 2024. 'Born-Free' Dreams: South African township youth discuss their hopes for a better life in future. *1st regional International Society for Quality of Life Studies (ISQOLS) Conference Africa.* 3-5 October 2024, hosted by University of Johannesburg at Irene Country Lodge, South Africa.

Møller, V. And **Roberts, B.** 2024. A Resilient Nation? Quality of Life and political support in South Africa. *International Society for Quality of Life Studies (ISQOLS) Conference.* 25-28 June 2024, Kota Kinabalu, Malaysia.

Møller, V. And **Roberts, B.** 2024. A Resilient Nation? Quality of Life and political support in South Africa. *1st regional International Society for Quality of Life Studies (ISQOLS) Conference Africa.* 3-5 October 2024, hosted by University of Johannesburg at Irene Country Lodge, South Africa.

Møller, V. And **Roberts, B.** 2024. South African hopes and fears thirty years into democracy: A follow-up replication of Hadley Cantril's Pattern of Human Concerns. *International Society for Quality of Life Studies (ISQOLS) Conference.* 25-28 June 2024, Kota Kinabalu, Malaysia.

Møller, V. And **Roberts, B.** 2024. Brief History of Quality-of-Life Studies in South Africa: Milestones, Measures, and Pioneers. *International Society for Quality of Life Studies (ISQOLS) Conference Africa.* 3-5 October 2024, hosted by University of Johannesburg at Irene Country Lodge, South Africa.

Møller, V. And **Roberts, B.** 2024. Intercultural Felicitometry: The potential of Bernheim's ACSA to overcome relativity-bias and thus make results comparable. *International Society for Quality of Life Studies (ISQOLS) Conference Africa.* 3-5 October 2024, hosted by University of Johannesburg at Irene Country Lodge, South Africa.

Institute for Water Research (IWR)

Introduction

The year 2024 was significant for the Institute for Water Research in many ways. The IWR has become an attractive intellectual site for both local and international students. For the first time in the Institute's history, a total of thirteen (13) Postgraduate students graduated in a single year. This is a remarkable achievement considering the staff complement and the fact that majority of these staff are externally funded.



Professor Nelson Odume

Director

Photo: Jackie Grove

I warmly congratulate both students and staff who have committed themselves to hard work, dedication and excellence. A critical highlight of the year was the successful presentation of the professorial inaugural lecture by **Professor Odume**. The inaugural lecture which was titled "Water for Ecological and Social Justice" and was well attended by both local and international delegates. Professor Odume stressed the importance of ensuring access to water, and protecting this critical resource for ecological and social justice.

The Institute leads several continental and global initiatives. The official launch of the **Africa-Europe Cluster of Research Excellence (CoRE)** on water resource management for a sustainable and just future was an important milestone. The CoRE was officially launched at Rhodes University from 5 - 8 March 2024, with the formal Secretary General of ARUA, Professor Ernest Aryeetey in attendance. The CoRE is an important platform for strengthening Africa-Europe collaboration in research and innovation.

The **African Water Resource Mobility Network (AWaRMN)** is a collaborative project, which has supported majority of the students within the IWR over the past five (5) years. It has been supported with funding from the European Union. As the project comes to an end, it has been transformed into a collaborative platform for African-centred water research. AWaRMN is a critical partner leading the implementation of the Water Science Cluster on Africa water-resilient futures. This science cluster is funded by the National Research Foundation (NRF) as part of the Future Earth Africa Hub Leadership Centre.

The Institute's strategic plan came to an end in 2024. A new plan has now been developed through a collaborative, participatory process that involved all staff and students. The new five-year strategic plan (2025 – 2029) has six (6) inter-related strategic goals covering:

1) research,
2) teaching and learning,
3) community engagement and policy influence,
4) funding and partnership,
5) human capability and wellness,
6) visibility, communication and dissemination.

The plan will guide how we work in the next five (5) years.



IWR staff and students during the 2024 October Graduation.
Photo: IWR

For the first time in the institute's history, **a total of thirteen (13) Postgraduate students graduated in a single year**. This is a remarkable achievement considering the staff complement and the fact that majority of these staff are externally funded.

The **Erasmus** + EU-funded project on Nature Based Solutions for African Resilience was officially launched in 2024. The project aims to develop African capacity to respond to climate-related risks and challenges through developing training programmes on nature-based solutions. The project is already generating interest from both local and international partners. In addition to on-going projects, three (3) new projects were awarded to the Institute by the Water Research Commission in 2024. We remain deeply grateful to the continuous support of the WRC towards the work of the Institute.

The Rhodes University African Studies Centre is one of five (5) Centres that constitute the Africa Multiple Cluster of Excellence, funded by the German Government. As the initial eight (8) years funding for the Africa Multiple draws to an end, the year 2024 was largely dedicated to the renewal application of this multi-million European initiative. The IWR played a leading role in formulating two (2) Research Sections that eventually will shape the direction of the next phase of this programme. **Ecologies** and **Digital Materialities** are the two research sections we see IWR playing a lead role.

Postgraduates / Graduations

A total of thirteen (13) Postgraduate students, (five (5) PhDs and eight (8) Master students) successfully completed their degrees and graduated in 2024. PhD graduates: **Drs Miracle Osoh**, **Enahoro K. Owowenu**, **Mary Chibwe**, **Egdar Tumwesigye**, **Pippa Schlegel** (in Geography); Masters graduates: **Mr. Peter Waswa**, **Ms Malaika Mahlatsi**, **Ms Esther Ahuoiza Seriki**, **Mr. Kamva Zenani**, **Ms. Sofia Lazar**, **Mr. Sakikhaya Mabohlo**, **Mr. Rodney Tholani** (in Computer Science), and **Regina Dakie** (in Environmental Science). This is the highest graduation rate in the history of the IWR. I warmly congratulate the graduates and their supervisors.

Distinguished Visitors / International Visits

Professor Odume visited Michigan State University (MSU) for 3 months (February - May 2024). This visit has deepened the partnership between IWR and MSU as it has led to the submission of three joint collaborative research proposals. Discussions are also on-going in other areas to further strengthen the relationship between MSU and RU.

Professor Odume attended the annual academic coordinators meeting of the Africa Multiple Cluster of Excellence, at the Joseph Ki-Zebo University, in Burkina Faso. The Academic Coordinators are responsible for the academic programmes of the entire cluster across all five (5) universities that forms the ACC.

The Institute was visited by leading academics in 2024. Professor Elizabeth Mack (Michigan State University), Professor Francis Arimoro (Federal University of Technology, Minna), Professor George Nyakairu (Makerere University), Professor Chrispin Kowenje (Maseno University), Professor Paul Mensah (University of Cape Coast), Professor Raphael Tshimanga (University of Kinshasa) and Dr Solomon Uriri (Southern Delta University).

Significant Research Aligned Events

The Institute took part in key strategic partnership events in 2024. The following are important key strategic partnership events that took place in 2024:

The Sustainability Research and Innovation Congress (Finland; 10 - 14 June 2024) and the Africa Satellite Events (Durban; 21 - 24 May 2024): The SRI congress brings together leading researchers, policy makers and innovators in the field of sustainability research and innovation. The Future Earth Africa Hub Leadership Centre, which is co-hosted by the IWR, featured prominently at these events.

The Society for Freshwater (SFS) Africa Chapter training workshops (2024): As the regional secretariate, the IWR led the organising of a series of training workshops for emerging researchers and students in the field of freshwater science. Through this initiative, the IWR is strengthening its collaborative partnerships with members of SFS globally.

The first INITIATE Annual Workshop in Morocco, 2024: INITIATE is an international, intercultural, and inter-disciplinary network of PhD candidates working on water issues globally. IWR is a founding member of this network. Two (2) of our PhD candidates (**Ms Sivu Mapapu** and **Mr Sakhi Mabohlo**) attended the workshop in Morocco.

Successful participation of the IWR at the 1st Africa-Europe CoRE Conference in Stellenbosch.

The IWR participation in the Science Granting Councils Initiative (SGCI) Academic Symposium and Global Research Council (GRC) Africa Regional Meeting held in Gaborone, Botswana (14 - 15 November 2024).

The IWR participation in the Modelling for change - science and public policy challenge workshop (13 - 15 November 2024). The workshop was organised by the UNESCO Centre at the University of Montpellier and the International Centre for Interdisciplinary Research on Water Systems Dynamics.

The closing workshop of the African Water Resources Mobility Network (AWaRMN) at Makerere University from 13 – 16 May 2024. AWaRMN is an international collaborative project dedicated to supporting and strengthening capacity of African scientists in the field of water.

