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224 Faculty of Law
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239 Department of Music and Musicology
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325 Institute for Water Research
332 Public Service Accountability Monitor
335 Rhodes University Mathematics Education Project
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Rhodes University Research Report | 2018
Overarching our Institutional Transformation Plan are four core operational principles that guide our intellectual community and are intended to permeate every aspect of the life of our University. These are:

1. Sustainability - conceptualised and understood in the broadest possible sense, and not just environmental or financial sustainability;
2. Being simultaneously locally responsive and relevant, as well as globally engaged, so that we can enter the global knowledge system from our own position of strength and thereby enrich the accumulated stock of knowledge;
3. The advancement of social justice; and
4. The public good purpose and value of higher education.

These core principles are intended to be embedded into our teaching and learning, research, community engagement, and every aspect of the life of our University.

The pages of this report outline the strong research trajectory that Rhodes University is on, which gives effect to these principles with increasing degrees of engaged research, and partner collaborations on the African continent and beyond. Rhodes University is very fortunate to have outstanding, dedicated and committed academic and support staff who take a deep and keen interest in the growth, development and academic success of each and every one of our students, as well as in the social and natural environment that surrounds us.

The results of the 2018 academic year were celebrated during a bumper graduation weekend in April 2019, in which a total of 2321 graduates were capped at six graduation ceremonies, 46% of whom were Postgraduates, 61% were women, and 19% were international students.
Many of our outstanding scholars attracted external acclaim.

- Our most high profile researcher, Distinguished Professor Tebello Nyokong, was honoured by the award of the degree of Doctor of Science honoris causa at University of KwaZulu-Natal (UKZN). This was the third time that Distinguished Professor Nyokong had received an Honorary Doctorate (the previous ones were from Walter Sisulu University and University of South Africa).

- The Vice-Chancellor’s Distinguished Research Award (in the age group 40 and below) for 2018 was awarded to Associate Professor Caroline Khene of the Department of Information Systems, while the Vice-Chancellor’s Distinguished Senior Research Award for 2018 went to Professor Brett Pletschke of the Department of Biochemistry and Microbiology. The Vice-Chancellor’s Distinguished Community Engagement Award went to Professor Jacqui Akhurst of the Department of Psychology for service learning and engaged research in the field of Community Psychology.

- On 13 July 2018, the Deputy President, the Hon David Dabede Mabuza, officially unveiled the 64-dish MeerKAT radio telescope array at Carnarvon, Northern Cape. Professor Justin Jonas, Professor Oleg Smirnov, and other Rhodes University staff, students and graduates of the Centre for Radio Astronomy Techniques and Technologies contributed in no small part to this major national and international scientific accomplishment.

- The Centre for Biological Control received a 5-year R67m follow-on funding grant from the Department of Environmental Affairs under the Working for Water Programme for this critical area of environmental research.

- The African Research Universities Alliance (ARUA) awarded the hosting rights of its ARUA Centre of Excellence for Water to Rhodes University - to be hosted in our Institute for Water Research. The Centre is intended to be a focal point for coordinating high quality research from universities across the continent.

- A new SARChI Chair award was made to Distinguished Professor Martin Hill. Professor Hill had been the acting incumbent of the Chair of Insects in Sustainable Agricultural Ecosystems, since the resignation of Professor Compton, and was awarded the permanent Chair. Rhodes University hosts 14 SARChI Chairs, with a 15th hosted as a Rhodes Professor in the associated South African Institute of Aquatic Biodiversity (SAIAB). Three SARChI Chairs underwent 5-year reviews in 2018 and had their Chairs renewed: Professor Rosemary Dorrington, Professor Charlie Shackleton and Distinguished Professor Catriona MacLeod.

- At the South African Women in Science (SAWiSA) gala dinner in Polokwane, Associate Professor Adrienne Edkins was named as the SAWiSA Distinguished Young Scientist in the Natural and Engineering Sciences.

- A press conference was held in the Centre of Excellence on Paleosciences at the University of the Witwatersrand to announce the ground-breaking new tetrapod fossil discovery of Dr Robert Gess, Postdoctoral Research Fellow of Rhodes University. The discovery was published in the high-profile journal Science.

- President Cyril Ramaphosa appointed Dr Siphokazi Magadla to serve on the Presidential Independent High-Level Review Panel on Intelligence, based on her significant standing in the field.

- The award of R77m for the second round of the South African Cultural Observatory was made to a consortium comprising Rhodes University, Nelson Mandela University (NMU), University of Fort Hare (UFH), and UKZN, the research component for the consortium being led by Professor Jen Snowball of the Department of Economics and Economic History.

- Rhodes University was successful in the award of two new large pieces of equipment from the National Equipment Programme in 2018: a new Nano Isothermal Calorimeter in Biochemistry and Microbiology, where the principal grant holder is Associate Professor Adrienne Edkins, and an extension to the Centre for Nanotechnology Innovation’s Time of Flight Ion Mass Spectrometer facility in Chemistry, where the principle grant holder is Dr Philani Mashazi.

Many other individual academics received widespread national and international acknowledgement of their work. Their fine accomplishments are contained within the pages of this report.

We extend our congratulations and thanks to all of our researchers, supervisors, collaborators, funders, donors, and partners who contributed to making 2018 a year in which research at Rhodes University flourished. Your expertise, integrity, dedication, rigour and generosity make Rhodes University the rich and distinctive intellectual space that it is.
This report describes the results of fundamental, applied, and engaged research published in 2018.

The compilation of a university Research Report is a substantial and lengthy process, starting with the writing of proposals, and the undertaking of fundamental enquiry and field work, usually dating back well before the year of reporting, then working through synthesis, analysis, critical review, and comparison, to the point where theses and papers are written and edited describing novel outcomes and views, discoveries are reported, and opportunities are sought to exploit innovation for social, commercial, and environmental benefit. Then there is the administrative task of recording all of the work done, compiling and auditing the publications and graduations for reporting to the Department of Higher Education and Training (DHET), and writing narratives on a sample of the outstanding scholars and their work. This substantial administrative part can only get fully underway in the year following the one under review, which explains why the 2018 Report is published in the second semester of 2019.

It is no accident that the 2018 Research Report is the longest ever produced at Rhodes University. The volume and quality of our research outputs have been on a steady growth path, and our intellectual space has benefitted from outstanding role models. The 2018 report represents the biggest effort ever by our researchers, Postgraduate students, and Postdoctoral Research Fellows, the biggest contribution ever by our collaborators, partners and funders, the biggest resource injection ever by our council and board of governors, and the biggest funding support ever from the DHET and other organs of State.
including for substantial infrastructure projects which support the research effort. We are well on the strategic path of our Institutional Development Plan, which positions the university as research led.

Our position as a small research-led and rural based university is relatively unique in the sector, and is something that we continue to build upon. In terms of absolute contribution of research outputs, our institutional capacity means that our contributions often look modest in relation to big urban research-orientated institutions. But in terms of measures which are normalised to our size, we are outstanding. Rhodes University is at the top of the sector in terms of the benchmark measure of weighted research outputs per capita (a measure usually taken to mean research value for money in relation to investment in the institution), at 3.2 units per capita in the most recent DHET audit in relation to a sector average of 1.84. This is something that we as a community of scholars can be proud of. The rate of increase in this measure has been consistent at Rhodes University, and it says much about the creativity, dedication and rigour of our researchers and Postgraduate supervisors.

The external audit of 2018 accredited research outputs is still underway by the DHET at the time of writing. Our internal benchmarking indicates that we can expect the results to show a continued improvement.

In excess of 84% of our accredited publications are in the form of journals, and of these journals 89.6% are in international indices - the highest proportion in the sector. The Web of Science is by far the most prevalent international index that features Rhodes University publications (85% of all journal publications).

In terms of CESM (Classification of Educational Subject Matter) categorisation of our areas of research strength, our largest publication concentration is in the Life Sciences (29.5%), followed by Physical Sciences (19.7%), Social Sciences (14.5%), Education (10.3%), and Languages, Linguistics and Literature (7.2%). Our other areas of research focus make up the remainder.

As an operational outcome of the development and adoption of an Institutional Development Plan and Institutional Transformation Plan, the university has improved the resourcing of the Centre for Postgraduate Studies with a full-time Director and expanded programmes.

I add my warm thanks and congratulations to all of our researchers, funders, collaborators and partners who contributed to the strong accredited research results of 2018, as well as those generating the many forms of scholarship that are not counted in the accreditation exercise but which contribute much to the rich intellectual space that is Rhodes University. I also thank all the administrators who play a crucial role in preparing the university’s meticulous audited submissions, and all who support the research endeavor intellectually, administratively, technically, creatively, and by maintaining our physical space as one that facilitates and encourages our diverse intellectual activity.
The National Research Foundation (NRF) rating system is a key driver in the NRF’s aim to build a globally competitive science system in South Africa. It is a valuable tool for benchmarking the quality of our researchers against the best in the world. NRF ratings are allocated based on a researcher’s recent research outputs and impact as perceived by international peer reviewers. The rating system encourages researchers to publish high quality outputs in high impact journals/outlets. Rated researchers as supervisors will impart cutting-edge skills to the next generation of researchers.

NRF B-rated researchers enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs.

**NRF B1-Rated Researchers**

**Distinguished Professor Catriona Macleod**

Catriona Macleod is a Distinguished Professor of Psychology, SARChI Chair of Critical Studies of Sexualities and Reproduction (CSSR), and editor-in-chief of the international journal *Feminism & Psychology*.

The overarching goal of the CSSR is to conduct critical research, based on feminist, post-structural and post-colonial theory, that addresses the social and human dynamics that enhance or undermine progress towards full sexual and reproductive citizenship for all.

**Emeritus Professor Valerie Møller**

As lifetime member of the International Society for Quality of Life Studies, Valerie Møller has tracked the life satisfaction and happiness of South Africans from the late 1970s to the transition to democracy.

A more recent research focus is on the history of quality of life and human well-being in sub-Saharan Africa and the prospects for the future happiness of people living there.
Professor Mike Marais
Professor Marais is interested in the interplay between ethics and aesthetics in modern fiction.

Professor Charlie Shackleton
Professor Shackleton currently occupies the SARChI Chair in Interdisciplinary Science in Land and Natural Resource Use for Sustainable Livelihoods.

The objective is to develop interdisciplinary understandings of and methods to reveal the role, value and importance of natural resources in rural and urban livelihoods for poverty alleviation.

Emeritus Professor Nigel Bishop
Professor Bishop’s research is concerned mainly with the accurate calculation or computation of gravitational waves from astrophysical sources such as merging black holes.

The issues currently being tackled are improvements to code efficiency, and the effect of dark matter (which has a low but non-zero density) on gravitational wave propagation.
Dr Nicola McLoughlin

Dr McLoughlin is a geologist and palaeontologist who specialises in microbial traces of life preserved in the rock record.

She combines microscopic and geochemical techniques to decipher the earliest fossil record and the rise of photosynthetic microorganisms. She also studies exceptional cellular preservation, targeting key evolutionary events in the history of life.

Distinguished Professor Heila Lotz-Sisitka

Professor Lotz-Sisitka’s research focus is transformative social learning and green skills learning pathways in areas of biodiversity, the water food nexus, climate change, social and environmental justice, and just sustainability transitions.

Further research interests include critical research methodologies, transformative social learning, and education system transformation.

Professor Makaiko Chithambo

The main theme of Professor Chithambo’s research is the study of point-defects in solids using luminescence methods.

He specialises in use of stimulated luminescence techniques particularly time-resolved spectroscopy to understand the dynamics of irradiation-induced charge transport in insulators.

His work spans experimental techniques, development of theory and mathematical modelling.
Dr John Mack
Since taking up his post in the Centre for Nanotechnology Innovation at Rhodes University in April 2012, Dr Mack's research has focused on the biomedical, electrochemical and nonlinear optical properties, and applications of porphyrin related dyes, such as boron dipyrromethenes (BODIPYs), phthalocyanines and corroles, in close collaboration with Distinguished Professor Tebello Nyokong and researchers in China, Japan, Kenya, Russia, Germany and the United Kingdom.

Professor Denis Pollney
Professor Pollney’s research is focused on the study of gravitational waves, and in particular, how they are generated during black hole mergers. This research involves large-scale supercomputer simulations of dynamical space-time geometries in general relativity.

Along with collaborators and graduate students, they have developed one of the principle black hole simulation codes informing the data analysts in the LIGO and Virgo gravitational wave detector communities.

Professor Warwick Sauer
Professor Sauer’s research interests include a fascination with cephalopods (cuttlefish, squid and octopus) but broadly he looks at the Ecosystem Approach to Fisheries, concentrating on all aspects involved in fisheries governance, and the influence of climate change on global fisheries.
Professor Shankar Aswani
Professor Aswani works at the interface between anthropology and marine science. His general expertise is in the human dimensions of coastal and marine resource use, conservation, development, and policy, with particular attention to the intersection between human ecology, marine science, and conservation biology.

Professor Stephen Compton
Professor Compton's research area is the interaction between plants and animals. Within this broad theme specific areas of interest include biological control of weeds, the conservation of plant-feeding insects and tritropic interactions involving plants, herbivores and their parasitoids.

In addition, the pollination of fig trees by fig wasps has been a long-running interest, with an emphasis on what fig wasps can tell us about the long-distance dispersal of small insects and theories of optimal offspring sex ratios. The research is mainly carried out in Africa and South East Asia.

Emeritus Professor Denis Hughes
Professor Hughes' main research field is the development and application of hydrological and water resource models with a focus on large river basins in sub-Saharan Africa. This includes assessments of water availability for various types of development (irrigation, hydropower, etc.) as well as quantifying the water needs of the environment.
Professor Kevern Cochrane
Professor Cochrane is a fisheries scientist with particular interests in progress and challenges being encountered in the implementation of fisheries management as an integrated process in the Benguela Current countries and globally, and in the impacts of climate change on fisheries and means to adapt to climate-driven ecological and social changes.

Professor Ruth Simbao
Professor Simbao conducts research on forms of epistemological resistance in Fine Art and Visual Culture, particularly in relation to the arts of Africa. She repositions the northern-driven discourse of “African Art” in relation to “strategic southerness”, arguing that artists, curators and scholars of Africa are at the forefront of knowledge creation about Africa.

Current research focuses on the ways artists and other creatives based in China and various African contexts reflect historical and contemporary resistances and solidarities, thereby challenging the dominant Africa-China discourse.

Professor Martin Villet
Professor Villet's rating recognized his academic outputs in forensic entomology over the last two decades.

The South African Police Service (SAPS) and the International Criminal Court (ICC), among others, have approached him for his practical expertise in murder and poaching cases.
Professor Brad Ripley

Professor Ripley’s research focuses on the impact of global climate change, and particularly altered atmospheric CO₂ concentration, on the performance of natural ecosystems and crops.

Much of this work includes experimental manipulations of climate within growth chambers of the Rhodes University Elevated CO₂ Facility, but includes work in systems ranging from subtropical savanna to sub-Antarctic Marion Island.

Professor Gianni Bernardi

Professor Bernardi’s research mostly focuses on observational cosmology and, in particular, observations of the redshifted 21cm line in order to understand how the first stars and galaxies formed in our Universe.

Over the last decade, he has been working with his colleagues to construct radio instrumentation dedicated to 21cm observations, in particular the Hydrogen Epoch of Reionization Array, currently under construction in South Africa, in the Karoo region.

Professor Ward Jones

Professor Jones has published in a wide range of fields: epistemology, philosophy of mind, philosophy of science, early Modern thought, narratives and ethics, moral psychology, higher education, and death.

In the past few years, he has concentrated more on questions in (i) metaphilosophy - the nature and value of philosophy as a discipline - and (ii) social injustice.
Professor J S ‘Goonie’ Marsh

Professor Marsh’s research is in igneous petrology and concerned with the origin of rocks formed by the crystallization of molten magma.

In particular his focus is on the chemical composition and origin of the very large-volume basalt lava flows known as continental flood basalts (CFB), with particular reference to the Karoo CFB of southern Africa and the Etendeka CFB of Namibia.

Credit: Simon Pamphilon

Professor CEJ ‘Ted’ Botha

Professor Botha’s research interests include functional plan anatomy, microscopy and plant insect inter-relationships - especially the Russian wheat aphid.

Credit: Photo supplied
Rhodes University acknowledges and congratulates the following for their accredited research outputs (Journal Publications, Books & Book Chapters, Conference Proceedings, and Masters/Doctoral students graduated) in 2018:

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<th>Department/Center</th>
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<td>1</td>
<td><strong>Distinguished Professor Tebello Nyokong</strong></td>
<td>Department of Chemistry, RU/DST Centre for Nanotechnology Innovation</td>
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<td>2</td>
<td><strong>Professor Charlie Shackleton</strong></td>
<td>Department of Environmental Science</td>
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<td>3</td>
<td><strong>Distinguished Professor Heila Lotz-Sisitka</strong></td>
<td>Faculty of Education, Environmental Learning Research Centre (ELRC)</td>
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<td>4</td>
<td><strong>Professor Kirk Helliker</strong></td>
<td>Department of Sociology and Industrial Sociology</td>
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<td><strong>Emeritus Professor Dan Wylie</strong></td>
<td>Department of Literary Studies in English</td>
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<td>6</td>
<td><strong>Professor Barry Irwin</strong></td>
<td>Department of Computer Science</td>
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<td>7</td>
<td><strong>Professor Rui Krause</strong></td>
<td>Department of Chemistry</td>
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<td>8</td>
<td><strong>Professor Makaiko Chithambo</strong></td>
<td>Department of Physics and Electronics</td>
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<td><strong>Distinguished Professor Catriona Macleod</strong></td>
<td>Department of Psychology, Critical Studies in Sexualities and Reproduction Research Unit (CSSR)</td>
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<td>10</td>
<td><strong>Professor Oleg Smirnov</strong></td>
<td>Department of Physics and Electronics, Rhodes Centre for Radio Astronomy Techniques and Technologies (RAITT)</td>
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<td>11</td>
<td><strong>Professor Emmanuel Mgqwashi</strong></td>
<td>Department of Education</td>
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<td>12</td>
<td><strong>Distinguished Professor Martin Hill</strong></td>
<td>Department of Zoology and Entomology, Centre for Biological Control (CBC)</td>
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<td><strong>Associate Professor Adrienne Edkins</strong></td>
<td>Department of Biochemistry and Microbiology, Biomedical Biotechnology Research Unit (BioBRU)</td>
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<td>14</td>
<td><strong>Professor Marc Schaefer</strong></td>
<td>Department of Education, Mathematics Education</td>
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<td>15</td>
<td><strong>Professor Sioux McKenna</strong></td>
<td>Centre for Higher Education Research, Teaching and Learning (CHERTL)</td>
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<td><strong>Associate Professor Warren Potts</strong></td>
<td>Department of Ichthyology and Fisheries Studies</td>
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<td><strong>Associate Professor Ozlem Tastan Bishop</strong></td>
<td>Department of Biochemistry and Microbiology, Research Unit in Bioinformatics (RUBi)</td>
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<td>Department of Management</td>
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<td>21</td>
<td><strong>Distinguished Professor Christopher McQuaid</strong></td>
<td>Department of Zoology and Entomology, Coastal Research Group</td>
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<td>22</td>
<td><strong>Professor Enocent Msindo</strong></td>
<td>Department of History</td>
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<td><strong>Associate Professor Michael Drewett</strong></td>
<td>Department of Sociology and Industrial Sociology</td>
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<td>24</td>
<td><strong>Professor Monty J. Roodt</strong></td>
<td>Department of Sociology and Industrial Sociology</td>
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<td>Department of Computer Science</td>
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<td>27</td>
<td><strong>Professor William Froneman</strong></td>
<td>Department of Zoology and Entomology, Southern Ocean Group (SOG)</td>
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<td>28</td>
<td><strong>Professor Paul-Henri Bischoff</strong></td>
<td>Department of Political and International Studies</td>
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<td>29</td>
<td><strong>Professor Louise Vincent</strong></td>
<td>Department of Political and International Studies</td>
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<td>30</td>
<td><strong>Associate Professor Sam Naidu</strong></td>
<td>Department of Literary Studies in English</td>
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**Associate Professor Kenneth Ngcoza** Department of Education
PhD GRADUATIONS

PhD Graduates at the April 2019 Graduation Ceremonies

FACULTY OF COMMERCE
(3 PhDs)

DEGREE OF DOCTOR OF PHILOSOPHY

ASAH, Francis Tangwo, BSc [Buea], BComHons, MCom [Fort Hare], in Management, in the Department of Management. Degree by thesis. Thesis: An analysis of the availability of and access to credit from the formal financial sector and the performance of SMEs. Supervisor: Professor L Louw. Co-supervisor: Professor J M Williams.


FACULTY OF EDUCATION
(16 PhDs)

DEGREE OF DOCTOR OF PHILOSOPHY


BELL, Caroline Margaret, BScHons [UKZN], MSc [Rhodes], in Education, in the Department of Education. Degree by thesis. Thesis: Understanding the learning that occurs through up-skilling opportunities and practices in the marine sector of South Africa. Supervisor: Distinguished Professor H Lotz-Sisitka.


MUTHAMA, Evelyn Loko, MEd [UCT], in Education, in the Centre for Higher Education Research, Teaching and Learning.
Supervisor: Professor SM McKenna.

MYERS, Lyndriane Peta, PGDHE, MEd (Rhodes), in Education, in the Centre for Higher Education Research, Teaching and Learning. Degree by thesis. Thesis: A social realist account of constraints and enablements navigated by South African students during the four year professional accounting programme at Rhodes University, South Africa.
Supervisor: Professor J Vorster.
Co-supervisor: Ms J Reynolds.

Supervisor: Professor B Brown.

Supervisor: Professor EM Mgqwashu.

Supervisor: Distinguished Professor H Lotz-Sisitka.
Co-supervisors: Professor RB O’Donoghue and Professor A Wals (Wageningen University).

Supervisor: Dr CM Boughey.

FACULTY OF HUMANITIES
(28 PhDs)

DEGREE OF DOCTOR OF PHILOSOPHY

Supervisor: Professor E Msindo.

Supervisor: Dr AP Fluxman.

DE JONG, Michelle Shirley, MScSci (UKZN), in Journalism & Media Studies, in the School of Journalism and Media Studies. Degree by thesis. Thesis: From ‘cleanliness is next to Godliness’ to ‘without perfect health, there is nothing’: discourses of healthy lifestyle in the construction of young adult identities in urban South Africa.
Supervisor: Professor AJL Collins.

Supervisor: Distinguished Professor CI Macleod.

Supervisor: Dr L Spencer.

Supervisor: Professor R Simango.

Supervisor: Professor PK Mwepu.
Co-supervisor: Professor RH Kaschula.

Supervisor: Professor PK Mwepu.
Co-supervisor: Professor DK Wa Kabwe-Segai.


reconciliation and other stories: a critical multimodal investigation of representations of post-apartheid South Africa in children’s picturebooks.

Supervisor: Professor RD Adendorff.


Supervisor: Professor AJL Collins.


Supervisor: Professor CJ de Wet.

Co-supervisor: Professor R van Niekerk.

XABA, Mzingaye Brilliant, BSoSci (Fort Hare), MSoSci (Rhodes), in Sociology, in the Department of Sociology. Degree by thesis. Thesis: The impact of land restitution and resettlement in the Eastern Cape, South Africa: restoring dignity without strengthening livelihoods?

Supervisor: Professor J J Roedt.
ato, Seychelles.
Supervisor: Professor PD Cowley (SAIAB).
Co-supervisor: Dr R G von Brands (GOSF).

FERNANDEZ MUNIZ, Carlotta, BSc (Spain), in Marine Biology, in the Department of Zoology and Entomology. Degree by thesis. Thesis: Large scale spatio-temporal forcing of pelagial-coastal coupling: Disentangling the effects of environmental change on intertidal invertebrate recruitment.
Supervisor: Distinguished Professor CD McQuaid.
Co-supervisor: Dr N Weidberg (Arctic University, Norway).

FRIE SLAAR, Ib n e e m, MSc (UJ), in Computer Science. Degree by thesis. Thesis: Mitigate side channel analysis in the time domain.
Supervisor: Professor B VW Irwin.

GUSHA, Bukho, MScAgric (Fort Hare), in Environmental Science, in the Department of Environmental Science. Degree by thesis. Thesis: Livestock water productivity: towards improving rural livelihoods from livestock in semi-arid rangelands.
Supervisor: Dr AR Palmer.
Co-supervisor: Dr M Wendera (ARC).

Supervisor: Professor B VW Irwin.

KANKUZI, Charles Frienderson, BEd, MSc (Malawi), MSc (Rhodes), in Geology, in the Department of Geology. Degree by thesis. Thesis: Genetic characterisation of a range of geographically distinct Helicoverpa armigera nucleopolyhedrovirus (HearNPV) isolates and evaluation of biological activity against South African populations of the African bollworm, Helicoverpa armigera (Hübner) (Lepidoptera: Noctuidae).
Supervisor: Professor J Britton.
Co-supervisors: Distinguished Professor MP Hill and Dr S Moore (CRI).

KANGA ISALOMBOTO, Christian, BPharm (Kinshasa), MSc (Rhodes), in Microbiology, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Characterization of termite Trinervitermes trinervoides metagenome-derived glycoside hydrolases, the formulation of synergistic core enzyme sets for effective sweet sorghum and comcob saccharification, and their potential industrial applications.
Supervisor: Professor BL Pietschke.
Co-supervisor: Dr K Rashamuse (CSIR).

MANAGA, Muthumuni Elizabeth, MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Photophysical properties and photodynamic therapy activities of symmetrical and asymmetrical porphyrins embedded into Pluronic polymer micelles and non-linear optical properties of an asymmetrical phthalocyanine.
Supervisor: Distinguished Professor T Nyokong.

MSANE, Gugu Florence, BSc, PGCE (Gwaziland), MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Design and fabrication of components of dye sensitised solar cells.
Supervisor: Professor RWM Krause.

MTAM BANEGWE, Kudzai Tapianawashe Esau, MSc (Rhodes), in Microbiology, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: Nonlinear optical responses of targeted phthalocyanines when conjugated with nanomaterials or fabricated into polymer thin films.
Supervisor: Professor BI Pletschke.
Co-supervisor: Dr V Hübner (Lepidoptera: Noctuidae).

Supervisor: Professor RWM Krause.

NKANGA ISALOMBOTO, Christian, BPharm (Kinshasa), MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Nonlinear optical responses of targeted phthalocyanines when conjugated with nanomaterials or fabricated into polymer thin films.
Supervisor: Distinguished Professor T Nyokong.
Co-supervisor: Dr J Britton.

ODERINLO, Ogunyemi Olajide, MSc (Ibadan), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Synthesis, characterization and biological evaluation of novel anti-infective compounds bearing ferocene, arylypyrrole,
thiazolidinedione, quinoline and triazole moieties.
Supervisor: Dr SD Khanye.
Co-supervisor: Dr M Tukulula (UKZN).

Supervisor: Professor O Tastan Bishop.

**ROSS, Caroline Jane**, MSc (Rhodes), in Bioinformatics, in the Department of Biochemistry and Microbiology. Degree by thesis. Thesis: A computational analysis to decipher the pathways of stability, uncoating and antigenicity of human enterovirus capsids.
Supervisor: Professor O Tastan Bishop.
Co-supervisors: Professor C Atilgan (Sabanci) and Professor C Knox.

**SIGAUKE, Lester Takunda**, MSc (Rhodes), in Chemistry, in the Department of Chemistry. Degree by thesis. Thesis: Enumeration, conformation sampling and population of libraries of peptide macrocycles for the search of chemotherapeutic cardiac protection agents.
Supervisor: Professor KA Lobb.
Co-supervisor Dr SD Khanye.

Supervisor: Professor S Vetter.
Co-supervisors: Professor NP Barker (Pretoria) and Professor J Donaldson (SANBI).

Supervisor: Professor AL Edkins.
Co-supervisor: Dr E Hutchinson (Wits).

Supervisor: Professor KA Lobb.
Co-supervisor: Professor PT Kaye.

**UWAMAHORO, Jean Claude**, BScHons (UCT), MSc (Rhodes), in Physics, in the Department of Physics and Electronics. Degree by thesis. Thesis: Modelling storm-time TEC changes using linear and non-linear techniques.
Supervisor: Dr J B Habanulema (SANSA).

Supervisor: Professor NP Barker (Pretoria).
Co-supervisor: Professor M Cocks.

Supervisor: Professor CG Palmer.
Co-supervisor: Professor J O’Keeffe.

Supervisor: Professor WM Potts.
Co-supervisor: Dr A Childs.
POSTGRADUATE FUNDING

The Rhodes University Research Office is committed to increasing both the number of Postgraduate students at Rhodes University and the available Scholarships and Bursaries to support these Postgraduate students.

We are dedicated to ongoing fundraising, to managing these funding streams, and to administering all individual Postgraduate Scholarship and Bursary awards. Currently there are two hundred and seventeen (217) Postgraduate scholarship and bursary programmes; including internal university funded programmes and externally funded programmes. There has been good growth from one hundred and twenty-five (125) programmes in 2008 to two hundred and seventeen (217) programmes in 2018. Funding supports Honours, Masters and Doctoral students across all Faculties.

Some of the donor funded programmes include the Flanagan Scholarship for international study, Atlantic Philanthropies scholarships for Doctoral Study, Andrew W. Mellon Foundation Scholarships, Allan Gray Senior Scholarships, the Ada & Bertie Levenstein Bursaries, the David Ryan Scholarship, the Ruth First Scholarship and the Pearson Young Scholarships. The Ada & Bertie Levenstein Bursary programme funds approximately twenty-five (25) Postgraduate students annually. Substantial further funding for Postgraduate study is provided through the National Research Foundation (NRF), the Medical Research Council (MRC) and the Water Research Commission (WRC).
In 2008 the range of funding programmes supported 1,116 students with a total value of R24.3 million. In 2018, a total of 1,476 Postgraduate students were funded with a total value of R75.8 million, a 211% increase in total funding over the decade.

Over this period there has been growth in the number of awards to black and female students, some of this due to targeted funding such as Allan Gray, Mellon, Sasol and Atlantic Philanthropies. Of those funded in 2008, 78.5% were from designated groups, whilst 61% were female and 87% were RSA citizens. In 2018, the percentage of students from designated groups had risen to 88.5%, with 65% being female and 89% being South African.
Microorganisms can be deployed to treat some of the world’s most vexing health problems. Their enzymes are useful for everything from brewing beer to cleaning water. Professor Brett Pletschke of Rhodes University’s Department of Biochemistry and Microbiology is also convinced they could revive the economies of biodiversity-rich countries like ours.

Our long and interesting relationship with bacteria begins on the day we are born. As we pass through the birth canal, we are seeded with our own unique combinations of these microbes.

No matter how fierce our commitment to hygiene, there will always be at least 1 000 species of bacteria living in and on us. In sheer volume, they completely outnumber us. For every one cell of ours, there are ten cells of theirs.

This is mostly a good thing. If it were not so, we would hardly survive a single day.

Bacteria help us extract nutrition from food. They turn the nitrogen we inhale into the amino acids critical for life. They gang up on other harmful microbes we might breathe in or swallow. But they can also be our worst enemies.

Their effects on our lives range from helpful to benign to downright deadly.
The Power of Tiny

But as author Bill Bryson notes in his popular science book *A Short History of Nearly Everything*, “This is their planet and we are on it only because they allow us to be.” He adds that if every bit of biomass on the globe were added up, microbes would account for more than 80% of it. In a very real sense, we are completely outnumbered and at the mercy of an invisible life-force.

It is the workings of this tiny world that Professor Brett Pletschke stumbled across in his second year of Marine Biology at the University of Port Elizabeth (now Nelson Mandela University). He’d switched to Biochemistry to avoid his least favourite subject at the time, Statistics. (He now thoroughly enjoys it.)

In so doing, he discovered enzymes. It was like chancing upon the command and control console to Life, from single-celled bacteria right up to whales, trees, fungi and everything in between.

Professor Pletschke explains: “Enzymes perform a wide range of very important functions throughout Nature. They play a key role in harvesting energy from the sun via photosynthesis, perform a wide range of metabolic functions throughout every living cell in the bodies of plants and animals, and are in fact the catalysts of all biological processes constituting life on Earth.

“They are highly specific and efficient, guiding the biochemistry of life with great precision and fidelity. This fidelity is essential in the cells of living organisms,” he adds.

“The other reason I loved enzymes was because you could do experiments in the test tube and get an immediate reaction. I liked that!”

He was awarded his PhD in Biochemistry from the then UPE in the fields of enzymology and protein chemistry. After doing Postdoctoral research in chemical pathology and molecular biology at the University of Cape Town, he joined Rhodes University in 2000 as a Research Lecturer.

Enzyme Energy

Right from the beginning, what fascinated Professor Pletschke most is that enzymes, which are forms of protein molecules, can be controlled, and their actions directed in all kinds of ways.

Extracted from various microorganisms, they are used to brew beer, make cheese, bleach paper, and add extra cleaning power to detergents. Their transformative energy has endeared them to advertising agencies, who often use taglines like “Now with Added Enzymes” to attract buyers.

Microorganisms and their enzymes are particularly useful in the cleaning up of polluted environments, a process known as bioremediation. They can render sewage sludge and acid mine drainage largely harmless. There is even a radiation-resistant bacterium, *Deinococcus radiodurans*, that is engineered to treat radioactive waste, says Professor Pletschke.

“They constantly surprise us with their remarkable adaptability in extreme conditions. As more recalcitrant chemical toxins enter the environment, microorganisms and the enzymes they possess find new ways to break down harsh chemical pollutants into non-toxic elements for their own survival. This in turn has benefits for us.”

Biodiversity and the Rise of the Global South

Historically, it has been the ‘Global North’ that has accumulated wealth and world domination, largely driven by control over fossil fuels which provide the ‘platform chemicals’ used for all kinds of modern products, including plastics.

But biotechnology, and more specifically the bio-economy, can switch the balance of power towards the more biodiversity-rich countries of the ‘Global South’.

With the help of certain enzymes, says Professor Pletschke, platform chemicals can also be created from agricultural waste or plants. These can then feed into a number of industrial applications, including degradable plastics, biofuels and nutraceuticals.

“A more environmentally benign bio-economy can level out the unequal balance between developed and less developed countries.”
Some of the most useful microorganisms, plants and their enzymes are found in very unusual places, making preservation of biomes and continued scientific research all the more important.

“Government is doing its thing in terms of making science more accountable in the short term (three to five years), but very often governments and the community don’t realise what science has to offer over the long term.”

Professor Pletschke mentions the ongoing habitat destruction and runaway fires in the Amazon rainforest and the Indonesian jungle as an example.

“This is where we sometimes fail as scientists. If biodiversity scientists pointed out the value of keeping ecosystems intact instead of - in the case of rainforests - burning them to increase palm oil plantations, soya beans or livestock rangelands, we could protect biodiversity instead of destroying it.

“You start giving value to the natural resources, and also to traditional knowledge.”

Coffee, Aloe, Prebiotics and Animal Feed

“When it comes to microorganisms, there are good guys and bad guys,” Professor Pletschke explains.

Our intestines are home to at least 400 to 1,000 species of bacteria. What we eat determines which ones flourish.

The benign or beneficial ones, referred to as probiotics, help our digestion and general well-being. They thrive on certain types of dietary fibre (roughage) found in fruits, vegetables, nuts and seeds. These are also known as prebiotics.

By contrast, the bad or pathogenic bacteria can cause all kinds of health problems, from cancer to irritable bowels, increased weight to depression. They are stimulated by diets high in simple carbohydrates and trans-fats. Junk foods and sugary drinks send the numbers of these pathogenic bacteria soaring.

One of the three programmes for which Professor Pletschke received the Vice-Chancellor’s Distinguished Senior Research Award for 2018 uses enzymes to address these gut health issues.

“We extract manno-oligosaccharides (MOS) from used coffee grounds and Aloe arborescens, a succulent plant that grows along the eastern rim of South Africa. MOS allows the good bacteria in our guts to flourish and out-compete the bad bacteria,” he explains.

The second programme using enzymes provides direct benefits to emerging farmers who are struggling to find grazing for their livestock.

“Subsistence farmers generally cannot afford animal feeds that are available from agricultural co-ops. Instead they mostly have mealies, wheat stems and soybean byproducts.

“The problem is that this feed is enwrapped or enveloped in a husk and the animals don’t have the enzymes to digest the non-starch polysaccharides properly.

“With funding from the Department of Science and Technology, and the Technology Innovation Agency, we have developed and patented a unique combination of enzymes in exactly the right ratio to punch holes in those husks. The animals get greater access to the nutrients, and studies show that they grow faster.”

Seaweeds vs Cancer, Diabetes, Obesity

Professor Pletschke’s third award-winning programme has enormous potential to combat some of the world’s most vexing health issues.

“It involves seaweed, which brings me back to my original love of marine biology. Certain kinds of seaweeds, the brown ones growing in inter-tidal zones, have compounds called fucoidans that protect them against harmful ultraviolet rays from sunlight. They also prevent the seaweeds, which are basically macro-algae, from drying out when exposed.

“Those fucoidans have very useful properties for human health. They powerfully inhibit enzymes that have harmful effects. In essence they are anti-cancer (we have specifically tested them against the breast cancer cell line HCC70), anti-diabetic, anti-obesity and anti-viral.”

This has global implications, considering there are more than 2.1 billion people in the world considered obese, says Professor Pletschke. There are 422 million people living with diabetes, 100 million with cancer and nearly 37 million with HIV/AIDS.
All could benefit from these fucoxidans, harvested from *Macroscyjis pyrifera* and *Ecklonia maxima* off South Africa's coastline.

“The idea is to create a range of bio-products, including the MOS from the aloe and the spent coffee grounds, the seaweed enzyme inhibitor and the animal feed enhancer, to spur on the bio-economy and create jobs within a sustainable, environmentally-friendly production space.”

**Right Time, Right Place**

Professor Pletschke considers himself blessed.

“I've taken my love for enzymes and I've managed to show their relevance. What I like about enzyme biotechnology is that it's immediate. I can see the seaweed emerging as an anti-obesity agent very soon. 

“I like the fact that we’re working on something you can discuss at a dinner table.”

He mentions that his wife, Professor Carminita Frost, also works in the field of Biochemistry. She is involved in equally exciting projects at NMU, including the use of medicinal plants and cannabinoids for treating metabolic diseases.

While there are some “dodgy characters out there”, Professor Pletschke says there is growing interest from Government and funders wanting to invest in biotechnology that can make a real difference.

“It’s essential we establish a value pipeline between academia and industry.”

He also counts himself lucky in the quality of the Postgraduate students who are working with him on various aspects of the three programmes.

“I've currently got five PhDs, five Masters’, two Postdocs and an Honours students. I'm very proud of them and the vast majority of my past students who have not only performed well at research institutions and in academia, but who have also made a significant impact in governmental and research funding agencies.

“These include the Department of Science and Technology (DST), the National Research Foundation (NRF) and Sociology and Industrial Sociology. They continue to contribute to policy formulation to establish a more equitable and sustainable, environmentally-friendly and better world.”

**Julienne du Toit**
Engaged Citizens, Responsive Government

Associate Professor Caroline Khene of Rhodes University's Information Systems Department is plugged into the potential benefits that mobile technology can offer connected communities. She has received the 2018 Vice-Chancellor's Distinguished Research Award for her studies examining the opportunities and complexities that arise in bringing citizens and government together via digital platforms.

In the Hamilton Building at the Rhodes campus, the walls of Professor Caroline Khene's office are devoted in equal parts to academic books, year planners and the art of her three young children.

Khene was born in Uganda, but spent almost all her school years in Harare, Zimbabwe, matriculating with A-Levels before heading to Rhodes University for her undergraduate degree.

Technology and Poverty

It was a tech-besotted older brother who convinced her she should get into the Information and Communication Technology (ICT) field. But an altogether more human condition had touched her long before, as a child - the sight of beggars in some of the streets of Harare.
"I remember asking my parents: What can we do about them?"

That was followed much later by the shock of seeing hundreds of shacks on entering Grahamstown, now Makhanda, by Greyhound bus when she came to start her undergraduate studies at Rhodes.

"I had never seen so much poverty. I wondered what could be done to help. What dots could be connected to address the problem?"

It was this burning question that led to Professor Khene basing her Postgraduate work on issues around ICT for Development (ICT4D).

Her PhD studies focussed on an evaluation framework for rural information and communication technology centred around the Siyakhula Living Lab project near Dwesa, along the Eastern Cape's Wild Coast.

Siyakhula, launched in 2006 and involving Fort Hare and Rhodes Universities, provided connectivity and communication-based services to 20 000 children and adults in a very impoverished area.

'The Smoke that Calls'

Later, her focus on ICT for Development led to Professor Khene's involvement with MobiSAM, a Mobile Social Accountability Monitoring platform.

First, some background:

"In many rural areas, up to 80% of the population own a mobile phone. Studies in South Africa show that access to smartphone technology has nearly doubled between 2016 and 2018," says Professor Khene.

This has coincided with another, more negative dynamic. In June 2019, South Africa's Auditor-General Kimi Makwetu reported that only 18 municipalities out of 257 had received clean audits in the 2017-2018 financial year. This financial mismanagement has resulted in wholesale weakening of government service delivery - specifically water and electricity supply, road repairs and waste removal.

Since 2004, service delivery protests have increased dramatically across the country, along with the destruction of infrastructure.

"I heard of a report that referred to this as 'the smoke that calls'."

In her study titled: Building Foundations before Technology: An Operation Model for Digital Citizen Engagement in Resource Constrained Contexts, Professor Khene and co-authors Dr Hannah Thinyane and Mwazvita Machiri point out:

"South African citizens do not have a voice that is heard, nor taken seriously, especially at local government level... Citizens have now become despondent, living in conditions that infringe on their human and civic rights... with the existence of corruption and political influence, there is a sense of helplessness."

Smartphones and Accountability

It was service delivery, or the lack of it in Grahamstown, that led to the creation of MobiSAM.

In 2012, Professor Khene's colleague Dr Hannah Thinyane (now at United Nations University in Macao) and her friend Debbie Coulson were about to bathe their children one evening. When Coulson opened the taps, the water that emerged was brown and filthy. Professor Khene recounts that Thinyane and Coulson, of the Public Service Accountability Monitor (PSAM), immediately began discussing how their knowledge could be used to help government address issues like this. Was there a tool that could alert authorities and monitor response?

Out of this discussion emerged the first version of the smartphone application called MobiSAM, funded in part by the Ford Foundation.

Citizens of Makana Municipality embraced it, but the local government itself did not.

"They saw it in an adversarial light, as possibly exposing their failings. It was a technical approach to dealing with governance, but there were many social issues surrounding it."

One of those issues was the ownership of MobiSAM.

"If government owned it, they could control access and transparency. If civil society owned it, government might reject it because it was being used against them. Ideally there should be a Switzerland, a neutral referee, to own and run it."

MobiSAM's phase 1.0 (from 2012 to 2015) had revealed a complete lack of responsiveness from local
government. Not coincidentally, Grahamstown began to appear constantly in the national news over this time because of the municipality’s financial mismanagement and service delivery collapse.

The entire country heard from the city’s despairing residents about sewage, garbage, potholes and donkeys in the streets along with decaying infrastructure, regular water outages and non-payment of debt to Eskom. In 2014, the municipality was placed under administration by the national government.

But precisely because of continuing local government malfunction, the MobiSAM project had great potential. Professor Khene points out similar mobile apps where digital citizens successfully engage with local government: an information-sourcing app in Kenya called Ushahidi, and FixMyStreet in the United Kingdom, which residents use to report on broken pipes or potholes.

**MobiSAM 2.0**

Professor Khene became involved as co-director of MobiSAM 2.0 in May 2016, along with Dr Hannah Thinyane. Financial support came from the “Making All Voices Count” global initiative, jointly funded by USAID, SIDA, UKAID and Omidyar.

“One of the successful adaptations was a report-ticketing system. Citizens open a ticket; the problem is directed to the right department, and when the problem is sorted out, the citizen closes the ticket. This can be opened again if the problem re-occurs. The ticketing system helps residents and government track the progress of service delivery complaints. MobiSAM has evolved to become a two-way conversation between residents and the municipality, as noted on its website www.mobisam.net.

The project is finally gaining traction with some parts of the municipality, in particular for fixing water leakage and broken pipes. Champions within the local government have helped it gain a certain degree of acceptance, notes Professor Khene.

“Another advantage is that it is transparent. Its accuracy means information can be used for evidence-based social accountability.”
Truth and Evidence

Professor Khene is currently supervising PhD candidate Gugulethu Baduza’s study on the scalability of similar projects.

“That is the golden thread - how a project can be scaled up or down and adapted. It is important to be as holistic as possible, to build capacity among all parties and to evaluate constantly.”

The lessons from MobiSAM in the Makana Municipality are being used in a Transforming Lives project (launched in 2018) in six Southern African countries.

“Baseline studies are showing that 60% of adolescents and youths are sexually active in sub-Saharan Africa. There’s a lot of stigma and cultural issues involved in providing access to HIV information among adolescent youth. Because of their ages, they are told to come with a parent, which complicates things. If they do not want their parents to know, they cannot access condoms or counseling. The problem is that this could reignite the spread of HIV-AIDS and governments would not see it coming.”

“Through a mobile app called MobiSAF AIDS, (available on the Android Playstore), youngsters can report anonymously and the truth can emerge.”

MobiSAM’s successes have attracted attention from national government. Its collaborators have been invited to give technical advice and policy recommendations to VulekaMali, a web portal that reveals how Government allocates funding. Amatola Water has also expressed interest in MobiSAM.

The Human Interface

Information and communication technology holds many potential benefits for developing communities, says Professor Khene. “Mobile banking apps like Mpesa and E-wallet have made a big difference in areas without ATM’s. E-learning is another promising application.”

“But technology, no matter how beautiful, is only one of many tools. It is not the only solution and sometimes comes with unintended consequences. Technology must always interface with humans, and where there are problems, it’s often for that reason.”

“Sometimes you encounter technophobia or the opposite, what I call Pilotitis. There’s all kinds of excitement about some new technology, but people don’t know how to use it. Government might decide all teachers must have laptops and children must have tablets. But if there is no support in integrating it properly - and issues might be as simple as a lack of access to mobile data or even electricity - then it fails, and ends up in a storeroom covered in dust.”

Digital citizen engagement can be a game changer where residents can play a more effective role in service delivery decisions in their local government and hold officials accountable. But it needs careful guidance and constant monitoring, Professor Khene points out.

“My vision? An engaged citizenry, and a responsive government.”

Julienne du Toit
For anyone with an interest in South Africa’s recent history, knowing about the experiences and challenges of female anti-apartheid liberation fighters at home and abroad during the struggle years and in the current aftermath, is critical.

Dr Siphokazi Magadla's interest in the concept of women, peace and security goes back more than a decade in her accomplished academic career.

A Senior Lecturer in the Political and International Studies department at Rhodes University, Dr Magadla completed her PhD on the lives of a large cross-section of South African woman combatants in post-apartheid South Africa.

She is the recipient of the 2018 Distinguished Teaching Award, for academics with fewer than 10 years’ experience of teaching in higher education.

A former research consultant with the Institute for Security Studies (ISS) in Pretoria, Dr Magadla is also a Fulbright Scholar who holds a Masters Degree in International Affairs from Ohio University, USA.

While with the ISS in 2008, her first field trip was to Rwanda to interview women’s organisations that had been established after the period of genocide which began in the mid-1990s.
And although she studied the global view of women and their roles in wartime and afterwards, her focus has honed in on Africa and, in particular, South Africa.

In 2018 Dr Magadla was appointed by President Cyril Ramaphosa as the youngest member of a high-level review panel into the workings of the State Security Agency (SSA). The panel’s findings were far-reaching and later described in the media as “explosive”.

A Father in Uniform

Dr Magadla grew up in her rural home in Ludaka, Ngqeleni, with her paternal grandmother. She moved with her parents to Thabo Mbeki Township (popularly known as Megacom) in Libode in 1990, where her family still lives.

Her father was initially a member of the Transkei Defence Force and then integrated into the South African National Defence Force.

“He took ‘early retirement’ in 1996, what I now understand as the rationalisation project that was headed by then Minister of Defence, Joe Modise,” she says.

“At the time, I was merely 10 years old. His transition to civilian life had a profound impact on our family life, and I have vivid memories of him whistling in the morning while polishing his shoes in full military uniform.”

“My curiosity was also compounded by the fact that my mother, who is a psychiatric nurse, used to come home with dramatic stories about the recently retired soldiers in her ward, who were suffering with mental illness following their demobilisation.”

“So, while the public image of the soldier is that of control, I grew up with an alternative archive of images of former soldiers who were overwhelmed by the realities of everyday life.”

An Under-Studied Field

March 21, 1960, was the date of the infamous Sharpeville Massacre during which sixty-nine (69) Pass Law protestors were shot dead by police. This tragedy and the events that were to unfold heralded the beginning of 30 years’ armed struggle against the apartheid regime.

“Those three decades thrust women into the centre of the all-encompassing transnational anti-apartheid battlefront,” Dr Magadla says. “The study examines the lives of woman combatants during and in the aftermath of this period.”

Previous research has been done on the various guerrilla groups including Mkhonto we Sizwe (MK) and Azanian People’s Liberation Army (APLA) that were trained outside South Africa - the male soldiers in particular.

“The privileging of the externally trained combatants has overshadowed the contributions of those who fought inside the country, the majority of whom were women,” says Dr Magadla in her thesis.

Women at Home

“But in spite of the international posture of the armed struggle, it was a domestic struggle in which women formed the basis of the domestic front in ways that became obscured by the military integration process that operated parallel to the political negotiations between the National Party government and the liberation movements at the end of the war.”

In a section of her thesis entitled Guerrilla Girls, Combative Mothers and the In-Betweeners, Dr Magadla discusses the differences between the “transnationally trained guerilla fighter”, the older women who remained in South Africa and confronted the state at home and the younger township women who fought in, for example, the various self-defence units during what has come to be known as ‘The People’s War’.

“The majority of women remained inside South Africa as the armed confrontation with the state reached its limits in the 1980s,” she writes.

“The older women, the ‘combative mothers’, thrust into this battlefield, provided protection for their children, who were being hunted by the state in their homes, schools, churches and at funerals.”

No Benefits

“The popular depiction of the revolutionary mother with the gun/spear, and the baby on her back, reveals the empirical reality of the majority of the women who were combatants of the People’s War.”
“Yet, these women are written out of the dominant narrative of the armed struggle and excluded from the material and symbolic benefits that are afforded other former internationally trained combatants in post-apartheid South Africa.”

Most of the women who left South Africa and joined MK were young and unattached, Dr Magadla reveals.

“In the context of guerrilla war, homes of women became sites of both struggle and retreat as they formed the barrier between the state and their children. These women would not define themselves as combatants, although the ‘young lions’ they protected would describe themselves as combatants of the People’s War.

“Without their participation, it is difficult to imagine that their children would have been successful in confronting the state. In the eyes of their own children, the mothers are seen as fellow combatants.”

Former combatants arriving back in South Africa underwent demobilisation and received various forms of veterans’ compensation. The majority of the internally-based combatants have received no forms of compensation from the state.

“These women have had to reinvent themselves for the post-apartheid reality, economically, socially, politically and psychologically,” says Dr Magadla.

“A section in this thesis also examines the different ways in which women are navigating civilian life, and how they deal with the enduring memories and wounds of the past.”

The Interviews

During the course of her research, Dr Magadla conducted extensive interviews with 38 women, chosen from the ranks of MK (18), APLA (7), the Amabutho Self-Defence Unit in Port Elizabeth (11), one Pretoria-based SDU veteran and one person from the Department of Military Veterans.

She has added more interviews to this sample as she is currently revising the thesis into a book. Among the people she has interviewed, in 2018 she interviewed retired General Siphiwe Nyanda, the former chief of the South African National Defence Force and former minister of communications, and retired Major Jackie Sedibe, who was the highest ranked woman in the defence force after the integration of the SANDF and the head of the Equal Opportunities Chief Directorate; as well Mr Tsepe Motumi, the first Director General of the Department of Military Veterans and current Special Advisor to the Minister of Defence and Military Veterans, Nosiviwe Mapisa-Nqakula.

“In terms of my own personal transformation during this manner of fieldwork, it became a ritual that I would take a shower after each of the interviews I faced,” she says.

“When I think about it now, it was my own attempt at cleansing myself of the heaviness of the lives I was made witness to in these encounters.”

Even though the content of the interviews was difficult, I felt a profound gratitude as a black woman to sit in the homes and offices of women who told me about their world and the choices that context allowed them to make while under siege.”

Survival Mechanisms

She quotes from a keynote address made by Dr Nthabiseng Motsemme, Academic Director of the National Institute for the Humanities and Social Sciences made at the 2018 African Feminisms conference titled The Mute Always Speak:

“For example, gunshots and running footsteps just outside one’s yard would awaken households in the quiet of the night. However, when families woke up in the morning, it was life as usual - porridge to be prepared for breakfast; uniforms to be ironed; baths to be timed; and other last-minute preparations for school and work.

“There might be a vague, or more commonly not a single utterance about what everyone had witnessed and heard during the night. This silence, which women’s narratives echo, is one which attempts to compensate for the loss of innocence for children who lived in a violent everyday in which women had, and continue to have, little power to change.”
Panel on State Security
Dr Sipho Magadla was appointed to the Security Sector panel (chaired by former Safety and Security Minister Dr Sydney Mufamadi) last year. Although Dr Magadla was discreet in discussing her work on the panel, the group’s report was released in the public realm.

On March 11 this year, The Daily Maverick said:
“The high-level review panel report on the State Security Agency’s (SSA) illicit activities during the Zuma years is awash with examples of politically-motivated operations, corruption and the spy agency’s general disregard for the rule of law. The report could serve as a useful manual to help rescue the SSA from the swamp of abuse and malfeasance it had been dragged into by Zuma and Co.

“But this document should by no means be the final say on this grave matter, and President Cyril Ramaphosa’s inevitable battle with the spooks is bound to get nasty.”

Media 24 reported the next day:
“According to explosive findings by the high-level review panel into the SSA, Zuma breached the Constitution, irregularly made changes to the previous intelligence structures and was directly responsible for executive interference in the workings of the agency.

“He is also responsible for the ‘extremely serious politicisation and factionalisation’ of the SSA, while the agency’s neglect to act on warnings about the Guptas and state capture ‘has cost the country dearly’.”

Dr Magadla sums up her work on the panel:
“It was the most intense six-month period of my career.”

Chris Marais
The Teacher

A sampling of the many students Dr Siphokazi Magadla has taught would include:

- **Sindi Ngaba** is the 2019 - 2020 recipient of the Social Science Research Council's Next Generation Social Sciences in Africa Fellows. Her PhD study will shed light on Ruth Mompati as a leader and her ideas. She was one of the first members of the ANC to be trained in the Soviet Union in 1962, a long standing member of ANC National Executive Council, and one of the principal organisers of the 1956 Women’s March.

- **Simamkele Dlakavu** is currently developing a proposal on the One in Nine Campaign: Feminist Organising Against Sexual Violence in Democratic South Africa. The One in Nine Campaign was founded in support of Fezeka Kuzwayo (known as Kwezi), who accused Jacob Zuma of rape in 2006. Dlakavu is a known feminist activist and Fallist, who did her undergraduate and Masters degrees at the University of the Witwatersrand (Wits). She was one of the four women who staged a protest in front of Zuma during the announce-ment of the 2016 municipal election results, to mark 10 years of the Zuma rape trial.

- **Sisasenkosi Mataruse** hopes to finish her Masters thesis on Joice Mujuru (the first woman Deputy President in Zimbabwe) and women in political parties in independent Zimbabwe.

- **Londiwe Mntambo** is looking at transitions of Zulu girlhood to woman through the ritual, Umemulo. She is examining the assumed tensions between women’s access to and participation in cultural rituals that are meant to shape the behaviour of girls and would-be women, and women’s individual autonomy in a democratic order.

- **Lihle Ngcobozi** has written and commented about her 2017 thesis study on Methodist Manyano women, womanhood and motherhood in democratic South Africa.

- **Christopher Morris** is preparing to do fieldwork for his Masters thesis research on the Violence Work of Gangs in Westbury, Johannesburg. Much of gang discourse in South Africa is focused on gang violence in Cape Town. The killing of Heather Peterson last year gave rise to some of the biggest and most sustained protests against gang violence in Johannesburg. Morris examines the impact of gangs in Westbury as work of violence that shapes gendered personhood that makes and ruptures social life in Westbury.

- **Gcotyelwa J imlongo** is looking at the citizenship of Xhosa widows after the mourning period. J imlongo is the 2018 recipient of the South African Association of Political Studies ‘Best Honours Essay’ Award for her paper titled: “When women have reached the end of their politics: Nakedness as Resistance”.

Reptile Detectives

At the top of Rhodes University’s Life Sciences Building is a laboratory that would have completely astounded the father of modern taxonomy, Carolus Linnaeus.

When Swedish naturalist Linnaeus began bringing systems and order to the classification of animals and plants roughly 280 years ago, there was only one tool available: careful observation and description of species.

By the time he died in 1778 his great book Systema Naturae was 2 300 pages long, spread over three volumes, giving succinctly descriptive Latin names to over 13 000 organisms.

Taxonomy has variously been described as a science, an art, and a battleground. Disagreements over classifications among scientists are legendary and bitter. They can and have raged for years.

Complicating things immeasurably is the fact that members of identical species can look quite different. The domestic dog is perhaps the most vivid example, ranging in size and appearance from the tiny Yorkshire Terrier to the gigantic Irish Wolfhound.

The converse is also true. Members of completely different species can look exactly the same.

“There are thirty different species of lizards around the world, from seven different families, that all have black and yellow striped bodies...”
Taxonomy and Taxidermy

Adjoining her office is the laboratory that Linnaeus would so have envied - where this kind of conundrum can be sorted out through genetic analysis of DNA.

Most of the work here is being done on reptiles. Back in the days of Linnaeus, this would have entailed studying actual samples of these animals, usually stuffed to preserve their appearance.

And that in turn relied on explorers such as Francois Levaillant, William John Burchell and Joseph Banks who would go on expeditions around the world to bring back samples. These collections had immense value to natural history museums.

When Francois Levaillant set off on his expeditions around South Africa in 1781, he was considered one of the best taxidermists in the world, thanks in part to his secret recipe of arsenic soap that made a dramatic difference in preserving specimens for longer, including their sheen and colouration. Some of his stuffed birds are still in the archives of French museums today.

Later on, natural history museum curators would set out and acquire specimens themselves. For centuries, the job entailed a certain handiness with rifles, an unflinching devotion to stuffing and mounting animals, and a gift for arranging these in helpful dioramas that gave visitors an idea of their habitat and behaviour.

It was those highly prized specimens that helped taxonomists define the often-disputed boundaries between species.

The Species Sleuths

These days Dr Edwards and Doctoral candidate Chad Keates analyse genetic samples in the Zoology and Entomology Molecular Laboratory (ZEML) from a tiny piece of tail - the lizard or snake escapes with its life - or a liver sample harvested from an animal caught for science.

They both had unlikely beginnings as reptile species sleuths. When Dr Edwards began her BSc at Stellenbosch University her ambition was to become a conservation veterinarian. It was only while doing her PhD on the genetics of Lacertid lizards that her direction changed irrevocably.

“I fell in love with reptiles, anything scaly and awesome - they've become the highlight of my career thus far. I realise that every biologist feels their study species is top notch, but the fact that these lizards seem to be so good at adapting to their environments truly fascinates me.”

It was when Dr Edwards began supervising Chad Keates’ doctoral studies on Psammophiinae (grass, sand and whip snakes) that the world of serpents began to intrigue her too. This sub-family of snakes is mildly venomous and as Keates describes them, “slender, gorgeous and lightning quick”.

Keates never envisaged a career path in science. While at school, he was an average learner.

“I remember very clearly the day the deputy headmaster told me I lacked the academic capabilities to pass high school science.”

He stubbornly persisted though, studied journalism at Rhodes for his undergraduate degree and then switched to Zoology for his Honours. He excelled, graduating with distinction.

“That's when I became really mad about snakes.”

Keates began his Masters by studying the phylogenetics of the spotted skaapsteker snake (Psammophylax). Halfway through, his studies were upgraded to PhD, expanding to include the Psammophiinae.

Evolution and Speciation

“This country's snakes are very under-studied,” says Keates. “Just last year we found a new snake species. There might even be a new family of frogs coming out of this lab. South Africa is the most sampled place in Africa. Southern Africa is home to around 660 species of reptiles, with approximately 165 species of snakes. Yet we're still finding new ones.
“We are all working on genetics, because there is no point in studying an animal if you don’t know what it is yet. Taxonomy first, then ecology.”

Dr Edwards explains: “We’re interested in how something became a species, the driving factors or speciation events that led to one group becoming different enough to be a new species. A speciation event, although it sounds like quite a sudden thing, is usually millions of years in the making. These are environmental or habitat changes, some kind of geological event, a mountain being pushed up, the course of a river changing, something that splits populations so that they stop interbreeding and evolve separately.

“Africa is a fantastic continent to be studying this simply because evolution was not interrupted by any glaciation processes during the last Ice Age. It has just undergone changes in rainfall and elevation. Over millions of years, half of Africa was pushed up by the magma in the mantle underneath the Earth and this uprising led to a change in the rainfall patterns and the reason why we have savannah.

“The rising of the Drakensberg range now intercepts the rain-bearing clouds that used to bring moisture to the Karoo, once an inland sea. Since the mountains have contributed to the drying out of the whole Karoo basin, species have responded in various ways.

“If we look back five million years ago and see what has happened, we can possibly predict which species will survive climate change. Perhaps a population will contract, or expand.”

Hadeda ibises, once limited to forests and wetlands, are now widespread throughout South Africa. Dr Edwards points out. Vervet monkeys have also expanded their populations along dry and wet rivercourses through the Karoo. Another area of Dr Edwards’ studies includes the spread of the house gecko (Hemidactylus mabouia) in the Eastern Cape province.

“What we find could help conservation efforts, giving baseline information that safeguards vulnerable species.”
Pressure and Change

“We’re trying to see signals of changes in the genetics of various reptile species. So we do single species genetics and look at their evolution and the times that they split and then do another species, another and another - we use multiple lines of evidence to look into the past and we can then start to try to predict how species are going to possibly survive climate change in the future.”

If conditions are constant, a species could remain the same for millions of years, adds Keates.

“But if there is pressure, the rapidity of the change depends on its generation times - how many times a year it reproduces. So if you’ve got something like an insect that can reproduce in a week, with 52 generations in a year, it can evolve quickly.

“But if you have a tortoise, say, that lives for 150 years, and produces an egg every two years, it will take some time for that species to change. Those with mutations that give an advantage for survival are the ones that will carry on.”

In reptiles, habitat change has forced speciation, which often begins with morphology (appearance).

Dr Edwards brings up two images of South African chameleons on her computer screen.

“Genetically, these are very nearly identical. But this one lives in forested areas, has that bony crest on its head, and is brightly coloured. It’s much bigger than this one that lives in open fynbos areas, has dull colours and a small head with no crest. They’ve adapted to the habitat they’re in, which is why there are these morphological differences. Theoretically, if they become physically separated, they would stop interbreeding and become completely separate species one day.”

Snakes and Lizards

In fact, Dr Edwards points out, snakes evolved from lizards millions of years ago. They began to burrow because something must have changed in their habitat. Limbs became a hindrance, and eyes were superfluous in the dark.

“These resulted in the primitive blind snakes.”

Even so, the ancient snakes retain the vestiges of limbs, including the pelvic girdle. Keates picks out a specimen from a box he brought in. It looks like a giant millipede without the feet.

“You can barely tell the back from the end. But the tail does have a sharp spine it uses for self-defence.”

The more recently evolved snakes, he explains, include the boomslang, which has huge eyes and dangerous venom.

“So snakes are just glorified lizards.”

Threats, Pets and Roads

One of the biggest threats to reptile populations is the pet trade. Lizards and snakes are in huge demand, especially the rare, charismatic and endemic ones with tiny distribution ranges like the Albany Adder, the Plain Mountain Adder, the Sungazer lizard and many kinds of tortoises.

Keates says he is contacted by people all the time, wanting to know where he found this or that species.

“Collectors have offered me money. They’ll follow people like me on Facebook or Instagram, and try to find out where the photos were taken. I take the geo-tags off my photographs before I post them on my website www.nextgenherpetologist.co.za.

“If you look at YouTube videos on the pet trade, you’ll see warehouses of people with tortoises in boxes so small they can’t move.

“But the problem generally isn’t with the reptiles you see, it’s the ones you don’t. It’s the rare, illegal to trade ones that sell for a fortune on the black market. They end up far from home, kept in secret enclosures, their valuable genes lost to nature.

“But habitat destruction and roads are even more of a threat. Hundreds die on the roads of South Africa every day.”

Horny Devils and Technicolour Warfare

Both Edwards and Keates marvel at the ingenuity and variety among reptiles.

There are swimming lizards (iguanas) in the Galapagos, an Australian lizard called the Horny Devil that can shoot blood from its eyes, and South Africa’s own flat
lizards that fight with competitors by flashing their technicolour stomachs at one another. Koggelmanders meanwhile, show their fitness to mate by turning their heads bright blue and doing press ups.

It’s not always habitat that determines changes in species. Dr Edwards explains:

“Those 30 different lizard species that all have striped bodies and blue tails have all found the same solution to an ecological problem - in this case predation.

“In nature, blue is a strange colour, but seems to be quite attractive to certain birds and mammals. So if you have a lizard with the ability to break off its tail and leave it wiggling behind it, then the predator is distracted and that will give the lizard an advantage. The stripes are also a way to confuse the predator. It is disruptive colouration. While the lizard is running, the predator cannot focus properly on it. Zebras use the same trick.”

Keates shares his passion for reptiles in outreach, taking snakes and lizards to schoolchildren and interested groups. He also offers demonstrations and ‘critter walks’ as well as a snake removal service.

When not working on his thesis, side projects or environmental awareness, he roams the country “in search of weird and wonderful reptiles and amphibians. I’ve photographed all the species I’ve encountered and uploaded them to my website so that others can enjoy Southern Africa’s amazing diversity.”

But he also loves being in the laboratory.

For Keates, the dusty traditions of taxonomy have acquired a whole new glamour through the research coming from the Zoology and Entomology Molecular Laboratory.

“Dr Edwards has elevated five new slug-eating snakes to species level. We’ve got two new grass snakes from Tanzania. A new pygmy toad from Angola. A whole new gecko genus from Angola too, plus a new skink from Mozambique. There are lots of cool things happening in this lab,” says Keates.

“It’s like CSI, except with reptiles.”

Julienne du Toit
Long Walk to the Lab

Farm-raised Dr Setshaba David Khanye, Head of Pharmaceutical Chemistry at Rhodes University’s Faculty of Pharmacy, grew up poor, tough and focussed. His protégé, Mziyanda Mbaba, shares his values, his love of books and a life of adventure in the laboratory.

Setshaba David Khanye’s first day of school was at the ripe old age of eleven - but there was a very good reason for his academic late-coming.

His grandfather worked for a farmer near Memel, a small town in the eastern Free State. His mother was a live-in housekeeper in town and so David and his younger brother Yatiso grew up on the farm with his grandparents.

The nearest available school was on another farm more than eight kilometres away, a long walk for a little barefoot boy.

The Farm School Years

“So I was kept at home until the age of 11, to be strong enough to walk 16 kilometres to school and back every day,” he says.

Yatiso, three years younger, was supposed to be held back for the same reasons, but he kicked up such a fuss that he was allowed to start school in the same year as his elder brother.
The 30-odd children took their lessons from one teacher in a two-room barn, from Grade One (Sub A) to Grade Four. And although the treks to school and back were often daunting, the brothers saw them as social occasions to bond with the other youngsters on neighbouring farms.

Then life turned. Their grandfather died and the farmer made them an offer: the family was allowed to stay on the farm with regular salary and food rations on condition that the older boy laboured for him.

“Before his passing, my grandfather had bought a site at Zamani township in Memel and my late grandmother preferred to take us there instead,” says David. “She chose our education above all the farmer’s benefits.”

Brothers in a Shack

After two years their mother, who was now employed in Newcastle, called for the boys to join her. She was still ‘live-in’, but had bought a tiny plot in Blaauwbosch near Osizweni township in Newcastle, and this was where 17-year-old Setshaba and 14-year-old Yatiso made a dwelling for themselves.

“Yatiso and I built a three-metre-square shack out of leaky corrugated iron and timber,” he says. It was roughly half the size of his present office.

“We set up a little kitchen with a pump-up primus stove for cooking, two single beds in opposite corners and an imbawula (a metal drum or konka) of live coals in the middle for heating. We fetched water from a well one kilometre away and dug a pit latrine outside. That shack was our home for four years. Our Mom visited us once a month.”

Conflict in the Classroom

School life was “interesting”, he says. Because he was a bright scholar of the right age, Yatiso easily gained entry to the disciplined, highly-regarded local St Lewis Bertrand Secondary School, a Roman Catholic institution. David, on the other hand, was seen as too old and was refused admission to the same school as his brother. His first high school was six kilometres from home and there was no culture of learning.

“It was the late 1990s, and there were still pockets of fighting between ANC and IFP supporters. There were fights at school, and learners were coming with weapons,” he says. “I remember an older boy in our class. One day, he turned around to us during a lesson and asked if he could borrow a ruler. We did not have one for him.”

“That’s OK,” he said. Then he took out his pistol and used it to draw a straight line.”

New School, New Possibilities

After a year, David realised his brother was outstripping him academically.

“Although we were in the same grade, his Maths was far ahead of mine. So I convinced my mother to find me another school and she did. It was also not of the highest standard, but it had a new headmaster intent on changing things.”

“When I arrived in Grade 11 at Dedangifunde Senior Secondary School, they were weeding out the problem students and sorting out the discipline issues. The headmaster and his deputy told the school they did not want to see graduates walking the streets and blaming their teachers for their bad education and life choices.”

Setshaba Khanye and a cluster of like-minded students heeded the call and hit the books. They would do the regular morning classes, take a 30-minute lunch break and return to their schoolwork until 4.30pm.

“I had to do some serious catch-up, because of my advanced age and the bad education I had received up to that point,” he says.

Hard Teenage Lessons

But all of it, the challenges they faced at school and in their leaky little township shack, served to toughen the Khanye brothers. They used to lie on their beds at night and talk of how they were going to bring relief to their family one day.

“We had no pocket money, so on Saturdays while other kids were playing, we would go to town and offer our services as gardeners. We lived on porridge, potatoes and sugar beans month after month. Through that we learnt that you don’t have to feel sorry for yourself - you just work your way out of a hard situation.”
When they matriculated in 2000, Yatiso received a Career Wise bursary linked to Sasol. The company sponsored his university studies and has employed him ever since as a Chemical Engineer.

His older brother’s road was a little tougher.

**Braving a New World**

“First, I had to deal with the opinions of locals who believed that university was for ‘certain people’, not for those from poor backgrounds.

“...I would look at the brochures and see people who did not look like me. It wasn’t a case of colour - by then they were also images of black students - but their confidence and their brand name clothes made me wonder if I would fit in. And what about moving from a black township school to a multi-cultural institution? Would that even be possible?""

He applied to the University of the Witwatersrand to do a BSc degree, majoring in Geology. At first, there were no funds for him, but Wits saw something in the young man. He was offered a Council bursary which, along with the Government NSFAS support, covered his basic needs.

“In my second year, I discovered medicinal chemistry,” he says. “I found out about various disease-fighting drugs and that became my passion.”

**Search for the ‘Gold Drugs’**

Khanye was wondering how to fund his Postgraduate studies, when he heard that Mintek was backing research into finding industrial and medical applications for gold.

This precious metal has many biological benefits, including anti-inflammatory, anti-bacterial and anti-parasitic properties. Khanye devoted himself to studying gold and its medicinal applications, and his main task involved finding good structures (ligands) to support gold in its different oxidation forms. The ligands have to be stable enough to survive administration into the human body.
"It has applications that can prevent or treat cancer, leukaemia, rheumatoid arthritis and malaria. But there are no quick fixes. One of the big issues is to establish how gold is eliminated from the body. In its metallic form, it is inert. But at various oxidation states - gold(I), gold(II) and gold(III) - things are different."

Dr Khanye specialised in bio-inorganic and bio-organometallic chemistry of gold through his Masters and PhD studies via Mintek, went on to work for pharma giant GlaxoSmithKline in Spain, then iThemba Pharmaceuticals in Gauteng for most of 2011. Within a year, however, he realised that the corporate life was not his calling.

**Love for Academia**

"Industry wasn't for me. I wanted to teach and do my own research. Now I am quite happy here in the chemistry lab at Rhodes, spending hours with young Mzi assembling molecules in different forms to generate new compounds with biomedical applications."

Dr Setshaba David Khanye first met Mziyanda ‘Mzi’ Mbaba in the second semester of 2012. Khanye was a new Chemistry lecturer at Rhodes and Mbaba was a second year student.

"Lecturing to a class scared the hell out of me at first," admits Khanye. "I remember Mzi sitting quietly in the middle row."

In his third year Mbaba came to see Khanye about further study projects and shared his fears of "not being good enough". This resonated with his lecturer, who assured him:

"I will supervise your Honours, set the bars for you and tell you when you have met them."

**The Solitary Student**

Mbaba, now 27, grew up in a village near Lady Frere in the Eastern Cape.

"I had the blessing of being raised by both parents until I was 15, when my mom passed on. My dad was on the platinum mines in Rustenburg so my five brothers, two sisters and I didn't see a lot of him."

"After my mom's death in 2007, my siblings were sent off to live with different parts of our family and I was left to look after the home on my own. I was at high school and it actually benefitted me - I had no distractions."

**Finding his Focus**

But his high school environment was another story. Mbaba tells of his Grade 10 class, where 200 learners sat in one room in front of a split blackboard being given Geography and Physics lessons by two teachers - at the same time.

"The Geography teacher was easy-going and fun and would be making jokes all the time. Our Physics teacher would get really unhappy with the level of distraction coming from his counterpart."

Mbaba, however, was dead-set on studying Physical Science. His Matric results were the best in his district, which gave him access to a university scholarship from the Premier of the Eastern Cape.

"This allowed me to apply to Rhodes," he says. "I did my BSc and graduated in 2014 with distinctions in both my double major subjects, Chemistry and Biochemistry. Dr Khanye is the person who inspired me to go further. I could relate to his life story, and from his experience I saw that even if you come from an impoverished background, you can dream. And with resilience and effort you can get where you want to be."

**World of Books**

They both say that reading sustained them.

"Books take you into another world," says Dr Khanye. His protégé agrees:

"While I was still at school, books helped me."

His favourite book from that time was Letshona Liphume, by Ncumisa Vapi.

"It's about orphaned siblings who, through persistence, managed to make something of themselves," he says. "I could relate to it."

Mbaba's doctoral research has focused, like that of his mentor and supervisor, on organometallic chemistry in pharmaceutical applications. But instead of gold, he is concentrating on iron, which
occurs naturally in the body. His research could be useful in fighting cancer, malaria, tuberculosis and even Alzheimer's Disease.

Mbaba's research involves the crafting of organometallic anti-microbial compounds that can overcome the problem of clinical drug resistance. Explaining the motivation for his PhD research, he says that the development of resistance to current clinical drugs is a major concern in modern drug discovery and medicine.

"As medicinal chemists, it is our moral responsibility to devise innovative solutions to address this threat which could render current clinical drugs obsolete in the near future."

Dr Khanye agrees Mbaba's work has huge potential. They talk of a 'scaffold' that combines the iron-containing compounds with a dual mode of drug action or mechanistic duality. This means that a drug can target the same disease in different ways.

Mbaba notes: "Iron has remarkable biomedicinal attributes including the ability to interfere with different pathways and generation of reactive oxygen species. It is effective against the pathogenic microorganisms causing diseases such as malaria and TB."