The Future Earth Africa Hub Regional Nodes Induction Workshop (1 – 3 October 2024) – The Future Earth Africa Hub has recently constituted the regional nodes for the purpose of mobilising and deepening sustainability sciences in Africa. The induction workshop brought together all the regional nodes Directors, the Science Cluster leads and the Hub and Leadership Centre staff.

Institute for Water Research Publications

Books/Chapters/Monographs

Gwapedza, D.R., Tanner, J.L. and Hughes, D.A.
Gwapedza, D.R., **Kabuya, P.M.**, **Lidzhegu, Z.**, Makungu, E., **Tanner, J.L.**, Muyaya, B., Beya, J.T. and **Hughes, D.A.** (2024) Chapter 11: River riparian zones in Sub-Saharan Africa: Processes, functions, and sustainability. In: Dalu, T. and Masese, F.O. (eds.). *Afrotropical Streams and Rivers: Structure, Ecological Processes and Management.* London: Elsevier Academic Press. p.267-288. ISBN: 9780443238987.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Farounbi, A.I. and Odume, N.O.
Farounbi, A.I. and **Odume, N.O.** (2024) Physicochemical and FT-IR analyses of some freshwater and inflow wastewater-treated effluents in the Eastern Cape Province of South Africa. *GSC Advanced Research and Reviews (GSCARR)*. 19 (1). p.178-199.

Slinger, J.H.
Bisaro, A., Galluccio, G., Beckhauser, E.F., Romagnoli, C., McEvoy, S., Sini, E., Biddau, F., David, R., d'Hont, F. and **Slinger, J.H.** (2024) Sea Level Rise in Europe: Governance Context and Challenges. *State of the Planet (SP)*. 3 (7). p.1-48.

Peer Reviewed Subsidy-Earning Journal Research Publications

Akamagwuna, F.C. and Odume, N.O.
Kunz, S., Kefford, B.J., Usseglio-Polatera, P., Hawkins, C.P., LeRoy Poff, N., **Akamagwuna, F.C.**, **Odume, N.O.**, Schmidt-Kloiber, A., Graf, W., Metzeling, L., Matthaei, C.D., Phillips, N. and Schäfer, R.B. (2024) Similarity of stream insect trait profiles across biogeographic regions. *Diversity and Distributions*. 30 (4). p.1-17.

Chibwe, M.
Gulumbe, B.H., Chishimba, K., Shehu, A. and **Chibwe, M.** (2024) Zambia's battle against cholera outbreaks and the path to public health resilience: a narrative review. *Journal of Water and Health*. 22 (12). p.1-19.

Chibwe, M. and Odume, N.O.
Chibwe, M., **Odume, N.O.** and **Nnadozie, C.F.** (2024) Spatiotemporal variations in the occurrence of Campylobacter species in the Bloukrans and Swartkops rivers, Eastern Cape, South Africa. *Heliyon*. 10 (7). p.1-11.

Clifford-Holmes, J.K.
Forbes, C.J., **Clifford-Holmes, J.K.** and Gillson, L. (2024) A past- present- future lens of environmental change: blending applied paleoecology and participatory system dynamics modelling at a conservation site in the Cape Floristic Region, South Africa. *Frontiers in Conservation Science*. 4 (2023). p.1-21.

Itzkin, A., Scholes, M., Coetzer, K. and **Clifford-Holmes, J.K.** (2024) A relational social-ecological systems approach to determine essential variables for monitoring sustainability at a catchment level. *Environmental Development*. 53 (2025). p.1-17.

Edegbene, O.A. and Odume, N.O.
Edegbene, O.A., Arimoro, F.O. and **Odume, N.O.** (2024) Developing Macroinvertebrate Biotic Indices in Nigerian Urban-Agricultural River Catchments: Is the Continuous Scoring System More Effective than Discrete Scoring System? *Water (Switzerland).* 16 (15). p.1-24.

Fry, A.S., Clifford-Holmes, J.K. and Palmer, C.G.
Fry, A.S., **Clifford-Holmes, J.K.** and **Palmer, C.G.** (2024) A systemic analysis of participatory land and water governance in the Tsitsa River Catchment, South Africa. *Systems Research and Behavioural Science*. 0 (0). p.1-17.

Fry, A.S., Weaver, M.J.T., Libala, N., Ralekhetla, M.M., Gusha, B. and Palmer, C.G.
Fry, A.S., **Weaver, M.J.T.**, **Libala, N.**, **Ralekhetla, M.M.**, **Gusha, B.**, **Mtati, N.** and **Palmer, C.G.** (2024) Stepping stones to transformative participatory governance capabilities in a rural landscape restoration project. *Ecosystems and People*. 20 (1). p.1-15.

Glenday, J.A.
Jumbi, F., **Glenday, J.A.** and Mazvimavi, D. (2024) Variation in soil water content and groundwater levels across three land cover types in a floodplain of the Kromme catchment, South Africa. *Wetlands Ecology and Management*. 32 (6). p.927-945.

Jumbi, F., **Glenday, J.A.** and Mazvimavi, D. (2024) Understanding dominant hydrological processes and mechanisms of water flow in a semi-arid mountainous catchment of the Cape Fold Belt. *Physics and Chemistry of the Earth*. 137 (2025). p.1-12.

Glenday, J.A., Gwapedza, D.R. and Tanner, J.L.
Rebelo, A.J., **Glenday, J.A.**, Holden, P., Gokool, S., **Gwapedza, D.R.**, Metho, P. and **Tanner, J.L.** (2024) Structural differences across hydrological models affect certainty of predictions of nature-based solution benefits. *Ecological Modelling*. 501 (2025). p.1-11.

Gusha, B. and Palmer, A.
Gusha, B., **Palmer, A.** and Renato, A.V. (2024) A Stochastic Frontier Analysis of the Performance of Livestock in the North-Eastern Cape Communal Rangelands, South Africa. *South African Journal of Agricultural Extension*. 52 (1). p.90-115.

Gusha, B., Gwapedza, D.R. and Palmer, A.
Gusha, B., **Gwapedza, D.R.**, Gwate, O., **Palmer, A.** and **Falayi, M.** (2024) A scoping review of communal rangelands management in southern Africa: towards sustainable management of rangelands. *Pastoralism*. 14 (2024). p.1-11.

Gwapedza, D.R., Mantel, S.K., Xoxo, B.S., Mabohlo, S., O'Keeffe, J.H. and Tanner, J.L.
Gwapedza, D.R., Barreteau, O., **Mantel, S.K.**, Paxton, B., Bonte, B., **Tholanah, R.S.**, **Xoxo, B.S.**, Theron, S., **Mabohlo, S.**, **O'Keeffe, J.H.**, **Bradshaw, K.** and **Tanner, J.L.** (2024) Engaging stakeholders to address a complex water resource management issue in the Western Cape, South Africa. *Journal of Hydrology*. 639 (131522). p.1-11.

Hughes, D.A.
Hughes, D.A. and Lawrence, D. (2024) Quantifying? realistic? uncertainty bounds as a part of sound hydrological modelling practice in data scarce regions of southern Africa. *Environmental Modelling & Software*. 179 (2024). p.1-11.

Hughes, D.A. (2024) Adjusting rainfall inputs to hydrological models in a data-scarce area of Southern Africa. *Hydrological Sciences Journal*. 69 (9). p.1-13.

Mack, E.A.
Mack, E.A., Loveridge, S., Keene, T. and Mann, J. (2024) A Review of the Literature About Broadband Internet Connections and Rural Development (1995-2022). *International Regional Science Review*. 47 (3). p.231-292.

Schuster, A.M., Van Fossen, J.A., Agrawal, S., Wang, S., **Mack, E.A.**, Tidwell, M.L. and Cotten, S.R. (2024) Disadvantaged workers are not all alike in attitudes towards automation. *Transportation Research Interdisciplinary Perspectives*. 26 (2024). p.1-8.

Keene, T., Mann, J., **Mack, E.A.** and Loveridge, S. (2024) Broadband access and knowledge spillover influence on SBIR phase II awards in non-metropolitan regions. *Annals of Regional Science, The*. 72 (3). p.903-925.

Mack, E.A., Theuerkauf, E.J., Pepper, J., Norton, R.K. and Bunting, E.L. (2024) Citizen perceptions of Great Lakes coastline change and management efforts. *Ocean and Coastal Management*. 255 (2024). p.1-13.

Wang, S., Agrawal, S., **Mack, E.A.**, Kalani, N., Cotten, S.R., Changa-Hsiang, C. and Savolainen, P.T. (2024) Downscaling occupational employment data from the state to the Census tract level. *Applied Geography*. 170 (2024). p.1-11.