"As a relatively new branch in medicinal chemistry, organometallic complexes provide a real glimmer of hope. The resulting compounds could serve as alternative medicaments to avert or delay the development of resistance."

Through collaborations with the laboratories of Associate Professor Adrienne Edkins, a co-supervisor to Mbaba's doctoral dissertation, and Associate Professor Heinrich Hoppe from the Department of Biochemistry & Microbiology, Dr Khanye's group has published a number of peer reviewed research papers in reputable international journals.

So far, Mbaba's work has culminated into two publications including one in which he is also a corresponding author.

When you ask Mzi Mbaba what his life goals are, he is clear:

"I want to teach like Dr Khanye and inspire other young University students - just like he inspired me."

Chris Marais

Mr Mziyanda Mbaba. Credit: Chris Marais
Transformation is a topic at the top of the agenda at universities across the country. For Emeritus Professor Chrissie Boughey, former Deputy Vice-Chancellor, Academic & Student Affairs and her colleagues in the Centre for Higher Education Research, Teaching & Learning (CHERTL), it is something that has long been central to their work.

“Academic Support was introduced to the historically white liberal universities in the early 1980s as a response to the decision, on the part of the apartheid government, to allow small numbers of students to study outside the historically black institutions”, explains Boughey.

“By the mid 1980s, the idea that it was black students that needed to be developed was beginning to be challenged. Rather, it was argued, it was the universities themselves that were in need of transformation to meet a new political dispensation and a changed student body. All my research on student learning since then has tried to explore what this could mean.”

Boughey’s early career involved teaching English as a foreign language in places as diverse as Spain and the Middle East. Throughout her years in the Middle East, Boughey says she was ‘a woman in search of a theory’. 
"I had been trained in the so called ‘best methods’ in language teaching at British universities but in all the places I taught - one of the first girls’ schools in the state of Qatar, a medical faculty in the University in Sana’a, Yemen - they simply didn’t work and I couldn’t work out why! I now know that all my training had been based on the assumption that education was neutral and fair - when it is far from this."

Her search for a theory was resolved when, in the late 1980s, she encountered critical social theory while working at the University of the Western Cape. "In those days, UWC was at the forefront of the struggle against apartheid and people like the late Wally Morrow and others were using critical theory not only to look at the damage done by apartheid but also to look to the future. I had been trained to use ‘mainstream’ linguistic theory and suddenly my eyes were opened and all my experiences began to make sense as I realized that dominant one-size-fits all approaches do not do justice to the multiplicity of ways of knowing and the way power plays out in privileging some over others”.

This led to Boughey writing a doctoral thesis that her supervisor claimed ‘bit the hand that had fed her’ for so long given its critique of dominant understandings of the so-called ‘language problem’ and the approaches they gave rise to. "The problem with academic research", says Boughey, "is that it doesn’t seem to impact on belief systems and what people do as a result of these beliefs in any significant way. For example, most people think that the difficulties students experience as a result of having to use English as a language of learning and teaching would be solved if we shifted to using the indigenous languages. Using indigenous languages in higher education would be enormously affirming for students and would address a number of issues related to identity. However, the move to using them would not mean students would automatically understand the complex abstract thinking that accompanies academic work or, indeed, would understand the ‘rules’ of that thinking".

Boughey’s research on academic language and literacy has taken her into the field of practice in order to try to explain those ‘rules’.

In 2012, she wrote a guide for Rhodes University students called ‘RULearning’ which tried to unpack the ‘mysteries’ of what it means to learn in the university. "Academics aren’t interested in students simply repeating what they hear in lectures or read in books and journal articles. At an institution like Rhodes University, they expect something more. They expect students to make sense of what they have heard and read in order to make a series of ‘knowledge claims’ - things they believe are true. Each claim has to be supported by evidence, either by data which could be the result of a prac session in a lab or from the literature. This is where referencing comes in. Referencing isn’t simply a matter of avoiding plagiarism. It’s related to the value of the evidence has to be provided for knowledge claims. We often draw on the literature to provide this evidence.”

RULearning was followed by an attempt to make academic belief and value systems, and the practices they give rise to, even more overt, in the form of a drama production. "Academic literacy isn’t a set of neutral skills”, says Boughey. "It’s a set of practices - things people do, not only reading and writing - that emerge from value systems in particular contexts. In academic contexts, value systems relate to what can count as knowledge and how it can be known. Think of what scientists do. Students are often told they need to use the passive when they write in science. Why is this so? Saying ‘5mls of the solution were titrated’ rather than ‘I titrated 5mls of the solution’ relates to the values of objectivity and accuracy. If students don’t get the disciplinary values, the practices simply don’t make sense to them”.

Boughey’s thinking was that if literacy is a set of practices, then it should be possible to demonstrate those practices in action and to voice the values that underpin them in a theatre piece. "CHERTL colleagues and I worked with Ubom!, a theatre company based in Drama here at Rhodes University to develop a production scheduled for O Week. All first-year students were invited to the production though, as word got around, crowd control was needed to stop more senior students entering the theatre and taking up all the seats."
In spite of all her research, Boughey is adamant that, at most universities in the country, attempts to develop students’ understandings of what they need to do as learners are misleading. “Students are usually taught in courses designed to ‘develop’ them by people who themselves don’t understand the nature of the academic project. I only worked out what academic knowledge was and learned how to produce it by doing my own research. It was this that then led me to understand academic literacy. I don’t know how you can expect minimally qualified academic support staff to teach students what they need to do if they themselves don’t understand what’s involved!”

This sort of thinking led Boughey to appreciate the need to develop academic staff as teachers, something CHERTL is renowned for across the country and beyond. “Student development has to be embedded in mainstream learning. This is the approach we have taken at Rhodes University for the past twenty years - and it’s paid off although we need more to be done as the student body changes.”

And what of the curriculum - a concept that has received a great deal of criticism since the protests of 2015 and 2016?

“The curriculum is a structure that distributes access to knowledge and knowledge making”, says Boughey, “It’s not simply a list of subjects to be taught but also involves how teaching and assessment take place and thinking about the ‘who’ of teaching and being taught”.

The curriculum review process, begun at Rhodes University in 2017, has been an attempt to get departments to do exactly that. It begins by asking departments to look at one course and explain the patterns they see in student performance - to explore how access to knowledge and knowledge making is being distributed.

“It’s unacceptable”, says Boughey, “that a majority of black students should cluster around the 50% mark. We need to work out why this is so and this means looking hard at what we do as educators.”

Having provided strategic direction for teaching and learning at Rhodes for the last twenty years, first as Director in CHERTL and then as Dean, Teaching and Learning and then as DVC: Academic and Student Affairs, what’s next for Boughey?

“I can’t imagine ever not researching and supervising”, she says. “Supervising doctoral students is one of the best bits of being an academic”. It was this that kept her supervising and researching during her time in the DVC’s Office. The 2019 graduation ceremonies saw two of her students receiving their doctorates. In 2018, she also produced two journal articles and a book chapter.

A recent award of R5m for a project intended to allow ten members of staff at South African universities to complete doctorates focused on teaching and learning led by Boughey will ensure that supervision remains very much on the agenda. So too will her involvement, with long-standing colleague Sioux McKenna, in a European Union funded project to the value of EUR 1m intended to develop supervisory capacity in East Africa. The latest EU money follows on two other projects, one funded by NUFFIC and the other by the EU which have involved the development of an enormously successful course on postgraduate supervision (http://postgradsupervision.com) and a website (http://postgradenvironments.com) intended to support postgraduate supervisors and their students across the continent.

Apart from this, Boughey has plans for two big research projects focusing on student learning. One, entitled ‘Going home’, aims to look at how ‘calls’ from home impact on the development of students’ academic sense of self.

“This was something I became aware of in my time as DVC”, says Boughey. “Students are split between home and campus and, when home is characterized by very different belief systems about what can count as knowledge and what it is appropriate to do as a learner, it can cause huge conflicts for young people.”

A second project with colleagues from the Allan Gray Centre for Leadership Ethics and the Department of Political and International Studies aims to explore why students make the choices they make about
what to do every day. Do they go to lectures or do they miss them? Do they do the set reading or not? Ultimately, and in line with much of her earlier thinking, the project aims to get at the values and beliefs students bring to their studies and how they impinge on what they do as academic learners.

“I’ve never had time to devote to research”, says Boughey. “I’ve never even taken study leave in all my years at Rhodes University. I now have time to do exactly that - what a luxury!”
Bring Back the Land

Rhodes University is part of a UNDP-funded project that aims to find ways of restoring South Africa’s ecological functions and increasing the productivity of the land through three projects. Goals include enhancing people’s livelihoods in ways that are gender-sensitive, climate-smart, simple, inexpensive and sustainable.

The planet faces three huge interlocking environmental problems: land degradation, biodiversity loss and climate change.

When it comes to the first of these, what are the solutions for South Africa? Is there a way to reverse damage and restore the vitality and ecosystem functions of rangelands? If so, can it be done using climate-smart principles that also ensure resident communities have sustainable livelihoods? Could overgrazing, topsoil loss and erosion gullies be halted and reversed in the long term, using simple and inexpensive methods?

There are more questions. How can women be more involved? What about opportunities for the youth? Can land stewardship principles be taught to young children? How can government provide support at various levels?

Finally, where does one start, and how does one scale up the lessons learnt?
In the large common room on the top floor of the Environmental Science building at Rhodes University, Department Head Professor James Gambiza and a handful of Doctoral scholars gather every week to share their progress on finding solutions to these exact challenges.

In 2017, Rhodes University became one of three responsible parties in an ambitious sustainable land management project funded by the Global Environmental Facility (GEF) over five years, administered by the United Nations Development Programme (UNDP) and South Africa’s Department of Environment, Forestry and Fisheries.

The other responsible parties are the Endangered Wildlife Trust (EWT), which is working on degraded rangelands in the central Karoo around Loxton, and the Council for Scientific and Industrial Research (CSIR), focused on the Olifants River Catchment in Limpopo Province.

The UNDP project document encapsulates the country’s situation as follows:

- South Africa has a total land area of 1.2 million km² with a population of approximately 59 million;
- Over 80% of South Africa’s territory is used for agriculture and approximately six million households depend on farming for their livelihoods and subsistence;
- Despite this, the sector contributes only 2.5% to GDP;
- Livestock herding is the dominant rural land use and grazing occurs on more than 650 000 km² of South Africa’s land area;
- Nearly 66% of these rangelands are moderately to seriously degraded;
- South Africa has serious physical soil degradation, including soil crusting and compaction. Sheet and gully erosion cover an area of nearly a million hectares. Water erosion is South Africa’s most widespread soil degradation cause, affecting 70% of the land;
- Halting and reversing current levels of land degradation is a labour-intensive exercise with the potential to create jobs, enhance productivity, provide resilience to climate change, and boost local communities’ livelihoods.

Rhodes University’s GEF 5 Sustainable Land Management project team includes five PhD scholars, each working on a different aspect or hub, guided by Professor Gambiza.

Monde Duma is looking at community-driven rehabilitation; Charles Chakoma is focused on sustainable grazing management of livestock; Ojong Enokenwa-Baa is examining gender involvement; Menelisi Falayi is tracking government participation, and Buhle Francis is working on how livelihoods can be enhanced among women.

Dr Rebecca Powell is the project manager and Dr Helen Fox heads up the Knowledge and Awareness hub.

In October 2019, Duma, Francis and Falayi received Rhodes University’s Best Student Researchers in Community Engagement Awards.

The remote settlement of Machubeni in the montane grasslands east of Lady Frere was chosen as a testing ground for one of Rhodes University’s projects. (The other, in the Baviaanskloof, falls within the thicket biome and is managed by an organisation called Living Lands.)

At Machubeni, all the drivers of land degradation and compromised livelihoods are present.

This area falls within the former Transkei homeland of the Eastern Cape, where people were forcibly settled under Apartheid. These days it is managed through a combination of traditional leaders (chiefs and headmen), as well as democratic structures, including provincial authorities and the local municipality.

Soils here are high in sodium, which makes them amenable to erosion. The lands are gullied by large spreading dongas that channel away the thin topsoil with every rainstorm. Where exposed, the earth is hard and crusted.

Constant overgrazing across the fenceless veld has resulted in the merciless spread of an indigenous, unpalatably bitter shrub called Euryops floribundus. Also called Harpuisbos in Afrikaans and Lapesi in
isiXhosa, it is resinous, flammable and deters grass growth.

Drought, possibly caused by climate change, is taking its toll on this already impoverished area, where most income is in the form of social grants.

Within Machubeni’s communal area are five villages, each with about 100 households. Among these are 200 livestock owners who vie for grazing. The bad access roads result in high transport costs. Education levels are low among the residents. Many men of working age are away earning money in the cities or on mines.

Any improvement in land productivity could make an immense difference.

In other words, if Professor Gambiza’s team can find workable solutions in Machubeni, the positive effects on the country and its people could be profound, multi-layered and long lasting.

Julienne du Toit
The remote rural village of Machubeni in the former Transkei is an incubator of solutions for land restoration and community pride.

The road to Machubeni starts as smooth tar from Lady Frere, but swiftly gives way to potholed dirt as it winds slowly into the foothills of the Stormberg range.

The krantz-crowned mountains are a dramatic and constant backdrop to the grassy hills and valleys. Every few kilometres, there is another small village with widely spaced homesteads painted sea green, marigold yellow, rose pink or brilliant white. Erosion dongas scar the tawny landscape.

Between them roam goats, sheep, cattle and donkeys, always with their heads down, seeking any hint of green. Many are scrawny after the long winter. It’s been a long season of slowly intensifying drought. There are no shops and no visible forms of industry.

As the crow flies, Machubeni is only a few dozen kilometres from Lady Frere, but the potholes, washaways and mountain switchbacks mean that any trip by vehicle is long and jolting.
The five Rhodes University Doctoral candidates involved in the GEF 5 Sustainable Land Management project know this road very well. Monde Duma, Charles Chakoma, Buhle Francis, Ojong Enokenwa-Baa and Menelisi Falayi are here every second or third week, working among the five villages of the communal area that is Machubeni for days at a time.

Their supervisor and team leader, Professor James Gambiza of Rhodes University’s Environmental Science Department, cannot hide his pride.

“These students are not only critical thinkers, but also critical doers.”

The road generally carries little traffic. In early October 2019, however, a small convoy of minibuses and bakkies traversed the landscape, halting finally at a sheep shearing shed that doubles up as a community hall.

It carried a delegation made up of UNDP officials from Pretoria; scientists from the Karoo and Olifants River Basin; officials from the national Departments of Environment and Agriculture; the local mayor and ward councillor.

They were warmly greeted by men and women from Machubeni in full formal Xhosa regalia, with beads, headdresses, embroidered skirts and capes, and old-fashioned country hospitality.

On the Ground

All the outsiders arriving here were supporters, observers and implementers of simple yet elegant plans to rehabilitate the land and ecosystem functions in a degraded landscape while also improving livelihoods.

Projects of this kind are planned far away, at workshops and meetings, with flipcharts, graphs and Powerpoint. Here, in a village like this, they either take root or die.

In this instance, Machubeni and its people are a microcosm of nearly all the ills that beset South Africa’s rural rangelands. It offers a testing ground of how these can be remedied. If it does not engage the hearts, minds and hands of the community that live here, the project will wither. On the other hand, this project and this community could become a model that can be adapted and used elsewhere.

As Professor Gambiza says: “If you can fix it here, if you can make a difference, you could probably do it almost anywhere.”

The people of Machubeni are no strangers to big interventions coming from afar with aims of improving their lives. Some years back millions were spent, for example, on a project to eradicate the pretty but unpalatable and fast-spreading Euryops floribundus.
Livestock owners watched in dismay as the plants came up again, spreading over the veld in even greater numbers than before.

They have also watching expensive gabions being inserted into erosion gullies, only to see them fall apart and fail, the heads of dongas moving higher and higher, sending ever more precious topsoil into distant rivers and dams.

“A lot of projects tend to be transient,” explains Professor Gambiza. “When the people who are pushing them leave, the projects die. We are core-constructing and producing solutions together with the community so that they are effective and sustainable long after this project ends in 2022.”

Professor Gambiza notes that people's ability to manage their natural resources has diminished.

“The land can no longer support the normal livelihood streams of the past. We are training them to heal their land, to get the vegetation back and manage livestock better. We are also trying to improve their livelihoods through strategic crops and home gardens.”

The project is broken up into ‘hubs’, each one the responsibility of the doctoral students who are simultaneously interacting with the community, transferring knowledge, as well as recording the progress and the results for their PhDs.

Liaison officers and champions from Machubeni then become the knowledge bearers, implementers and teachers of these methods. These include 71 people directly involved with the project - of which 41 are women and 30 are men.

**Dealing with Dongas**

Monde Duma heads up the hub in charge of land rehabilitation.

“To fill these gullies, you would have to bring in thousands of tons of soil, which is clearly impossible,” he explains. “So we are focusing on stopping the damage, and reversing it where we can, using very simple methods and available natural materials.”

These involve low stone walls structures above and around active erosion gullies, and rows of heavy boulders within them. They slow and divert the flow of water across the landscape without causing damming. There are also sturdy brushpacks made from the most plentiful woody plant material around - the ubiquitous Euryops.

These simple methods cost nothing but time and labour, and are already working. Community Liaison Officers Bongani Ntsomi and Zwelethemba Madywabe proudly show how these simple devices are acting as seed traps. Sediment that would have been washed away into rivers has been stopped and is collecting behind them. Grass has started to grow in the lee of the structures.

“When we started, we brought in some guys from Matatiele who had been doing this kind of thing for a long time,” adds Duma. “They have the technical skill in combating erosion. This peer to peer teaching is an important part of the project. We emphasise the ‘learn by doing’ principle.”

But how to stop the overgrazing that started the process in the first place? Key to that effort would be to control grazing, says Professor Gambiza. But how does one do that in an open access piece of land without fencing?

**Regenerative Grazing**

Charles Chakoma’s PhD deals with the livestock component.

“The key thing is to give these rangelands a rest, for at least one rainfall season, and also to institute high intensity rotational grazing.”

This method of veld restoration using livestock is also known as regenerative agriculture, holistic resource management, or simply the Allan Savory planned grazing method.

Savory, a former Zimbabwean game farmer, had seen how the veld deteriorated without animals during the 1960s when wildlife was culled to reduce the numbers of tsetse fly (a futile exercise). Until then, it was often assumed that if veld was left untouched, it would recover to a near-pristine condition.
He realised that plants, soils and animals (including humans) evolved together and all need each other to flourish. Grasses grow moribund and die when not consumed. Many seeds need to be distributed and fertilised by animals.

Savory concluded that ranges were overgrazed, not because there were too many animals, but because they were left in one place for too long. What the veld needed, he said, was to have brief, intense grazing on it, and then be left to recover for many months, preferably a full rainfall season.

“The major challenge here, besides the land being degraded, is to organise the livestock farmers so that they bring the cattle, goats and sheep together,” says Chakoma. “This helps break the crust of the soil, fertilises it and allows other areas to rest.”

But assembling animals together in huge herds brings the risk of disease, which means the State will have to be involved with vaccinations and dipping. Instead of fencing, herders will be needed to keep the massed livestock together, he adds.

Machubeni farmers derive a substantial part of their income from sheared wool, but could also benefit from working as a group selling livestock to Meat Naturally (www.meatnaturallyafrica.com) in Matatiele, which links small-scale African cattle farmers with commercial meat buyers.

Frank Manyonga of Machubeni is in charge of the local livestock.

“We are very supportive of this idea,” he says. “All the headmen and the livestock owners agree with it. The only problem will be making sure that certain areas are left alone for a full season. If the veld is green, you will always have people who want to take their animals there.”

Chakoma says they hope to have all the agreements between livestock owners in place within the next few months.

Growing Livelihoods

Buhle Francis is working on home gardens within the Machubeni community.
"The principles we are using here are allied to Conservation Agriculture. These include minimum tillage, mulching, crop rotation and crop diversity. We’ve experimented with various ways of planting vegetables and the method that seems to work best is what we call the Tower Garden."

Francis is working with 25 Home Gardening Champions, with six demonstration sites within the five villages of Machubeni. Each one gets a 5 000 litre JoJo water tank, a gardening toolkit (spade, fork, pick and hoe) and seeds.

“We are very pleased that the youth also have a demonstration site,” she adds. All the home garden champions are transferring their knowledge to others.

At Machubeni, community liaison officer Xoliswa Mjuleni showed how the so-called tower gardens work. Four tall stakes are driven into the ground, about a metre apart, in a rough square. Plastic or geotextiles are wound around them to form a container, into which is placed manure and soil. In the centre, as the soil is built up, is a column of small stones that added to as more soil and manure are included. This acts as a channel and filter for the grey water that is added every day.

“We find this very convenient because we can re-use water from bathing or washing dishes. It’s more convenient in that sense than trench gardening,” says Mjuleni. The soil is then covered with mulch.

“Another reason we prefer the tower gardens is that they are not as badly affected by frost,” she adds.

Francis and her Home Gardening Champions will also be cultivating nurseries with deep-rooted vetiver grass for soil conservation, as well as oats as forage for sheep and other livestock.

**Women and Governance**

Ojong Enokenwa-Baa, who is focusing on gender involvement and climate change stressors, has found that women in the community are keen to take part in all aspects of the project and agriculture generally, especially sheep farming.

“In Machubeni, women are in the foreground. They are the warriors when it comes to this programme. “But land access is a problem generally, especially for female-headed households. They are the drivers of land use within the communities. But they have to seek permission from the men to access the land.”

They are excluded from agriculture, which makes them more vulnerable, says Enokenwa-Baa.
“They are most passionate about nutrition. Women find the home gardening aspect of the project the easiest to include in their daily lives, simply because they are then also able to care for children and carry out household tasks.”

Menelisi Falayi has been tracking governmental involvement in the project. “It is crucial. What we have found is that before 1994, there were a lot of top-down directives. Now that is changing. We have support from national departments, specifically Environmental Affairs, Forestry and Fisheries, as well as the Department of Agriculture, Land Reform and Rural Development. “Land restoration and erosion problems are seen as priorities at the top, but until very recently, they have not been on the radar of local governments. There has been a disconnect. That is why I’m so pleased that the Emalahleni Mayor and the ward councillor are here today, and to see how interested and engaged they are. Everyone has a voice. “We’ve just applied to add support of this project to the local municipality’s Integrated Development Planning (IDP). “The people at Machubeni are developing unique green economy skills, but they will need the support of Government to maximise and monetise them.”

Youth and the Future

It is clear that the Machubeni community is tremendously proud of this project. “This project is giving us skills to protect the soil and livestock. After two years we can already see the difference,” says the headman of Machubeni, Onke Masi. Zamukulungisa Mtubu, a headman within the communal area, adds “The knowledge they are giving us is very useful. They have taught us about the kinds of diseases in animals and what to do about them. The sheep sometimes suffer from pulpy kidney. “We have a problem in that the youth are jobless and bored. They go to the shebeens to drink, but now many of them are motivated to take part in the programme.”

Professor Gambiza is passionate about this village and the project’s vision. “We cannot let these people down. Failure here is not an option. I’m 60 now, and after I’ve retired, I think I’ll still keep coming back to Machubeni.”

Julienne du Toit

Rhodes University Research Report | 2018

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A crucial new publication that helps Chinese and African traders and business communities negotiate the often-tricky waters of dealing with each other has been released - and the timing is perfect.

Anyone looking for quick insights into China’s commercial dealing with the world at large would be well advised to brew a strong cup of tea, settle down and watch American Factory on Netflix.

It is a take-no-sides (or prisoners) documentary, the first to be released by Higher Ground, Barack and Michelle Obama’s new production house.

In what has been described as an exposure of “the future of work in a globalised economy”, American Factory chronicles the re-fitting of a former General Motors assembly plant in Dayton, Ohio, that closed down and left more than 2 000 locals out of work.

It was bought by a Chinese automotive glass company, which promptly hired many of those jobless GM employees as a ground-level workforce, added a raft of managers from their home country and tried to mould a successful American-based business.
Over a period of a few years of adjustment, one sees the confusion, miscommunication, cultural gulf and frustration on both sides of the corporate - workshop landscape.

**A Useful Handbook**

Those involved in the ‘China into Africa’ business initiatives that have been growing since the end of European colonialism on this continent could take lessons from the Obama documentary, but a recently-released handbook co-authored by experts in the Rhodes University Department of Management on the subject would be more relevant.

Managing Chinese-African Business Interactions - Growing Intercultural Competence in Organisations was edited and compiled by Claude-Hélène Mayer, Lynette Louw and Christian Martin Boness. Professor Lynette Louw is in the Raymond Ackerman Chair in Management and Deputy Dean of Commerce at Rhodes.

This book responds to the call for practical intercultural insights and ways of dealing in the Chinese-African work space.

“Differences in cognition-such as those expressed in values, norms, beliefs and thoughts-influence negative stereotypes. Further, along the process of intercultural communication, the experience of differences in effect and behaviour can impact negatively on intercultural communication itself. Such experiences include differences in emotional expression, perception and behaviour, involving how language, customs and communication styles are understood, expressed and used.”

This book could not have been launched at a more auspicious time.

**The ‘Going-Out’ Strategy**

China has become Africa’s biggest trading partner, and mega-business between them grows by an estimated 20 percent every year.

A Human Sciences Research Council (HSRC) report released in 2017 titled Southern Africa - China Economic Relations: Trends and Outcomes outlined some of the positive and negative aspects of this developing relationship.

Traditionally, China adopts a policy of non-interference in the internal political matters of the African country it has interests in. Its modus operandi of entry and operation is one of ‘soft power’, taking root in many African countries during the anti-Colonial era of the mid-1950s onwards.

**What Africa Wants, What China Wants**

China has generally supported post-colonial Africa with massive funds, management and infrastructural development plans.

Special Economic Zones, roads, telecommunication, railroads and ports, solar power fields, access to lower-priced Chinese-manufactured goods, bridges and buildings - these are examples of the projects on offer, according to the HSRC document.

Some African countries (including Nigeria, Zimbabwe, South Africa, Ethiopia and Zambia) have stronger ties with China than others. Their giant Far Eastern counterpart has enormous and constant need for what Africa has.

In the SADC region alone, China imports oil and diamonds from Angola; timber, fisheries, cotton and chrome from Mozambique; more than 60 types of minerals and precious stones from Zimbabwe; copper, silver and diamonds from Namibia; phosphates, diamonds, gemstones and coal from Tanzania and cobalt, zinc and copper from Zambia.

From South Africa, China has an interest in a broad spectrum of mineral resources, chemicals, textiles, live animals and agricultural products.

**There are Downsides**

But the rumblings of discontent have begun, the HSRC report states.

Cheap Chinese goods threaten local industry, and there is perceived to be little transfer of skills. China’s desire for raw materials means resource-rich African countries become exporters of prime commodities instead of manufacturers, and the environment around a host of extraction activities (from big-scale tree-felling to alluvial gold mining) is often left damaged and unrehabilitated.

Research in Managing Chinese-African Business Interactions - Growing Intercultural Competence in
Organisations reveals that China has invested more than $136 billion in Africa in less than 20 years. More than 3 000 Chinese companies have established an African footprint.

The new book aims to:

“Provide guidance in understanding and establishing successful Chinese-African business interactions and cooperation in African countries.”

One China, Many Africas

One of the most important chapters in Interactions is African Cultural Concepts and Their Influence on Management by Samukele Hadebe and Dion Nkomo.

“While we can comfortably refer to Chinese culture and, by extension, Chinese cultural concepts, the same cannot be said of African culture without courting controversy,” the authors say.

“Unlike China, Africa is not a country but an expansive continent with complex internal diversity. The cultural landscape of Africa, just like its politics and political economy, has been shaped by colonial conquests whose vestiges remain very strong decades after the hoisting of post-colonial flags.”

“One China, Many Africas”

Closely associated with political domination of Africa by outsiders is the crucial element of imported religions, mainly Christianity and Islam, having become defining and sacrosanct features of many Africans.

“In terms of languages, Africa is now divided into Maghreb Africa, Francophone Africa, Lusophone Africa and Anglophone Africa. These descriptions define modern Africa in terms of exogenous official languages, which the majority citizens lack proficiency in.

“The current geographical outlook of the continent is an enduring legacy of political, historical and cultural demarcations that would defy any idea of a collective African culture.”

“Globalisation, increased migration and digital technologies have also influenced various aspects of social, cultural, political and economic life. “It is difficult to say who or what is African.”

‘Small Trade’ in Mozambique

Professor Lynette Louw, who heads up the Chinese Organisation in Sub-Saharan Africa - New Dynamics, New Synergies research group at Rhodes University, has invested a lot of time, study and “simple interest” in the way Chinese and Africans are doing business together. She contributed a chapter to the final Interactions project on how Chinese entrepreneurs are setting up small, medium and micro enterprises in Maputo, Mozambique.

“The push and pull factors that lead Chinese entrepreneur immigrants to operate such SMMEs are explored,” she says. “The chapter also demonstrates the impact of the language barrier between these Chinese entrepreneurs and the Mozambican locals.”

Interestingly, she notes (after a series of interviews with 12 Chinese entrepreneurs who have set up shop in Maputo) that the prime ‘push’ factors for them were high levels of unemployment and air pollution back in China.

“One participant emphasised how much healthier it is to live in Mozambique because of the absence of smog and air pollution,” Professor Louw writes.

A major Chinese cultural principle (important in trade) is the system of Guanxi (English pronunciation: Gwan-shee), which basically means being part of a deeply connected group with like-minded interests.

Professor Louw found that the more successful new operators were those who had come from China with an adequate amount of start-up money (also with the possibility of borrowing funds from friends or family), who established good Guanxi with the locals, who worked out the retail needs of their communities, got to know the labour laws and picked up a basic grasp of the indigenous language quickly.

Building in Uganda

One of Professor Louw’s Master’s students, Sidney Muhangi, also contributed a chapter which is titled Transforming Employee Conflicts in a Chinese Construction Firm in Kampala, Uganda.

“This case study examines the way in which intercultural conflict is being handled in a Chinese
contracting firm which is upgrading roads and drainage in Kampala City,” he writes.

The project manager believes that Ugandan employees are not as loyal to their jobs as are Chinese workers. Chinese employees acknowledge that Ugandans have a different work ethic from theirs; they attribute conflicts to cultural misunderstandings, including the language barrier between the two groups.

“From the Ugandan employees’ perspective, the Chinese managers are authoritative, use ‘colonial’ management styles and stereotype the Ugandans.

“To resolve this intercultural conflict, the company needs a structural transformation which includes cultural orientation of employees and use of the English language for improved communication.”

In an interview, Sidney Muhangi relates the simple example of how site workers used their hour-long lunch breaks.

“The Chinese managers would eat their meal for 30 minutes, take a nap for 30 minutes and return to work refreshed,” he says. “Whereas the Ugandan workers would not take a nap and would then appear to be sluggish in the afternoon. The Chinese would accuse them of being lazy.”

Many cultural differences between Chinese newcomers and their African counterparts can be bridged with increased language skills, he believes.

“Right now on-site conflicts are being reduced, because Ugandans are learning how to do the work required, and both sides are getting used to one another. The Chinese are learning to speak English (the second language of Uganda) and they’re teaching Mandarin to senior Ugandan staff.”

Lessons from Africa

What gives Interactions its edge as a potential handbook for both Chinese and African commercial participants is the collection of actual case studies to which Professor Louw, Sidney Muhangi, Quintabella Andangcu and four other Postgraduate students contributed.

A set of solutions accompanies the challenges presented in specific cases:

- One chapter deals with conflict dynamics within a Tanzanian-Chinese water project, in which the local employees suspect their Chinese management’s motives. Tanzanians also fear that the water will be sold and not distributed free to the local community;
- In Zambia, a joint venture textile company in Kabwe experiences issues regarding decision-making and participation of local employees, who feel disrespected by their Chinese managers;
- A Chinese manager ‘loses face’ to his Namibian counterpart in an exchange full of cultural misunderstandings. The authors suggest a variety of long- and short-term solutions to the problem;
- A simple tea ceremony in Kigali, Rwanda, between the Chinese owner of a flower retail shop and a local manager of a tin smelting company begins pleasantly until suspicions based on hearsay begin to creep in. More unfortunate misunderstandings follow;
- In a telecoms company in South Africa, Chinese management structures and cultural differences create “perceptions of command and control, which limit the success of both employee interactions and technological learning, and reinforce the distance and foreignness of Chinese organisations”;
- In a Chinese-funded housing development project in Luanda, Angola, the indigenous employees feel they are treated as ‘second-class’ staff and resent the manager’s habit of addressing them in English.

Looking at Cameroon

Another of Professor Louw’s Postgraduate scholars, Quintabella Andangcu, is studying foreign direct investment and motives for investing in her home country of Cameroon.

“Cameroon is Africa in miniature,” she says. “Almost all of Africa’s ecosystems can be found here, from grasslands to deep forests. The Chinese are interested in a lot of resources from Cameroon, but the most recent point of conflict has been accusations around their gold-mining methods.”
She adds:

"Out of all the Chinese investments in all parts of the world, the one that has raised the most criticism is their investment in Africa."

Why?

"Because they tend to invest in relatively unstable countries rich in natural resources, and their loans are resource-backed."

**Getting to Know Each Other**

"The Chinese presence in Africa is changing things rapidly," says Professor Louw. "And yet, little research and collective knowledge exists at organisational and community levels.

"Mostly, African governments welcome the Chinese presence. But what happens at management level? How are Chinese organisations run? Do they simply compete with Western firms on costs? Do they compete with African firms on the basis of expertise? What are they bringing to communities? What is their impact on the local job market? How are they working with local firms?"

Professor Louw’s dream is to establish a centre of cross-cultural management at Rhodes University.

"We need to look at the interactions between these different cultures," she says. "And we all need to understand the nature of these interactions."

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**Managing Chinese-African Business Interactions**

- *New Dynamics, New Synergies* research group has already produced three PhDs, three Masters, four Honours graduates and one postdoctoral scholar. The monograph, bearing the same title as a group, is in the pipeline.


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Chris Marais
The Honest Truth in Pulp Fiction

African writing tends to take on different forms, from genres such as science fiction to romances to crime fiction, from print to digital. Dr Lynda Spencer, Senior Lecturer of the Department of Literary Studies in English at Rhodes University finds that writers in Africa have appropriated and adapted popular literary forms as a way of reflecting on and interrogating social, economic and political issues.

All book-lovers have their guilty pleasures: bodice-ripper romances, trashy detective novels and lurid science-fiction adventures.

Right through Dr Lynda Gichanda Spencer’s life, during three civil wars in Uganda and intense studies at four different South African universities, there was always a Mills & Boon or Harlequin romance storybook at her bedside.

“There used to be a bookstore in Braamfontein, near Wits University where I was studying at the time. It had every single Danielle Steele book ever written, and I’d read all of them.”

And don’t get her started on Helen Fielding’s runaway hit, Bridget Jones’s Diary.
Happily Ever After

It was while Dr Spencer was doing her Master's in African Literature that she attended a lecture on Romances written by African Women, taught by Professor Stephanie Newell.

"I was fascinated. I began to realise you can actually study these books academically."

At the time, her life was fraught. Dr Spencer was living in Pretoria, teaching at Vista University in Mamelodi, and catching three taxis to and from the University of the Witwatersrand for the coursework component of her Master's studies at the African Literature Department.

She’d often arrive back home at 8.30 in the evening, exhausted. But the romances transported her to another world, one where each human drama would reassuringly end with happiness ever after.

Dr Spencer is certainly not alone. Mills & Boon is one of the world's most successful publishing houses. By the company's centenary in 2008, it was selling 200 million novels a year - in other words, one every 6.6 seconds.

An article in The Guardian that year notes: "No one believes they're great literature, nor do they need to be. They're cherished for their simplicity. Sometimes, all we want is a break from wondering what's going to happen next."

Or as legendary romance writer Jilly Cooper more vividly put it: "After all, life's bloody tough. Mills & Boon is much better than binge drinking."

Bridget Jones, Chick Lit and Feminism

Dr Spencer's doctorate at Stellenbosch University was on women's writing from Uganda and South Africa.

"Both countries were emerging from repression. I wanted to examine what opportunities open up for women; when they start to write, what is it that they are concerned with?"

After she came to work as a Senior Lecturer in Rhodes University's Department of Literary Studies in English in 2014, her fascination for women's writing in the field of popular fiction deepened.

"I've been pushing back against the idea that there is something wrong with romance. It can also be seen as a place where woman writers articulate their concerns. That's what hooked me."

A more recent development of the traditional romance novel is "Chick Lit". Dr Spencer explains that this is fiction mainly written by women, for women, about women.

"My guilty pleasure has become an academic project. I offer Chick Lit as a course for third years, and it is very popular, because the students think they’re just going to read romance. By the time I’m done, I’ve created feminists - although that’s not something they necessarily signed up for."

If you were looking for examples of Chick Lit, they would include Sex and the City by Candace Bushnell and Bridget Jones’s Diary.

"It is all about what it means to be a woman in a neo-liberal society of apparent choices, but one that is still highly patriarchal, expecting particular things of women.

"Bridget Jones is economically active and independent in a modern world, yet she's still tied into these conventional notions of what being a woman means."

"The book starts with a list of what she's going to do this year. A lot of what she's doing is self-surveillance of the body. One of her obsessions is this idea of weight and body image. As a feminist you have to ask: whose standard of beauty is she aspiring to? Ironically, when she finally does reach her goal weight, her friends become convinced she is sick."

Zukiswa Wanner is one of South Africa's first writers of Chick Lit, says Dr Spencer. Wanner's debut book, The Madams, was published by Oshun in 2006. In it, according to the sales blurb, protagonist Thandi decides that "being Supermom to her child, Superslut to her husband and Superwoman is all too much, so she hires a white maid."
In an interview with News24, Wanner says she saw a gap for writing light-hearted fiction about contemporary South Africa that was not, “preachy, rainbow nation, let’s-hug kind of stuff. It’s addressing issues that affect us, post-1994.”

These include abusive husbands and the ins and outs of black and white friendships.