Scott, C.K., **Mack, E.A.**, Chi, G., Kelgenbaeva, K. and Henebry, G.M. (2024) Remittances and Livestock Management in Agropastoral Households in Rural Kyrgyzstan: Telecoupled Impacts of Globalization. *Rural Sociology*. 89 (3). p.456-482.

Ross, A., **Mack, E.A.**, Marcantonio, R., Miller - Graff, L., Pearson, A.L., Smith, A.C., Bunting, E. and Zimmer, A. (2024) A mediation analysis of the linkages between climate variability, water insecurity, and interpersonal violence. *Climate and Development*. 16 (2). p.134-148.

Mack, E.A., Akamagwuna, F.C., Murata, C., Materechera-Mitochi, F., Nnadozie, C.F. and Odume, N.O.
Mack, E.A., **Akamagwuna, F.C.**, **Murata, C.**, **Materechera-Mitochi, F.**, **Nnadozie, C.F.** and **Odume, N.O.** (2024) Perceptions and knowledge of ecosystem services in urban river systems, Eastern Cape, South Africa. *Urban Ecosystems*. 27 (1). p.1905-1914.

Mensah, P.
Lukhabi, D.K., **Mensah, P.**, Asare, N.K., Akwetey, M.F.A. and Faseyi, C.A. (2024) Benthic macroinvertebrates as indicators of water quality: A case study of estuarine ecosystems along the coast of Ghana. *Heliyon*. 10 (e28018). p.1-17.

Krampah, E.A., **Mensah, P.**, Acheampong, E. and Obodai, E.A. (2024) Isolation and evaluation of local microalgal isolates as feed forlarval rearing of *Crassostrea tulipa* towards optimisation of mangrove oyster seed production in Ghana. *Aquaculture, Fish and Fisheries*. 4 (e184). p.1-10.

Adhiambo, R., **Mensah, P.**, Acheampong, E. and Krampah, E.A. (2024) Plankton assemblages in a tropical West African estuary. *Aquatic Sciences*. 86 (70). p.1-18.

Mensah, P.K.
Mensah, P.K. and Akwetey, M.F.A. (2024) Effective toxicity of pH to embryonic development of the banded lamp eye killifish *Aplocheilichthys spilauchen* (Dum´eril, 1861). *Heliyon*. 10 (e32771). p.1-8.

Muylaert, R., Hayman, D.T.S., Fernandez, M., von Hildebrand, A., Willetts, E., Machalaba, C., **Mensah, P.K.** and Prist, P.R. (2024) Human Health Thrives Thanks to Biodiversity. *Biodiversity*. 0 (0). p.1-9.

Miiro, A. and Odume, N.O.
Miiro, A., **Odume, N.O.**, Nyakairu, G.W.A., Odongo, S., Matovu, H., Kato, C.D., Spanik, I., Sillanpaa, M., Mubiru, E. and Ssebugere, P. (2024) Per- and poly-fluoroalkyl substances in aquatic ecosystems and wastewater treatment works in Africa: Occurrence, ecological implications, and future perspectives. *Chemosphere*. 367 (2024). p.1-14.

Nnadozie, C.F., Akamagwuna, F.C. and Odume, N.O.
Onyima, B.N., Nwabueze, L.N., **Nnadozie, C.F.**, Omovoh, G.O., Mmachaka, T., Omovoh, B.O., Arimoro, F.O., Uku, J.E., **Akamagwuna, F.C.**, Onyima, G.O. and **Odume, N.O.** (2024) Livelihood risks arising from urban river pollution in selected marginal communities in the Federal Capital Territory, Nigeria. *Urban Ecosystems*. 28 (33). p.1-12.

Nsengimana, V. and Mugume, P.J.
Nsengimana, V., Nzibaza, V., Nzarora, A. and **Mugume, P.J.** (2024) Conserving biodiversity and managing water resources in the Akagera River catchment, Eastern Rwanda: local engagement and knowledge cocreation through the adaptive planning process. *Socio-Ecological Practice Research*. 6 (3). p.245-261.

Odume, N.O.
Akamagwuna, F.C., **Odume, N.O.** and **Richoux, N.B.** (2024) Impact of agricultural land-use on functional feeding groups of Afrotropical *Ephemeroptera*, *Plecoptera* and *Trichoptera* in the Kat River, Eastern Cape, South Africa. *African Journal of Aquatic Science*. 49 (2024). p.298-311.

Kinyua, E.M., Nyakairu, G.W.A., Tebandeke, E. and **Odume, N.O.** (2024) Visible light photocatalytic degradation of HDPE microplastics using vanadium-doped titania. *Central Asian Journal of Water Research*. 10 (1). p.126-141.

Sani, Z., Tshimanga, R.M., **Odume, N.O.**, Basamba, T.A. and Katshiatshia, H.M. (2024) Developing an approach for balancing water use and protecting water quality of an urban river ecosystem. *Physics and Chemistry of the Earth*. 136 (103687). p.1-10.

Sani, Z., Katshiatshia, H.M., Tshimanga, R.M., Basamba, T.A. and **Odume, N.O.** (2024) Relationship between land use and water quality in a tropical urban catchment of the Congo Basin: A case study of N'Djili River catchmen. *Water Practice and Technology*. 19 (4). p.1272-1289.

Odume, N.O., Chili, A.S., Nnadozie, C.F. and Slaughter, A.R.

Odume, N.O., **Chili, A.S.**, **Nnadozie, C.F.** and **Slaughter, A.R.** (2024) Stakeholder contestations of water quality use and management in the Vaal Barrage catchment. *South African Journal of Science*. 120 (9/10). p.1-8.

Palmer, A.

Mushunje, L.H., Marandure, T., Chikwanha, O.C., Bennett, j., Hawkins, H.-. J., **Palmer, A.**, Wu, L., Marufu, M.C. and Mapiye, C. (2024) Supplementation of Acacia dealbata versus Acacia *mearnsii* leaf-meal has potential to maintain growth performance of lambs grazing low quality communal rangelands in South Africa. *Tropical Animal Health and Production*. 56 (152). p.1-9.

Palmer, A. and Smart, K.G.

Simba, L.D., te Beest, M., Hawkins, H.-.J., Larson, K.W., **Palmer, A.**, Sandstrom, C., **Smart, K.G.**, Kerley, G.I.H. and Cromsigt, J.P.G.M. (2024) Wilder rangelands as a natural climate opportunity: Linking climate action to biodiversity conservation and social transformation. *Ambio*. 53 (2024). p.1-19.

Palmer, C.G.

Lotz-Sisitka, H., Pahl-Wostl, C., Meissner, R., Scholz, G., **Cockburn, J.**, **Jalasi, E.M.**, Stuart-Hill, S. and **Palmer, C.G.** (2024) Interrelated transformative process dynamics in the face of resource nexus challenges: an invitation towards cross case analysis. *Ecosystems and People*. 20 (1). p.1-16.

Slinger, J.H.

Bhatta, A., Vreugdenhil, H. and **Slinger, J.H.** (2024) Characterizing nature-based living labs from their seeds in the past. *Environmental Development*. 49 (2024). p.1-17.

Slinger, J.H. (2024) Water renewal and stratification modelling in small estuaries. *Estuarine, Coastal and Shelf Science*. 300 (1). p.1-10.

Taljaard, S., **Slinger, J.H.**, Weerts, S.P., Vreugdenhil, H.S.I. and Nzuza, C. (2024) Circles of port sustainability: A novel method combining global comparability and local relatability in performance assessment. *Environmental Development*. 52 (101068). p.1-17.

Berger, M., Spray, C.J., Blom, A., **Slinger, J.H.**, Stancanelli, L.M., Snoek, Y. and Schielen, R.M.J. (2024) Assessing the IUCN global standard as a framework for nature-based solutions in river flood management applications. *Science of the Total Environment*. 950 (2024). p.1-8.

Slinger, J.H., Cunningham, S.C. and Kothuis, B. (2024) A co-design method for including stakeholder perspectives in nature-based flood risk management. *Natural Hazards*. 119 (2024). p.1171-1191.

Hüsken, L.M., **Slinger, J.H.**, Vreugdenhil, H.S.I. and Altamirano, T.A. (2024) Money talks. A systems perspective on funding and financing barriers to nature-based solutions. *Nature-Based Solutions*. 6 (1). p.1-18.

Bhatta, A., Vreugdenhil, H. and **Slinger, J.H.** (2024) Harvesting living labs outcomes through learning pathways. *Current Research in Environmental Sustainability*. 9 (2025). p.1-13.

Tanner, J.L. and Palmer, C.G.