**Penny Dreadfuls, Dime Novels, Nigerian Chapbooks**

The origin of popular, mass-produced novels is rooted in the industrial age in Britain and the opening of the Western frontier in the USA nearly 200 years ago. These events coincided with advances in printing technology and a general rise in literacy.

Nicknamed ‘penny dreadfuls’ in the UK and ‘dime novels’ in the USA, the books were cheap, lurid, and often badly written. They were churned out so fast and in such huge numbers that publishing houses were often referred to as ‘fiction factories’.

Like Mills & Boon books, dime novels and penny dreadfuls were formulaic and easily available, or as Dr Spencer puts it, “cheap, nasty and lovely”. Then, as now, they revealed much about society and the prevailing concerns of their times. They were often badly bound and considered ‘disposable literature’, but they are also credited with stimulating a widespread culture of reading.

Charles Dickens started off his writing career in this populist vein, publishing his books in serialised form. The Pickwick Papers was the first of these, a runaway hit in 1836.

Dr Spencer mentions two African fiction phenomena that took a similar path. The first took place in Nigeria from the 1940s to 1960s. Its books are usually referred to as Onitsha Market Literature. The city of Onitsha, in the Igbo region of the country, has one of the continent’s largest open air markets.

Novellas and books from Onitsha were cheaply produced, often no more substantial than pamphlets. Another name for them was ‘chapbooks’, or simply ‘chaps’.

They were aimed at the common man and woman and reflected social conditions of the time. Written in vivid, non-standard English, many had racy plotlines, while others provided morality lessons and warned against loose women. Chief preoccupations were love, sex, marriage and money.

This form of literature disappeared in 1968 after the market was badly damaged in the Biafran War, but the region has remained a seat of African storytelling. The Nollywood movie industry, much of it based in Onitsha, has replaced the chapbooks.

**Zulu Girl Online**

The second, more recent African literary phenomenon that fascinates Dr Spencer is via on digital platforms.

“There’s a common misperception that Africans and students in particular don’t read. They are reading, but much of it is online.”

In 2013, Mike Maphoto started a blog called Diary of a Zulu Girl: From mudhuts, umqomboti and straightbacks to penthouses, expensive weaves and Moet. It chronicles the fictional life of Thandeka Mkhize, who moves from rural KwaZulu-Natal to study law at the University of the Witwatersrand and falls in with some shady Nigerian men.

The blog, written and read on mobile phones, was wildly popular. It was swiftly followed by Confessions of a Sugar Baby and several others on the same website platform.

The issues addressed include changing gender roles, sexuality, xenophobia and cultural norms in a modern world. Unlike normal books, digital media offers readers the opportunity to respond immediately and interact directly with the author - which they do, sometimes by the hundred.

Maphoto, who says he was raised on Harry Potter books, eventually started selling chapters online (R5 for two at a time). He has now self-published the print version of Diary of a Zulu Girl, which is also being turned into a television series. His work has spawned several copycat blogs, including Diary of a Taxi Driver.

Dr Spencer marvels at the many different forms that African fiction is taking. They sprawl across the
genres of mysteries, short stories and romances. The latest big wave is in African science fiction.

The latter offers opportunities for thought experiments on the consequences of current trends. Themes include dystopian African cities, Chinese involvement on the continent, the climate crisis and Nigerian astronauts.

**Popular Imaginaries and African Feminism**

The study and stimulation of popular African literature has been boosted by a five year grant from the Andrew W. Mellon Foundation.

Urban Connections in African Popular Imaginaries (UCAPI) was initiated by Dr Spencer and Dr Minesh Dass and includes academics from universities across South Africa and Africa. “Popular imaginaries” simply refers to popular literature and media, she explains.

UCAPI, which is located at Rhodes University, has resulted in several colloquia and conferences as well as Postgraduate scholarships. Most of the research focuses on new ways of telling stories in Africa.

Dr Spencer and her colleagues in the Department supervise these Postgraduate candidates.

UCAPI funding is also fostering creativity and authorship through a Writers-in-Residence programme. A number of writers have been hosted to date, including Ingrid Nayame from Zambia and Mona Liban from Somaliland.

“It’s so encouraging to see the new voices and young writers coming through,” remarks Dr Spencer.

“One of the things Professor Sharlene Khan and I stumbled upon is African Feminisms. Last year this resulted in a second conference; the theme was ‘The Mute Always Speak’. The title came from an article written by Dr Nthabiseng Motsemme about women’s silences at the Truth and Reconciliation Commission. These silences can be read as a form of agency that helps us understand women’s subjectivities under apartheid.

“I was astonished to find there is probably no other conference on the continent that is looking at African feminisms, or anything that offers this kind of channel to academics, researchers, artists and students.”

**The Accidental Academic**

If you had unveiled this future and mission to the young Lynda Spencer when she was enrolled to study Law and English at the University of Transkei (now Walter Sisulu University) back in 1992, she would not have believed it for a second.

“I had no plan or ambition to become an academic. I’ve never thought of myself as being the brightest. I just work hard. I don’t see myself as a visionary, just a very practical person. One thing simply led to another.

“By the end of my undergrad degree in 1994, I realised that I was not prepared for an LLB, in part because the case studies in the Law Library had been torn out of the books. That was why I carried on with English instead. And I only did my Honours at the University of Pretoria because I had a friend living in the city, so that gave me free accommodation.

“Because I had no money, I looked for a teaching position, which is what led me to tutor at Vista University.”

She was later offered a lecturing post which she took while studying for her Masters. After her contract ended, she worked at the University of South Africa, and eventually moved to lecture and to read for her PhD at Stellenbosch University. On completion, Dr Spencer moved to Rhodes University.

“In fact in an application for promotion, I once described myself as an accidental academic.”

It has come as a great and wonderful surprise to her that she is now described as promoting research on contemporary writing and feminist engagement in Africa.

“That’s just how it turned out. As usual, I don’t plan these things.”

Happily ever after, in other words.

**Julienne du Toit**
Walk far, Walk together

One of the solutions to South Africa’s education crisis is to invite indigenous knowledge into Foundation Phase teaching. That’s a belief shared by Professor Ken Ngcoza of the Rhodes University Education Department and three of his protégés.

As a young boy growing up in the 60s in Fingo Village, Grahamstown (now Makhanda), Professor Kenneth Mlungisi Ngcoza had the best view of the Rhodes University campus.

All the way down from the Drostdy Arch, the administration buildings and beyond, the university precinct gleamed in the early morning light.

“That was the Promised Land where, as black students under apartheid, we were not allowed,” says Professor Ngcoza.

He lived with his family in a “self-built house of poles and mud” while several of his older siblings looked after cattle and goats at their mother’s village near Peddie, far away from schools and higher learning.

Lucky Number Seven

“I’m the last-born and the luckiest one because I got the opportunity to study and ended up being the first person in my family to get a
degree. And even though my parents were not educated people, they made a lot of sacrifices for us."

“One of the joys of growing up in Grahamstown was coming into town to watch school rugby on weekends. We would all have our heroes, so after the matches, we township boys would go on to the field, play our own games and pretend to be them. I remember one day our lower primary school teacher asked us:

‘Which positions would you like to play in?’

“Most of the boys wanted to play at flyhalf - Number Ten. But I had a different choice: Number Seven. It's a pity that the teacher never asked me why I wanted to play at Number Seven, the flank-forward. I would have told him it wasn’t about the position, but it was all about the number.

“You see, my mother (umaRadebe - her clan name) worked for the principal of Victoria Primary School for Girls in Beaufort Street and she stayed at Number Seven, Ayliff Street. Every morning, I would run down from Fingo Village to Number Seven, where my mother gave us her breakfast bread so that we could have something to eat before school. That’s why I loved the Number Seven so much”.

“We would only eat again when she returned home in the evenings with some leftovers for us. I learned that leftovers can do magic. They can even produce a professor!”

Lessons from the Forest

“When people ask me where I learnt my Maths and Science, I tell them at the place where Graeme College is today. What I mean is that I learnt those subjects in the forest that stood where the school is now.

“My mother and I used to fetch firewood in that forest. She made up a bundle of firewood (inyanda) for me and then one for herself. And, like any child would, I complained:

‘Kutheni eyam inyanda incinci kune yakho?’ (‘Why is my bundle of firewood smaller than yours?’)

‘Then my mother would say:
Zama uphakamise eyam.’ (‘Try to lift mine.’)

It would just be too heavy for me - and in this way I learnt about mass and weight. She placed a piece of cloth on my head under the bundle, and that’s how I learnt about friction. We’d walk back home and she’d use my firewood first to light up the fire and I would ask her why.

“Ukuwuphembi umlilo ngeenkuni ezinkulu, uwuphemba ngeentsasa” “Because you can’t start a fire with logs,” she’d reply. “You need the smaller sticks or twigs.”

“Concepts like mass, weight, ratio, proportion, friction, fulcrum, surface area, energy and so forth are in that story. But when I started school, teachers did not make any reference to our everyday life experiences such as the one mentioned above. And that’s what we’re trying to do in our projects: make these subjects relevant and accessible to everyone.”

Education Metamorphosis

“When I was growing up, our parents had to pay the school fees and buy our schoolbooks. The advantage of that was always a small bookshelf full of books in every home in the township, no matter what the socio-economic background of the family.

“The child would be curious to read. So that culture of reading was there. These days, there are fewer books in homes. Rich and poor children alike spend most of their times on their cell phones, resulting in social skills being compromised.

“We also learnt through playing games like upuca, using small stones. That would be useful now as an analogy to teach chemical equilibrium, a topic most learners and even science teachers find difficult to comprehend.”

Teaching the Teachers

As a youngster in the 1980s, Professor Ngcoza dreamt of studying medicine. He started his BSc at the University of Fort Hare, but because of political boycotts and activism, could not complete his studies. For a while he found work with a brickmaking company and later at Settlers Hospital dispensary. While there, a friend suggested he apply for a teachers course at the Cape College of Education in Fort Beaufort.

“I majored in mathematics and science, my favourite subjects. That’s how I became a teacher by default.”
Professor Ngcoza went on to teach at Nombulelo Secondary School in 1983, the first multi-cultural school in the township in Grahamstown.

“Black and white teachers worked alongside each other - like a true Rainbow Nation. I realised that diversity is actually a strength rather than a disadvantage.”

Deciding to improve his qualifications, Ngcoza took unpaid leave to complete a BSc degree at Rhodes, where the doors were now opening for South Africans of all races.

“It was the first time for me to be in the same classroom with white students. Apartheid had divided us according to race. Our physics Professor Eddie Baart asked us who had done science at school. All the white students’ hands shot up, in contrast with mine which was at half-mast. I knew the reality of the way science was taught in township schools.

“To my surprise and relief, he said ‘I wish you had not done science at school because we are all going to start afresh.’ The lesson I personally learnt from Professor Baart is one of self-esteem. It is very important to make people believe in themselves.”

By the early 1990s, Professor Ngcoza realised his first love was the professional development of teachers - especially in the fields of maths and science.

He started micro-chemistry projects for under-resourced schools with Joyce Sewry from the Chemistry Department at Rhodes.

“This enabled learners to experience and visualise science concepts rather than relying on rote learning.”

In 2000 they started the Khanya Maths and Science Club and the Khula Project respectively to promote these subjects in township schools.

Professor Ngcoza and Sewry have now been collaborating for 21 years and in 2009, their work was honoured with the Distinguished Vice-Chancellor’s Award for Community Engagement. A year later, Professor Ngcoza was awarded the Citizen of the Year by the Grahamstown Rotary club for his community engagement activities.

The Promised Land - a hybrid space

In 2001, Professor Ngcoza joined the Rhodes Education Department, taking over from his supervisor Dr Jap Kuiper.

“One of my abiding passions became seeing how indigenous knowledge can be integrated into the teaching of my favourite subjects - which also happen to be the national education weak spots in South Africa.

“Our students’ research projects are informed by a perspective that sees learners’ home language as a resource rather than a barrier. Additionally, we try to tap into the cultural heritage or knowledge of community members, acknowledging them as custodians of cultural heritage. This helps bridge the gap between school and home.

“Our community of practice is underpinned by the principles of Ubuntu. Our research projects contribute to the current debates about transformation and decolonisation or decoloniality in our country, acknowledging that there are other ways of doing and knowing.”

Professor Ngcoza has supervised or co-supervised and graduated 68 Masters students (including his former school science teacher), six of whom graduated with distinctions, as well as a PhD student.

He is currently the President of Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE). This is the biggest research organisation in Southern Africa and has to date externally examined 27 MEd, 5 MSc and 22 PhD theses from other universities, nationally and internationally.

Apart from his many academic roles at Rhodes, Professor Ngcoza is also a chairperson of the Grahamstown District Relief Association (GADRA). In the past, GADRA tried to address poverty by empowering the community through social projects and counseling. But its focus now is on quality education in under-resourced schools.
“In the past, very few students made it to Rhodes from the township schools,” he says. “One of GADRA’s goals is to help them gain access to the University. I strongly believe that a child’s background need not determine his or her future.”

Additionally, Professor Ngcoza is involved the Vice-Chancellor’s Initiative which focuses on turning Schools of Excellence in the townships.

**Raised by Strong Women**

One of Professor Ngcoza’s current PhD students, Zukiswa Nhase, attributes her energy, ambition and skills to having grown up “as a child between three strong women: my mother, my grandmother and my aunt”.

She was raised in Ndwayana Village in the Peddie district of the Eastern Cape in a close family environment that also included a group of supportive uncles who gave her counsel.

“I finished my schooling in Port Elizabeth,” she says. “I wanted to study medicine, but there were no funds. Instead, one of my uncles took me off to Dower College (also in PE) to study to be a teacher.”

Because of her excellent Matric results, Zukiswa was accepted at the college without having to sit for entrance examinations. After specialising in Maths and Science in her fourth year, she taught at the college for a year and then became a teacher at Ntaba Maria Primary in Grahamstown. And that’s where her academic career turned into a whirlwind of opportunities and achievements.

**Creative Thinkers, Creative Citizens**

“I did my Honours part-time at Rhodes, then my Masters,” she says. “I was now in a Head of Department (HoD) position at the school but I was also involved in projects with other schools and the Department of Education.”

Today, Nhase is a full-time lecturer at Rhodes and as part of her responsibilities she is coordinating the BEd Foundation Phase Degree.

“This is where I came to understand what it means and how it is to coordinate an academic course. This has come with its own challenges. But not once have I regretted taking up this opportunity.”

Her PhD on Science Education focuses on how teachers in Foundation Phase can use an inquiry-based approach in developing the scientific skills of young children. This came as a result of her being a coordinator of the BEd and being interested in understanding science teaching at Foundation level.

**Building from the Ground Up**

“The good news is that the Department of Education now realises the importance of Foundation Phase and is going back to basics. That’s why I feel my research is at the right place at the right time.

“It’s about how teachers create opportunities for learners to be hands-on, minds-on, words-on, to observe and think independently.

“I believe that having these challenges of low pass rates in Science at upper level can be addressed at Foundation Phase,” she says. “Our aim is to develop creative thinkers and creative citizens through the use of an inquiry-based approach to teaching Science.”

Nhase is also the PhD SAARMSTE representative and the Chairperson for the SAARMSTE Eastern Chapter.

“Through this platform and opportunities for research, I have come to see each one as a learning opportunity. I now co-supervise both Masters and PhD scholars with Prof Ngcoza.

“We are collaborating with several universities abroad, specifically in a project on indigenous knowledge systems (IKS) and Lesson Studies with Japan, South Africa, Namibia and Zambia.”

With Professor Ngcoza, Nhase has also co-written a book chapter as part of a project on Citizenship Education with Professor Tonio Oeftering of Germany.

“I feel this interaction has extended my research opportunities.”

**Growing up in the War Years**

Chrispen Mutanho, also one of Professor Ngcoza’s PhD students, grew up in Zimbabwe and says the main reason why that country used to have such a comparatively fine education system was that emphasis was traditionally placed on primary school teachers.
"If the foundation is strong, what follows will flow naturally," he says.

Chris was raised in a village in the Murewa district of Mashonaland East, at the time when the country was going through a bloody civil war. In an attempt to cut off supplies of basic necessities such as food, clothing and medicines to the freedom fighters, the colonial government closed hospitals, clinics, schools and shops in many rural areas.

This made it very difficult for many to access medical care from government institutions and they had to rely on indigenous knowledge.

For instance, "One day we found that most of the streams and the dams around the village were polluted and had some kind of green algae - we suspected government forces had poisoned the water somehow," he says.

Granny's Herbs

Mutanho’s grandmother was a herbalist who went into the bush and picked the roots of certain plants and with these she purified their water.

“She was a well-known person for she would help many people who had different ailments. Yet the school system despised anything to do with indigenous knowledge, especially traditional medicines.

“So, the same schoolmates who came to our homestead to be treated would then turn around and call my grandmother a ‘witchdoctor’. This was very confusing for me because I grew up with a burning desire to be a medical doctor.

“So, although I really wanted to become a medical doctor, I never connected my passion with what my granny was doing - and I regret it,” he says.

“She would call us youngsters into the forest and say: ‘Let me show you these medicines. You will need them when I’m gone.’

She would ask me to dig out a plant and I’d do so, but reluctantly. I did not see the point. Now she’s gone and I look back and I wish I had documented everything she told us. Such is the damaging effect that colonial education had on our identity as African people.”

Mutahno graduated as a primary school teacher in 1993 and taught at a number of schools in Mashonaland. The highlight of his career as a primary school teacher in Zimbabwe was when he was deployed to an under-performing school that was ranked 61st out of 63.

“In consultation with the school management, I initiated an accelerated literacy program. The result was a resounding success. The school that was once third from the bottom attained Position Two in the District.”

Coming to South Africa

By 2007 life as a teacher in Zimbabwe was fraught with low salaries and political instability which often resulted in political harassment of civil servants such as teachers. Mutanho had to make other plans to support his family and came to South Africa.

Once in Johannesburg, he was desperate for work - any work. He approached a construction company in the hope of a job. When Mutanho presented his teaching qualifications, the manager’s response was:

“Wow! And do you see any children to teach here on site?”

“No,” Mutanho replied. “But I need money for something to eat today. I’ll do anything.”

“What do you think you can do around here?”

Mutanho looked about him and spotted a collection of paint buckets, brushes and rollers in the corner of the office.

“I think I can paint,” he said.

“OK,” the manager said. “Here’s a brush. Here’s a wall. Show me what you can do.”

And that’s how Chrispen Mutanho ended up painting the Ethiopian Embassy in Pretoria.

The Science behind Umqombothi

Within six months Mutanho found a teaching job at a high school in Mthatha, Eastern Cape. Later he enrolled for his Honours and then Masters at Rhodes through in-service training.
In 2017 he left his job to do his PhD at the Rhodes Education Department under the supervision of Professor Ngcoza. His study focuses on how to support teachers to develop lessons that integrate indigenous knowledge.

"Using the science behind the brewing of traditional beers (umqombothi and oshikundu) as an example and a catalyst, I am exploring how to support BEd Natural Sciences in-service teachers to develop model lessons that integrate Indigenous Knowledge (IK)."

"Umqombothi and oshikundu are brewed from cereal grains such as maize, millet and sorghum and are common traditional alcoholic or non-alcoholic drinks among the Xhosa of South Africa and the Oshiwambo of Namibia respectively. The making of the two beverages involves many practices that can be used to teach scientific concepts such as alcoholic fermentation, rates of reactions, osmosis and diffusion."

Mutanho adds: "For me, decolonising education is all about removing the constraints, boundaries and barriers that limit people from fully realising their educational potential, regardless of who they are. Also, it works best when an educational institution embraces knowledge that lies in indigenous traditions."

He adds "When I review my current research, I find a strong female voice running through it and I wish my grandmother were here to see this."

A Troubled School

Xolani Mayana is a school principal currently doing his Master's degree in Education at Rhodes. He first came to Rhodes in 1992 to pursue a BSc degree.

"But I got involved in politics and failed my first year," he says. "Then I moved to Fort Hare, where I dedicated myself to my studies and became a student tutor. I was also involved in outreach work in rural areas where there were no science teachers."

In 1998 Mayana found Kuyasa Combined School in Endlovini Township, Port Alfred, and started work as a volunteer teacher in maths and physical sciences.

“That year, 100% of the Matric learners passed physical sciences. I was thrilled.”

Eventually, Xolani was employed at Woodridge College between Port Elizabeth and Jeffreys Bay, working his way up to Head of the Department for Physical Sciences.

“For me, Woodridge had it all. This is where I saw the work ethic of private schools, their administration excellence, their teaching methods, how you are constantly encouraged to do your best, how teachers and learners develop a relationship. You form a bond with learners and they don’t want to disappoint you.”

Mayana loved taking the learners for camping, hiking and mountain climbing as part of the school’s outdoor programme.

A Comprehensive Rebuild

"I was cruising. But in 2007 I saw an advertisement for the post of principal back at Kuyasa, and I applied. I felt a responsibility to plough back into my own community, to share my knowledge and experience."

Kuyasa Combined was in a state of decline, he says.

"Matric results were sitting at a 26% pass rate. There was a distinct lack of get-up-and-go in both the teacher and learner bodies."

When he was made principal, Mayana went directly to the ‘hard subjects’.

“I decided to tackle physics and chemistry separately and allow the teachers to choose their favourite subjects, so they could work to their strengths. I would fill in where there was a gap. We did the same with Maths.”

“In one year, the pass rate went from 26% to 56%.”

His energetic and successful recovery programme for the embattled township school included a development of learner leadership skills, classroom discipline, parent involvement, motivational talks, an outdoor adventure programme and a campaign against schoolyard litter.

“We got former prison inmates to talk about gangsters, jail and role models,” he says. “We planted grass, we painted the school buildings - all of that had a great impact.”

For the past five years, successful Matric results at Kuyasa have been at the 80% level. Now, after connecting with Professor Ngcoza and his team, Mayana is doing his Masters on a part-time basis,
focusing on introducing indigenous knowledge into the school education spectrum - wherever it fits in naturally.

“We bring in the community elders to pass on their knowledge, we study the waves down at the beach and next week we’ll be meeting Xhosa fishermen and they will tell us about the tides,” he says. “The importance of engaging community members lies in the fact that they are more knowledgeable others when it comes to indigenous knowledge and storytelling. They also use the language (isiXhosa) as a tool for meaningful communication, resulting in learners’ active participation during the learning process.”

The learners of Kuyasa are giving him feedback; Mayana has taught his learners the importance of writing reflections in their journals and sharing with the class.

“This helps me improve my teaching, and reflections are being included in my Masters studies. This is a skill I learned from Professor Ngcoza. He is very passionate about written journals.”

And, exactly as with Zukiswa Nhase and Chris Mutanho, it’s very hard to keep the excitement out of Mayana’s voice.

“We have our community of practice here at Rhodes, where we share and assist one another,” says Professor Ngcoza. “We believe in the African proverb that says:

“If you want to walk fast, walk alone. But if you want to walk far, walk together.”

Chris Marais
The Magic of Many Tongues

From the classroom to the courtroom and beyond, the benefits of a multilingual South Africa are legion. This is part of the vision shared by Professor Russell Kaschula of Rhodes University’s School of Languages and Literatures and one of his PhD students, Zakeera Docrat.

The little town of Steytlerville in the Eastern Cape Karoo region of South Africa is possibly the only settlement on Earth where residents have their family crests displayed together along the main street.

It’s a social phenomenon that speaks of a long-held dream of a united South Africa - perhaps more symbolic than real, granted, but nevertheless the crests are up there for the world to see. Someone had a fine idea and made it happen.

Now imagine if all of Steytlerville were fluent in English, Afrikaans and isiXhosa - municipal workers, mohair farmers, stockmen, shopkeepers, motor mechanics, retirees from up-country, caterers and co-op counter staff.

They would, if you follow the thinking of Russell Kaschula and Zakeera Docrat, know a lot more about each other’s lives, challenges, hopes and dreams. The town would run more efficiently, its residents would be more mindful and able to step easily into each other’s cultural paradigms. The people living in such a place (or a country) would, they say, be better citizens.
One Boy, Two Cultures

Professor Kaschula grew up with one foot in the Xhosa world. Born in Stutterheim, raised in a small village in the former Transkei, the companions of his youth were Xhosa. He spoke English and isiXhosa with equal ease and thought nothing of it.

“I always say I had two sets of parents: one biological, one Xhosa. Time spent with my childhood friends and extended Xhosa family made me fluent in their language.”

When he was six, he went to an Afrikaans school in Elliot, where he picked up his third language. Professor Kaschula's parents farmed sheep and potatoes in the area.

“Although I often dream about the farmstead with its beautiful old house, Italian tiles and long passage, I've never been back,” he says. “I hear it's been dismantled.”

At the age of 12, Russell Kaschula's life changed. He was sent to boarding school at Queen's College in Queenstown and became “socialised into Western society”, as he puts it.

“You had to wear shoes.”

Growing Up, Growing Apart

But when he returned home for the holidays, he realised that something had shifted in the relationship with his earlier familiaris. Not only was young Russell now ensconced in a reasonably colonial English school, but his old friends were entering their initiation phase into manhood.

“We couldn't properly identify with each other anymore,” he says. “However, I wouldn't be the person I am today if I didn't speak isiXhosa. Being fluent in the language has also made me more aware of the battles that these rural communities are faced with, linguistic battles as well as social and cultural.”

Professor Kaschula's childhood memoir, Displaced, was published in 2013.

“It is about finding commonality between two cultures which didn't trust the English at that time,” he told the Eastern Province Herald.

His Wendisch-Sorb (Slavic sub-group) settler ancestors were part of a buffer zone in the British Cape Colony adjacent to amaXhosa territory. In the 1980s, Professor Kaschula's parents' farm was incorporated into the former Transkei homeland.

“It is this fruit-salad of continual human displacement that the book tries to unravel and explore.”

The Future is Multilingual

He believes that if South Africa at large would see the country's 11 official languages in the light of a "multilingual feast", it would lead to much-needed social cohesion and unlock huge employment potential.

“It would create opportunities for language development and greater access to services - from government departments, courts of law, hospitals, banks and so on,” he says. “This in turn would provide many new job opportunities for African language speakers. Monolingual students clinging stubbornly to their home language don't realise just how much they are short-changing themselves intellectually.”

Professor Kaschula has also become a great proponent of mother tongue teaching, from foundation phase to tertiary levels.

“There's been insufficient buy-in from the South African government about the importance of developing, promoting and using African languages, particularly in education,” he wrote in the Cape Argus. “Ordinary South Africans are ill-informed about the advantages of mother tongue being used as the medium of instruction.”

A Case for the Mother Tongue

He argues that from Grade R to at least Grade Eight, lessons should be taught in the African mother tongue of the child, with English as a subject.

“It aids cognition and improves learners’ ability to transfer concepts from their own languages into English,” he says.

Mother Tongue Based Bilingual Education (MTBBE) has been implemented by the Eastern Cape education
authorities and was first used successfully in more than 70 schools in the Cofimvaba district.

The project was launched under the stewardship of language and policy specialist Naledi Mbude, also completing her PhD under the supervision of Professor Kaschula, who says:

**Cofimvaba Success Story**

“At the Cofimvaba Project, children are taught and examined using isiXhosa in Mathematics alongside English, which is taught as a subject. The result is that in these schools the pass rate for the Mathematics national benchmark tests has gone up from around 30% to 70% in the past two years.

"Although our situation is complex, one of the key reasons for the dropout rate from school - where only one in three learners reaches Matric - is language. Children become disillusioned because they have no idea what is going on in the classroom. Then they drop out.

"English literacy levels in these schools is at 60%, way above the average of other rural schools where English is the medium of instruction. These percentage figures speak for themselves. It is the only project of its kind in South Africa and has been well supported by the provincial government. It should serve as a model for the rest of the country."

**isiXhosa on Campus**

In 2008, isiXhosa was introduced as a mother tongue language at Rhodes University.

"Initially we began with 50 students," says Professor Kaschula. "Now, on any given day, you have about 700 students learning isiXhosa on this campus. Passing two semesters of isiXhosa has even become compulsory for Journalism students."

Back in 2010, one of those isiXhosa students was Zakeera Docrat, whose childhood days were spent in her mother Glenda’s florist shop in central Grahamstown.

**Memories of a Florist Shop**

“That’s where, for me, the isiXhosa really started,” she says. “Most of our customers were isiXhosa mother-tongue speakers. They would come to buy flowers for funerals and weddings. My father, Mohamed Docrat, is a pharmacist with the Department of Health. Both my parents speak isiXhosa.

“Being in the shop with my mom, the customers would always speak to me. Xhosa people are engaging, they’re warm and welcoming. They’d strike up a conversation with me and I would respond."

At home, Zakeera’s family gardener, Peter Sandi, and his sister Ivy (their housekeeper) kept the isiXhosa flowing with Zakeera, who grew to love the language.

“Obviously, I was still a second-language isiXhosa speaker,” she says. “But it’s really the people in your life who contribute to who you are today.”

Zakeera pays tribute to her Grahamstown schools (St Andrews Preparatory and Diocesan School for Girls) for her academic grounding.

“Love for this language was fostered by my mother, my teachers Brian Mullins and Shelly Roodt and here at Rhodes by Professor Kaschula.”

**Like Professor Kaschula, she believes fervently that language is the key to bringing South Africans together.**

**Monolingual Isolation**

“If I can speak your language, I can get through to you. It’s also about breaking down cultural barriers.”

Zakeera Docrat remembers being literally ‘speechless’ at a language conference she attended with Professor Kaschula in Portugal.

“Hardly anyone spoke English - it was mostly Portuguese. For the first time, I realised what it was like to be monolingual. At a similar conference in Morocco last year, it was the same."

“The taxi driver asked us: ‘Do you speak French? Do you speak Arabic? Do you speak Spanish?’ We realised how most of our fellow South Africans, the ones who can’t speak English, feel every day.”

**Law Courts and Language**

Her PhD is based on the language of record and proceedings used in the South African law courts.
"I'm looking at the relationship between graduating linguistically competent LLB students and the language of record. How can we expect to transform the legal system if we're producing monolingual students?"

Zakeera remembers opening the morning newspaper one day in April 2017 and reading the announcement from the Chief Justice that English would from henceforth be used as the official language of record. Afrikaans would be removed.

"I jumped up and down and said this can't be, what about the African languages? My argument was that if you remove Afrikaans you're going backwards, from a bilingual to a monolingual position. So you're immediately downgrading the African languages even further, because then there's no hope of ever putting them there. And you're elevating English to this super-official language.

Open to Interpretation

"How does English, a language only spoken by 9.6% of the population, foster transformation? And why were no interested parties and regular citizens consulted? Imagine the stress and the isolation of being in a courtroom situation and having no command of English.

"We also have an unregulated interpreter industry in South Africa. In a courtroom situation, if you cannot speak or understand English you are solely reliant on the interpreter."

Zakeera quotes from an interview she had this year with an Eastern Cape judge, who recounted an instance where she read out her lengthy statement in court near the conclusion of a trial. The interpreter wrapped it up "in two seconds", the judge told Zakeera.

"How can you possibly have translated my statement so quickly?" the judge asked the interpreter.

His answer?

"Oh, I summarised it to save time."

She says opponents to the inclusion of African languages in South African courts state the impracticalities of implementing such a system.
"It's been done before. I think the whole issue is whether we want to do it. You would have a system which includes the majority-spoken African language which would vary from province to province - this would add greatly to transformation.

"And just imagine what wonderful legal work would be done if we produced graduates with a degree in translation."

The Emoji Universe

Another subject she and Professor Kaschula, who both hold LLB degrees, are delving into is that of forensic linguistics, and at an upcoming colloquium the theme is to be New Courtroom Languages.

"Take, for instance, the use of digital emojis. What would our judges do if those emojis formed part of the evidence in a rape trial? It's actually happening in a High Court matter in the UK right now.

"We're going to look at the cultural awareness attached to emojis in the South African sense. Someone from one cultural group might innocently send an emoji to someone from another cultural group who might be insulted by it."

Back to Professor Russell Kaschula for the final question: What, for white kids, is the advantage of being fluent in the majority-spoken African language of their district?

“It will open up a whole new world,” he says. “They will then be exposed to all those people who have been denied access to the mainstream economy and who live on the fringes of this society because they’re not fluent speakers of English. Bridges would be built, and they would never be the same person again.”

Chris Marais
Critical Diaries of a Busy Man

He's a poet, a rock climber, an environmentalist, a teacher, adventurer and historian who occasionally ruminates on dystopian futures. He's the recently-retired Professor Dan Wylie of the Rhodes University Department of Literary Studies in English.

If you ever get the chance to go on a long walk around the inside of Dan Wylie's head, best wear serious hiking boots and take the year off.

The veteran author, poet, historian, researcher and Rhodes University Emeritus Professor lists packing pills in a British mental asylum and North Sea oil rig jobbing as part of his work resume. His choice of writing subjects is vast, from the debunking of popular Shaka Zulu myths to how we view elephants to a post-apocalyptic lark around a dystopian Eastern Cape.

“For me as a young boy, it all began at my mother's wildlife sanctuary outside Umtali (now Mutare) in the Eastern Highlands of what was then Rhodesia and is now Zimbabwe,” he says. He returns from time to time, and often records the details of home journeys in his blog, called Critical Diaries.

An excerpt reads:

“The countryside between the towns is looking dry and tawny, as one would expect this time of year. Though locals complain of the
cold, to me, coming out of Grahamstown’s considerably more biting winter, it feels delightfully balmy. Already some of the miombo woodland trees are coming out in hints of spring colour - from lime green to deep maroon - at least a month early. A product of the drought, and/or global heating?

“In Harare, I sit in the garden of a friend’s house, and the Grey louries and Arrow-marked babblers creak and flicker through the trees; the dog chases sticks; I discuss the nature of the planets with the six-year-old daughter. It might almost be normal. Or you might say, Nature and the topography retain their own sanity.”

**Mentors and Mindfulness**

After his army service, Dan Wylie came south to Rhodes University, majoring in English and History. He studied under the legendary Don Maclennan, and they were to become close friends in the years that followed.

“We climbed together and we read poetry together,” he says. Wylie could not have had a finer mentor in the late Maclennan, a well-loved teacher and leading poet.

After Rhodes, young Wylie “wandered off” overseas.

“I worked in a mental asylum in Leicester for two months, mostly in the pharmacy,” he says. “I cycled around Ireland and took a job at an oil rig design company.”

He remembers something.

“I was recently horrified to hear that one of the rigs owned by that company is going to be abandoned up there in the North Sea.”

Abandoned oil rigs, one gathers, leak thousands of tonnes of planet-warming methane gas into the North Sea every year. Dan Wylie worries about these things.

“I went on to teach at a summer camp in the USA and cycled around that country as well.” After two years, he returned to Zimbabwe and took a teaching post at a Methodist bush school south of Mutare.

**The ‘Zulu Period’**

“I did that for two years as well,” he says. “Then I went freelance, wrote a failed novel (that was my practice run) and began to think about a possible Master’s degree on how King Shaka of the Zulu nation has been written about over the decades.”

Professor Julian Cobbing of the History Department at Rhodes was, Wylie recalls, an inspiration to the young student from Mashonaland.

“In teaching the ‘Zulu Period’ of South Africa’s history, he was uncovering the historical nonsense and myths that have been propagated about Shaka in Africa and elsewhere for years and years,” Dan Wylie says.

“Some portrayed him as a monster, others as a liberation leader.”

In 2000, Professor Wylie’s first book on the subject, *Savage Delight: White Myths of Shaka*, was published by the University of KwaZulu-Natal (UKZN) Press.

It was followed in 2006 by *Myth of Iron: Shaka in History*. In reviewing his work, Shaun de Waal wrote in the Mail & Guardian in May of that year:

**Finding Shaka**

“What we think we know (about Shaka) is largely dubious, the product of the imaginations of a small handful of colonial-era travellers who almost all had ulterior motives.

“**Myth of Iron**, despite its status as an ‘anti-biography’, is not only a work of debunking. For all its evisceration of error, supposition and myth, Wylie nonetheless provides an absorbing picture of Shaka’s world and times, dealing with the debate around the mfecane (the alleged large-scale migrations of dispossessed Africans during the period, blamed on Shaka and made into an ‘alibi’ for white conquest) and the related issue of slave-trading on the east coast of southern Africa.”

Says Wylie:

“The material for a trustworthy biography of Shaka simply does not exist. There is a great deal that we do not know, and never will know. Maybe two times out of three, we cannot be sure that the anecdotes told about him are true.”

These days, the makers of graphic novels and film documentaries are booking Dan Wylie as a consultant and, he says, they’re doing their research very well.
Ecological Criticism

His interest in the natural world began to develop into study projects and, ultimately, into an impressive array of books. His mother, Jill Wylie, is also a widely published author.

“During my national service, I spent seven months up at Mana Pools (one of the ultimate southern African ‘destinations’ for elephant sightings) where we patrolled up and down the Zambezi River, often being chased by the megafauna.”

In the late 1990s, Dan Wylie began to study ‘elephant literature’ written by a vast array of hunters, explorers, conservationists and rangers. He was fascinated by the various literary takes on these beasts.

“Even though there is a huge community of so-called ecological critics around the world, the field was almost unheard-of in South Africa.

“Elephants really get people’s emotional heat up very quickly,” he says. “They are at the heart of many aspects of animal identity, animal sentience, animal families, land use problems between animals and local communities and other conservation issues.”

His landmark book on elephant writing and the historical portrayal of them in general was a long time coming, however. Death and Compassion - The Elephant in Southern African Literature was published in 2018 by the Wits University Press.

“It’s is the story of a developing contestation between death and compassion, between those who kill and those who love and protect,” he says in the synopsis on the back of the book.

Along the way, Dan Wylie also wrote Elephant and Crocodile for the Reaktion Books series on animals, and to research these two subjects he travelled the world from Florida USA to the Amazon and to Australia.

Future Fantasies

His deep interest in all things ecological has led him into the grey, smoky world of post-apocalyptic dystopian fiction - in other words, Mad Max Country.

“Look what’s going on up in Alaska,” he says, referring to media reports about the critical snowmelt in the Bering Strait region. Warmer oceans have resulted in the end of salmon spawning in the area, mass die-offs of whale and walrus populations and a deadly algal bloom.