Tanner, J.L. and **Palmer, C.G.** (2024) What does practising the Adaptive Systemic Approach offer engaged sustainability science? *South African Journal of Science.* 120 (9/10). p.1-5.

Weaver, M.J.T. and Palmer, C.G.

Weaver, M.J.T., **Cockburn, J.**, **Mtati, N.** and **Palmer, C.G.** (2024) Exploring transformative processes at the intersections of land, water and livelihoods: a case study from the Tsitsa Project, South Africa. *Ecosystems and People*. 19 (1). p.1-20.

Xoxo, B.S., Mantel, S.K. and Tanner, J.L.

Xoxo, B.S., **Mantel, S.K.**, **De Vos, A.**, **Tanner, J.L.** and Le Maître, D.C. (2024) Using the analytic hierarchical process to identify potential sites for rural ecological infrastructure investment in South Africa: examples from Cacadu and Tsitsa Catchments. *Restoration Ecology*. 1 (1). p.1-15.

Weaver, M.J.T.

Cockburn, J., **Weaver, M.**, and **Sitas, N.** (2024). Shedding light on global south transformations: integration, transgression, diversity and hope. Editorial - Ecosystems *and People*, 20(1). P. 1-9.

Palmer, C.G. and Tanner, J.L.

Palmer, C.G. and **Tanner, J.L.** (2024) What does practising the Adaptive Systemic Approach offer engaged sustainability science? *South African Journal of Science* 120 (9/10). p.1-5.



Photo: Chris Marais

South African Institute for Aquatic Biodiversity (NRF-SAIAB)

Introduction

The NRF-South African Institute for Aquatic Biodiversity (NRF-SAIAB) continues to serve as a hub of scientific innovation and ecosystem-based research that supports the sustainability of Africa's aquatic environments. Grounded in the principles of Transformation, Impact, Excellence, and Sustainability (TIES), the Institute has delivered high-impact, interdisciplinary work that addresses national and global challenges. This work is driven by a combination of advanced research platforms, a dynamic team of scientists, and a strong institutional culture of inclusion, capacity development, and strategic collaboration.



Professor Albert Chakona

Chief Scientist & Acting Managing Director

Photo: Jackie Grove

To advance the **transformation** of the knowledge enterprise, NRF-SAIAB has strengthened collaborative efforts with all institutions of higher learning, with a particular focus on Historically Disadvantaged Institutions (HDIs), to expand access to state-of-the-art research infrastructure and resources across the higher education sector. These partnerships aim to redress historical inequities and foster inclusive participation in aquatic biodiversity and environmental sciences. The transformation agenda is further supported through specialised training programmes and the recruitment of Postdoctoral Research Fellows, Postgraduate students, and interns, with a strong emphasis on inclusion of candidates from underrepresented



2024 Rhodes University Graduands, supervisors and staff.

From left to right: Dr Tadiwa Mutizwa (2023), Dr Martinus Scheepers (2024), Dr Tayrn Murray (Supervisor), Professor Albert Chakona (Supervisor), Professor Francesca Porri (Supervisor), Dr Olwethu Duna (2024), Dr Samantha Ockhuis (2024), Dr Tholoana Ntokoane (2024), Dr Yonela Sithole (2023).

Back: Dr Suzanne Redelinghuys (2024). In absentia: Dr Nawa Nawa (2024).

Photo: NRF-SAIAB

Grounded in the principles of **Transformation, Impact, Excellence, and Sustainability** (TIES), the Institute has delivered high-impact, interdisciplinary work that addresses national and global challenges.

groups. Strategic investment in mentorship and capacity development is cultivating a diverse and skilled cohort of students, interns, and emerging researchers, positioning NRF-SAIAB as a leading driver of scientific innovation and research excellence in South Africa and the continent. Building on the success of the ACEP Joint Marine Laboratories Programme (JMLs), NRF-SAIAB will deepen collaborative frameworks by expanding this initiative through the establishment of Joint Freshwater Laboratories (JFLs) that are ear-marked to be launched at selected inland universities in 2025/26. The overall aim is to expand and further strengthen transformation and research capacity nationwide.

NRF-SAIAB continues to embrace forward-looking, **impactful** and innovative approaches to address the pressing environmental, health, and socio-economic challenges faced by current and future generations. Applied research is gaining momentum, with significant advances in biological control, eco-engineering, marine robotics, genomics, computer vision, and marine biodiscovery. Through the joint Rhodes University (RU) and NRF-SAIAB DSTI-NRF South African Research Chair Initiative (SARChI) in the Ecology and Management of Aquatic Invasive Species, the strategic release of biocontrol agents has led to notable reductions in invasive aquatic plants, directly improving water quality and access. Key innovation frontiers lie in the collaborative partnership between NRF-SAIAB and Rhodes University, particularly through the Computer Vision and AI Unit, the AQUALAB, and the drug discovery programme.

The Computer Vision Unit is pioneering the development of automated classification of marine life using advanced machine learning models, laying the groundwork for rapid provision of data for fisheries management. These technologies will be refined and expanded to improve ecological assessments and support marine conservation efforts. The recent acquisition of a deep-sea remotely operated vehicle (ROV), capable of collecting samples from depths up to 1,000 meters below the surface of the sea, represents a major leap forward in NRF-SAIAB's drug discovery and bio-discovery initiative through exploration of previously unseen environments. The collaboration between NRF-SAIAB and the ADD Hub at RU seeks to unlock the pharmaceutical potential of marine-derived compounds, targeting cancer and infectious diseases, an endeavour that not only responds to global health threats but also positions South Africa as a leader in marine biodiscovery.

Looking ahead, NRF-SAIAB is actively exploring strategic partnerships, including with European Union (EU) institutions, to establish an African network for marine biodiscovery. This network will facilitate coordinated access to marine biodiversity hotspots across the continent, offering new opportunities for the discovery of novel compounds and further advancing Africa's contribution to the global bioeconomy. The establishment of AQUALAB, a new collaborative live animal handling research platform co-managed by NRF-SAIAB and the DIFS, will expand South Africa's capacity to support sustainable aquaculture and fisheries development, as well as captive breeding of threatened species. This is a critical step towards alleviating poverty, food and nutrition insecurity, and unemployment, particularly in rural and coastal communities.

Research **excellence** at the Institute is reflected in many areas, including the production of one hundred and thirty-seven (137) peer-reviewed scientific publications in 2024, contributions to books, successful supervision of Postgraduate students numerous conference presentations, and invitations to deliver keynote addresses. The Institute also produces policy briefs, and its researchers actively serve on scientific advisory and editorial boards both nationally and internationally. A robust network of national, regional and international collaborators reinforces the Institute's reputation as a hub of research excellence, offering unique platforms that distinguish it from similar institutions on the continent.

Several NRF-SAIAB researchers have successfully secured competitive grants, ensuring the **sustainability** of the Institute's research mandate. Most importantly, research findings are shared through various platforms, with policy briefs playing a key role in shaping national and global strategies on environmental sustainability and climate adaptation. To support world-class research operations, NRF-SAIAB has also completed a solar installation project to provide uninterrupted power supply for critical platforms such as the BioBank and Genomics Laboratories. The Institute also installed two (2) 200000 Litre water towers to ensure a reliable backup supply for fire risk mitigation for the National Fish Collection building. Looking ahead, ongoing engagement with the NRF Business Advancement unit aims to unlock and diversify funding streams through strategic continental and global partnerships.

Postgraduates / Graduations

NRF-SAIAB researchers and Honorary Research Associates supervised fifty-six (56) students across Higher Education Institutions in SA, of which 89% are from designated groups. The Institute is proud to announce the successful graduation of six (6) PhD candidates through Rhodes University in April 2024. This achievement highlights the Institute's commitment to academic excellence and its pivotal role in fostering the next generation of skilled aquatic scientists. These graduates have conducted groundbreaking research on aquatic ecology, molecular systematics, taxonomy and biodiversity conservation.

The students participated in various regional and international conferences, workshops, research visits and expeditions. The researchers and students visited more than fifteen (15) countries in 2024, which included the United Kingdom, France, Mozambique, Australia, New Zealand and Costa Rica.

The 6th instalment of the Institute's Annual Student Symposium was successfully held at the Amazwi Literature Museum in November 2024. This flagship annual event serves as a critical platform for Masters students and PhD candidates affiliated with NRF-SAIAB to present their research findings, engage in scholarly discussions, and build connections within the scientific community and other stakeholders. The 2024 symposium was centered around the theme "Safeguarding Africa's Aquatic Future." This theme underscored the growing threats faced by aquatic ecosystems, including pollution, habitat degradation, climate change, and over-exploitation of aquatic resources. Given the increasing vulnerability of freshwater and marine environments, the Symposium aimed to highlight innovative research approaches and solutions geared toward protecting aquatic species and ecosystems.

Distinguished Visitors / International Visits

NRF-SAIAB plays a pivotal role in several regional and international biodiversity and conservation initiatives, leveraging its expertise in marine monitoring technologies, including stereo-BRUVs, ROV and acoustic telemetry, coupled with specialised laboratories for genomic research. The Institute's continued involvement in these collaborative efforts highlights its leadership in aquatic biodiversity research and its commitment to supporting international conservation and capacity-building initiatives through cutting-edge technologies and knowledge sharing. Some of the notable regional and international collaborations undertaken in 2024 include:

The **EAF-Nansen Programme Post-Survey Workshop** on Fish Taxonomy jointly funded by FAO that was hosted at NRF-SAIAB in July 2024 and attended by ten (10) scientists from Mozambique, Kenya and Tanzania for advanced training;

Global FinPrint Project, a global shark and ray bio-diversity monitoring initiative. NRF-SAIAB is contributing to this initiative through use of stereo-BRUVs technology to assess elasmobranch populations in key regions;

Coral reef monitoring in Mozambique;

Regional monitoring of sharks and rays in the Western Indian Ocean in collaboration with Wildlife Conservation Society;

Use of non-invasive biodiversity monitoring in the Maldives and Seychelles; (vi) extensive collaboration network for sea floor mapping, including partners from France, UK and USA;

Contribution to the IUCN Freshwater Fish Specialist Group. NRF-SAIAB holds the Regional Chair for the International Union for Conservation of Nature (IUCN) Freshwater Fish Specialist Group and has the responsibility to coordinate research on conservation of freshwater ecosystems and their biodiversity in the

SADC region.

Significant Research Aligned Events

Blending Indigenous Knowledge and Innovation for Sustainable Coastal Futures:

One of the inspiring programmes being jointly coordinated by RU and NRF-SAIAB is the Indigenous Marine Innovations for Sustainable Environments and Economies (IMIsEE) project. The project integrates eco-engineering approaches with cultural heritage, and places women knowledge holders and traditional weavers at the centre of innovation. Key contributions include the elevation of traditional music and storytelling as decolonial tools for knowledge transmission, as well as provision of ecological evidence for the use of *imizi, (Cyperus textilis)*, in marine infrastructure retrofitting. These outputs demonstrate the power of community-rooted, African-led science that is both locally transformative and globally relevant. This project demonstrates the significance of blending science with Indigenous Knowledge Systems to tackle complex coastal challenges.

Advancing discovery of novel marine compounds:

The South African coastline, with nine (9) bioregions, is rich in marine biodiversity that is a valuable resource for the discovery of novel chemical leads for the pharmaceutical industry. In partnership with the NRF-SAIAB Aquatic Genomics Research Platform (AGRP), the RU ADD Hub has developed a cutting-edge genomics platform that facilitates *in silico* analysis of large DNA sequence datasets to predict the biosynthetic pathways used by the sponge host and its microbial symbionts, to produce bioactive secondary metabolites. To date, the research team has characterised a spirochete symbiont species, Spo2.3, hosted only by latrunculid sponges, known for their production of cytotoxic and antimicrobial pyrro-loiminoquinone alkaloids. The discovery of new drugs and novel marine compounds is critical in the global fight against antimicrobial resistance, offering alternative therapies where existing treatments are becoming increasingly ineffective. Antimicrobial resistance (AMR) is one of the top ten threats to global public health, with 5 million human deaths associated with AMR worldwide, and with sub-Saharan Africa accounting for the highest mortality rate. Without significant interventions, the global death toll due to antimicrobial resistant microbial infections is expected to double by 2050.

Use of intelligent applications for complex data analyses:

Further expanding the innovation initiatives of 2023, NRF-SAIAB partnered with Rhodes University (RU) to establish a Visual Analytics Laboratory (VAL), aligning Postgraduate research with institutional priorities. To date, the VAL has produced notable research outcomes, including Postgraduate studies on fish detection using machine learning algorhithms that have resulted in three (3) publications and four (4) conference poster presentations. The VAL's main objective is to develop an AI-assisted species identification tool for aquatic biodiversity research at RU and NRF-SAIAB in order to enhance research efficiency and improve accuracy in species classification. Successful implementation of this initiative will reduce research processing time to ensure that research findings are shared timeously with relevant stakeholders and decision makers. Another collaborative project between NRF-SAIAB and RU focuses on developing intelligent applications to detect anomalies in the vast datasets generated by estuarine acoustic

A decorator crab (*Homolidae* species) gets close and personal with the camera on a deep-sea lander deployment at 200m in a submarine canyon of the iSimangaliso Wetland Park. Decorator crabs have an interesting behaviour of carrying objects - such as sponges, corals (as in this case), or sea urchins - above their heads, using their last pair of legs. Photo: NRF-SAIAB



telemetry, which monitors fish movement. These datasets are often compromised by irregular movement records that hinder accurate ecological interpretation. By applying unsupervised learning techniques, the initiative has successfully identified and filtered anomalous data without the need for labelled inputs. To date, the models have significantly improved data quality and reliability, enhancing the accuracy of ecological analyses and paving the way for scalable, automated data processing in aquatic research.

Seascape ecology for resilient fisheries:

NRF-SAIAB's research on seascape ecology provides critical insights on fish habitat ecology (how fish interact with their environment) and the effects of global and climate change on coastal and estuarine habitats and associated fauna. Habitat loss and disturbance not only affects population abundances but also makes these populations less resilient to climate stress. By identifying important fish nursery habitats and preventing habitat loss and disturbance, this research informs fisheries management to ensure resilience of fish stocks that are key sources of food and nutrition for coastal communities. NRF-SAIAB also led the estuarine fish component for the programme initiated by the Department of Water and Sanitation (DWS) to establish resource quality objectives (defining the quantity and quality of water ecosystems need to function optimally) and ecological reserves for Eastern Cape catchments.

Advancing policy development and marine management:

Marine biodiversity monitoring remains a pillar of NRF-SAIAB's research infrastructure. The Acoustic Tracking Array Platform (ATAP) enabled a range of studies on the movement patterns of sharks, sub-adult leervis, and juvenile river snapper along South Africa's coastline. In parallel, the Marine Remote Imagery Platform (MaRIP) and the Geophysics and Mapping Platform (GeMaP) contributed essential seafloor and biodiversity data through ROV, BRUV, and multibeam bathymetric surveys in majority of coastal Marine Protected Areas along South Africa's south and east coast. Additionally, the marine platforms have also been instrumental in driving the development of South Africa's deep sea research capacity. Through this work, these platforms enable marine spatial planning and biodiversity conservation through the generation of high-resolution, spatially explicit data for ecosystem management. The data are actively used in the National Marine Biodiversity Assessment, Marine Ecosystem Classification, Marine Protected Area expansion and management, and to support fisheries management. Furthermore, the platforms have played an important role in enabling marine research by neighbouring African nations, especially within the Western Indian Ocean region, contributing to continental development objectives. Through representation on various panels and working groups, NRF-SAIAB's marine platforms have been instrumental in advancing regional and global research standards and supporting the development of FAIR data management pipelines for the Global Ocean Observing System (GOOS).

SARChI boosting biocontrol efforts:

A significant area of societal impact has been the inclusion of biological control of invasive aquatic weeds into NRF-SAIAB's core research focus. As a partner in the Centre for Biological Control (CBC) at RU, NRF-SAIAB has led national-scale interventions targeting invasive species such as water hyacinth, water lettuce, and giant salvinia. The programme has successfully deployed and monitored host-specific biocontrol agents in several heavily infested water bodies, including Hartbeespoort Dam and the Vaal River Barrage. Innovations such as climate-matching, molecular barcoding, and local stakeholder co-development have enhanced the precision and sustainability of control efforts. The work contributes directly to national priorities around invasive species, climate adaptation, and water security in collaboration with the Government Department of Water and Sanitation, while restoring ecosystem function and community access to aquatic resources.