“It’s all happening faster than anyone could have predicted,” says Dan Wylie. “Then I look at Zimbabwe, which is also full of elements right now that I could build into a dystopian novel.”

In fact, one of his most popular books is a slim volume in that genre called The Wisdom of Adders. Set in the year 2170, Adders has a young San-like woman as the central character. Her mission is to trek across the blighted landscape of a ruined Eastern Cape from her broken village to find her father, who is rumoured to be living somewhere in the Cockscomb range of mountains near a place he calls ‘Nummers’ - AKA Nelson Mandela Bay.

As a work of ‘fun but frightening’ future fantasy, The Wisdom of Adders is such a rattling good read that fellow writers have urged Dan Wylie to spend his retirement years writing Big Fiction on the subject.

The Poet

Then there is his poetry, the field of words he had in common with the late Don Maclennan. Of the South African 2019 Election Day, Wylie writes:

After three decades of lowering mist, a bright day of sunlight through pine-needles, and steam off rotting fungi.

The geese are voting one way, the guineafowl another. Left-wing drongos, dark on the wires, taunt the tabby electorate with their forked tails, their obsidian eyes and promises. No one believes them any more, or trusts the clouds. The dogs bark, but the vervets’ rhetoric baffles them. The bees have compiled their poll, but no one knows how this day might end for them. What does the wind think, tainted with the smoke of loitering desires? Or the sea, tasting saltier to itself than at any time in its leviathan memory? Or the noonday sun, burning its hole through the sky? Or the river, its bounty irrevocably mingled with toxins and blood? Or the leaves left behind on the floor of the broken forest, like the remnants of slaves?
Or the doubloons of light on the shadowed lane, the pointless riches of overthrown kings? A nameless man is sweeping dead leaves round and around the parking circle; his toothless broom splinted with someone else’s rough idea. Curtained windows and erythinas observe indifferently. The night is falling, echoing with uncertainty. The stars are counting themselves up, the heavens impassive but for the comets inserting themselves in the slots in the galaxies. All said and done, the sky looks much the same. Leaves go on falling through the wind.

Another project that was a couple of decades in the making was Intimate Lightning (UNISA Press, 2018), his study of Sidney Clouts and his poetry. In his time, the Capetonian man of letters was regarded as the finest of his generation,” says Wylie. “Incidentally, he was also Don Maclennan’s friend.”

View from Stones Hill

For now, however, Professor Dan Wylie will be continuing his pilgrimages up to Zimbabwe and back in his old bakkie, thinking about the world we live in and pondering on the possibility of future fiction. Most of which will be considered from the vantage point of his cottage at Stones Hill just outside Makhanda, with the forest down below and the Indian Ocean on the horizon.

“There was a porcupine on the back porch last night, and a baboon rumbled across the roof this morning. I just love the place.”

Should you ever search for him online, your best bet would be to hire a digital detective. However, for a direct hack into the world of Dan Wylie, visit www.netsoka.co.za “Netsoka means ‘on foot’ in Shona,” he’ll tell you, as if that makes it all OK. But once you navigate via this site to another one called www.danwyolecriticaldiaries.blogspot.com you will find it’s well worth the hunt. The man has a superb way with his words.

Chris Marais
Departments & Faculties
Books/Chapters/Monographs

Boughey, C.

Peer Reviewed Subsidy-Earning Journal Research Publications

Boughey, C.

Centre for Higher Education Research, Teaching and Learning (CHERTL) offers formal courses aimed at building knowledge and expertise in teaching and learning, and contributes to research in the field of higher education studies. The field is especially important in the context of a higher education system that is grappling with the challenge of creating conditions for success for the majority of students.

CHERTL adds to an understanding of contemporary higher education in a rapidly changing world through its various Postgraduate programmes and in accredited publications, conference presentations and the popular press.

**Postgraduates / Graduations**

**PhD graduations**

- Dr Evelyn Muthama: Conditions constraining and enabling research production in historically black universities in South Africa.
- Dr Gillian Shan Reid: A realist exploration of transnational mobility, change and identity construction in South African Higher Education expatriates in Abu Dhabi, the United Arab Emirates (UAE).
- Dr Mlamuli Hlatshwayo: ‘I want them to be confident, to build an argument’: An exploration of the structure of knowledge and knowers in political studies.
- Dr Peta Myers: A social realist account of constraints and enablements navigated by South African students during the four-year professional accounting programme at Rhodes University, South Africa.
- Dr Meredith Armstrong: Learning to Learn: A critical realist exploration into the home established learning practices of a marginalised community in Port Elizabeth.
Postgraduate Diploma (PGDip) in Higher Education (HE) graduations

The PGDip (HE) offers a broad introduction to the field of higher education, with a particular focus on teaching and learning. At the 2018 graduation ceremony, there were sixteen (16) graduates from this programme, five (5) achieved distinctions.

Distinguished Visitors / International Visits

CHERTL prides itself on working with national and international academics ensuring that our students benefit from such relationships. In 2018, we again, had a number of distinguished visitors.

In March 2018, CHERTL hosted Professor Karl Maton. Professor Maton is a Research Associate of CHERTL, and the Director of the Legitimation Code Theory (LCT) Centre for Knowledge-Building at the University of Sydney. Professor Maton gave a series of lectures and offered intensive individual supervision sessions.

In July 2018, CHERTL together with the Centre for Postgraduate Studies (CPGS), hosted Dr Femi Otulaja, from University of Witwatersrand (WITS), and Mr Ndumiso Dladla from University of South Africa (UNISA). They both ran seminars during the July ‘Doc Week’ prior to taking part in the annual Postgraduate conference.

Professor Karl Maton at CHERTL Doc Week.
Credit: CHERTL

Dr Otulaja gave a presentation entitled: “To decolonisation or to indigenisation: That’s the question” and Dr Dladla gave a presentation entitled “Here is a table: The history of race in South Africa”.

In October 2018, CHERTL co-hosted, with the Education Department, a group of PhD supervisors and scholars from Umeå University in Sweden. During the ‘Doc Week’, scholars from both Umeå and Rhodes University made presentations and shared experiences.

Significant Research Aligned Events

In March 2018, CHERTL hosted the book launch of Going to University: The influence of higher education on the lives of young South Africans. This open access book was co-authored by Professor Sioux McKenna with colleagues from University of Cape Town (UCT) and University of Western Cape (UWC), Jenni Case, Disa Mogashana and Delia Marshall.

The book traces the lives of seventy-three (73) young people who first registered for a Bachelor of Arts (BA) or Bachelor of Science (BSc) in 2009. The book has garnered much critical praise with a number of positive reviews in Journal of Student Affairs, South African Journal of Science, and Critical Studies in Teaching & Learning.

At the launch of Going to University: the Influence of Higher Education on the lives of young South Africans: (from left to right) Dr Peter Clayton (DVC: Research and Innovation), Dr Sizwe Mabizela (VC), Dr Disapeela Mogashana (co-author), Professor Sioux McKenna (co-author), and Emeritus Professor Chrissie Boughey (CHERTL).
Credit: CHERTL
Books/Chapters/Monographs


Other Publications


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


**PUBLICATIONS**


McKenna, S. and Thompson, C.


McKenna, S., Quinn, L. and Vorster, J.A.


Muthama, E. and McKenna, S.


Quinn, L. and Vorster, J.A.


Vorster, J.A.


Wilmot, K. and McKenna, S.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Madondo, N.


McKenna, S.


Research Papers published in the popular press

McKenna, S.


Wilmot, K. and McKenna, S.

Wilmot, K. and McKenna, S. ‘University writing groups provide an unexpected space for change’. The Conversation. 28 May 2018.

CHERTL staff, Doctoral and PGDip graduates at the CHERTL graduation celebration.

Credit: CHERTL
The number of research outputs from the Community Engagement Division has been growing exponentially over the past four (4) years. Our researchers are publishing in high impact international journals and presenting at prestigious international conferences. All of this highlights the growing expertise in the emerging discipline of the Scholarship of Engagement at Rhodes University, which is now recognised as a national leader for engaged research.

The diversity of disciplines impacted through the scholarly outputs produced showcases the possibility for inter-disciplinary work to thrive within the division. Moreover, the transdisciplinary nature of all of the work carried out within the division demonstrates the broader commitment of the Rhodes academic community to higher education for the public good through community-based research.

Postgraduates / Graduations

The Community Engagement Division congratulates two (2) outstanding MSc graduates, Ms Nqowana and Ms Ralekhetla, supervised through the Epistemic Justice and Engaged Research Group. Both students developed innovative participatory approaches to addressing water quality and scarcity challenges in the Makana Municipal area, and will continue to drive social change as they extend their research via Doctoral studies at Rhodes.

International Visits

Doctoral candidate, Ms Bango, was able to expand her research on pedagogies for social change through her participation in the Teaching at the intersection of language, culture and identity: multilingual pedagogies for social justice workshop at the Interdisciplinary Centre for Integration and Migration Research, University Duisburg-Essen, Germany.

Postdoctoral Research Fellow, Dr Carlos Bezerra, and Senior Lecturer, Dr Paphitis, attended two (2) international conferences in London and Salzburg, sharing their work on community-based research for conservation in partnership with the Amakhala Foundation.
Director, Ms Hornby, travelled to the United States of America, where she shared innovations in theory and practice made by the Division in relation to partnership building and citizenry education at the 8th Annual Service Engagement Summit.

**Significant Research Aligned Events**

The Community Engagement Division hosted the annual international Community Engaged Learning Symposium at the National English Literary Museum (NELM). Delegates from across South Africa and Europe shared their research alongside Rhodes University community partner organisations, making the symposium a truly transdisciplinary event.

In May 2018, Rhodes hosted the Erasmus+ Funded Common Good First Project consortium meeting, in which the Community Engagement Division is a key partner. The key areas for discussion were updating the group of twelve (12) international universities on the digital storytelling pilots run at Rhodes, and beginning to scope out the digital labs which will launch in 2019.

**Dr Sharli Paphitis**, Senior Lecturer

**Credit:** Community Engagement Division

Partners from 12 Institutions collaborating on the Erasmus+ funded Common Good First Project met at Rhodes University to take stock of the project progress and plan for the next phase.

**Credit:** Community Engagement Division

Dr Sharli Paphitis (in photograph) and Dr Joana Carlos Bezerra presented their paper, “Connecting through images: feedback to communities beyond written words,” at the Photography & Academic Research: Images in The Post-Truth Era conference London (Birkbeck).

**Credit:** Community Engagement Division

Rhodes University Research Report | 2018
Books/Chapters/Monographs

Paphitis, S.


Concerts, Exhibitions, Performances, Workshops, Events

Bango, Y.
Bango, Y. Participant. Teaching at the intersection of language, culture and identity: multilingual pedagogies for social justice. Interdisciplinary Centre for Integration and Migration Research (InZentIM), University Duisburg-Essen. Germany. 30 October 2018.

Duxbury, T.


Peer Reviewed Subsidy-Earning Journal Research Publications

Carlos Bezerra, J.

Paphitis, S.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Bango, Y.
Bango, Y. An Investigation of transformation policies and practices designed to address institutional culture in four South African universities. Postgraduate Education is a Public Good: 9th Interdisciplinary-Postgraduate Conference. Rhodes University, Grahamstown. South Africa. July 2018.

PUBLICATIONS

Bobo, B.
"Most importantly the partner takes more interest in us": Using Ubuntu as the cornerstone of Community Engagement at Rhodes University. Decolonization and Afrikanization: A Conversation. UNISA, Pretoria. South Africa. August 2018.

Bobo, B.

Bulunga, A.A.L.

Carlos Bezerra, J.

Carlos Bezerra, J.

Carlos Bezerra, J. and Paphitis, S.

Duxbury, T. and Paphitis, S.

Hornby, D.

Nqowana, T. and Paphitis, S.

Ms Thandiswa Nqowana completed her MSc with the Epistemic Justice and Engaged Research Group. She was also awarded the Engaged Student Researcher of the year award at Rhodes University for her work in science engagement and water quality with 90 learners from schools across Makana.

Paphitis, S.

Paphitis, S. and Carlos Bezerra, J.

Ralekhetta, M.M.
The Rhodes University Library (RUL) embeds research work into its day to day activities from Postgraduate support and training; scholarly communications; digital commons; new acquisitions; and collaborations in support of research, teaching and learning.

During 2018 RUL was guided by the following:

- **Purpose Statement**: RUL is committed to the pursuit of knowledge by connecting people to resources that contribute to the intellectual development of future responsible citizens.

- **Overarching Goal**: To develop and maintain efficient, reliable and responsive library and scholarly communication services that promote, support and enhance the research, teaching and learning endeavours of Rhodes University.

- **Library Culture**: RUL aspires to a shared culture, “a way of being both in mind and in action” in support of a positive academic outcome for the Rhodes University community, while also creating a positive work environment for all.

The following strategic focus areas are considered appropriate and relevant to the teaching, learning and research endeavours of the University:

- Positioning the library in the intellectual midst of the University community.
- Dynamic user services.
- Staff development.
- Technology and innovation.
- Transformation.
- Risk management.

**Physical Library and Usage**

- 4 Libraries - Main, Law, Sound and Cory Library.
- Supports the South African Institute for Aquatic Biodiversity (SAIAB) and the International Library of African Music (ILAM).
- 1,200 study spaces.
- 213 computers for students.
- 57 computers for staff.
- 10 000 m² space.
- Certifying of documents - 2 954 transactions.
- Information Resources:
  - Books and Monographs: R500 000.
  - Journals: R2 107 000.
  - Databases: R17 700 000.
- Library visits:
  - Gate count: 523 375

Collections

- Monographs in stock: 284 300 including 1 773 new books.
- e-Books: 13 326.
- Journals - individual titles: 231.
- Journals via Databases: 38 000.
- Repository (including ILAM and Cory digital collections): 17 526 items.

Usage

- Circulation: 60 488 Loans (books and other materials).
- Inter-library loans:
  - 621 applied to other institutions.
  - 877 items received.
- Database usage:
  - 10 420 762 total database use.
  - 690 416 full-text articles downloads.

Teaching and Learning Contribution

- 75 LibGuides.
- 1211 first-year student attendance at Library orientation during O-Week.
- 934 undergraduate participants in Information Literacy/User Education sessions.
- 7 417 Reference transactions.

Social Media/Web 2.0

- www.facebook.com/RhodesUniversityLibrary (2810 followers).
- twitter.com/RhodesResearch (1232 followers).
- twitter.com/RhodesLibrary (1345 followers).

Champion Open Access (OA), open publishing and scholarly communication

International Open Access Week was observed.

Unlike previous years wherein the Library scheduled a full programme during Open Access Week, we opted to observe the 2018 OA Week (3-7 September 2018) through an awareness campaign. This decision was taken in lieu of poor attendance during previous OA Weeks due to September and October being the busiest times of the annual academic calendar. The awareness campaign encompassed the distribution of informative OA bookmarks, giveaways to researchers and students in the Research Commons and Postgraduate Commons, and OA displays on each of the Faculty hubs’ advertising screens.
Investigate tools and initiatives to enhance access to information resources and the visibility of Rhodes University research

Research Week

The RUL lead and hosted the second Research Week programme during 7-11 May 2018. The 2017 theme of ‘In support of Emerging African Academics and Researchers’ continued through the 2018 events.

The aim of the research week is to raise awareness of how the library supports research and research visibility, and to strengthen partnerships with researchers and Postgraduate students, the Research Office, Centre for Postgraduate Studies, the International Office and the SRC.

The sessions enabled attendees to actively participate with presenters who shared their vast and diverse experiences and knowledge of the research landscape and journey. Although the event was widely marketed, it was extremely disappointing to see sessions were poorly attended this year.

Scholarly Communication Tools: raise researcher and institutional visibility

ORCID
(Open Researcher and Contributor ID)

ORCID is a National Research Foundation (NRF) requirement. The RUL continues to advocate for the registration and optimal use of ORCID (Open Researcher and Contributor Identifier) among researchers and Postgraduate students.

The RUL Librarian: Scholarly Communications has been kept busy with supporting ORCID registrations and researcher profile construction.

The RUL leads awareness campaigns within the research community to showcase how ORCID can be used to promote and enhance researcher and institutional visibility:

- ORCID workshops/presentations with departments (throughout the year).
- Postgraduate Orientation programme (16 January 2018; 11 April 2018).
- National Institute for the Humanities and Social Sciences (NIHSS): Professor Paul Maylam (3 May 2018).
- RU Research Office/National Research Foundation (NRF) students (23 May 2018).
- Nuffic Postgraduate Supervision programme (16 August 2018).

Collaborations between RUL, Rhodes ICT, ORCID, TENET and SAFIRE began during 2018. It is anticipated the logistics to complete the integration of ORCID within the institutional IT systems and
strengthen Rhodes University as an ORCID Organisation Member will happen in 2019.

Rhodes Digital Commons

The Rhodes Library’s primary function is to aid in fulfilling the scholarly values and objectives of Rhodes University through its rich collection of information resources, both print and electronic, its information portal, and institutional repository.

It is imperative that the Library is able to meet the information needs of the university’s students and staff, to support and enhance the high standards of teaching, research and scholarship. The Rhodes Digital Commons is a collective responsibility of the institution, library, Research Office, and academics.

In 2018, as part of the strategic imperative to ensure that Rhodes research is made optimally visible, the Library staff focused on ensuring that research outputs, especially articles, were made accessible on the Rhodes Digital Commons.

The depositing of Rhodes University research outputs into the Rhodes Digital Commons continues to be a priority project. This project is aligned with the Rhodes University Open Access Policy and the NRF Open Access Statement (2015) and ORCID Mandate (2017).

| Rhodes Research Outputs added 2018 |
|-------------------------------|----------|-----------|
| Articles                      | 276      |
| Books & Book Chapters         | 77       |
| Conference Papers             | 4        |
| Theses                        |          |
| Masters                       | 298      |
| Doctorals                     | 121      |

| Rhodes Digital Commons Items hosted 2018 |
|----------------------------------------|--------|
| RU Main                                | 9 425  |
| RU Cory                                | 6 686  |
| RU ILAM                                | 1 256  |
| RU SAIAB                               | 159    |
| Total                                  | 17 526 |

| Rhodes Digital Commons Visits and Downloads 2018 |
|-----------------------------------------------|--------|
| Site                                          | Visitors | Hits    |
| RU Main                                      | 4 649   | 115 215 |
| RU Cory                                      | 2 130   | 10 071  |
| RU ILAM                                      | 1 328   | 3 027   |
| RU SAIAB                                     | 1 450   | 5 476   |
| Total                                        | 9 557   | 133 789 |

The depositing of research output project is a collaborative activity:
- Driven by the Librarian: Scholarly Communications and Librarian: Metadata and Repository.
- Uploaded by Faculty Librarians.
- Enabled by researchers who permit the upload of their research output (articles, conference papers, books, book chapters, images).
- Supported by the RUL Technical Services and the SEALS Consortium.

The challenge of copyright compliancy rests on either open access, publisher version and/or pre-print version of articles.

Open Journal Systems

Rhodes Library hosts the institutional Open Journal System. There are currently two (2) journals hosted on the open access online platform. Discussions have taken place with various stakeholders for the possibility to add the South African Journal of Environmental Education and the Journal of the Ergonomic Society to the platform.
Postgraduate and Research Support and Training

Several support and training activities are encompassed in the awareness sessions/workshops/presentations held throughout campus. Notably, these sessions are included in the annual Postgraduate Orientation, new Academic staff orientation and the NIHSS group.

Similar sessions have been part of the Psychology Clinic, Fine Art SARChI and Research Office research groups.

The sessions include the use of the following tools:
- Reference Management Software (e.g. Zotero, Mendeley).
- Researcher identities (e.g. ORCID, ResearcherID, Scopus AuthorID, Google Scholar).
- Citation analysis (e.g. InCites, ResearcherID, Scopus, Dimensions, Microsoft Analytics).
- Research Media (e.g. ResearchGate, Academia.edu).
- Rhodes Digital Commons.
- Research Workshops (e.g. Clarivate Analytics, Elsevier).

Cory Library

The Cory Library is one of the premier research facilities in South Africa, with its focus on Eastern Cape history and society, it primarily serves Rhodes University’s students and staff. The Cory Library is especially well suited for primary research and as such it serves academic staff and Masters and PhD students best.

Started in 1931, its operations take place in four (4) divisions: Library, Archives, Publishing, and Licensing. Operations at Cory Library proceeded at an accelerated pace in 2018. For the first time, history students from all years of study did research projects in the library. It was especially encouraging that all first-year history students did their research projects in Cory Library.

The staff routinely served international, national and local scholars and researchers across a range of disciplines. The Cory Library also fielded electronic research inquiries relating to a number of disciplines, including literature, genealogy, architecture and photography.

The Library is continually strengthening its holding in Eastern Cape material, judiciously accepting relevant deposits and buying "local" titles.

Publishing and Books

- Cory Library remained engaged in scholarship and publishing activities.
- Senior Research Associate in Cory Library, Dr Sandra Rowoldt-Shell published the following book, Children of Hope: The Odyssey of the Oromo Slaves from Ethiopia to South Africa, Ohio University Press, 2018, illustrated, xvii + 334pp.

Cory Library is continually giving substance to its brief to transform from a library orientation to an archive orientation with a focus on Eastern Cape history and society. For reasons of easy retrieval, preservation and serving scholars world-wide, Cory Library continues to work towards a digital future.

Conference / Workshop Presentations

Martindale, D. Scholarly Communication: “The Library’s strategic plan to support raising the visibility of institutional research” Nelson Mandela University (NMU) Open Access Seminar, 31 October 2018


Thomas, C. Presented the following lectures on the use of the archive:
- To History I students: “From Mystery to Magic” - The Inner Workings of the Archive;”
- To Honours, MA and PhD students: “An analysis of archives as instruments of power, agency, and therapy in the writing of South African history”.

In September-October 2018, Dr Thomas visited Brigham Young University in Provo, Utah and presented the following two (2) lectures:
- “Up a Rickety Staircase: An Historians Negotiates the New South Africa”.


Radebe, K. 2018. Rhodes Digital Commons. Presentation to Fort Hare staff. 23 May 2018. Fort-Hare.

Stoltz, B. 2018. ERM and III KB: the practical workflow to ensure full discoverability of electronic resources. IUG-SA 16th Annual Conference, 7-8 November 2018, Kempton Park.


Human Resources
Total Staff complement - 43 staff members.

Appointments
M. Chikafa (Librarian: Humanities); L. Maholo (Assistant Librarian: Circulation); VT Ntamo (Assistant Librarian).

Resignations
Ms. F. S. Drewett, Ms. N. Mkhatahal and Ms. U. Satgoor.

Formal studies (in process)
D. Martindale (M.IT, UP); F. Still-Drewett (MLIS, UCT); I. Kretzmann (PGDipLIS, UNISA); K. Yona & T. Mamani (B.Inf, UNISA); K. Radebe (MLIS, UCT); B. Stoltz (MLIS, UKZN); N. Mahleka (B.Inf. Hon. UNISA).

Sector Engagement and Professional Involvement
RUL staff are involved in various leadership roles in the acknowledged professional bodies, namely, CHELSA; IUG-SA; SANLiC; SEALS; IFLA-Africa; AFLIA, LIASA

U Satgoor
- Deputy Chair SANLiC Board, 2015-2018.
- Chair-Elect CHELSA, 2016-2018.
– AFLIA Governing Board Member & Treasurer, 2016-2018.
– Chairperson Academic & Special Libraries Sections, AFLIA, 2016-2018.

L Naicker
– Sabinet Board Member 2015 - to date.
– LIASA National Secretary 2016-2018.
– Rhodes Middle Management Steering Committee 2016-2018.

W van der Walt
– SEALS Trust member.
– NeDICC Secretary 2018-2020.

C Clack

A Mente

M Chikafa
– Additional member (LIASA HELIG 2018-2020).

T Dyantyi
– Chair-Elect (LIASA Eastern Cape Branch 2018-2020).

L Verwey
– Secretary - (LIASA Eastern Cape Branch 2018-2020).
Research activity in the department continued at a modest pace due to the focus on the delivery of the South African Institute of Chartered Accountants (SAICA) accredited professional program.

**Associate Professor Arendse** continued her work in the tax field with another annual edition of the seminal work, ‘Silke on Tax Administration’, of which she is the managing author, and two (2) other publications. She continued to share her expertise by presenting numerous tax seminars and webinars throughout the year, to several hundred tax professionals and corporates around the country.

**Dr Myers** and **Professor Bunting** each presented a paper at a conference in their respective research fields; Dr Myers in the area of accounting education and Professor Bunting in the area of finance.

**Postgraduates / Graduations**

**Professor Lilla Stack** continued her success in supervising Postgraduate students, with nine (9) Masters students and two (2) PhD candidates graduating from the Department in 2018.

Associate Professor Arendse graduated with a PhD in Accountancy in the field of Taxation and her thesis entitled ‘An Investigation into the Introduction of a New Wealth Tax in South Africa’ was later awarded first prize in the 2018 South African Institute of Professional Accountants (SAIPA) Tax Thesis Competition for the Doctoral degree category.

**Distinguished Visitors / International Visits**

The Department arranged a visit with the Coventry University (United Kingdom), which initiated a collaboration in the subject of Auditing, whereby third-year Auditing students in the Department worked on an assignment with their peers at the University of Sussex. This provided an opportunity for our students to share their knowledge with their Coventry University counterparts, with the experience of working in an international tax made possible by the use of technology.

In December 2018, the Department ran a research seminar hosted by two (2) international academics, Professor Joan Ballantine...
(University of Ulster, Belfast, Northern Ireland) and Professor Greg Stoner (University of Glasgow, Scotland). Both are researchers in the field of Accounting Education, and they are respectively the Chair and Vice-Chair of the British Accounting and Finance Association (BAFA) Accounting Education special interest group. During the seminar they shared useful guidance on research opportunities and practical advice on how academics could build their research capabilities.

**Significant Research Aligned Events**

Mr Edward Horn and Mr Sazi Mabaso, both Senior Lecturers in the Department who completed their Master of Commerce in Taxation degrees during 2018, presented their research at the Rhodes University’s Interdisciplinary Postgraduate Conference in July 2018.

The title of Mr Horn’s paper was ‘A comparative study of tax incentives for small business and investors in South Africa, Australia, New Zealand, Singapore and Ireland’ and the title of Mr Mabaso’s paper was ‘An analysis of the possible success of a tax on sugar-sweetened beverages in South Africa’.

Associate Professor Jackie Arendse was awarded first prize at the 2018 SAIPA Tax Thesis Competition for the Doctoral degree category.

Credit: Department of Accounting
Books/Chapters/Monographs

Arendse, J.

Other Publication

Arendse, J. 

Peer Reviewed Subsidy-Earning Journal Research Publications

Arendse, J. and Stack, L. 

Peer-reviewed Proceedings

Myers, L.P. 

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Bunting, M.B. 
The Anthropology Department continued to engage in exciting research activities across their core nodes of research including marine and ecological issues, urbanisation and nature, anthropology of performance, and biological and cultural anthropology.

The core geographical areas include coastal communities living along the South African coast, Tanzania, and the Pacific Islands as well as small to medium sized towns in the Eastern Cape. Through newly funded research the Department’s geographical range has been extended to include the Canary Island, El Hierro. The range of topics and geographic regions covered reflects the richness of expertise held in the department.

Professor Shankar Aswani, through his collaborative networks with the Leibniz Centre for Tropical Marine Ecology at Bremen University, Germany, and SOLCISTE, has continued to carry out research in East and South coasts of Africa and Oceania.

Research carried out amongst coastal communities in South Africa aims to improve compliance amongst recreational fishers. This forms part of government’s long-term plans for improving the livelihoods and sustainability of coastal communities. This research has been funded by the National Research Foundation (NRF).

Professor Aswani’s Sandisa Imbewu grant (Rhodes University-South Africa) has been extended to 2020 and is being used to carry out a comparative analysis of coastal communities’ responses to climate and environmental changes in Africa and Oceania.

Professor Aswani has also extended his research interests to include documenting communities’ social responses to catastrophe and environmental shock of volcanic eruptions, and how these are mediated by various factual and institutional components. This project focusses on documenting how various local and governmental institutions are capable of meeting the needs created by an environmental shock. The research includes a comparative study on the seismic-volcanic crises that occurred on the Canary Island of El Hierro in 2011 and in Kilauea volcano in the Hawaiian Islands in 2018.
Associate Professor Michelle Cocks and Professor Charlie Shackleton continued to lead their multidisciplinary research project entitled A Place to Belong that aims to unpack how urban nature(s) can assist and facilitate processes of belonging and well-being. Funding received from the NRF included supporting Postgraduate research. Amanda Manyani and Dennis Radebe both received funding and completed their research for their MA dissertations. Duncan Haynes was awarded NRF funding to carry out his research for his MA dissertation.

Dr Patti Henderson continued her project in applying social theories of futurity and potentiality to a number of South African artists. She began working on Zanele Muholi’s photographic images in opening a public space of visibility for African queer identities.

Dr Dominique Santos, a new member of staff, published as editor and contributor in the Suomen Anthropologi Special Issue. ‘The Fieldwork Playlist’ drew together a global cohort to explore the place of music in the research process, across the social sciences. Music is evocative of meaning and memories tied to people, places and particular events, powerfully bringing them into the present, yet its role in the making of research pathways is rarely foregrounded. Evolving from the mix-tape, the playlist is a form of communication through the assemblage of songs. The format was straightforward - one song from each contributor, and the story behind its significance for their research.

Dr Janet Hayward graduated with her Doctorate entitled “We are white”: Oral tradition, documented history and molecular biology of Xhosa clans descended from non-African forebears and their expression of this ancestry through the idiom of ancestor religion. She is publishing a chapter in an upcoming edited volume to be published by Cambridge University Press viz. The Transformative Power of Language and is working on additional journal articles from her PhD research.

Postgraduates / Graduations

Dr Janet Hayward (supervised by Professor Robin Palmer) obtained her PhD degree, alongside five (5) Honours students in anthropology and one (1) joint anthropology/German studies student. Two (2) Honours students graduated with distinctions.

Significant Research Aligned Events

Professor Aswani’s research in East and South coasts of Africa and Oceania has contributed to a greater theoretical understanding of dynamics and causal flows in coupled human and natural coastal systems at various spatial, temporal, and organizational scales, as these respond to environmental hazards related to climate change. A Multiscale Integrated Earth Systems Model has been developed to predict the responses of coastal coupled natural-human systems to endogenous and exogenous transformations including impacts, trade-off of ecosystem services, and estimates of system uncertainty under different climate change scenarios. The model will be used to assist in predicting the social and ecological drivers that lead some communities to be more resilient than others when faced with environmental change such as harmful algal blooms and sea level rise.

Professor Aswani was invited to give presentations at a number of international institutions on his marine related research. These included delivering a paper...
Associate Professor Michelle Cocks was one of fifteen (15) participants invited to participate in a workshop on biocultural diversity focusing on urban regions with an aim to develop a deeper understanding of biocultural diversity and its applications particularly relating to urban planning. The workshop was hosted in Tokyo and Kanazawa, Japan and was organized as part of the one hundred and fifty (150) year anniversary of Sweden-Japan Diplomatic relationships.

Based on the novel research being carried out under the leadership of Associate Professor Michelle Cocks and Professor Charlie Shackleton three (3) funded Postgraduate students presented their work at international congresses and conferences. These included being part of a panel entitled Biocultural Diversity in Cities at the 16th Congress of the International Society of Ethnobiology held in Belém, Brazil, and the World Forum on Urban Forests, Teatro Sociale di Mantova, Mantova in Italy.

Dr Patti Henderson was invited to the University of KwaZulu-Natal to speak on the work of Gregory Maqoma and Mary Sibande, the two (2) artists about whom she had already published.
PUBLICATIONS

Department of Anthropology

Books/Chapters/Monographs


International Visits

Cocks, M.L. (2018) Stockholm University (SRC), University of Tokyo (IR3S), Kanazawa, Japan. Three-day workshop on Biocultural diversity- with a focus on urban regions. Organized as part of the 150-year anniversary of Sweden-Japan Diplomatic relationships. Funders: STINT. 4 - 6 April 2018.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


The Department of Biochemistry and Microbiology has had a challenging 2018.

The renovations to the Biological Sciences Building started in earnest mid-year. The efforts of all staff and Postgraduate students who managed to continue with their research, despite the noise and dust, are highly commendable. Our research groups, notwithstanding the inconveniences of working in a building site, continued with their research and have produced significant outputs in student graduations and research publications.

**Significant Research Achievements**

The Dorrington Research group is involved in a $1.4 million project funded by the Gordon and Betty Moore Foundation ("How Microbes Use Chemistry to Form Ecosystems in Layered Living Rocks") to study the molecular ecology of living South African stromatolites. Modern stromatolites provide a glimpse into the first cellular life to emerge from the oceans more than 3.5 billion years ago and were responsible for the great oxygenation events.

The Moore Foundation project aims to develop a fundamental understanding of the microbial community structure, specialised metabolisms and molecular signalling that enables these complex microbial communities to survive in extreme environments.

A research team including four (4) scientists from Oregon State University (Professor Kerry McPhail), the University of California at San Diego (Drs Daniel Petras, Emily Gentry and Allegra Aron) and the Rhodes team (Professor Dorrington, Dr Xavier Siwe-Noundou and PhD candidates Mr Eric Isemonger, Ms Ross-Lynn Weston and Ms Mart-Mari de Bruyn) were involved in field studies on the Cape Recife coast, near Port Elizabeth. The team collected samples for chemical and genetic analysis of the stromatolites and their surrounding environment and also conducted primary productivity field studies to measure the ability of stromatolite communities to fix CO₂.

The Research Unit in Bioinformatics (RUBi) second year PhD candidate, Mr Allan Sanyanga, was invited to give an oral presentation at the 6th International Bahçeşehir University (BAU) Drug Design Congress, in Istanbul, December 2018.
Six (6) RUBi MSc students and PhD candidates attended the 12th CHPC National Conference in Cape Town in December 2018 to present their work, and Ms Chiamaka Jessica Okeke received 3rd best poster presentation award.

Ms Rita Boateng, RUBi first year PhD candidate attended the 1st Congress of the African Association for Research and Control of Antimicrobial Resistance (AAAMR) Bamako, Mali (26-28 February 2018) and received the best oral presentation award.

RUBi MSc student, Bertha Baye, was selected as Secretary of the Student Society of South African Society for Bioinformatics (SASBi) during the national SAGS/SASBi 2018 Symposium (16-18 October 2018).

Associate Professor Özlem Tastan Bishop spent three (3) months (January - March 2018) at Sabanci University, Istanbul, Turkey, during her sabbatical leave. Her sabbatical outputs included three (3) research articles in high impact factor journals (Bioinformatics-IF:5.481; Journal of chemical information and modeling-IF:3.760; Biophysical Journal-IF:3.495).

During her visit to Sabanci University, Associate Professor Tastan Bishop also gave a research seminar, one (1) popular science seminar (FUTURE series; https://gazetesu.sabanciuniv.edu/en/2018-02/future-seminar-series) and a workshop on homology modeling and PRIMO, a web server established by RUBi PhD candidates. The workshop included thirty-five (35) attendees from various universities located in Istanbul.

Associate Professor Tastan Bishop was also invited to attend two (2) PhD committee meetings for project proposal/progress reports of Sabanci University students, and she was invited to give oral presentations at two (2) international conferences - 43rd FEBS Congress, Prague and 6th International Bahçeşehir University (BAU) Drug Design Congress, Istanbul, as well as a national conference - 12th CHPC National Conference.

PhD candidate, Ms Caroline Ross, developed a novel coarse-grained approach to analyse viral capsid behaviour and applied to Enterovirus 71 which can be a severe pathogen in small children and immunocompromised adults. Ms Ross’ publication received a video highlight in Biophysical Journal. (http://www.cell.com/biophysj/fulltext/S0006-3495(17)35101-9).
PhD candidates, Natasha Boël and Michaelone Vaaltyn, were accepted to present their research at a leading international conference on the Hsp90 chaperone machine in Switzerland.

PhD candidates, Laura Dingle and Abantika Chakraborty conducted international research visits to the laboratories of Robin Reed (Harvard University) and Rick Morimoto (Northwestern University) funded through travel grants from the National Research Foundation (NRF). During these visits, they both attended the Cell Stress Society International (CSSI) conference in Virginia, United States of America (USA), where Ms Chakraborty’s abstract was selected for an oral presentation.

MSc student, Ms Kelly Schwarz, was awarded a prestigious South African Women in Science (SAWISA) Department of Science and Technology (DST) Albertina Sisulu Fellowship.

This year marked the 10th Anniversary of the establishment of the Biomedical Biotechnology Research Unit (BioBRU). BioBRU has made a major contribution to student training and research in the area of molecular biology of cell stress in the department and country. The event was marked with a public lecture by BioBRU alumnus and current Head of Department (HoD) of Biochemistry at University of Venda, Professor Addmore Shonhai.

Associate Professor Adrienne Edkins was awarded a prestigious Newton Advanced Fellowship to start a new research focus in HIV-related cancers. Associate Professor Edkins was also the winner of the DST South African Women in Science (SAWISA) Award for Distinguished Young Scientist in the Natural/Engineering Sciences.

Professor Pietschke and Associate Professor Edkins were nominated as Fellow of the African Academy of Sciences (AAS).

Finally, congratulations to Professor Brett Pietschke for being awarded the Vice-Chancellor’s Distinguished Senior Research Award for 2018.
Books/Chapters/Monographs

Dames, J. F.

Edkins, A.L. and Boel, N.

Distinguished Visitors

Sithole, B.
Professor B Sithole. CSIR Principal Researcher and Director of the CSIR Forestry and Forest Products Research Centre, Grahamstown, South Africa. Collaborative Visit and Lecture. November 2018.

Blatch G.L.
Professor Gil Blatch, Pro Vice-Chancellor Research at the University of Notre Dame Australia and Visiting Professor, Rhodes University, Grahamstown, South Africa. Collaborative Visit. November 2018.

Shonhai A
Professor A Shonhai. Professor and Head of Department of Biochemistry, University of Venda, South Africa. Research visit and BiBRU 10th Anniversary Lecture. November 2018.

International Visits

Pletschke, B.I.
Pletschke, B.I. Tampere University of Technology, Tampere, Finland. Visit to collaborator Professor Matti Karp as part of sabbatical. 20 - 24 March 2018.

Dorrington, R.A.
Memorial University, St Johns, Newfoundland, Canada. Visit to collaborator, Professor Rachel E. Spier as part of an South Africa-Canada Research Chair’s collaborative initiative.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Isaacs, M. and Hoppe, H.C.


Rafael, C.N. and Tastan Bishop, O.


Wilhelm, B.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Abrahams, G.L.


Charlter Fitzgerald, V.C. and Dames, J.F.


Dames, J.F.


Dorrington, R.A.


J. ukes, M.D. and Knox, C.M.


Kambule, N.V. and Dames, J.F.


Laming, D. and Hoppe, H.C.


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Pietschke, B.I. Enzyme synergism: Cellulases, expansins and degradation of the cellulose microfibril network. South Africa - Germany bilateral research projects workshop. CPUT Hotel School, Granger Bay Campus, Cape Town, South Africa. February 2018.


Van Der Merwe, M. and Knox, C.M. Yeast-baculovirus synergism: Investigating mixed infections for improved management of the false codling moth, Thaumatotibia leucotreta. 2018 International Congress of Invertebrate Pathology and Microbial Control and the 51st Annual Meeting of the Society for Invertebrate Pathology. QT Gold Coast hotel, Gold Coast, Australia. August 2018.

Internal and external collaborations once again positioned the Rhodes University Biotechnology Innovation Centre (RUBIC) as a cutting-edge entity for multidisciplinary Postgraduate training and translation of innovative research in South Africa and Africa.

Postgraduates / Graduations

RUBIC hosted thirty-two (32) Honours, Masters and PhD students in 2018. The Centre graduated ten (10) honours (including four (4) distinctions), five (5) Masters (including one (1) distinction) and four (4) Doctoral (Rose Kadye, Stephen Bentley, Shane Flanagan and Lance Ho) candidates at the graduation ceremony.

Distinguished Visitors / International Visits

RUBIC hosted Ms Tanya Accone, Senior Advisor on Innovation at United Nations Children’s Fund (UNICEF) who visited the facility as part of the second year of the UNICEF funded Innovation Laboratory, led by Professor Janice Limson (SARChI Chair in Biotechnology Innovation and Engagement) and Dr Ronen Fogel.

Old Rhodian, Dr Henry Roman, and Director: Environmental Services and Technologies at the Department of Science and Technology (DST), presented the 9th Annual PD Rose Biotechnology Lecture titled “Sustainable Development: almost...not quite?”

Professor Pedro Estrela (Bath University) and Professor Limson collaborated with the Donald Woods Foundation in Hobeni to conduct site visits to clinics and hospitals in the former Transkei region. This forms part of their research collaboration in developing appropriate diagnostic tests to support early disease detection in remote areas.

Staff recognition

In recognition for her contribution to research and teaching and learning at Rhodes, Dr Aileen Boshoff was promoted to the academic level of Associate Professor.

Ms Lwazikazi Madikiza joined RUBIC as a DST/NRF Intern, managing science engagement events and research.
Mr Aphiwe Mfuku, a researcher in RUBIC, continued his work towards developing portable water treatment filters using nanomaterials.

**Significant Research Aligned Events**

The Prinsloo Lab represented RUBIC at the combined meeting of the South African Society for Biochemistry and Molecular Biology, and the Federation of African Societies of Biochemistry and Molecular Biology (FASBMB) at the North-West University in Potchefstroom where they presented work on cellular differentiation and tissue engineering.

The BioSens Research group led by Professor Limson and Dr Fogel presented their work at the 69th Annual Meeting of the International Society of Electrochemistry in Bologna, Italy. Dr Lance Ho presented his work on electrochemical sensors treatment while Dr Shane Flanagan presented his work on aptamer based biosensors.

Professor Limson presented her work alongside Dr Michael Gastrow, Professor Anne Dijkstra and Dr Lars Guenther at the 15th International Public Communication of Science and Technology Conference in Dunedin, New Zealand, 3-6 April, 2018. Their presentation explored the science-society interface in South Africa.

Professor Limson was also an invited speaker at the SciCOM 100 Conference in Stellenbosch University, 5-7 November 2018. There she presented her findings on “Co-creation of technology and innovation with communities: models and benefits in higher education”.

**Workshops**

Professor Limson enjoyed a successful collaboration with Rachel Rayner of the South African Agency for Science and Technology Advancement (SAASTA), and Penny Haworth of the National Research Foundation (NRF) South African Institute for Aquatic Biodiversity (SAIAB). The team ran two (2) successful workshops at both Scifest Africa and at the National Arts Festival. As part of the Film and Ideas Festival at the National Arts Festival, the team explored the
role of the arts in mediating communication between the public and scientists in Science and Society: Can Art close the gap? A workshop at SciFest Africa encouraged science communicators to explore new roles in science engagement, in particular in Responsible Research and Innovation frameworks.

**Media**


**Awards**

Charles Faul, a Masters Biotechnology student, was selected as one of the Mail and Guardian’s 200 Young South Africans in the Science category. He was also profiled in Destiny Man’s Science, Technology and Healthcare category for 2018. The recognition is for his entrepreneurial activities, most notably development of Fieldlab, a lab-in-a-box capable of field based disease detection.

Charles Faul was also selected as a Mandela Washington Fellow as part of the 2018 Mandela Washington Fellowship for Young African Leaders, held in the United States of America (USA) in 2018. This included a six (6) week academic residency.

**Patents**

ARIPO patents granted include the development of aptamers for newer forms of diagnostic sensors for malaria by K-A Frith, M Cromhout, R. Fogel, D. Goldring and J. Limson.
Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Fanucci, S. and Prinsloo, E.


Flanagan, S., Fogel, R. and Limson, J.


Ho, L., Limson, J. and Fogel, R.


Kadye, R., and Prinsloo, E.


Limson, J.


Limson, J. Towards co-creation of technology and innovation with communities: models and benefits in higher education. ScICOM 100 Conference. Stellenbosch University, South Africa. November 2018.

Prinsloo, E.


Patents

The Botany Department continued to consolidate its research focus on evolution, ecology and global change.

The Department welcomed Mr Douglas McMurtry, a well-known horticulturalist and expert on orchids, as a Research Associate.

The flagship Rhodes University Elevated CO2 Facility (RUECF) was a hub of research activity and collaboration on the effects of elevated CO2 on crop plants and indigenous vegetation. Professor Brad Ripley was on sabbatical and focused on ensuring the sustainability of this research facility.

A visit from the Director-General of the Department of Science and Technology (DST) proved a turning point in securing core funding from the National Research Foundation (NRF) that will allow the appointments of instrument scientists and partially cover the running costs of the facility. Professor Ripley also secured funding of several million rand via the Applied Centre for Climate and Earth Systems Science (ACCESS), Grain-SA and Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASCCAL) grants.

Professor Susi Vetter continued research on bush encroachments and its feedbacks on the herbaceous layer and herbivory. She initiated an ACCESS-funded project to investigate the ecology of thicket pioneer species, which are hypothesized to play a crucial role in the functional shift from savanna to closed-canopy woody vegetation. She developed collaborative links with Juliesta Rosell Garcia and Mark Olson from the Universidad Autónoma de Mexico to work on the bark, hydraulic and photosynthetic functional traits of thicket pioneer and savanna species.

Dr Tracey Nowell continued to establish her research programme on the evolutionary relationships within the genus Cotyledon. She and her PhD student, Alex de Gouveia, did field work throughout the Eastern and Western Cape provinces to collect material for molecular analyses, conduct pollination experiments, and digitised herbarium specimens throughout the country. She continues to serve on the scientific committee of the Thicket Forum.

Professor Craig Peter’s research on pollination saw him travel to the Lowveld for research on orchid pollination. His interest in orchids
led to diverse research activities that included work on the conservation status of orchids in South Africa, and a new collaboration with Professor Joanna Dames (Department of Microbiology) on the mycorrhizal associations of terrestrial orchids. He attended the Wild Orchid South Africa conference in Dullstroom.

Professor Julie Coetzee continued research into the biological control of aquatic plants. She was seconded to work full-time for three (3) years in the Centre for Biological Control as a Senior Researcher on a prestigious multi-million Rand national biological control project. She remains a member of the Botany Department.

Tony Dold continued his collaboration with researchers from the University of Alicante studying South African Hyacinthaceae, resulting in the description of the new genus Austronea and seven (7) new species. Together with herbarium volunteer, Jean Kelly, he compiled and edited the historical archives of Mary Pocock and published the material in a book entitled “Bushmen, Botany and Baking Bread”.

Postgraduates / Graduations

In 2018 the Botany Department was home to six (6) Honours, ten (10) MSc and six (6) PhD students. Three (3) PhD candidates graduated in 2018.

Once again our Postgraduate students have made us proud by scooping awards and recognition. PhD candidate, Aviwe Matiwane was included in the Mail & Guardian’s 200 Young People list and MSc student, Nompumelelo Baso won the award for Best Speed Talk at the 45th Annual Research Symposium on the Management of Biological Invasions in Southern Africa.

Two (2) exciting new funding opportunities for Postgraduate students were launched in 2018 and awarded for the first time. The Craib Family Scholarship has been made possible by a generous bequest by the family of the late Charles Louis Craib (1954 - 2012), who was a dedicated and passionate amateur botanist. The first two (2) recipients are Damian Lourens (MSc) and Christopher Johnston (Honours).

The Rhodes University Student Travel Award to attend international conferences and field excursions in plant ecology was also launched and awarded to Katherine James (MSc, Department of Computer Science). She will attend the Savanna Science Network Meeting in early 2019.

Distinguished Visitors / International Visits

Professor Vetter visited the Stockholm Resilience Centre in January. She was hosted by a group of researchers to co-write a paper on the reciprocal relationship between ecosystem services and wellbeing.
Books/Chapters/Monographs

Coetzee, J.A.


Dold, A.P.


Peer Reviewed Subsidy-Earning Journal Research Publications

Barker, N.P.


Bentley, L. and Barker, N.P.


Coetzee, J.A.


Swart, C. and Barker, N.P.


Van Wijk, Y.


Vetter, S.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Chiloane, V.D. and Vetter, S.


Coetzee, J. A.


Griffith, T.C., Patterson, I.D., Owen, C.A. and Coetzee, J. A. Some like it hot, some like it cold: thermal plasticity of biological control agents enhances establishment. XV International Symposium on the Biological Control of Weeds. Hotel Bellevue, Engelberg, Switzerland. August 2018.


Astronea patersoniae, a new species in a new genus in the family Hydrocharitaceae described by Tony Dolo and collaborators from Spain.

Credit: Department of Botany


Paterson, I. D., Hill, M. P. and Coetzee, J. A. Cryptic species in biological control: a biocontrol agent that we didn’t know we had. 1st International Congress on Biological Control: Biological Control for a Healthy Plantl. Beijing, China. May 2018.


Prevec, R., Matiwane, A., Mnqeta, Z. and Mbunge, M. Concerts, Exhibitions, Performances, Workshops, Events

Prevec, R., Matiwane, A., Mnqeta, Z. and Mbunge, M. Concerts, Exhibitions, Performances, Workshops, Events

PhD candidate, Mr Alex de Gouveia setting up a pollinator exclusion experiment in Calitzdorp. Credit: Department of Botany
This year (2018) was a year of promotions for our Department, with the announcement coming out on Mole Day. Mole Day (23 October) commemorates Avogadro’s Number \((6.02 \times 10^{23})\), which is a basic measuring unit in chemistry. Mole Day was created as a way to foster interest in Chemistry. This is a significant achievement, and each of these staff members, Associate Professor Khene, Associate Professor Klein and Associate Professor Lobb, hold up the name of our Department in everything they do, and deserve our congratulations.

**Associate Professor Khene** got the year off to a great start with a Research Development Grant for Y-rated researchers from the National Research Foundation (NRF). He also celebrated being selected as one of the newest members of the South African Young Academy of Science (SAYAS).

**Associate Professor Klein** completed a successful three (3) year term as the Chair of the Green-Chemistry Division of the South African Chemical Institute (SACI) in December 2018 with an invited talk at the National Convention. Green Chemistry is the newest division of SACI, but is highlighted in the recent “Green Economy” strategy, and has grown tremendously both at Rhodes and nationally during her term.

**Associate Professor Lobb** co-authored no fewer than eleven (11) publications this year, including one (1) that featured on the cover of Tetrahedron Letters, one of the premier journals in Organic and Physical Chemistry. Professor Lobb’s collaborations with colleagues in Chemistry, other researchers at Rhodes, and people abroad is evident in his publications.

**Distinguished Professor Nyokong** also deserves our congratulations, not least for receiving her third Honorary Doctorate (Doctor of Science Honoris Causa) on the 18 April 2018 from the University of KwaZulu-Natal (UKZN) with the previous two (2) being awarded by Walter Sisulu University (WSU) and the University of South Africa (UNISA) in 2010. The number of publications listed below, and student graduations also attest to the phenomenal impact and influence that this outstanding A-rated scientist has in South Africa.

**Distinguished Professor Nyokong** is the Director of the DST/Mintek Nanotechnology Innovation Centre (NIC), which in 2018 was awarded
The Institute continues to excel in many respects, including an NRF B2 rating for Dr Mack (this was a first-time B2 rating, which underlines the considerable international recognition that Dr Mack has developed for his research).

Dr Mashazi (who was appointed Deputy Director of the NIC in 2018) was awarded an NRF Research Development Grant for Y-Rated Researchers. More importantly, in recognition of his research leadership as a Principal Investigator, he was also awarded a R3 million grant from the NRF-National Equipment Program (NEP) to upgrade the TOF-SIMS instrument, which is one of only two of its kind in South Africa.

This equipment and the other infrastructure means that the NIC is a draw-card for many visitors from advanced research institutes all around the world. The state-of-the-art facilities and expert supervision also means that the Postgraduate students are regular award winners at conferences and in national and international competitions. This method of instilling an ethos of excellence in her students is often seen in the achievements of Professor Nyokong’s graduates.

An example of this, is PhD student, Ms Muthumuni Managa (who graduates in April 2019) was announced as one of the Mail and Guardian’s Top 200 young South Africans in Science and Technology category at a gala dinner on the 28 June.

These young scientists and all the others from our Department often go on to take up important positions around the world. Mr Zweli Hlatshwayo (MSc graduate from 2018), is only the second scholar from Chemistry to be awarded a Fulbright Fellowship to study overseas. Dr Edward Sekhosana was appointed as a Senior Lecturer at the University of South Africa (UNISA). Dr Christian Nkanga (PhD graduate from 2018) was awarded a Novartis Next Generation Scholarship and spent three (3) months in Basel, Switzerland. Christian is the first Rhodes student to be selected for this.

I need to acknowledge our alumni and collaborators, who continue to help us become a Department that changes lives across the world. Former Head of Department (HoD), and now Dean of Natural Sciences at University of the Western Cape (UWC), Professor Michael Davies-Coleman is a new Academy of Science of South Africa (ASSAf) member. Former student, Dr Sunny Sunassee was a United Nations Educational, Scientific and Cultural Organization
(UNESCO)-Merck Best Young African Researcher Awardee, and our 2018 administration intern Ms Alyssa Williams was selected as one of the Top 100 Future Leaders by the South Africa Graduate Employers Association (SAGEA).

I would also like to thank Professor Dudley Shallcross and Mr Tim Harrison from the University of Bristol, whom we hosted as our 2018 Barker Lecturer visitors. These two (2) visitors have helped us establish programs such as the “Pollutants Tale” outreach demonstration, and provided many ideas for future joint projects.

Finally, to all our researchers, students, graduates, collaborators, technical and administrative support staff, I would say a big thank you for helping us remain one of the most productive and successful departments at Rhodes.

Postgraduates / Graduations

As our Department continues to grow and become more successful, so too does the list of outstanding students and Postgraduates. It’s therefore very hard to single out individuals, but apart from those mentioned elsewhere in the report, I would like to congratulate Nasiphi Mpti (Honours graduate) and Lisa Shwempe for their first places in the annual South African Chemical Institute (SACI) regional seminars. Also, Nobuhle Ndebele, Refilwe Matshitse and Aviwe Magadla for best presentations at the DST/Mintek Nanotechnology Workshop.

Of our 2018 PhD graduates, Dr Oluwafemi and Dr Nwaji received Rhodes Postdoctoral Research Fellowships, and former Postdoctoral Fellow, Dr Richard Bet reck published an article in Nature.

Congratulations to all our graduates, especially those whose degrees were awarded with distinction.

Distinguished Visitors / International Visits

Professor Dudley Shallcross and Mr Tim Harrison were SciFest visitors from Bristol and hosted by the Department for the Barker Lecturer series. They gave two (2) very different research seminars on the “Impacts of public engagement”, and on “The problems of indoor and outdoor air pollution”. They also gave a public talk, “The Biosphere is Cool”.

The NIC also hosted a number of research visitors who spent time working on the amazing instruments. This included a delegation from Mintek who have been a long-term supporter of NIC, and also Mr Krzysztof Jankowski and Mr Szymon Caluch from the Jacob of Paradies Academy in Gorzow, Poland.

The Vice-Chancellor, Dr Siwze Mabizela, hosted a celebratory dinner (28 November 2018), where several current and former students spoke of the enormous positive influence that Distinguished Professor Nyokong has been to them personally, and to science.

Congratulations to all who contributed in any way to our work, and as we welcome 2019 as the International Year of the Periodic Table, let me wish you success for the future.
Concerts, Exhibitions, Performances, Workshops, Events

Hulushe, S.T.
Hulushe, S.T. Learner Participant, 5th European Crystallographic School, Stellenbosch University, Stellenbosch, South Africa. 8 - 14 July 2018.

Louzada, M.S. and Khene, S.

Mafukidze, D.M. and Nyokong, T.

Magadla, A., Britton, J., Oluwole, D.O. and Nyokong, T.

Mapukata, S. and Nyokong, T.

Matshitse, R. and Nyokong, T.


Mgidlana, S., Oluwole, D.O. and Nyokong, T.

Ndebele, N., Mack, J. and Nyokong, T.

Distinguished Visitors

Haynes, D.A.

Jankowski, K. and Caluch, S.
Mr. K Jankowski and Mr. S Caluch. Jacob of Paradies Academy in Gorzow Wielkopolski, Poland, Gorzow Wielkopolski, Poland. Made use of the Centre’s facilities and did some research on the results of physical parameters of nanoparticles of metals and semiconductors. April 2018.
Distinguished Professor Tabelo Nyokong receiving her Honorary Doctorate from the University of KwaZulu-Natal. Credit: Department of Chemistry

Mjwara, P.
Dr P Mjwara, Department of Science and Technology, Pretoria, South Africa. Tour with students/staff. Chemistry Building and Rhodes/DST Centre for Nanotechnology Innovation and meeting with Dr Clayton and Distinguished Professor Nyokong. November 2018.

Murage, M.

Shallcross, D.E.
DE Shallcross, Bristol University, United Kingdom. Lecture: Climate change Workshops: Science Outreach. March 2018.

International Visits

Kubheka, G.
Kubheka, G. BA Material Forschung Berlin, Germany. DAAD-NRF Joint Scholarship Programme. 15 October - 14 December 2018.

Mack, J.

Mapukata, S.

Molupe, N.
Molupe, N. Queen's University, Belfast, Northern Ireland. Cancer Research: Part of Pearson-Young Memorial Trust Funding. 16 September - 4 October 2018.

Ndebele, N.

Nene, L.C.

Nxele, S.R.

Nykong, T.

Nykong, T.

Nykong, T.

Shabangu, S.M.

Soy, R.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Sen, P.


Khaney, S.D. and Lobb, K.A.


Khene, S.


Krause, R.W.M.


Mack, J., Ndebele, N. and Nyokong, T.


Mack, J., Soy, R. and Nyokong, T.


Mafukidze, D.M. and Nyokong, T.


Magadla, A., Oluwole, D.O., Britton, J. and Nyokong, T.


Makinde, Z.O., Louzada, M.S., Britton, J., Nyokong, T. and Khene, S.


Managa, M., Achadu, O.J. and Nyokong, T.


Managa, M., Britton, J. and Nyokong, T.


Managa, M., Khene, S., Britton, J. and Nyokong, T.


PUBLICATIONS

Smith, V.J.
Sobola, A.O. and Watkins, G.M.
Stone, J.
Stone, J., Mack, J., and Nyokong, T.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Adeniyi, O.K. and Mashazi, P.
Betteck, R.M.
Centane, S. and Nyokong, T.
Cossa, T.M.
Cossa, T.M. Silica supported sulfuric acid as a green catalyst for synthesis of symmetrical and unsymmetrical 1,2,4,5-tetroxanes with good activity against Plasmodium falciparum. IUPAC Postgraduate Summer School on Green Chemistry 2018. Venice, Italy. January 2018.
Dube, E., Osawole, D.O. and Nyokong, T.
Klein, R.
Krause, R.W.M.
Krause, R.W.M.
Kubheka, G., Achadu, O.J., Mack, J. and Nyokong, T.
Lebecchi, A.K., Nyokong, T. and Mack, J.
Lobb, K.A.
Mack, J., Babu, B., Soy, R. and Nyokong, T.
Mack, J., Babu, B., Soy, R. and Nyokong, T. The use of Gaussian 09 to identify trends in the optical


Mack, J., Molupe, N., Soy, R., Babu, B., Oluwole, D.O. and Nyokong, T.


Managa, M. and Nyokong, T.

Managa, M. and Nyokong, T. Conjugates of platinum nanoparticles with gallium tetra-(4-carboxyphenyl) porphyrin and their use in photodynamic antimicrobial chemotherapy when in solution or embedded in electrospun fiber. Electrospinn2018 International Conference. The Stellenbosch Institute for Advanced Study (STIAS), Stellenbosch, South Africa. January 2018.

Managa, M., Achadu, O.J. and Nyokong, T.


Manyeke, M.H.


Mapukata, S. and Nyokong, T.


Masahzi, P., Adesina, A.O. and Adeniyi, O.K.


Masahzi, P., Mwanzo, D. and Hvango, S.


Matlou, G.G. and Nyokong, T.


May, A.K., Ngoy, B.P., Soy, R., Mack, J. and Nyokong, T.


Mzambe, T.E. and Betack, R.M.


Ndagano, U.N.


Nwaji, N.J., Nwai, N., Fomo, G. and Nyokong, T.


Nwahara, N., Achadu, O.J. and Nyokong, T.


Nwai, N., Mack, J. and Nyokong, T.


Nyokong, T.


Nyokong, T. The role of nanostructured materials in enhancing the photophysical behaviour of phthalocyanines (Invited Speaker). Atlantic Basin Conference on Chemistry. IBEROSTAR Cancun, Cancun, Mexico. January 2018.

Oluwole, D.O. and Nyokong, T.


In 2018, the research activities in the Computer Science department were organized around mutually supporting the research groups listed below.

With the exception of BioInformatics, all groups are integrated in the Telkom Centre of Excellence in Distributed Multimedia, a triple helix initiative that brings together industry, government and academia to foster innovation to every participant’s gain. The longevity of the Centre, as an external funded project, has been remarkable, having started in 1997.

**Convergence**

*(Dr Mosiuoa Tsietsi and Professor Alfredo Terzoli)*

This group carries the core activity of the Telkom Centre of Excellence, focusing on the rich intersection of legacy telecommunication systems & organizations and the Internet. The theme for 2018 was ‘Software Defined Networks, Network Function Virtualization, Cloud and Fog computing for 5G networks’.

**Security and Networks**

*(Professor Barry Irwin and Associate Professor Karen Bradshaw)*

The Security and Networks Research Group (SNRG) concentrates in the areas of Information Security and Computer Networks, both crucial in modern computing and telecommunications.

**ICT for Development**

*(Professor Alfredo Terzoli and Dr Mosioua Tsietsi)*

This group concentrates on a long-term, multidisciplinary effort to introduce meaningful and sustainable ICT in poor areas of South Africa, rural and peri-urban.

**Distributed Audio Networks**

*(Professor Richard Foss)*

The Audio Networks group deals primarily with the management and control protocol of audio streams to be used in large sound installations such as stadiums, studios and convention centres.
Parallel and Distributed Computing

(Associate Professor Karen Bradshaw and Professor George Wells)

This group focuses on the ever-present and important theme of parallel and distributed computations.

Bioinformatics

(Professor Philip Machanick)

Rhodes University Bioinformatics (RUBi) Research Group is an interdisciplinary group housed in the Department of Biochemistry, Microbiology and Biotechnology and focuses on collaborative research to produce computational outcomes of biological significance.

Postgraduates / Graduations

During 2018 the following students were in training:
- Nineteen (19) Honours.
- Nineteen (19) MSc by coursework and research (engaged in the research portion of their studies).
- Eighteen (18) MSc by research.
- Eight (8) PhD.

The following 2018 students graduated:
- Sixteen (16) Honours.
- Ten (10) MSc by coursework and research.
- Three (3) PhD.
- Three (3) extra MSc students by research had their theses successfully examined.

Distinguished Visitors / International Visits

Representatives of the industry partners of the Computer Science department, within the Telkom Centre of Excellence and outside, visited the department during 2018. Staff and students routinely attend overseas conferences. The attendance is often complemented by a visit to an academic institution in the country where the conference takes place.

Significant Research Aligned Events

As in previous years, the department received research grants from the partners of the Telkom Centre of Excellence in Distributed Multimedia, Telkom and Coriant (now Infinera). In January 2018, Dr Mosiuoa Tsietsi visited Cape Town for a collaborative meeting with partners from the Department of Future Technologies at the University of Turku (Finland), and a Cape Town based NGO (contextualize.co.za) specializing in ICT4D/participatory design. The purpose was to workshop ideas that would feed into a research proposal under the Southern Africa Innovation Support (SAIS) Programme (http://www.saisprogramme.org) focusing on a multi-disciplinary approach toward the development of agricultural solutions for Sub-Saharan Africa employing the Internet of Things (IoT) paradigm.

The two (2) day meeting yielded a detailed work plan and identified key technologies that would be employed for this unique context, but also outlined a comprehensive skills-sharing plan that would support mobility between the two (2) partner countries (South Africa and Finland) including opportunities for Postgraduate student exchange.

At the end of February 2018, Associate Professor Karen Bradshaw presented, with her German research partners, a short course on Ecological Modelling at the University of the Witwatersrand (WITS) Rural Facility near Hoedspruit. At the beginning of March 2018, she attended the Savanna Network meeting at Skukuza, where research conducted in national parks and other conservation areas was presented. At the end of March she attended the GPU Technology Conference (GTC) in San Jose, California. There she was granted the NVIDIA DLI (Deep Learning Institute) University Ambassadorship. DLI Ambassadors are a select group of DLI Certified Instructors committed to teach DLI workshops and host DLI lab meetups at universities, academic conferences, and events using cloud-based training materials from Nvidia.

The Siyakhula Living Lab (SLL) continued sitting in the Eastern Cape ICT Working Group, which oversees the public ICT activity in the Province, contributing the result of its research in the diffusion of ICT in poor communities. The focus of the Working Group was the implementation of “SA Connect”, the national broadband initiative. Two (2) computer labs, of thirty (30) seats, arrived at the end of 2018 from Saab Grintek, as an in-kind contribution to the activities of the Siyakhula Living Lab.
Concerts, Exhibitions, Performances, Workshops, Events

Machanick, P.


Peer Reviewed Subsidy-Earning J-ournal Research Publications


Peer-reviewed Proceedings


Brown, D.L. and Bradshaw, K. Efficient Biometric Access Control for Larger Scale
PUBLICATIONS


Chihipa, S.D., Irwin, B. and Herbert, A.

Connan, J.

Devconet, S. and Foss, R.

Herbert, A.

Herbert, A. and Irwin, B.

James, K.M.F.

Lehata, M. and Connan, J.

Linklater, G., Herbert, A. and Irwin, B.


Machanick, P.

Magwenzzi, T., Tsethe, M. and Terzoli, A.
Magwenzzi, T., Tsethe, M. and Terzoli, A. Towards a Low-cost

MSc student (Ms Katherine James) collecting image data using the Mavic drone for an environmental bush classification project. Credit: Department of Computer Science

Max drone used in image processing and machine learning research projects.
Credit: Department of Computer Science

Mavic drone used in image processing and machine learning research projects. Credit: Department of Computer Science


Marais, K. and Foss, R.

Motara, Y.M.


Pennefather, S., Bradshaw, K. and Irwin, B.

Pennefather, S., Bradshaw, K. and Irwin, B. Exploration and Design of a Synchronous Message Passing Framework for a CPU-
PUBLICATIONS


Shaw, B. and Irwin, B.

Vorster, J.

Vorster, J. and Irwin, B.

PhD candidate, Mr Sean Pennefather, delivering a presentation on his research on network flow processors at the annual SATNAC conference.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Pipile, Y.Y., Tsietsi, M. and Terzoli, A.
In 2018, through a combination of performing arts creative practice and the presentation and publication of articles, the department encouraged a dialogical connection between practice and research. This approach consolidated and extended the theatre knowledge-base within the academic programme. The department gives central place to the question of how theatre and performance relates to audiences and the broader society and therefore conducts research for, through and into theatre.

Such research requires diverse and applied approaches, allowing space for performers, choreographers, writers, designers and directors to prepare for and create productions. The same industrious effort is required whether one is preparing to work within an applied-theatre context, in a classroom, or in any other learning context. The department regards content and form as equally important, thus requiring that theatrical form is investigated with the same intensity as theatrical content.

The department's synergistic amalgamation of research and practice has led to participation in international conferences, events and workshops. The department was represented nationally and also internationally (Cambodia, Serbia, Japan, Greece, the United Kingdom, the United States of America and Hong Kong).

Dr Gehring and Mr Parker delivered papers at a conference in Serbia, while Ms Mohoto and Professor Krueger participated in creative projects in the United States of America (USA). Professor Krueger, with Professor Megan Lewis, received the 2017 Hiddingh-Curie award for his book Magnet Theatre: Three Decades of Making Space (2016). The department hosted a number of distinguished visitors with Ms Selloane Mokuku instrumental in inviting guests and in co-facilitating workshops.

The creative outputs of staff and students were showcased at the National Arts Festival in Grahamstown (now Makhanda); the Klein Karoo National Arts Festival; the Cape Town Fringe Festival; the Drama for Life International Festival in Johannesburg; the Dance Umbrella Festival; the Institute for Creative Arts Live Art Festival;
and the Kuwamba Women’s Festival. The year ended on a high note when the student production, Seeing Red, was invited to perform at the Stockholm Youth Theatre in Sweden.

**Professor Buckland** performed at the Baxter Theatre and Theatre on the Bay in the production *The Inconvenience of Wings* and he was assistant director of *See You Yesterday* for the Global Arts Corps in Cambodia.

The inspirational work of Research Associate, **Athina Vahla**, culminated in a production for the First Physical Theatre Company, called *DNA*.

**Postgraduates / Graduations**

Postgraduate students made a strong contribution to creative outputs. Most notably, after winning the National Arts Festival ‘Best Ensemble’ award, the production, Seeing Red, directed by Masters student Mmatumisang Motsoi, received invitations to collaborate and perform nationally and internationally.

**Distinguished Visitors / International Visits**

**Professor Ketu Katrak**, researcher, guest lecturer and PhD co-supervisor, brought a wealth of experience in Drama and Dance/Choreography. Her books on current Indian contemporary choreography and postcolonial politics of the female body are relevant to discussion about decolonising curricula.

**Ms Mammatli Thakhuli-Nzuza** conducted workshops in playback theatre. She is a lecturer at the University of the Witwatersrand (WITS) where she teaches Theatre for Human Rights in the School of Arts, Drama for Life division. She holds a Bachelor of Arts in Dramatic Arts with an Honours degree in Drama in Education and Theatre as Activism. She is the founder of the Mankokosana Playback Theatre Collective and is an accredited Community Capacity Enhancement facilitator.

**Mr Selaelo Maredi** is a playwright, director and actor who offered lectures on South African protest theatre. In 1971, Maredi was a founder of the
internationally renowned Workshop 71 Experimental Theatre, a unique space where artists could meet beyond race boundaries. Among the plays he has written are: Prosecution, Mboni, Bound by Love, The sun will soon rise, Boobsy Cooksy Doopsy, Not gender, Hell we can, Devine will, Breaking the cocoon of ignorance, S’kotiphola, and Alexandra Child.

Mr Theogène Niwenshuti conducted workshops on healing through movement. Born in Rwanda, he is a PhD candidate in Anthropology at the University of Cape Town (UCT), and has an MA (cum laude) from WITS School of Arts in Johannesburg. He is passionate about using arts-based methods to facilitate interventions focusing on social transformation, community building, human rights, education, conflict/genocide resolution.

Research-Aligned Events

First Physical - an associate project of the department - offered extensive interaction with the larger Grahamstown community. The BodyForms programme offered somatic training in dance and movement forms and produced four (4) productions: Athina Vahla’s DNA, (Rhodes University Drama department), Gavin Krastin’s Yet to be determined, (National Arts Festival and Institute for Creative Arts Live Art Festival), Alan Parker’s Sometimes I have to lean in (Dance Umbrella Festival and Institute for Creative Arts Live Art Festival), and a production created by Professor Gary Gordon for a National Pam Golding Awards Ceremony.

In 2018 Ubom! - another associated project of the Drama department - built the capacity of local unemployed practitioners, scholars, prisoners and others through theatre skills courses. The Vuka Drama Workshop Programme offered drama-focused activities for schools; Performing Change Workshops were run at the Grahamstown Correctional Facility for juvenile offenders; and Fundisa’s Fabulous Adventures was a dynamic event intended to ignite a love of theatre in children. The Makana Drama Development Festival was held during November 2018 in the Rhodes University Theatre.
Concerts, Exhibitions, Performances, Workshops, Events

Buckland, A.F.


Gehring, H.


Krastin, G.


Krueger, A.

Mokuku, S.


Parker, A.C.


Vahla, A.


Other Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


In 2018 the Department of Economics further strengthened its dual Postgraduate research focus in Financial Markets and Environmental and Resource Economics (ENREFA). The former is managed through the Masters in Financial Markets (by coursework and thesis) and subsequent publications from theses, while the latter is housed within the ENREFA special focus research programme.

A total of eleven (11) peer reviewed subsidy-earning publications were produced by staff and Postgraduate students. A variety of topics featured, including some from the above themes. Other publications were on Economic Theory and Policy, Trade Policy and Economics curriculum issues, while Cultural Economics, particularly under the auspices of the South African Cultural Observatory (co-hosted by Rhodes University) also resulted in several research outputs.

**Postgraduates / Graduations**

Thirteen (13) Masters students completed their degrees. Five (5) of these were by full thesis on a variety of topics, while eight (8) of the students who graduated were registered for a Masters in Financial Markets degree.

**Significant Research Aligned Events**

Professor Alejandro Nadal of the Centre for Economic Studies of El Colegio de México was a Visiting Professor jointly in the Department of Economics and the Neil Aggett Labour Studies Unit (NALSU) in September 2018. Professor Nadal's publications cover a wide variety of subjects, from technical change and resource management, to macroeconomics and general equilibrium theory. He is the author of Rethinking Macroeconomics for Sustainability (Zed Books 2011), a book designed to link the most pressing issues in macroeconomics with the key components of the debate on global sustainability. Professor Nadal delivered a lecture to the second year Microeconomics class and a university seminar hosted by the Economics Department and NALSU, as well as holding wide-ranging discussions with Departmental staff.
Professor Jen Snowball participated in an international workshop on the roles of intellectual property and diversity in the creative industries: Networking South Africa and the United Kingdom (UK); funded by Arts and Humanities Research Council (AHRC), UK. The workshop was held on 21 September 2018, London. Partners included: University of Fort Hare and Coventry University.

Professor Snowball also delivered the keynote address at the international conference of the Association for Cultural Economics in June 2018, Melbourne, titled: “Bread or Circuses? Cultural Policy and the Cultural and Creative Industries in Developing Countries: A case study of South Africa”. Professor Snowball continued to manage the Rhodes component of the South African Cultural Observatory.

South Africa hosted the Summit of the BRICS grouping (Brazil, Russia, India, China and South Africa) in 2018, along with a wide range of high level side events. Ms Niki Cattaneo was a South African delegate at the 2018 BRICS Academic Forum held in May, hosted by the South African BRICS Think Tank in Johannesburg. The theme of the Academic Forum was Envisioning Inclusive Development through a Socially Responsive Economy.

Ms Cattaneo was also a Rhodes University delegate at the BRICS Network University Conference in July 2018 in Stellenbosch, hosted by the Department of Higher Education and Training, together with the BRICS Network University. The theme of the conference was Unlocking BRICS Universities Partnerships: Postgraduate Opportunities and Challenges.

Professor Gavin Keeton completed his term as President of the Economic Society of South Africa.
Other Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Fraser, G. and Humphrey, L.
The Faculty of Education’s continued commitment to research teaching, research activities and engagement, remain a defining character of every member of staff. From the newer, younger and first generation academics, to seasoned professorate, including permanent and contract academic members of staff, researching our practices has become the modus operandi in the Faculty of Education.

Leading by example, the Head of Department (HoD), Professor Emmanuel Mgqwashu, received his first National Research Foundation (NRF) Rating and was awarded a C3. This is a symbolic gesture recognising the research trajectory and productivity the Education Department continues to maintain.

As the record of our research involvements below shows, our commitment to new knowledge generation cuts across such areas as schooling in all its facets, teaching and learning in higher education and civil society, and community learning via expansive learning research. Most of our work is focused firmly in the service of our town, province, country, continent, and the international community.

Postgraduates / Graduations

In 2018, the Department of Education celebrated the award of a Doctoral degree to one of its academic members of staff, Dr Farhana Amod Kajee. Under the supervision of fellow colleagues in the Department, Professors Hennie van der Mescht and Callie Grant, Dr Kajee’s work responds to national and international concerns around the perceived weaknesses in the field of Educational Leadership and Management.