Taxonomy, the backbone of conservation and sustainable livelihoods:

In 2024, NRF-SAIAB's researchers and Honorary Research Associates, made significant advances in taxonomy through integrative approaches that combine morphological and molecular data. This work led to the description of fifteen (15) new fish species, revalidated three (3), and uncovered several cryptic lineages across southern Africa. Key outcomes include the revision of the *Parauchenoglanis ngamensis* complex (commonly known as the Zambezi grunter), that resulted in the recognition and description of eight (8) distinct species that were previously grouped as one. Additional newly described or revalidated species are in the genera *Chiloglanis*, *Pseudobarbus*, *Enteromius* and *Glossogobius*. NRF-SAIAB, in collaborating with ARC, DFFE, SanParks and University of Limpopo initiated a new project (funded by the WRC) that aims to generate credible data to support development and management of inland fisheries in the Limpopo Province. The inland fisheries sector in South Africa has the potential to address the United Nations Sustainable Development Goals (SDG) 1 (No poverty), 2 (Zero hunger), 8 (Decent work and economic growth), 12 (Responsible consumption and production) and 14 (Life below water). However, formal development of this sector must be guided by principles of sustainable resource use to avoid over-exploitation and ensure long-term benefits. This ongoing project will generate the much needed data to inform and guide the sustainable development of inland fisheries in South Africa.

South African Institute for Aquatic Biodiversity (NRF-SAIAB) Publications

Peer Reviewed Subsidy-Earning Journal Research Publications

Braganca, P.H.N. and South, J.
Cairns, J.P., **Braganca, P.H.N.** and **South, J.** (2024) A systematic review of poeciliid fish invasions in Africa. *BMC Ecology and Evolution*. 24 (1). p.1-1.

Bennett, R.H. and Ebert, D.A.
Groeneveld, J., Klein, J.D., **Bennett, R.H.**, Abdulla, A.S., Bond, M.E., **Ebert, D.A.**, Fernando, S.M., Gledhill, K.S., Jaquemet, S., Kiszka, J.J., MacDonald, A.H., **Mann, B.Q.**, Nevill, J., Price, A.S., Rumbelow, J., Sitoe, J.J., van Staden, M., Wueringer, B.E. and Bester-van der Merwe, A.E. (2024) Population genetic structure of bottlenose and white spotted wedge fishes from the Southwest Indian Ocean using a dual marker approach. *Endangered Species Research*. 53 (1). p.409-427.

Bernard, A.T.F.
James, N.C., Jacobs, A.G., **Gayiza, M.**, Human, L.R.D., Steyn, P.-. P., **Bernard, A.T.F.** and Rishworth, G.M. (2024) Nursery provision of red-algal habitats in temperate Algoa Bay, South Africa. *Marine Biology*. 171 (185). p.1-13.

Bills, R. and Vreven, E.J.W.M.N.
Dierickx, K., Lunkayilakio, S.W., **Bills, R.** and **Vreven, E.J.W.M.N.** (2024) Morphometric synthesis of Pollimyrus (Teleostei, Mormyridae) with the description of four new species. *Journal of Fish Biology*. 1 (2024). p.1-47.

Braganca, P.H.N. and Chakona, A.
Scheepers, M.J., **Braganca, P.H.N.** and **Chakona, A.** (2024) Revalidation of *Enteromius* crocodiles (Fowler, 1934) from synonymy with the disjunctly distributed *Enteromius argenteus* (Günther, 1868) based on molecular and morphological evidence. *Journal of Fish Biology*. 1 (2024). p.1-16.

Scheepers, M.J., **Braganca, P.H.N.** and **Chakona, A.** (2024) Naming the other cousin: A new goldie barb (Cyprinidae: *Smiliogastrininae*) from the northeast escarpment in South Africa, with proposed taxonomic rearrangement of the goldie barb group in southern Africa. *Journal of Fish Biology*. 105 (4). p.1041-1361.

Castaneda, R.A., Chakona, A., Weyl, O.L.F. and Mandrak, N.E.
Van Nynatten, A., **Castaneda, R.A.**, **Chakona, A.**, Lovejoy, N.R., **Weyl, O.L.F.** and **Mandrak, N.E.** (2024) Environmental DNA metabarcoding in the Cape Fold aquatic ecoregion: Opportunities and challenges for eDNA uptake in an endemism hotspot. *Freshwater Biology*. 69 (11). p.1627-1639.

Chakona, A.
Prikrylova, I., Truter, M., Luus-Powell, W.J., **Chakona, A.** and Smit, N.J. (2024) *Gyrodactylus serrai* n. sp. (Gyrodactylidae), from the Near-Threatened Clanwilliam Sawfin, *Cheilobarbus serra* (Peters) (Cyprinidae, Smilogastrinae), in the Cape Fold Ecoregion, South Africa. *Systematic Parasitology*. 101 (67). p.1-16.

Kadye, W.T., **Nkomo, T.**, **Kambikambi, M.J.** and **Chakona, A.** (2024) Trophic niche patterns of endangered Sandelia bainsii and *Amatolacypris trevelyani* in the Eastern Cape, South Africa: Insights from stable isotope analysis. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 34 (2). p.1-17.

Martin, M.B., **Chakona, A.**, **Kadye, W.T.** and **Scheepers, M.J.** (2024) Revalidation of *Enteromius karkensis* (Gilchrist and Thompson 1913) (Cypriniformes: Smiliogastrinae) from the southern temperate freshwater ecoregion, South Africa. *Journal of Fish Biology*. 1 (2024). p.1-19.

Coetzee, J.A.
Chikodza, T., **Hill, M.P.**, **Kinsler, D.L.** and **Coetzee, J.A.** (2024) Biological control alters competition between *Pontederia crassipes* Mart. (Pontederiaceae) and *Salvinia minima* Baker (Salviniales: Salviniaceae) in a eutrophic waterbody. *Aquatic Botany*. 196 (2025). p.1-9.

Coetzer, W.
Coetzer, W. and Lisher, M. (2024) Biodiversity Data Curation as a Profession in South African Natural Science Museums. *Curator-The Museum Journal*. 1 (2024). p.1-7.

Cowley, P.D. and Whitfield, A.K.
Helm, C.W., Carr, A., Cawthra, H., **Cowley, P.D.**, De Vynck, J., Grabe, P.J., Rust, R., Stear, W. and Whitfield, A.K. (2024) A Purported Pleistocene Sand Sculpture From South Africa. *Rock Art Research*. 41 (1). p.58-73.

Cuthbert, R.N.
Mutshekwa, T., Mugwedi, L., **Wasserman, R.J.**, Dandofema, F., **Cuthbert, R.N.** and Dalu, T. (2024) Aquatic macroinvertebrate community colonisation and succession in macadamia orchardand communal area reservoirs: a case study of Luvuvhu River valley, South Africa. *Water SA*. 50 (2). p.137-147.

Daly, R.
Mann, B.Q., Jordaan, G.L., Dalton, W.N., **Daly, R.**, Soekoe, M., **Potts, W.M.**, Smale, M.J. and Swart, L. (2024) Movement and growth of the spotted gully shark *Triakis megalopterus* in South African waters. *African Journal of Marine Science*. 46 (2). p.109-123.

Peel, L.R., Meekan, M.G., **Daly, R.**, Keating, C.A., Collin, S.P., Nogués, J. and Stevens, G.M.W. (2024) Remote hideaways: first insights into the population sizes, habitat use and residency of manta rays at aggregation areas in Seychelles. *Marine Biology*. 171 (4). p.1-19.

Cliff, G., Booyens, N.G., **Daly, R.**, Jordaan, G.L., Nkabi, N., Parker, D. and **Mann, B.Q.** (2024) Biology and ecology of the African blackspot shark *Carcharhinus* human on the east coast of South Africa. *African Journal of Marine Science*. 46 (1). p.65-76.

Dixon, R.B., **Murray, T.**, **Mann, B.Q.**, **Cowley, P.D.**, **Daly, R.** and **Filmalter, J.D.** (2024) Longshore movements and site fidelity of the iconic giant *trevally Caranx ignobilis* from southern Africa, determined using passive acoustic telemetry. *Marine Ecology Progress Series*. 729 (2024). p.201-218.

Daly, R., Cowley, P.D. and Filmalter, J.D.
Lubitz, N., **Daly, R.**, Smoothey, A.F., Vianello, P., Roberts, M.J., Schoeman, D.S., Sheaves, M., **Cowley, P.D.**, Dagorn, L., Forget, F., Soria, M., Peddemors, V.M., **Filmalter, J.D.**, Butcher, P.A., Brett, G. and Barnett, A. (2024) Climate change-driven cooling can kill marine megafauna at their distributional limits. *Nature Climate Change*. 14 (2024). p.526-535.

Daly, R., Filmalter, J.D. and Cowley, P.D.
Elston, C., **Murray, T.**, Rogers, T., **Parkinson, M.C.**, **Mann, B.Q.**, **Daly, R.**, **Filmalter, J.D.** and **Cowley, P.D.** (2024) Diamond *Gymnura natalensis* and duckbill *Aetomylaeus bovinusrays* undertake nationwide coastal migrations. *Journal of Fish Biology*. 2024 (1). p.1-16.

Ebert, D.A.
Ebert, D.A. and *et al,* (2024) Fishing for oil and meat drives irreversible defaunation of deepwater sharks and rays. *Science*. 383 (6687). p.1-17.

Navia, A.F., Alfaro-Shigueto, J., Agreda-Arango, J., Areano, E., Avalos-Castillo, C., Bizzarro, J.J., Bustamante, C., Cevallos, A., Concha, F.J., Cruz-Escalona, V. and **Ebert, D.A.** (2024) Unveiling Macroecological Patterns of



An emperor snapper (*Lutjanus sebae*), yellowmouth moray (*Gymnothorax nudivomer*) and tomato rockcod (*Cephalopholis sonnerati*) inspect the bait canister of a stereo-BRUVs sample from the mesophotic zone in the iSimangaliso Wetland Park.

Photo: NRF-SAIAB

Elasmobranchs in the Eastern Pacific Ocean. *Journal of Biogeography*. 52 (2). p.323-349.

Finucci, B., Didier, D.A., **Ebert, D.A.**, Green, M.E. and Kemper, J.M. (2024) Harriotta avia sp. Nov. - a new rhinochimaerid (Chimaeriformes: Rhinochimaeridae) described from the Southwest Pacific. *Environmental Biology of Fishes*. 107 (8). p.841-865.

Kyne, P.M., Carlson, P., Aitchison, R.M., Hameli, S.A., D'Alberto, B.M., Gonzalez-Pestana, A., Groeneveld, J., Jolene, H., Divya, K. and **Ebert, D.A.** (2024) Global status and research priorities for rhino rays. *Endangered Species Research*. 55 (2024). p.129-140.

Aitchison, R.M., **Ebert, D.A**., Seret, B. and Weigmann, S. (2024) Review of three southwestern Indian Ocean species of Rhinobatos (Rhinopristiformes: Rhinobatidae). *Endangered Species Research*. 53 (2024). p.67-87.

Ebert, D.A., Krajangdara, T., Fahmi, and Kemper, J.M. (2024) Chimaera supapae (Holocephali: Chimaeriformes: Chimaeridae), a new species of chimaera from the Andaman Sea of Thailand. *Raffles Bulletin of Zoology*. 72 (2024). p.84-90.

Kumar, R., Venu, S., Bineesh, K.K., Sajeela, K.A., **Ebert, D.A.**, Gopalakrishnan, A. and Basheer, V.S. (2024) First record of the rare deep-sea shark, *Scymnodon ichiharai* Yano and Tanaka, 1984 (Squaliformes: Somniosidae) from Andaman Waters, India. *Thalassas*. 40 (3). p.1297-1305.

Ebert, D.A. and Bennett, R.H.
Pollom, R.A., Cheok, J., Pacoureau, N., Gledhill, K.S., Kyne, P.M., **Ebert, D.A.**, Jabado, R.W., Herman, K.B., **Bennett, R.H.**, da Silva, C., Fernando, S., Kuguru, B. and Leslie, R.W. (2024) Overfishing and climate change elevate extinction risk of endemic sharks and rays in the southwest Indian Ocean hotspot. *PLOS ONE*. 19 (9). p.1-25.

Ellender, B.R. and Weyl, O.L.F.
Swanepoel, P.J., Barkhuizen, L.M., **Ellender, B.R.**, As LL, L.L. and **Weyl, O.L.F.** (2024) Temporal trends in fisher catch and effort, and the impact of Covid-19 on inland fisheries: a case study from Gariep Dam, South Africa. *Water SA*. 51 (1). p.1-11.

Elston, C. and Murray, T.S.
Elston, C. and **Murray, T.S.** (2024) multi-method approach identifies a South African estuary as an important elasmobranch habitat and potential nursery ground. *African Journal of Marine Science*. 26 (2). p.91-102.

Filmalter, J.D.
Dupaix, A., Menard, F., **Filmalter, J.D.**, Baidai, Y., Bodin, N. and et al, (2024) The challenge of assessing the effects of drifting fish aggregating devices on the behaviour and biology of tropica tuna. *Fish and Fisheries*. 25 (3). p.381-400.

Gennari, E.
Towner, A.V., Micarelli, P., Hurwitz, D., Smale, M.J., **Booth, A.J.**, Stopforth, C., Jacobs, E., Reinero, F.R., Ricci, V., Di Bari, A., Gavazzi, S., Carugno, G., Mahrer, M. and **Gennari, E.** (2024) Further insights into killer whales *Orcinus* orca preying on white sharks *Carcharodon carcharias* in South Africa. *African Journal of Marine Science*. 46 (1). p.1-5.

Gennari, E. (2024) Uncertainty remains for white sharks in South Africa, as population stability and redistribution cannot be concluded by Bowlby *et al.* (2023): Decline or shifting distribution? a first regional trend assessment for white sharks (Carcharodon carcharias) in South Africa? *Ecological Indicators.* 160 (2024). p.1-6.

Gouws, G.
Gouws, G., **Kruger, J.**, **Smale, M.**, Henriques, R. and **Potts, T.** (2024) Revisiting the description of *Atractoscion macrolepis* (Perciformes: Sciaenidae): Another argument for comprehensive taxonomy. *Zootaxa*. 5529 (1). p.159-174.

James, N.C.
Nodo, P., **Childs, A.R.**, Pattrick, P. and **James, N.C.** (2024) Spatial patterns and environmental drivers of demersal fish assemblages in the Swartkops and Sundays estuarine to marine seascapes, South Africa. *African Journal of Marine Science*. 46 (2). p.125-141.

Jordaan, M.S.
Jordaan, M.S., Barrow, S., **Kadye, W.T.** and **Chakona, A.** (2024) Status and distribution of a novel redfin lineage, *Pseudobarbus* sp. 'burchelli Tradouw' from the Cape Fold Ecoregion of South Africa. *African Journal of Aquatic Science*. 49 (1). p.29-39.

Keates, C.
Munyai, L.F., Mugwedi, L., **Wasserman, R.J.**, Dondofema, F., Riddell, E.S., **Keates, C.** and Dalu, T. (2024) Water and sediment chemistry drivers of chlorophyll‑ a dynamic within a Ramsar declared floodplain pan wetland system. *Environmental Science and Pollution Research*. 31 (2024). p.28549-28563.

Keates, C., Conradie, W. and **Edwards, S.** (2024) Phylogeographic structuring in a widespread southern African Grass Snake (Psammophiidae: Psammophylax rhombeatus). *African Journal of Herpetology*. 73 (2). p.210-235.

Kock, A.A.
Dedman, S., Moxley, J.H., **Kock, A.A.** and *et al,* (2024) Ecological roles and importance of sharks in the Anthropocene Ocean. *SCIENCE*. 385 (6708). p.1-14.

Kock, A.A. (2024) Ecological conclusions remain unchanged for white sharks in South Africa: A reply to Gennari *et al.* 2024. *Ecological Indicators*. 165 (2024). p.1-112160.

McInnes, A.M., Weideman, E.A., Carpenter-Kling, T., Barham, P., Christian, M., **Kock, A.A.** and *et al,* (2024) Commercial fishery no-take zones for African penguins minimize fisheries losses at the expense of conservation gains. *ICES Journal of Marine Science*. 81 (8). p.1632-1646.

Mbandzi, N., Puccinelli, E. and Porri, F.
Mbandzi, N., **Puccinelli, E.**, Pieterse, P.P., **Ndaba, J.** and **Porri, F.** (2024) Metal bioaccumulation in marine invertebrates and risk assessment in sediments from South African coastal harbours and natural rocky shores. *Environmental Pollution*. 355 (15). p.1-11.

Mofu, L., Cowley, P.D. and Weyl, O.L.F.
Mukhari, D.L., **Mofu, L.**, Lombard, A.T., Attwood, C.G., Witteveen, M., **Smith, M.K.S.**, **Cowley, P.D.**, **Weyl, O.L.F.** and **Pegg, J.** (2024) Life-history of invasive common carp, Cyprinus Carpio, within a natural lake (Groenvlei), South Africa. *African Journal of Aquatic Science*. 49 (3). p.246-253.

Mpanza, N.P., Cuthbert, R.N. and Pegg, J.
Mpanza, N.P., **Cuthbert, R.N.**, **Pegg, J.** and **Wasserman, R.J.** (2024) Assessing biological invasion predatory impacts through interaction strengths and morphological trophic profiling. *Biological Invasions*. 26 (2024). p.4165-4177.

Murray, T.S., Elston, C. and Cowley, P.D.
Murray, T.S., **Elston, C.**, Smale, M.J., **Childs, A.R.**, Dicken, M.L. and **Cowley, P.D.** (2024) Marine predators segregate interspecifically by space and time in a sheltered coastal bay. *Journal of Fish Biology*. 1 (2024). p.1-15.