Using Legitimation Code Theory to surface serious discrepancies in terms of both knowledge and knowers across Master’s programmes offered by six (6) South African universities, Dr Kajee concludes that weak programmes’ most significant challenges lay in envisaging students as knowers who were professionally proficient but critically weak, thereby perpetuating the legacy of an impoverished and socially unjust education system. Dr Kajee’s work makes a major original contribution into the fast growing Educational Leadership and Management field.
We also witnessed the total number of sixty-one (61) BEd Honours, twenty-four (24) MEd and eighteen (18) PhD students graduating.

At the Rhodes University’s Annual Vice-Chancellors’ Graduation Lunch, to which all PhD and Master’s theses supervisors get invited, Distinguished Professor Heila Lotz-Sisitka and Professor Emmanuel Mgwashu were named among the Top Three (3) most productive academics in terms of postgraduate students’ throughput, in positions two (2) and three (3), respectively.

At the same event, the Educational Leadership and Management specialisation was acknowledged for having graduated a record number of eleven (11) full-time MEd students. Professors Callie Grant and Hennie van der Mescht, and Dr Farhana Amod Kajee collectively received acknowledgement for this high throughput rate.

Distinguished Visitors / International Visits

Professor Mgwashu and Dr Wallace Mataka (as PhD Scholar at the time) gave a paper at a symposium during 19-21 July 2018 International Functional Linguistics Congress: re-imagining the future - expanding resources and making connections which was held at Boston College, United Stated of America (USA). The title of their presentation was: Democratising the classroom for epistemological access: the role of RtL pedagogy in an Eastern Cape Secondary School, South Africa. From this Congress, Professor Mgwashu visited the Lynch School of Education and Human Development, Boston College, Chestnut Hill, USA from 22-26 July 2018. The purpose of this Visitorship at Boston College was to spend time with Professor Stanton Wortham, the Dean of the School.

Professor Wortham’s background in linguistic anthropology, with a particular expertise in how identities develop in human interactions and the difference this brings to the process of educating younger learners (pedagogy) and adult university students (andragogy), were the focus of the engagements.

Professor Mgwashu’s second Visitorship as Researcher was on 8-14 December 2018 at the University of Bristol in the United Kingdom (UK). The research visit was part of the ESRC-NRF funded Southern African Rurality in Higher Education (SARiHE) in which the University of Johannesburg, University of Bristol, University of Fort Hare, the University of Brighton and Rhodes University are collaborating. The project is investigating how students negotiate the transition from school and home in rural contexts to ‘university learning’. This visit culminated into a Seminar presented in the School of Education entitled: Knowledge generation and Northern hegemony.

Professor Schäfer was an invited Guest Professor at the Goethe University in Germany, where he taught Visualization modules to student teachers and consulted on two (2) PhD projects. He also visited Switzerland where a new collaboration project was conceptualized. He was the Plenary Speaker at the 6th International Conference: Enhancing quality education through innovative pedagogy hosted by the Federal University of Technology in Minna, Nigeria.

Professor Schäfer also led various Research Methodology workshops during the Visitorship. He was subsequently appointed as Co-Chair for the Visualization Topic Study Group for the ICME-14 International Congress on Mathematics Education to be held in China in 2020. He was also appointed as an Associate Editor of the Eurasia Journal of Mathematics Science and Technology Education.

During 2018, Distinguished Professor Lotz-Sisitka was invited to present thirteen (13) keynote papers in eight (8) countries, including Germany, Hungary (at the Balaton Group Systems Science Conference), Norway (at the International Association of Critical
Realism Conference), Colombia (at the T-learning Colloquium), Senegal (at the African Food Sovereignty Alliance Conference), Ireland (at the Public Pedagogy and Sustainability Conference) and in Japan (with Dr McGarry and Injairu Kulundu) in the Transformations to Sustainability meeting, and in South Africa where she presented a plenary contribution in the Department of Science and Technology Global Change Research Conference.

Dr Dylan McGarry and Ms Injairu Kulundu presented for the Chair's International Science Council T-learning Programme in the World Social Science Conference in Japan in November 2018.

Distinguished Professor Lotz-Sisitka also presented a keynote paper at the Future Earth Seedbeds of Transformation Conference hosted in Port Elizabeth to deliberate the Sustainable Development Goals in Africa. Here a twelve (12) point framework for guiding transformations oriented research for Africa was developed.

Scholars and associates of the SARChI Chair in Global Change and Social Learning Systems made various contributions in plenary sessions, workshops, and in coordinating and co-hosting the arts-theme in the conference, as well as the early careers network. The conference was co-organised by Postdoctoral Research Fellow Dr Dylan McGarry.

Ms Priya Vallabh, Ms Morakane Madiba and Ms Sheraine van Wyk were successful in attracting an international T-LAB grant focussing on citizen science and sustainability, which they were invited to present at the Future Earth Seedbeds Conference, and develop further.

Distinguished Professor Lotz-Sisitka was also invited to serve as a Visiting Professor at Leuphania University in Luneburg, Germany (December 2018), working with colleagues at this university to contribute to the SDG 4.7 working group of the International Association of Universities. The Chair offered two (2) lectures at Leuphania University during this visit.

Distinguished Professor Lotz-Sisitka was nominated to serve on the Council of the International Association of Critical Realism, and also presented a keynote paper at the IACR Conference in Norway in August 2018. Here the Chair, together with Research Associate Dr Leigh Price, presented a lecture on the Routledge publication 'Critical Realism, Environmental Learning and Social-Ecological Change', which earlier won the Cheryl Frank Memorial Prize.

Dr Chikiwa, the researcher on the NRF Mathematics Education Chair held by Professor Marc Schäfer, presented at numerous conferences and is leading the new and exciting Visualization and Language research agenda. A number of students in collaboration with Professor Schäfer and Dr Chikiwa presented at conferences in South Africa, Botswana and abroad.

The NRF Mathematics Education Chair's international collaborators in Germany, Switzerland and Namibia continue to thrive, and new collaborations are being established in Zimbabwe and Italy.


Professor Mellony Graven presented a workshop for teachers on ‘mathematics story time’ at the Queensland Association of Mathematics Teachers annual conference held in Brisbane, Australia.

**Significant Research Aligned Events**

The Faculty's Research Chairs continue to make significant contributions to educational knowledge generation and educational development that impact at regional, national, continental and global level. 2018 saw the continuation of the Environmental Learning Research Centre’s (ELRC) strong research contribution that impacts our communities.

In 2018 Distinguished Professor Hella Lotz-Sisitka in her role as SARChI Chair in Global Change and Social Learning Systems, continued to focus on the key themes of transformative learning and green skills learning pathways research with the Chair being involved in six (6) publications as author or co-author, with Postgraduate scholars associated with the Chair producing a further seven (7) publications. The Chair graduated three (3) PhDs in 2018.

Besides the international and national conference presentations included above, the Chair also offered
the Vice Chancellor’s Senior Research Award Public Lecture at Rhodes University in May 2018, entitled ‘#Transgressive Learning in times of [Climate] Change’.

An early career research school named the ‘Living Aula’s’, was partly organised by the Chair’s T-learning in Times of Climate Change research programme scholars, Colombian T-learning researchers, and the International Science Council (ISC). The early career research school was held in Quindea, Colombia, involving over twenty (25) early career researchers working on transformations research. This overlapped with the final Research School of the ISC T-learning project. Dr Dylan McGarry and Research Associate, Dr Mutizwa Mukute, both provided strong leading contributions to this international research programme. This ISC funded programme will conclude in 2019, and a special issue journal focussing on transgressive learning in times of climate change is being co-edited by Distinguished Professor Lotz-Sisitka and Dr Bengtsson from Uppsala University in Sweden.

Through ongoing work with UNESCO and the Southern African Regional Universities Association, the Chair successfully leveraged 31 million rand (21 Million SEK) from the Swedish International Development Agency (Sida) for a joint project to be implemented by UNESCO’s Regional Office for Southern Africa and the SARChI Chair in Global Change and Social Learning Systems.

This programme, titled ‘Sustainability Starts with Teachers’ will support research and professional development for teacher education in southern Africa, including Early Childhood Education, Primary and Secondary Education, and Technical Vocational and Training. It builds on a pilot programme implemented by UNESCO, the Chair, SARUA and SWEDESD in 2017/18 which worked with ninety (90) secondary teacher education institutions in southern African countries. The focus of this project will be to continue to advance Education for Sustainable Development in eleven (11) southern African countries, working with over one hundred (100) teacher education institutions in the region between 2019-2022. It will also develop M&E indicators for Target 4.7 for Sustainable Development Goal 4, focussing on quality lifelong education and learning.

In 2018, the SARChI Chair also concluded research to inform Chapter 5 of South Africa’s Third National Communication (national report) to the United Nations Framework Convention on Climate Change. In this research the Chair reviewed South Africa’s educational response to climate change, noting the need for a more systemic, inter-sectoral approach to climate change education, training and public awareness. The Chair, working with Dr Ramsarup at the University of the Witwatersrand (Wits), the Centre for Researching Education and Labour (REAL), completed research and drafting of the South African Environmental Education and Training Strategy and Action Plan, which was presented to Working Group 3 of the Department of Environmental Affairs, and is now being ratified at provincial levels before final national approval.

Locally, the Chair’s Amanzi for Food research programme continued to strengthen knowledge of new models of vocational education and training, leading to a new research programme which was signed up at the end of 2018 (with Wits REAL and Nottingham University) that will investigate VET 4.0 pedagogy and methodology in Africa.

The Green Skills research programme is coordinated jointly by Professor Eureta Rosenberg, Chair of Environment and Sustainability Education in the ELRC, with the Centre for Researching Education and Labour at Wits University, where Rhodes graduate Dr Presha Ramsarup took up the directorship in 2018. Professor Rosenberg, Dr Ramsarup and Distinguished Professor Lotz-Sisitka received a joint book contract by Taylor and Francis to publish...
The Evaluation Research Programme involved collaboration between the Chair in Environment and Sustainability Education, Professor Rosenberg, and Environmental Science at Rhodes University in the development of a research-based Participatory Monitoring, Evaluation, Reflection and Learning framework for a landscape restoration and citizen engagement programme in the Tsitsa basin in the north-eastern Eastern Cape.


Building on her Evaluation Research Programme, Professor Rosenberg was awarded a second Research Chair funded by BANKSETA and ServiceSETA to the value of R4.5 million. Its aim is to produce an overarching monitoring and evaluation framework for SETAs, with methods, guidelines and capacity development processes. These will eventually be incorporated in a Capstone Course and Short Course modules to be offered by Rhodes in partnership with the Centre for Learning, Evaluation and Research for Anglophone Africa, CLEAR-AA at Wits.

The Environmental Learning Research Centre is making efforts to communicate their research through the Rhodes website as well as social media, with active Twitter accounts in place for @EuretaRose, @RU_elrc2, @GreenSkills_za and @SAJEE_EEJournal.

The NRF Mathematics Education Chair held by Professor Marc Schäfer continues to be busy and productive in its endeavors to research and generate new insights and knowledge about visualization processes in Mathematics Education. The research is very multilayered and themed around five major areas: Visualization and cognition; Visualization and pedagogy; Visualization and mathematicising; Visualization and technology; and Visualization and language.
Scholars linked with the Chair are located across South Africa, Namibia and Zambia, mostly framing their research projects within a school context, and centred on an intervention programme that involves either learners or teachers, or a combination of both. Each of the eight (8) PhD scholars’ research projects is intricately intertwined with a community development initiative to such an extent that the community development site doubles up as the empirical field of the individual project. The rationale behind this model is that this research work has community impact and benefit and the lessons learned from the community involvement contributes to a wider understanding of teacher development and best practice in the Southern African Region.

Through this PhD network of communities of practice, the Chair reaches out to approximately fifty (50) mathematics teachers and one thousand five hundred (1500) learners. A similar model with the current thirteen (13) MEd student applies. One (1) PhD scholar and five (5) MEd students completed in 2018.

The South African Numeracy Chair led by Professor Mellony Graven continued with and completed the Early Numeracy Inquiry Community of Leader Educators (eNICLE) programme started in 2017. In 2017, the Chair designed and began a ten (10) session, research informed early numeracy development programme for local Grade 1 and 2 teachers based around a research informed ‘early number resource kit’.

This kit has been provided to all participating teachers for use in their Grade 1 and 2 classrooms. The materials have since been made freely available to DoE District staff and other NGOs who wish to run the programme with non-participant schools and teachers and beyond. In 2018 the remaining six (6) sessions with fifty (50) teachers from fourteen (14) schools were carried out.

The Chair’s Family Math Story Time project ran several math story time professional development sessions in a remote rural Aboriginal Australian school, with Foundation Phase teacher aids and teachers/some parents, collaborating with Professor Robyn Jorgensen from the University of Canberra. In addition to these, twelve (12) Maths Clubs, which are part of the work with the Vestas Empowerment Trust, were started in 2018. All had new learners, totalling one hundred and twenty-seven (127) learners. This is a big increase in numbers of clubs and learners that were involved in the previous year (six (6) clubs and fifty-eight (58) learners in 2017).

The Chair also introduced Maths Club website in collaboration with other organisations around South Africa. Organisations such as Olico, Axium Education, Wits Maths Connect and Kelello, SANC through Debbie Stott played a leading role in the conceptualisation and creation of these new Maths Clubs website. The idea behind the website is that resources and activities used by all organisations that run clubs for Grade 1 to 6 learners can be shared freely.

As a result of the extensive collaboration between Professor Graven and Postdoctoral Research Fellow Pam Vale and Jana Visnovska (UQ Australia) and Jose Cortine (Mexico), the Chair has developed a Measurement Story Book (research informed and carefully structured based on established research and teaching sequence) for use with Intermediate Phase learners and teachers. This will form the basis of further research and development work.

In December 2018 Professor Graven and Dr Visnovska trialled the storybook with a group of Australian learners and their facilitators. In 2019 the book will be trialled with Eastern Cape learners and teachers.

Professor Graven was invited to Chair the International Congress on Mathematical Education (ICME) plenary panel for the ICME congress to be held in Shanghai in 2020. The Plenary is on Math in global education reform: Conversations that need to happen. ICME is the largest gathering of mathematics educators in the world and attracts more than four thousand (4000) delegates, and is held only every four (4) years.

As members of an international partnership of Education for Sustainable Development teacher educators (ESD Innovate), Associate Professor Ingrid Schudel and Ms Zintle Songqwaru were part of the organising committee of the bi-annual International Network of Teacher Education Institutions (INTEI) conference. This was an online conference held from 13-15 November, 2018.
Starting in 2000, the UNESCO Chair in Reorienting Education towards Sustainability, has facilitated biennial meetings in Canada, South Africa, Sweden, Finland, Turkey, Paris, Canada, Japan, and Sweden. Over the years, INTEI grew from about thirty-five (35) TEIs in thirty-four (34) countries to approximately three hundred (300) TEIs and affiliated organizations in more than seventy (70) countries.

The 2018 conference was ground-breaking as the first online INTEI conference, a meeting illustrating that it is possible to curb the ecological footprint of international events while still facilitating lively international dialogue and collaboration.

In April 2018, the Environmental Learning Research Centre, hosted the leader of the CYCLES Research Project - Professor Bronwyn Hayward from the University of Canterbury, Christ Church, New Zealand. CYCLES is an international comparative study of the lifestyles and embedded experience of young people aged twelve (12) to twenty-four (24) in urban communities. Makhanda is one of seven (7) cities represented in this study, with comparative studies being conducted in the New Zealand, United Kingdom, India, Bangladesh, Japan and Brazil.

In July 2018, Masters student Ms Lona Musiyiwa participated in a CYCLES research planning meeting at the Centre for Understanding of Sustainable Prosperity (CUSP) in Surrey, UK. In November, 2018, Associate Professor Ingrid Schudel and Masters student, Ms Livile Matiwane travelled to Surrey, UK to participate in the finalisation of Stage 1 of this same project. During this visit they attended the opening of an exhibition of photographs curated by the project in London (The Foundry): https://www.cusp.ac.uk/themes/s1/cycles_london-nov-jan/. This exhibition included photographs taken by Makhanda youth representing their lives in our small city.
PUBLICATIONS

Ramsarup, P., Ward, M., J enkin, N. and Lotz-Sitikha, H.

Stott, D.

Vallabh, P.

Wilmot, D.


Concerts, Exhibitions, Performances, Workshops, Events

Knoetze, S., Van Der Mescht, C. and Gush, C.C.

Schafer, M.


Schafer, M. Keynote Address. Visualisation in the teaching and learning of mathematics and science. 6th International Conference of School of Science and Technology Education (SSTE), with theme ‘Enhancing Quality Education through Innovative Pedagogy’. Federal University of Technology, Minna. Nigeria. 1 October - 5 January 2018.

Distinguished Visitors

Charalampopoulou, N.
Dr N Charalampopoulou. Managing Director at Feedback Environmental, Food For Us | July Collaborative Project Workshop Meeting. july 2018.

Martija, A.
Professor Dr Andoni Arenas Martija. Professor Laboratory Geografía y Educación, Instituto de Geografía, Pontificia Universidad Católica de Valparaíso, Chile. Geography Education and Research. August 2018.

Mendoza-Zuany, R.

Professor Merrilyn Goos

Gustafson, M.

Holmberg, J.
Professor J Holmberg. UNESCO Chair and Physics and Sustainability Professor, Chalmers University, Sweden. Challenge Lab Master Class to Limpopo Basin Curriculum Innovation Network December Partner Meeting in Polskowane. December 2018.

Roussell, C.
Ms C Roussell, African Centre for Biodiversity, Seed Sovereignty and Activism. August 2018.

Sandoval Rivera, J. C. A.

Spore, R.

Swanepoel, S.

Taylor, J.

Vermeylen, S.
Dr S Vermeylen. Chancellor’s Fellow, Centre for Environmental Law and Governance, University of Strathclyde, United Kingdom. Uncanny Lore Research Meeting with the Khoi San Council. J uw 2018.

Westernmark, A.

International Visits

Mgwawu, E.M.

Mgwawu, E.M. University of Bristol, UK, Visiting Researcher. 8 - 14 December 2018.

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Schafer, M. Goethe University, Frankfurt, Germany. Visiting Professor. 6 - 31 March 2018.


Hayward, B. University of Canterbury, Christ Church, New Zealand. July 2018.


Other Publications


Matonne, K.


McGarry, D.


Murray, S.R.


Schudel, I.


Schudel, I.


O’Donoghue, R.


Olvitt, L.L. and Lotz-Sisitka, H.


Sibanda, J.

Sibanda, J. (2018) Efficacy of written corrective feedback on

Peer Reviewed Subsidy-Earning Journal Research Publications


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Rhodes University Research Report | 2018

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PUBLICATIONS


Peer-reviewed Proceedings

Chikiwa, C.


Chikiwa, C. and Schafer, M.


Graven, M.

Jawahar, K.

Nghifimule, S.N. and Schafer, M.

Ramaski, L.F. and Ngcowa, K.M.

Robertson, S.A. and Graven, M.

Sibanda, L.
Sibanda, L. The Linguistic Component in Mathematics Assessment and Attendant Tensions and Dilemmas: The Teachers’ Experiences.

Cockburn, J.


Cockburn, J. and Human, H.


Cockburn, J. and Rosenberg, E.


Dongwi, B.L. and Schafer, M.


Durr, S.


Grant, C.


Graven, M.


Human, H.


Human, H. and Rosenberg, E.


Ijabadeniyi, A.


Ijabadeniyi, A. and Loto-Sisitka, H.


Kajee, F.A.


Jawahar, K.


Long, R.


Loto-Sisitka, H.


Loto-Sisitka, H.


Loto-Sisitka, H. Opening Plenary Address: Sustainability Starts with Teachers. Programme Implementation Framework. Final


PUBLICATIONS

CYCLES Research team visit to London. Credit: Department of Education

Mgwawu, E.M.


Mgwawu, E.M.


Mgwawu, E.M.


Matl, N., Rosenberg, E. and Cockburn, J.


Mukate, M. and Lotz-Stiikka, H.


O‘Donoghue, R.


Olvitt, L.L.


Olvitt, L.L. and McGarry, D.


Pesanayi, VT.


Price, L.


Robertson, S.A. and Graven, M.


Rosenberg, E.


Rosenberg, E. and Cockburn, J.


Rosenberg, E. and Ramusanp, P.


Schafer, M.

Schafer, M. From Data to Narrative. 9th Annual UNISA ISTE

Schudel, I. (2018) Transformative learning: Diadactics in learning about nutrition in rural primary school classrooms. Panelist invited to speak at the online conference of the International Network of Teacher Education Institutions (INTEI) associated with the UNESCO Chair on Reorienting Education to Address Sustainability. 13 -15 November 2018.


Vallabh, P. Transformative learning: Diadactics in learning about nutrition in rural primary school classrooms. Panelist invited to speak at the online conference of the International Network of Teacher Education Institutions (INTEI) associated with the UNESCO Chair on Reorienting Education to Address Sustainability. 13 -15 November 2018.


Makshanda Youth photographs displayed at the Foundry in London, United Kingdom. This exhibition includes photographs taken by Makshanda youth representing their lives in Grahamstown.

Credit: Live Matiwane
Staff were active in their research endeavours and had their works presented at international and local conferences and symposia, as well as getting some of their papers published.

**Professor Simango** gave two (2) keynote addresses at the University of Zimbabwe International Linguistics Conference, and at the 7th International Conference on Bantu Languages in Cape Town. He also had his works presented at the 20th International Congress of Linguists and the 19th Interim Conference of the African Languages Association of Southern Africa (ALASA).

**Professor Hunt** and **Professor de Vos** presented their work at the 20th International Congress of Linguists in Cape Town. In addition, **Professor de Vos** presented his work on Transforming and Decolonizing Linguistics at workshops at the University of Free State in Bloemfontein and at Nelson Mandela University in Port Elizabeth. He also presented a research paper at the 7th South African Microlinguistic workshop at the University of Venda.

**Mr Siebörger** presented his work at the 20th International Congress of Linguists in Cape Town, while **Ms Probert** presented her works at Nelson Mandela University and the University of the Witswatersrand (WITS).

**Dr Bennett**, a Senior Research Associate, presented his work at the 49th Annual Conference on African Linguistics at Michigan State University in the United States of America (USA).

**Professor Adendorff** continued serving on the Board of the Dictionary of South African English as well as on the national (PANSALB-affiliated) English Language Board. He and **Professor Simango** continued to serve as members of the Academy of Science of South Africa. **Professor de Vos** and **Professor Hunt** served as co-presidents of the newly formed Southern African Linguistics and Applied Linguistics Society. **Professor Simango** continued to serve as a non-executive director for the Molteno Institute for Language and Literacy.
Postgraduates / Graduations

One (1) student submitted her MA thesis on an aspect of the phonological description of isiXhosa. A number of Postgraduate students presented their works at the annual mini-linguistics conference held at the beginning of September.

Distinguished Visitors / International Visits

The department, at different points in the year, hosted four (4) African Humanities Program Fellows from universities in West Africa - one (1) from Ghana and three (3) from Nigeria. The scholars spent between six (6) and eight (8) weeks in the department and presented their works at research seminars and also interacted with staff and Postgraduate students.

Significant Research Aligned Events

The workshop Transforming and Decolonizing the Linguistics curriculum, convened by Professor de Vos and hosted by Nelson Mandela University offered linguists and language practitioners from universities around the country the opportunity to reflect on new directions, curriculum issues as well as research in linguistics and access to the discipline in South Africa.
DEPARTMENT OF ENGLISH LANGUAGE AND LINGUISTICS

Concerts, Exhibitions, Performances, Workshops, Events

De Vos, M.

Probert, T.

Distinguished Visitors

Probert, T.

Other Publications

Probert, T., Katz, J.L. and Rees, S.A.

Other Publications

Bennett, W.G.

Bloom Strom, E.M.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Bennett, W.G.


De Vos, M.

Peer-reviewed Proceedings

Bennett, W.G.
De Vos, M. and Hunt, S.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Bennett, W.G.

De Vos, M.

De Vos, M.

De Vos, M. and Ma, X.

Hunt, S. and De Vos, M.

Probert, T.
Translanguaging for epistemological access in a multilingual pre-Grade R classroom. Literacy Association of Southern Africa Annual Conference 2018. Nelson Mandela University, South Africa. October 2018.

Probert, T.
Koie, Goeie môre, Good morning: Exploring translanguaging practices in an multilingual pre-Grade R classroom. 5th International Conference on Language and Literacy Education. University of the Witwatersrand, Johannesburg. South Africa. August 2018.

Sieborger, I.

Simango, S.R.
We have grown the number of our senior Postgraduate students. The number of MSc students is the highest since 2015. The number of registered PhD students was higher than in 2017. All these positive changes are in line with our Departmental vision of growing the number of our postgraduate students (including Honours students). However, we need to increase the throughput rate of our MSc and PhD students.

Our publications in subsidy-earning journals were thirty-six (36). This was slightly lower than in the previous year by five (5) articles. However, conference presentations (thirty-seven (37) versus thirty-three (33)) and book chapters (three (3) versus two (2)) were higher than in the previous year. Furthermore, eight (8) other reports were also published in 2018.

**Postgraduates / Graduations**

At the end of 2018, there were a total of twenty-three (23) PhD candidates, twenty-eight (28) Masters and fifteen (15) Honours students. Of these, one (1) PhD candidate and seven (7) Masters students graduated.

**Significant Research Aligned Events**

Professor James Gambiza was invited to address the South African Parliament’s Environmental Committee on 06 June 2018. He gave an overview of Rhodes University’s Department of Environmental Science research programme. He highlighted how the Department’s research programmes supported natural resource management and land degradation initiatives in the country.

Professor Gambiza also led the development of South Africa’s national land degradation neutrality targets in line with the United Nations Sustainable Development Goal 15 and Target 15.3. The Minister of Environment endorsed the targets in 2018. The targets will guide South Africa’s efforts towards achieving land degradation neutrality by 2030.
Books/Chapters/Monographs


Other Publications


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications

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Credit: Department of Environmental Science

tensions for engaged praxis in a complex social-ecological system.


Blair, D., Shackleton, C.M. and Mograbi, P.J.


Bulunga, A.A.L. and Thondhlana, G.


Carlos Bezerra, J.


Chakona, G.


Cockburn, J., Cundill, G. and Shackleton, S.E.


Cundill, G.


Dalu, M.T.B. and Shackleton, C.M.


De Vos, A.


Fox, H. and Cundill, G.


Gowus, A.J. and Shackleton, C.M.


Guilé, J. and Shackleton, C.M.


Martins, A.R.O. and Shackleton, C.M.


Masunungure, C. and Shackleton, S.E.


Norman, Y.M.


Shackleton, C.M.

The Fine Art Department has enjoyed a prolific and rewarding year, engaging in a diversity of research projects and engagements with notable outputs - many at an international level. These include academic publications, conference research papers, and symposia presentations. Department staff and students have engaged in practice-as-research creative outputs including exhibitions, curation, performances, workshops, residencies, and artists’ dialogues. Additionally, contribution to arts community engagement and activism is noted. A large number of distinguished academics and artists visited and contributed to the department through participation in events and initiatives.

Postgraduates / Graduations

In 2018, the Department graduated three (3) MFA students, Ms Gladys Kalichini and Mr Luthando Mama with distinctions, and Ms Ivy Ng'ok. The students also presented solo exhibitions as part of their practice as-research submissions.

In addition, our Postgraduates participated in numerous exhibitions locally and abroad as contributing and solo artists.

Notably Ms Natasha Bezuidenhout exhibited in three (3) exhibitions and was a finalist in the Sasol New Signatures competition. Mr Brunn Kramer exhibited in three (3) exhibitions including the RMB Turbine Art Fair. Mr Wallen Mapondera exhibited in three (3) exhibitions including a solo exhibition at the Tyburn Gallery in London and one (1) at the SMAC Gallery in Johannesburg. Ms Philiswa Lila exhibited her Gerald Sokoto ABSA L’Atelier Art Award exhibition at the ABSA Gallery in Johannesburg.

Distinguished Visitors / International Visits

A number of staff members and Postgraduate students embarked on research visits abroad. These included Professor de Jager who travelled to Birkbeck University of London, United Kingdom, to present at the Violence and Society International Conference.
Ms Christine Dixie attended the Kaunas Art Festival in Lithuania to present her exhibition *To Be King*. She also delivered a public address at the Vilnius Academy of Art contextualising the installation.

Dr Sharlene Khan visited the University of Sussex where she presented a paper at the Decolonial Transformations Conference. Dr Khan also took up the African Humanities Postdoctoral Research Fellowship Residency at the University of Ibadan, Nigeria.

Professor Ruth Simbao presented a keynote address at the International Bandung School Workshop, Nanshan Campus of the China Academy of Art, in Hangzhou, China. She also attended the RAW Material Company Condition Report 3 Symposium on "Art History in Africa" at the Musée des Civilisations Noires, in Dakar, Senegal. Professor Simbao was invited as a guest by the Center for African Studies at Peking University in Beijing, China, and additionally travelled to Accra, Ghana for contemporary research on the Chale Wote Street Art Festival.

Professor Dominic Thorburn attended the IMPACT 10 International Multidisciplinary Printmaking Conference in Santander, Spain where he presented an exhibition and a paper at The Social and Cultural Action Center of Caja Cantabria (CASYC). He was also an invited artist and keynote speaker at the 2nd International Academic Printmaking Alliance (IAPA) Conference, Taoxichuan Art Museum, jiangdezhen, China.

Two (2) Postgraduate students embarked on international visits. Ms Nancy Dantas presented a paper at the Association for Art History Annual Conference, at the prestigious Courtauld Institute of Art in London, United Kingdom. Ms Gladys Kalichini travelled to Lagos, Nigeria to present a conference paper at the Centre for Contemporary Art.

The Fine Art Department hosted many distinguished visiting academics and artists. Included were Mr Mphapho Hlasane who convened a Zine Workshop, Ms Helene van Aswegen ran a book-arts workshop, Mr Jonathan Silverman conducted a painting workshop, and Mr Abri de Swart delivered Studio Practice lectures. Dr Thembinkosi Goniwe was an art history and visual culture guest lecturer.

Two (2) projects initiated by the Arts of Africa and Global Souths Research Programme attracted a number of international visitors.

The Artists-and-Writers-in-Residence program (RAW) hosted Professor Adepeju Layiwola and Dr Patrick Oloko both from the University of Lagos, Nigeria. Mr Moffat Takadwa from Harare, Zimbabwe and Dr Nadine Siegert from the University of Bayreuth, Germany also participated.
The PROSPA Publishing Workshop hosted Ghana participants, Dr Dorothy Akpene Amenuke, Dr McMaster Saidu, Mr George Ampratwum, Mr Kwaku Boafo Kissiedu, Mr Ibrahim Mohammed Mahama, Professor Adepeju Layiwola and Postdoctoral Research Fellow Dr Stephen Folaranmi from Nigeria also attended. The department was also honoured to host visiting artists Dr Bernard Akoi-Jackson and Mr Bright Ackwerh from Ghana, Dr Angelo Kakande (African Humanities Program Fellow) from Uganda and Dr Eyitayo Ijisakin from Nigeria.

**Significant Research Aligned Events**

The exhibition *Converge* at the National Arts Festival was an international collaborative project run by students and staff of the National Research Foundation (NRF) SARChI programme Geopolitics and the Arts of Africa, and it included artists from South Africa, Zimbabwe, Tanzania, Zambia and Ghana. A number of Rhodes Fine Art postgraduate and undergraduate students participated. The Arts Lounge Africa programme invited Mr Bernard Akoi-Jackson from Kumasi, Ghana, as the guest artist and performer.

The SARChI programme opened its new space and RAW Spot Gallery in June 2018 with the inaugural exhibition *Return* by Professor Peju Layiwola from the University of Lagos. Professor Layiwola spent two (2) months at Rhodes as an Artist-in-Residence, and Dr Patrick Oloko was the Writer-in-Residence who wrote about her work.

Mr Moffat Takadiwa, a Harare-based artist, also spent two (2) months in the Department as an Artist-in-Residence, and he involved a number of undergraduate Fine Art students in preparation for his exhibition.

Internationally renowned Ghanaian artist Mr Bright Ackwerh held his first solo exhibition at Rhodes University. “Where de cho dey?” was curated by Professor Ruth Simbao at the RAW Spot Gallery and formed part of a Postgraduate seminar on Southern Epistemologies organized in collaboration with the School of Journalism and Media Studies.

The Rhodes Fine Art Department and SARChI programme played a significant role in the 2018 African Arts journal, which featured a painting by former student Ms Chemu Ng’Ok on the front cover. The journal issue was edited by Professor Ruth Simbao and Research Associate Dr Amanda Tumusiime from Makerere University, and it included articles by Postdoctoral Research Fellow Dr Stephen Folaranmi, Dr Rachel Baasch and Research Associate Dr Ying Cheng from Peking University. The core goal of Rhodes University participation in the African Arts Editorial Consortium is to increase the number of Africa-based scholars and artists.

As part of the Andrew W. Mellon Foundation funded programme Publishing and Research of the South: Positioning Africa (PROSPA), Professor Ruth Simbao and Dr Stephen Folaranmi hosted a publishing workshop at Rhodes University. Guest writers and artists were from the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana, and included the internationally renowned artist Mr Ibrahim Mahama.
**Books/Chapters/Monographs**


**Concerts, Exhibitions, Performances, Workshops, Events**


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PUBLICATIONS

Ghana Publishing Workshop participants, with (second from right) Professor Ruth Simbao. Credit: Department of Fine Art

Dixie, C. Public lecture/Walkabout. Outside the Seminar Room: Contextualizing the To be King Installation. Outside the Seminar Room, Video Art, Vilnius. Lithuania. 8 November 2018.

Dixie, C. Public lecture/Walkabout. To Be King. H. Žižka’s Art Museum, Kaunas. Lithuania. 8 November 2018.


PUBLICATIONS


Mulenga, A.M. Presenter. How can an analysis of artistic portrayals of the future portrayed in the works of select contemporary Zambian artists be used to break down the dichotomy between the tradition and the future? Mellon Series of Humanities Seminars - Southern Epistemologies: Thinking Beyond the Abyss for a Transformative Curriculum, School of Journalism and Media Studies in collaboration with Fine Art. Arts Lounge, Makhanda. South Africa. 25 - 26 October 2018.


research programme. Arts Lounge (Arts of Africa and Global Souths research programme), Makhanda. South Africa. 19 October 2018.


Other Publications


Distinguished Visitors

Akol-Jackson, B., Dr B Akol-Jackson. Kwame Nkrumah University of Science and Technology (KNUST) Fine Art Department and Blaxtarlines collective, Kumasi, Ghana. Distinguished visiting artist and performer for the Converge exhibition curated by Irene Kramer and Ruth Simbao.

Participant in the Arts Lounges Africa festival series of seminars organised by the Arts of Africa and Global Souths research programme (National Arts Festival). june 2018.


Khan, S. and Motsemme, N.

Khan, S. and Ntombela, N.

Khan, S. and Peterson, B.

Khan, S., Asfour, F. and Hlatsane, R.

Kissiedu, K.B.

Layiwola, A.

Layiwola, A.A.
AA Layiwola. Department of Creative Arts (Head of Department), University of Lagos, Lagos, Nigeria. Artist's Residency hosted by Residencies for Artists and Writers (RAW) - Arts of Africa and Global Souths research programme. April 2018.

Mahama, I.M.

Ngcai, S.

Nichols, P.
Dr P Nichols. University of Witwatersrand, Johannesburg, South Africa. Facilitator (two days) at the PROSPA Publishing Workshop hosted by Ruth Simbao and the Arts of Africa and Global Souths research programme. November 2018.

Oloko, P.

Seidou, K.

Siegert, N.I.
NI Siegert. Iwalewahaus (Deputy Director) at the University of Bayreuth, Bayreuth, Germany. Writer's Residency hosted by Residencies for Artists and Writers (RAW) - Arts of Africa and Global Souths research programme. August 2018.

Takadiwa, M.

International Visits

Khan, S.

Mapondera, W.

Simbao, R.
Simbao, R. The Institute of Asian, African and Latin American Culture and Art at the China Academy of Art in Hangzhou, and the Center for African Studies at Peking University in Beijing, Hangzhou and Beijing, China. Research in China (Beijing and Hangzhou) on artistic representations of Africa-China encounters, and collaboration with Research Associate Dr Cheng Ying. 31 May - 8 June 2018.


Moafi Takadiwa's exhibition.
Credit: Department of Fine Art.

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Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Folaranmi, S.A.


Khan, S.

Siegert, N.I.

Tumusiime, A.

Dantas, N.I.

Simbao, R.

Tumusime, A.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Dantas, N.I.
Dantas, N.I. Unsettled and Unsettling: The Colonial and Indian Exhibition as part of the repressed and disavowed in curatorial pedagogy. SAMVAH Annual Conference University of Stellenbosch, Stellenbosch, South Africa. July 2018.

Dantas, N.I.

De Jager, M.S.

De Jager, M.S.

Peer Reviewed Subsidy-Earning Journal Research Publications

Baaensch, R.
J. Jimoh, G.A.

Kakande, A.

Kakande, A. and Tumusime, A.

Kalchini, G.M.

Khan, S.

Khan, S.

Khan, S.

Khan, S. and Asfour, F.

Mulenga, A.M.

Simbao, R.

Simbao, R.

Simbao, R.

Simbao, R.

Stanley-Niaah, S.

Stanley-Niaah, S.

Stanley-Niaah, S.

Stanley-Niaah, S.

Tello, V.

Tello, V.

Thorburn, D.

Thorburn, D.

Zhang, Z.L.F.
Research in the Department reflects the diversity of the discipline of Geography. Activities include: the wild honeybush industry; land and agrarian reform; human mobility; the role of tertiary institutions in Grahamstown; 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 and Biogeomorphology; and climate change.

Not only is our research academically diverse, but spatially extensive, with projects extending from the Nordic Arctic to Antarctica.

An aspect the Department is extremely proud of is our training of Postgraduate students and exposing them to the international research community. All those who have been 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

At the Graduation ceremonies nine (9) Masters students graduated and Christel Hansen received her PhD. Dr Hansen was the first South African woman to lead a field based Antarctic research team and is now tenured Faculty at the University of Pretoria.