Naidoo, T.
Munien, S., Adhikari, P.L., Reycraft, K., Mays, T.J., **Naidoo, T.**, Pruitt, M., Arena, J. and Sershen, A. (2024) Application and Efficacy of Management Interventions for the Control of Microplastics in Freshwater Bodies: A Systematic Review. *Water (Switzerland)*. 16 (1). p.1-34.

Palmer, R.M.
Oliver, J., Shum, P., Mariani, S., Sink, K.J., **Palmer, R.M.** and **Matcher, G.F.** (2024) Enhancing African coelacanth monitoring using environmental DNA. *Biology Letters*. 20 (10). p.1-11.

Potts, W.M. and Weyl, O.L.F.
Lynch, A.J., Embke, H.S., Nyboer, E.A., Wood, L.E., Thorpe, A., Phang, S.C., Viana, D.F., Golden, C., **Potts, W.M.**, **Weyl, O.L.F.** and *et al,* (2024) Inland recreational fisheries contribute nutritional benefits and. *Nature Food*. 5 (5). p.433-443.

South, J.
Oficialdegui, F.J., **South, J.**, Courchamp, F. and Clavero, M. (2024) Nativeness is a binary concept -Invasiveness and its management are not. *Biological Conservation*. 294 (2024). p.1-6.

Guareschi, S. and **South, J.** (2024) Biological invasions in intermittent rivers and streams: current knowledge and future frontiers. *Ecosistemas*. 33 (1). p.1-8.

South, J. and Mofu, L.
Woodford, D.J., **South, J.**, **Mofu, L.** and **Pegg, J.** (2024) River hydrology mediates fish invasions in Addo Elephant National Park, South Africa. *KOEDOE*. 66 (1). p.1-11.

South, J. and Weyl, O.L.F.
Ndaleni, P.M., **James, N.C.**, **South, J.** and **Weyl, O.L.F.** (2024) Reproductive biologies of *Psammogobius knysnaensis* and *Caffrogobius gilchristi* in a warm-temperate South African estuary. *African Journal of Aquatic Science*. 49 (1). p.1-6.

South, J., Ellender, B.R. and Pegg, J.
Nawa, N., **South, J.**, **Ellender, B.R.**, **Pegg, J.**, Madzivanzira, T.C. and **Wasserman, R.J.** (2024) Complex selection processes on invasive crayfish phenotype at the invasion front of the Zambezi floodplains ecoregion. *Freshwater Biology*. 69 (9). p.1322-1337.

South, J., Khosa, D., Mofu, L. and Jordaan, M.S.
Raman, N.V., Belay, B.M.G., **South, J.**, Botha, T.L., **Pegg, J.**, **Khosa, D.**, **Mofu, L.**, Walsh, G., **Jordaan, M.S.**, Koelmans, A.A., Teurlincx, S., Helmsing, N.R., de Jong, N., van Donk, E., Lürling, M., Wepener, V., Fernandes, T.V. and de Senerpont Domis, L.N. (2024) Effect of an antidepressant on aquatic ecosystems in the presence of microplastics: A mesocosm study. *Environmental Pollution*. 357 (2024). p.1-13.

Stauffer, J.R.
Konings, A.F., Miller, T. and **Stauffer, J.R.** (2024) Description of a rock-dwelling cichlid that re-invaded the sand substrate in Lake Malawi, Africa. *Zootaxa*. 5399 (2). p.181-189.

Uiblein, F.
Uiblein, F., Williams, J.T., Bailly, N., Hoang, T.A. and Rajan, P.T. (2024) Four new goatfishes (Upeneus, Mullidae, Mulliformes) from the Asian Indo-Pacific with a list of valid goatfish species and remarks on goatfish diversity. *Cybium*. 48 (2). p.135-160.

Vreven, E.J.W.M.N
Ilodiri, W.M., Huyghe, C.E.T., da Costa, L.M., Baba, T.M., Mizani, C.D. and **Vreven, E.J.W.M.N.** (2024) Hidden species diversity in the *Enteromius Cope*, 1867 (Teleostei: Cyprinidae) from the Aruwimi basin (Middle Congo) in the Okapi Wildlife Reserve (Democratic Republic of the Congo). *Journal of Fish Biology*. 106 (2). p.230-255.

Bigirimana, A., Kisekelwa, T., da Costa, L.M., Huyghe, C.E.T., Banyankimbona, G. and **Vreven, E.J.W.M.N.** (2024) Description of a new endemic *Enteromius* (Teleostei: Cyprinidae) from the upper Malagarazi in Burundi: Lessons for a protected area under implementation. *Journal of Fish Biology*. 1 (2024). p.1-28.

Bigirimana, A., Kisekelwa, T., da Costa, L.M., Muzumani, D.R., Mulelenu, C.M., Abwe, E., Banyankimbona, G. and **Vreven, E.J.W.M.N.** (2024) An Updated Checklist of the Fishes from the Upper Malagarazi (Lake Tanganyika Basin) in Burundi: Implications for an under Implementation Malagarazi Nature Reserve. *Diversity*. 16 (7). p.1-45.

Vreven, E.J.W.M.N., Braganca, P.H.N. and Chakona, A.
Sithole, Y., **Vreven, E.J.W.M.N.**, **Braganca, P.H.N.**, Musschoot, T. and **Chakona, A.** (2024) Nine in one: integrative taxonomic evidence of hidden species diversity in the widespread Zambezi grunter, *Parauchenoglanis ngamensis* (Siluriformes: Auchenoglanididae), from southern and south-central Africa. *Zoological Journal of the Linnean Society*. 202 (3). p.1-11.

Vreven, E.J.W.M.N., Braganca, P.H.N. and Chakona, A.
Ntokoane, T., **Vreven, E.J.W.M.N.**, **Braganca, P.H.N.**, **Kadye, W.T.** and **Chakona, A.** (2024) Taxonomic diversity, distribution, and ecology of the freshwater fishes of the Zambezian Lowveld Ecoregion in southern Africa: A systematic review. *Journal of Fish Biology*. 106 (2). p.315-343.

Welch, R.J.
Welch, R.J., **Childs, A.R.**, **Murray, T.**, Darnaude, A.M. and James, N.C. (2024) The role of acoustic telemetry in assessing fish connectivity within marine seascapes: A global review. *Journal of Fish Biology*. 2024 (1). p.1-20.

Weyl, O.L.F.
Marr, S.M., Hlungwani, H.A., **Weyl, O.L.F.** and Sara, J.R. (2024) Per-recruit analysis and proposed sustainable harvest strategy for red nose *labeo Labeo rosae* and Mosambique tilapia *Oreochromis mossambicus* in Flag Boshielo Dam, Olifants River, South Africa. *African Journal of Aquatic Science*. 49 (3). p.232-245.

Roy, H.E., Pauchard, A., Stoett, P.J., Renard Truong, T., Meyerson, L.A., Bacher, S., Galil, B.S., Hulme, P.E., **Rono, B.J.** and **Weyl, O.L.F.** (2024) Curbing the major and growing threats from invasive alien species is urgent and achievable. *Nature Ecology and Evolution*. 8 (7). p.1-11.

Whitfield, A.K.

Harrison, T.D. and **Whitfield, A.K.** (2024) A global functional analysis of fish-estuary associations and selected environmental factors. *Reviews in Fish Biology and Fisheries*. 34 (2). p.805-825.

Whitfield, A.K., Blaber, S.J.M., Elliott, M. and Harrison, T.D. (2024) Trophic ecology of fishes in estuaries. *Reviews in Fish Biology and Fisheries*. 34 (4). p.1371-1405.

Research Papers Presented at Academic/ Scientific Conferences (Non-peer-reviewed Proceedings)

Mbandzi, N. and Ndaba, J.

Mbandzi, N., **Porri, F.**, **Ndaba, J.**, **Puccinelli, E.** and **Lukwe, O.** Bioaccumulation of metals in marine invertebrates: Ecological risk assessment in coastal harbours and natural rocky shores along the South African south coast. *7th International Marine Conservation Congress.* Cape Town International Convention Centre, Cape Town. South Africa. October 2024.

Porri, F.

Porri, F., **Mpanza, N.P.**, **Ndaba, J.**, Howse, M., **Van Der Walt, K.A.** and **Lukwe, O.** Fostering harmony between science and indigenous perspectives for sustainable nature-based coastal solutions. *7th International Marine Conservation Congress*. Cape Town International Convention Centre, Cape Town. South Africa. October 2024.



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