Distinguished Visitors / International Visits

Dr Bennie van der Waal received a Universities UK International (UUKi) Rutherford Fund Strategic Partner Grant to visit the Department of Geography and Earth Sciences at Aberystwyth University between July and September 2018.

Visiting Professor Thembela Kepe, Chair of Geography in Toronto University, visited the Department during May and August 2018.
Visiting Professor Ian Foster (Northampton University) continued his supervisory role and research in the Tsitsa Catchment during October 2018.

**Significant Research Aligned Events**

**Professor Ian Meiklejohn** was the South African and International Geographical Union (IGU) delegate at the Scientific Committee for Antarctic Research (SCAR) Open Science Conference and Delegates Meeting from 12-26 June 2018. This was his third meeting as a South African and second as an IGU delegate. He was also part of the council of the Antarctic Permafrost and Soils working group (ANTPAS) of SCAR and the International Permafrost Association. Much of their work was summarised in a Nature Communications article to be published in 2019.

**Ms Gillian McGregor** continued her work with students on wild honeybush (Cyclopia intermedia) resource utilisation, and was responsible for resource utilisation guidelines published by the Western Cape government. The crop grows in the mountainous regions of the Langkloof in the Eastern Cape, as well as in the mountains of Western Cape.

**Dr Bennie van der Waal** chairs the sediment community of practice (COP) which advises on erosion and sediment related issues in a multidisciplinary/multi-institutional Ntabelanga and Laleni Ecological Infrastructure Project (NLIEP) funded by the Department of Environmental Affairs (DEA). Researchers from the Geography Department are playing a key role in landcover, burning practices, and river sediment sources and loads.

**Emeritus Professor Kate Rowntree** continues her leadership of a team that is addressing community engagement in catchment restoration through a Water Research Commission (WRC) project.

The Landscape Processes in Antarctic Ecosystems group led by Professor Ian Meiklejohn completed their field work during the 2017/18 Austral Summer in Antarctica. The project has contributed to over twenty (20) peer-reviewed articles, and eleven (11) Rhodes’ Masters and PhD degrees since 2012. In addition, three (3) students involved in the project completed their degrees at other universities.

The Department of Geography was well represented at the Annual Geography Students Conference, hosted by the University of the Free State. Natasha Moore (MSc student) won the prize for the best Masters Presentation in GIS and Remote Sensing.
Books/Chapters/Monographs

Foster, I.

Kepe, T.

Mollett, S.

Lewis, C.A.

Rowntree, K.
Rowntree, K. and Van Der Waal, B.

Other Publications

Lewis, C.A.

Lewis, C.A.

International Visits

Meiklejohn, I.
Meiklejohn, I. SCAR (Scientific Committee for Antarctic Research), Davos, Switzerland. South African Delegate to the SCAR (Scientific Committee for Antarctic Research) Delegates Meeting. 24 - 26 June 2018.

van der Waal, B.W.
van der Waal, B.W. Research fellowship with Professor Stephen Tooth and Professor Andrew Thomas of the Department of Geography and Earth Sciences at Aberystwyth University. Funded by Universities. UK International (UUKi) Rutherford Fund Strategic Partner Grant. July to September 2018.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Denison, J.


PUBLICATIONS

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Ellery, S.G.

Ellery, W.N.

Ellery, W.N.

Hansen, C.D.

Hansen, C.D. and Meiklejohn, I.

Meiklejohn, I.


Meiklejohn, I.
Meiklejohn, I. Active layer and permafrost monitoring in Western Dronning Maud Land, Antarctica. SANSA, Hermanus, South Africa. August 2018.

Meiklejohn, I.

Shlegel, P.K., Huchzermeier, N.H. and van der Waal, B.W.

van der Waal, B.W. and Ellery, W.N.


The Department has moved into a consolidation phase after peaking in 2016 with its highest ever undergraduate numbers. The classes have shrunk a little and are not at the same size as the mid-2000s. Postgraduate numbers have stayed constant over the past five (5) years.

Academic and senior administrative staff numbers have now settled down with the Department having a full staff complement.

Overall, the Department has maintained its research profile with all staff together with its Research Associates contributing peer-reviewed papers, books and conference presentations.

**Postgraduates / Graduations**

At the 2018 graduation ceremony, the Department graduated two (2) research MSc students, and three (3) and two (2) MSc graduates from the department’s prestigious Economic and Exploration Geology MSc programmes, respectively. In addition, the Department graduated nine (9) Honours students.

**Distinguished Visitors / International Visits**

- **Dr Eugene Grosch** hosted Professor Giulio Viola, the Chair of Structural Geology at University of Bologna, Italy and Dr David Wacey from the University of Western Australia.

- **Dr Rob Gess** hosted Professor Ahlberg of Uppsala University, Sweden, to work on remains of a four (4) metre predatory tristichopterid fish, Hyneria, of a genus only known from one other species from North America. Dr Alice Clement of Flinders University is collaborating with Dr Gess on a new genus and species of lungfish.

- **Ms Thapelo Moloto** travelled to the German Geo-Research Centre (GFZ) in Potsdam where she carried out her isotope analysis, using GFZ’s SIMS facility. The work was funded by a UJ-based CoE (CIMERA).
**Significant Research Aligned Events**

**Ms Thapelo Moloto**, the first black female South African graduate with a Research MSc in Geology, used sulphur isotope systematics in pyrite from the Twangiza-Namoya Gold Belt in eastern Democratic Republic of the Congo (DRC) with the objective of trying to identify possible gold sources.

**Professor Hari Tsikos’** research unit PRIMOR began its next five (5) year cycle with renewed formal funding from ASSMANG. The unit is progressing strongly with the recruitment of further MSc and PhD students, and has a new industry collaboration with the company Giyani Metals in the field of battery-grade manganese exploration and mining.

**Dr Grosch** presented a seminar titled “Early Earth Crustal Evolution Recorded in the Barberton Greenstone Belt, South Africa” at the Geology Department, University of Cape Town (UCT).

A big departmental highlight was **Dr Gess’** publication in the prestigious journal Science. Apart from describing two (2) new species *Umzantsia amazana* and *Tutusius umlambo*, the latter in honour of Archbishop Emeritus Desmond Tutu, provides evidence that not all ancient tetrapod remains are from rocks originally laid down in tropical waters, chiefly from Laurussia (a continent then formed from what is now Europe, North America and Greenland).

(Artist’s reconstruction by Maggie Newman showing two new species, *Umzantsia Amazana* (left) and *Tutusius Umlambo* (right). Credit: Department of Geology)
Books/Chapters/Monographs

Distinguished Visitors
Grosch, E.G., University of Western Australia, Perth, Australia. Associate Professor. David Wacey, research collaboration. November 2018.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Peer Reviewed Subsidy-Earning Journal Research Publications


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During the course of 2018, the Department was involved in a process of re-structuring and re-staffing. This meant that teaching loads were heavier than usual and a more limited range of activities were undertaken than in other years.

The situation was considerably improved by the appointment of Professor Helena Pohlandt-McCormick and Dr Janeke Thumbran.

The successful changes implemented and projects adopted in the Department bode well for next year’s report.

**Postgraduates / Graduations**

The Department graduated three (3) PhDs, three (3) MAs, seven (7) Honours and one hundred and eleven (111) undergraduate students during the year.

**Distinguished Visitors / International Visits**

Staff members presented papers at overseas conferences held at the University of Padua and Queen’s University, Belfast, Northern Ireland.

**Significant Research Aligned Events**

In conjunction with the SARChI Chair in Social Change at the University of Fort Hare, the Department hosted the first Rhodes/Fort Hare collaboration of Eastern Cape Historians. Follow-up arrangements were made for future activities.
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


The department had a very successful year in the research sphere with a number of publications which include student co-authors and national and international collaborators.

Postgraduates / Graduations

In 2018 the department graduated one (1) PhD candidate, five (5) MSc students and seventeen (17) Honours students.

Distinguished Visitors / International Visits

The department welcomed a number of international visitors; Professor Jose Orlando Gomes presented a seminar series on cognitive ergonomics related to emergency response and disaster management.

Professor Samuele Marcora visited the department together with his wife Dr TingTing Peng. Their visit to Grahamstown was linked with collaborative research with Professor Christie. While he was here, Professor Marcora did several seminars with the honours class on the psychobiology of physical activity behavior and the psychobiology of endurance performance. He also presented a public lecture. Professors Christie and Marcora also spent the time working on joint research initiatives for long term collaboration.

Dr Will Vickery visited from Northumbria University to work on a collaborative research project on the constraints-led coaching strategy in cricket, with Professor Christie. He held various lectures on the constraints led approach as well as a practical session on this coaching method which was open to all cricket coaches in the Makana region. He is currently co-supervisor of a PhD thesis with Professor Christie registered with Rhodes University.

Professor Sylvain Leduc, President of the Federation of European Ergonomics Societies (FEES) from Aix-Marseille University in France presented a workshop on the Francophone approach to human factors and ergonomics, particularly focussing on Activity Analysis.
Andrew Todd has continued his international work as a member of the International Ergonomics Association (IEA) committee. He, again, travelled extensively around the world for conferences and meetings to promote Human Factors and Ergonomics.

**Significant Research Aligned Events**

Postgraduate students and staff presented at the South African Sleep Health Symposium hosted by the Sport Science Institute of South Africa where Dr Jonathan Davy presented a keynote address.

The department was also well represented at the Triannual Conference of the International Ergonomics Association in Florence, Italy.
Books/Chapters/Monographs


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


On Sunday 15 April 2018, 30 third year and Postgraduate students from the Department of HKE participated in the volunteer programme for the Ironman 70.3 event hosted in Port Elizabeth. They were involved in the massage programme, providing relief to the aching muscles of 1850 competitors. Ironman athletes have to complete 1.9km of swimming, 90km cycling and 21.1km of running.

Credit: Rhodes University Communications and Advancement Division
The Department of Ichthyology and Fisheries Studies (DIFS) had a very successful year, with more than eighty (80) research projects underway, and with an increase in our research outputs and in third stream income.

**Postgraduates / Graduations**

The DIFS continues to play a significant role in Postgraduate training with numerous Honours, MSc and PhD students graduating in 2018.

Dr Charles Teta, a Postdoctoral Research Fellow, is researching aquatic health. His research encompasses aquatic toxicology, emerging organic contaminants and their fate in the environment, endocrine disrupting chemicals and the development of non-invasive methods for assessing aquatic health. Some of his research involved evaluation of anaesthetic chemicals, by assessing fish stress responses. Dr Teta carried out his research in collaboration with Professor Horst Kaiser and Dr Edmond Sanyanyado (Shantou University, China).

Dr Kelly Ortega’s, Postdoctoral Research Fellow, research includes the use of ecosystem models as tools to explore fisheries management and environmental change scenarios. Kelly’s research using an Atlantis model for the west and south coast of South Africa has been conducted in collaboration with Professor Kevern Cochrane, Dr Lynne Shannon (University of Cape Town) and Dr Elizabeth Fulton (CSIRO, Australia). Her work also investigates model uncertainty and the use of different ecosystem models to explore scenarios. Her research evaluates future impacts of environmental change on the small pelagics fishery using models of intermediate complexity for ecosystems in collaboration with Dr Carryn de Moor (University of Cape Town) and Professor Cochrane.

**Distinguished Visitors / International Visits**

Professor Warwick Sauer travelled to America to visit local universities and attend a conference, London to attend a research meeting; various countries in Africa and London for ongoing research projects; and the University of Mauritius to act as external examiner.
Associate Professor Cliff Jones represented the DIFS and Rhodes University at the following international events:

- He traveled to Kenya as the external examiner for Department Fisheries and Aquatic Sciences, Eldoret University. He has been appointed by the Council of the Eldoret University (Kenya) as the external examiner for this department for a period of three (3) years.

- Aqua-Vitae project proposal-writing workshop: Cliff Jones travelled to Copenhagen (Denmark) to develop a collaborative research network with various researchers from sixteen (16) different countries. At the meeting, he was nominated leader for one of the proposed research project’s three (3) innovation work packages. The project has subsequently been funded by the European Commission.

- Traveled to Xiamen (China) and presented a paper at International Abalone Symposium.

Professor Peter Britz attend the Abalone Symposium in China and represented the DIFS at a workshop to discuss MSc curriculum development in France.

Professor Warren Potts worked extensively with colleagues on his climate change work in Angola.

Dr Kelly Ortega travelled to America to attend the International Symposium on the Effects of Climate Change on the World’s Oceans, Washington, and to the Far East where she also delivered an oral presentation at the International Marine Conservation Congress, Kuching, Malaysia.

**Significant Research Aligned Events**

**Professor Peter Britz**

Professor Britz’s Postgraduate team’s abalone (perlemoen) sea ranching project at Port Elizabeth, is restoring the heavily poached abalone population by reseeding hatchery reared juvenile abalone. The pilot project, which is a partnership between government, the aquaculture industry and Rhodes University, has demonstrated that the poached population is recovering through a combination of reseeding of farmed and reducing poaching fishing effort. The model potentially provides a solution for the abalone poaching problem and a foundation for a sustainable fishery with job creation for local communities. Professor Britz received an International Abalone Society (IAS) Academy Award at the IAS conference in Xiamen, China in recognition of his career contributions to abalone aquaculture and biology.
Professor Warwick Sauer

Professor Sauer was involved in a number of new and ongoing research initiatives; SOLSTICE - Sustainable Oceans, livelihoods and food security, through increased capacity in ecosystem research in the Indian Ocean is a project involving South Africa, Tanzania and Kenya, with a host of research activities.

A second international project involves the Benguela Current Convention (BCC), which includes South Africa, Namibia and Angola, investigating how climate change is effecting some of the key fisheries in the region, and how they can adapt to the changes.

A number of Postgraduate students were busy with their projects around Africa and further abroad, including Namibia, Mauritius, the Falkland Islands and Mozambique.

A visit to America, with a conference presentation in Florida and discussions with various University senior administrators around future collaboration took place toward the end of the year. A trip was made to Mauritius to act as an external examiner and to Zanzibar, Dar es Salaam, Mombasa and London to discuss various projects. Six (6) manuscripts were published in rated peer reviewed international scientific journals.

Professor Sauer was awarded the Rhodes University Internationalization award for 2018.

Field research involving SCUBA was carried out in November over a two (2) week period in St Francis Bay, investigating spawning concentrations of the South African chokka squid (calamari).

Associate Professor Horst Kaiser

Associate Professor Horst Kaiser continued with various research projects aimed at improving abalone farm technologies (i.e. larval settlement of South African abalone and abalone physiology).

Together with Associate Professor Cliff Jones, the department published a first study on the effect of dietary soya levels and crystalline isoflavones on growth, gonad development and gonad histology of farmed abalone, Haliotis midae.

Associate Professor Kaiser also continued his collaboration with the South African Institute for Aquatic Biodiversity (SAIAB) researchers on invasive species behaviour and their functional responses. For this research we used the greenhouse tunnel belonging to DIFS for the fourth year in a row.

He continued collaborating with a new Rhodes University postdoctoral fellow, Dr Charles Teta, on research topics related to fish physiology and anaesthetics, and published results on the use of crystal menthol as an anaesthetic in fish.

The collaboration with researchers from the University of Uganda resulted in a paper on sperm morphology and ultrastructure in Nile perch. He joined a newly formed Research Group in 2018 on estuarine pipefish conservation, which includes researchers from the University of Johannesburg, SAIAB, and the Knysna Basin Project.

Associate Professor Kaiser was invited in 2018 to become an Associate Editor of the journal Aquaculture Research and continues as Section Editor for the Journal of Applied Ichthyology. He continued as the departmental chairperson of RUESC-AE, the Rhodes University Ethical Standards Committee.

Associate Professor Warren Potts

Associate Professor Potts is the leader along with Dr Childs of the Southern African Fisheries Ecology Research Lab (SAFER lab, see https://www.safisheriesecologyresearchlab.com/), which maintains a broad focus on the study of coastal and estuarine fish and fisheries. Research interests include fish life history, physiology and movement, with an emphasis on how these are influenced by environmental change (at a range of timescales) and exploitation.

Abalone farm - Aquunion Pty Ltd, Roman Bay.
Credit: DIFS
The African Coelacanth Ecosystem Project, which aims to examine the impact of exploitation on the physiology of fishes is well underway. We completed a successful field spawning of red roman in the field and managed to rear the larvae for twenty (20) days post hatch. We also completed the validation of field metabolic rate of red roman in the laboratory using a swim tunnel and have deployed acoustic arrays and tagged fish (with acoustic tags that record swimming speed) in comparable habitats inside and outside a marine protected area. This sub-project will compare the metabolic activity of exploited and unexploited fish at a range of temperature in the wild.

The Angola research program has continued with two (2) PhD candidates completing or in the process of completing their theses on the movement behaviour of important coastal fishery species. We continue to collaborate with the Ocean Tracking Network (Canada), the Agostinho Neto University and the Ministry of Fisheries on this project.

Our physiology and climate change research has expanded into Namibia. We obtained funding and have initiated a project examining the impact of a climate-driven distributional shift and hybridisation of a coastal fishery species. This project includes a life history, morphology and physiology component and aims to make a holistic assessment, including a prediction of the outcome of the first climate-driven hybridization event documented for a marine fish.

The human dimensions research on recreational fisheries has continued. This has included the completion of an assessment and drivers of the compliance of South African marine shore based anglers and a global evaluation on the role of recreational angling guides on the catch and release behaviour of recreational anglers. These research projects form the basis of two (2) PhD projects.

The lab has also continued with fish life history and fisheries research. Several students are involved in these components and these are distributed across southern Africa, including South Africa, the Seychelles and Namibia.

The community engagement component of the SAFER lab, which partners with a community of recreational fishers to improve their environmental behaviour, has continued with the Honours class participating in an engaged research experiment during the National competition in Mosselbay. We published a paper which documented the role of a pro-environmental approach to improve the catch and release behaviour of recreational anglers. This was a global first and has attracted a great deal of interest.

The lab continues to grow. Two (2) Postdoctoral Research Fellows joined at the end of 2018 and the lab supported the research of twenty-one (21) Postgraduate students, all of which are supervised by Associate Professor Potts.

**Associate Professor Clifford Jones**

Cliff Jones represented Rhodes University in the Collaborative Training in Fisheries and Aquaculture in East, Central and Southern Africa (COTRA) program in 2018. This is a multi-institutional and multi-national (eight (8) countries) project that aims to mobilise researchers (staff and MSc/PhD students) working on fisheries and aquaculture related research project within Eastern, Central and Southern Africa. The project will develop collaborative research and teaching relationships and a mutual exchange of ideas, expertise and access to research facilities that promotes improved quality of research, teaching and learning in the higher education of aquaculture and fisheries science, in the region. The project is funded by the Inter-Africa Academic Mobility Scheme (Call for proposals EACEA/05/2017), an initiative of the European Commission in partnership with the African Union.

He also initiated the DIFS involvement in the AquaVitae research program, and travelled to Belgium in 2018 to participate in the research-proposal writing-phase of this project. The consortium, which consisted of thirty-six (36) members from sixteen (16) countries, won the European Commission Horizon 2020 research funding bid to the value of $8-million (R130-million). This will see the DIFS participating in numerous Postgraduate research projects aimed at improving environmental sustainability in aquaculture development over the next four (4) years.

He also continued his research projects on integrating aquaculture with other water users, with a focus on water reuse and nutrient recycling. Here he continued
to work with Dr Tom Shipton, Professor Keith Cowan and Mr Richard Laubscher from the Institute for Environmental Biotechnology, Rhodes University (EBRU) and collaborating with Professor Mark Laing (University of KwaZulu-Natal) and South African Breweries.

He also continued his work in developing abalone feeds with Professor Peter Britz and abalone farm development technologies with Associate Professor Horst Kaiser, working closely with industry partners Marifeed Pty Ltd and HIK Abalone Pty Ltd and Aqunion Pty Ltd.

Dr Amber Childs

Dr Amber-Robyn Childs is continuing her research on the biology, ecology, physiology and movement behaviour of estuarine and coastal fishes, with implications for fisheries and climate change. Her research also involves the biological and social aspects of recreational fisheries.

She is currently involved in several ongoing research programmes using laboratory (ecophysiology) and field-based research and supervising several Post-graduate students with her collaborators. She is part of Associate Professor Potts’ research lab (https://www.safisherieresearchlab.com/) and is involved in several SAFER lab projects including:

i) assessing the physiological and behavioural plasticity of linefish species - specifically the effects of fisheries-induced evolution and climate change through using acoustic telemetry and physiology as part of an ACEP program (one (1) MSc, two (2) PhD students),

ii) assessing the physical and physiological impacts of catch and release angling, evaluating the use of pro-environmental behavioural interventions to improve the health and survival of fishery species and understanding a West African recreational fishery as a socio-ecological system (two (2) MSc, two (2) PhD students, collaborators: Dr J Mann (ORI), Professor A Danylchuk (US), Dr J Brownscombe (Canada), and

iii) investigating the links between movement behaviour and climate change in Angola via the Ocean Tracking Network (OTN) (two (2) PhD candidates of which one (1) completed this year).

Other ongoing programmes involve assessing the nursery function of estuaries and nearshore marine habitats, with emphasis on the recruitment mechanisms of estuarine and coastal fish species using beam trawl surveys, and choice chamber experiments (one (1) PhD candidate, collaborators: Dr N James (SAIAB), Dr P Patrick (SAEON), and understanding the migration ecology and habitat connectivity of coastal fishery species in South Africa using acoustic telemetry (she is in the process of writing manuscripts with her national and international collaborators using data collected during the last decade of research in this field via the SA-Norway bilateral) (Collaborators: Professor P Cowley (SAIAB), Dr T Murray (SAIAB), Dr T Naesje (Norway)).

Dr Wilbert Kadye

Dr Wilbert Kadye conducted research on freshwater ecology, covering aspects that include trophic ecology and food web dynamics. He worked in collaboration with Dr Albert Chakona (SAIAB) and Dr Emmanuel Vreven (RMCA, Belgium) in the field of freshwater systematics and taxonomy.
Books/Chapters/Monographs


Other Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Potts, W.M.


Raphala, E.M.

Robinson, G. and J. ones, C.L.W.


Sauer, W.H.H. and Shaw, P.W.


Scheepers, M.J.

Taylor, R.P. and J. ones, C.L.W.

Teta, C.


Wu, Y., Kaiser, H. and J. ones, C.L.W.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)
Dunser, S.J., Kaiser, H. and J. ones, C.L.W.

J. ones, C.L.W.


Ventor, N.

Wright, J., Kaiser, H. and J. ones, C.L.W.
The Department of Information Systems is particularly interested in the generation of knowledge in the areas of ICT4D, eGovernment, eLearning, IT Project Management, Social Networks, Information Security, Behavioural Cybersecurity, and User Experience.

Research in these areas have produced two (2) book chapters, eight (8) journal articles, and eleven (11) conference papers, with aspects of this research being presented locally as well as internationally in the United Kingdom, Netherlands, Iceland, and United States of America.

In addition to producing research outputs, staff in the Department of Information Systems contribute to their discipline as journal editors and reviewers, conference reviewers and panel members, and external examiners of theses for other academic institutions.

Postgraduates / Graduations

Postgraduate numbers in the Department include twelve (12) PhD candidates, thirteen (13) Masters students, and a class of thirty five (35) Honours students. In April 2018, we celebrated the graduation of five (5) Masters students.

Distinguished Visitors / International Visits

Distinguished visitors to the Department included Dr Lynette Drevin and Professor Hennie Kruger from North-West University who participated in research workshops.

Professor Christos Kalloniatis, an Erasmus+ professor (Erasmus+ is the European Union’s programme to support education, training, youth and sport in Europe) from University of the Aegean participated in research workshops and gave a guest lecture to Postgraduate students on Privacy by Design.
Professor Sue Conger, a Visiting Professor from the Satish and Yasmin Gupta College of Business at the University of Dallas, continues to make a valuable contribution to the research efforts, with a number of publications of IT in developing countries.

Professor Graham Wright, a Visiting Professor of the Department, continues to make a valuable contribution to the research efforts, with a number of publications in the field of Health Information Systems.

Ms Brenda Mallinson, a Research Associate of the Department, continues to make a valuable contribution to the research efforts, with a number of publications in the field of eLearning.
Books/Chapters/Monographs

Conger, S.

Siebörger, I.

Concerts, Exhibitions, Performances, Workshops, Events

Flowerday, S.
Flowerday, S. Co-chair for “The 2018 Dewald Roode Information Systems Security Research” IFIP (WG) 8.11/11.13 - held in Cape Town, South Africa, 14 - 15 June. This is an International working group.


Mallinson, B.J.


Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Wright, G.


Flowerday, S.
Peer Reviewed Subsidy-Earning Journal Research Publications


Peer-reviewed Proceedings


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


Left to right: Vice-Chancellor, Dr Sizwe Mabizela with Associate Professor Caroline Khene. Caroline received the 2018 Vice-Chancellor’s Distinguished Research Award for her research examining the opportunities and complexities that arise in bringing citizens and government together via digital platforms.
One hundred and thirty (130) graduates from the School of Journalism and Media Studies (JMS) celebrated the successful completion of their degrees at the 2018 graduation ceremonies. They received Bachelor’s degrees in Journalism and Media Studies, Postgraduate Diplomas in Journalism and Media Studies, Media Management and Economics Journalism as well as Masters’ degrees in Journalism and Media Studies.

Distinguished Visitors / International Visits

During 2018 a rich variety of academics, researchers, journalists and multimedia specialists came to share their experiences, research and findings with JMS staff and Postgraduate students.

Dr Julian Matthews from the University of Leicester talked about the experience and application of his ethnographic research to the production of news.

During the National Arts Festival, American documentary filmmaker Jon Alpert shared his experiences about making documentaries in the war zones of Vietnam and Afghanistan and the difficulties he encountered with lack of resources, danger and the highly regulated environment.

Howard University Assistant Professor Jennifer Thomas held a discussion with the staff about reporting on elections and issue of ‘fake news’, asking the question, “How do you do your job when everyone is vilifying your profession?”

Dr Marcia Lyner-Cleophas, head of the Disability Unit at Stellenbosch University, was invited by Professor Lorenzo Dalvitt to discuss “Disability inclusion in the curriculum”.

Dr Tinashe Mushakanvanhu, writer and scholar, 2018 Writer-in-Residence in Creative Writing (funded by the Andrew W. Mellon Foundation) discussed his work as a journalist with Vice Media and the Knight Foundation.

Mr Toby Shapshak, a digital journalist spoke to students and staff about “The future of journalism” and Deirdre Uren, regional editor of SABC Radio and TV News in Port Elizabeth, presented her research on regional news.
Acclaimed, award-winning South African photographer Jodie Bieber hosted workshops and seminars with the second and third year students and presented to staff and students her current work, #i, a project in posters that showcases the perspective of what it’s like to be a young person in contemporary South Africa.

With support from the Goethe Institute, Jide Akinleminu a filmmaker from the Berlin Film School, was able to share with JMS, stories of the different documentaries he has made that draw on his own life experience. Akinleminu followed this up with a field trip with the JMS4 TV students focused on the different styles and techniques of documentary filmmaking.

Professor Harry Dugmore spent his sabbatical with the Digital Media Research Centre at the Queensland University of Technology in Australia, and Dr Alette Schoon attended their summer school in Digital Media Research Methods. These visits forged a relationship with the Centre which resulted in plans to raise money to run a winter school in digital media methods at Rhodes University in 2019.

**Significant Research Aligned Events**

The Andrew W. Mellon Foundation awarded Professor Lynette Steenveld a grant for the project (which includes a teaching programme) called Media and Sociality: Probing Coloniality and Decoloniality through the Media-Social Belonging Nexus in Contemporary South Africa. The programme focuses on the complicated relationships between the South African media environment and the country’s changing political environment. The aims are to probe the ways in which digital and social forms of communication, knowledge-making, and archiving are being used in this new iteration of an ongoing struggle for full personhood, recognition and inclusion.

The teaching programme which started in 2018 explores the ways in which the digital and social media are being taken up by the ‘wretched’ of South Africa in their processes of forging new socialites, new social relationships, new knowledges, and new forms of political association as ways of challenging and transforming coloniality: of being, knowledge and power. The foundation supported five (5) Honours and four (4) Masters’ bursaries, as well as a Postdoctoral Research Fellowship, in 2018.
Professor Steenveld was also awarded $50,000 by the Andrew W. Mellon Foundation for their 30th anniversary seminar series. Professor Steenveld has titled the series: Southern Epistemologies: Thinking beyond the abyss for a transformative curriculum. The series probes how ‘southern epistemologies’ can be used across disciplines to transform aspects of the curriculum in South African higher education. The theoretical foundation of the series is Boaventura de Sousa Santos’ work on southern epistemologies, and the development of an ecology of knowledges based on ‘thinking beyond the abyss’. The seminars offer an approach to knowledge production that is transdisciplinary, so art, creative writing, ecology, the environment, urbanism and policy, while appearing to be different, are all thought through the same epistemological problematic.

Professor Anthea Garman was awarded a grant by the National Research Foundation (NRF) under the Human and Social Dynamics in Development programme to embark on a research project called “Licence to Talk” which seeks to ascertain the shifts and ruptures in what is said and what is sayable in the South African public sphere at this present moment in our post-apartheid history and to assess whether listening theory offers new practices for those conducting public debates, discussions and engagements, whether they be face to face encounters, via the media or on social media.

The Open Society Foundation provided Professor Harry Dugmore with funds to pursue research on the sustainability of journalism in South Africa as companies struggle to survive the digital transformation and a context of political uncertainty. Professor Dugmore’s work culminated in the publication: Paying the Piper: The Sustainability of the News Industry and Journalism in South Africa in a Time of Digital Transformation and Political Uncertainty.

The Open Society Foundation for South Africa, in celebration of their 25th year in South Africa, launched a special programme for the next generation of investigative journalists. In partnership with Rhodes University and the University of the Witwatersrand (Wits) five (5) fellowships will be offered to young journalists, giving them the opportunity to spend eighteen (18) months learning cutting-edge investigative, digital, multimedia and storytelling skills at both Wits and Rhodes. While at Rhodes they will work in the Grocott’s Mail newsroom producing local investigations.

The Sol Plaatje Institute (SPI) for Media Management was chosen by the World Media Economics and Management Conference to be the organiser and host of the first-ever summit in Africa. The two hundred and fifty (250) delegates gathered to present papers on the promises and perils of media convergence on media firms and seek solutions that strengthen an industry that is facing hyper-competition from the ‘platform economy’ of technological giants such as Google, Facebook, Apple and Twitter.

Francis Mdlongwa, the director of SPI, also edited the book Entrepreneurial Journalism in Africa: Opportunities, challenges and risks for media in the digital age, published by the Konrad Adenauer Stiftung which arose from papers presented at a conference in Ghana in 2018.

The Menell Media Exchange, a Duke University conference held annually in South Africa for journalists took place in June 2018. Senior writing and editing students from Rhodes joined other students from universities across the country and professionals to explore stories missed by large mainstream media, as well as critiquing the media and the operations of journalists in the 21st century. Many of the students, some of whom also worked in the conference newsroom producing news for social media platforms, felt that they had expanded their views on digital age journalism and felt better equipped to enter this fluid world.

The School was saddened by the news that the founder of the School and first head, Emeritus Professor Anthony Giffard, passed away on 20 April 2018. Giffard led a long and interesting career as a reporter, translator, editor and author as well as belonging to many boards and councils such as the IPS (Inter Press Service).
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Other Publications

Bombi, T. and Garman, A. (2018) Young, black women storytellers and the reshaping of the media space. In: Kanengoni, A.D. (ed.) Young, black women storytellers and the reshaping of the media space. 8th Ed. johannesburg: 055A.


PUBLICATIONS


International Visits

Dugmore, H.

Peer Reviewed Subsidy-Earning Journal Research Publications

Dugmore, H.

Prinsloo, J.

Santos, P.

Sepotokile, T.

Peer-reviewed Proceedings

Dalvit, L.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Boshoff, P.
Boshoff, P. Platforms at a Crossroad: Letter Writers to the Daily Sun and the Challenges of Facebook. SACOMM (South African Communications Association), University of Johannesburg, Johannesburg, South Africa. September 2018.


Dalvit, L.

Dugmore, H.

Prinsloo, J.

Schoon, A.

The 2018 academic year saw members of the Faculty involved in a number of research activities, ranging from conference presentations to publication of accredited journal articles. The Faculty continuously works to strengthen the research capacity of its staff and students through in-house research seminars and scholarly discussions around topical legal issues.

**Postgraduates / Graduations**

Two (2) Postgraduate students, one (1) LLM and the other a PhD were awarded their degrees at the graduation ceremony in 2018. The theses addressed regulation of multilateral trade in Malawi and the role of the Kenya Human Rights Commission in relation to the protection of socio-economic rights, respectively.

**Distinguished Visitors / International Visits**

The Faculty of Law hosted a number of its associates during the course of the year. These experts contribute significantly to the intellectual life of the Faculty:

- Visiting Fellow, Mr Max Boqwana delivered a thought-provoking public lecture in February 2018 entitled ‘Illicit Financial Flows from Africa: What African Lawyers can do about it?’
- Advocate Chris McConnachie, a Research Associate of the Faculty, presented lectures to the Constitutional Law class and the Life Partnerships class respectively on matters in which he had acted as counsel: Economic Freedom Fighters v Speaker of the National Assembly and Others; Democratic Alliance v Speaker of the National Assembly and Others on the requirement for parliamentary rules providing for impeachment procedures and accountability measures, and on Women’s Legal Centre v President of South Africa, and others addressing the need to recognise Muslim Marriages through legislative enactment.
- Visiting Professor, Judge of Appeal Nambitha Dambuza delivered a well-attended public lecture in April 2018 entitled, Women’s parental rights in ulwaluko: A paradox. Judge Dambuza also gave lectures in procedural law courses for LLB students.

- Advocate Wim Trengove delivered a public lecture in September 2018 on ‘The Good, the Bad and the Ugly in the NDPP’.

- Judge Clive Plasket delivered a public lecture in October 2018 entitled ‘Procedural fairness, executive decision-making and the rule of law’.
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Akinloye, I.A.

Bergover, S.N.

Campbell, J.

Glover, G.

Juma, L.


Kruuse, H.


Masinini, T.N.


Mzolo, N.

Rahim, S.

Van Coller, H.
Staff and student research interests in the Department range widely, and include areas such as postcolonial, transnational and diasporic literature; popular African culture, Afroturism and fan fiction; queer theory and writings; ecocriticism, paleontology and literature; South African crime and detective fiction; literature and the Internet; and ethics, vulnerability and implication in contemporary fiction.

In 2018, Dr Lynda Gichanda Spencer’s and Dr Minesh Dass’s (now with University of Johannesburg) “Urban Connections in African Imaginaries” (UCAPI) project, funded by the Andrew W. Mellon Foundation, went from strength to strength, and saw the co-hosting of the hugely successful second African Feminisms (AFEMS) conference on our campus, and the publication of two (2) special issues of the journals Agenda: Empowering Women for Gender Equity and English in Africa.

Dr Spencer and Professor Ashleigh Harris (Uppsala University, Sweden) also began collaborating on a Swedish Foundation for International Cooperation in Research and Higher Education (STINT)/National Research Foundation (NRF)-funded research project entitled “Contemporary African Texts and Contexts: Decolonising the Archive, Genre and Method”.

Professor Sam Naidu’s collaborative research project, “Intersecting Diasporas” (ID), meant that she took up her second residency at San Francisco State University in December 2018, and extended her involvement in Professor Teresa Carrillo’s “Gendered Borders: Latinas and Globalization” seminars, whilst continuing to work on a monograph on “Border Crossing and Agency” and “Agency in the Diaspora Space” which she hopes to complete in 2020.

In addition, Dr Aretha Phiri, as part of her Iso Lomso Fellowship at the University of Stellenbosch’s Institute for Advanced Study, spent the fourth term as a Research Fellow at the National Humanities Center (NHC) at the University of North Carolina, United States of America (USA).
Both UCAPI and ID continue to fund Postdoctoral Research Fellowships, visiting scholars and writers-in-residence in the Department, together with postgraduate students from Honours to Doctoral level. This means that we continue to enjoy a very healthy and diverse research culture!

### Postgraduates / Graduations

**PhD:** One (1) PhD in English was awarded in 2018, to Douglas Kaze, whose thesis was entitled “The Environmental Imagination in Arthur Nortje’s Poetry”. Supervisor: Professor Dirk Klopper.

**MA:** A single MA was awarded, to Shirley Erasmus, for a dissertation entitled “Challenging Biblical Boundaries: Jeanette Winterson’s Postmodern Feminist Subversion of Biblical Discourse in Oranges are Not the Only Fruit (1985) and Boating for Beginners (1985)”. Supervisor: Professor Sam Naidu.

**Honours:** Of a class of seven (7) students, five (5) received distinctions.

- Dr Nicklaus Hällén, from Uppsala University, Sweden.
- Mr Ayodabo Sunday, from Elizade University, Nigeria.

In addition, UCAPI hosted Ms Ingrid Nayame, author of *The Last Laugh* (2017) and *The Coloured Vine* (2018), as a Writer-in-Residence in the Department.

### Significant Research Aligned Events

**Dr Spencer** co-hosted, with Dr Sharlene Khan of the Fine Arts Department, the second AFEMS Conference, “The Mute Always Speak: ReImagining and Re-Imagining Feminist Futures”, at Rhodes in September 2018. She also began a three (3) year collaborative project on “Contemporary African Texts and Contexts: Decolonizing the Archive, Genre and Method” with Professor Ashleigh Harris at Uppsala University, Sweden. The latter means that students and Postdoctoral Research Fellows from both Rhodes and Uppsala will be visiting each other’s campuses, a process that began last year with Mr Patrick Chesi Lumasia, currently registered for a PhD at Rhodes, and Dr Hällén, a Postdoctoral Research Fellow from Uppsala.

### Distinguished Visitors / International Visits

Five (5) international scholars visited the Department in 2018:

- Professor Teresa Carrillo, from the College of Ethnic Studies at San Francisco State University.
- Dr Lizzy Attree, Director of Short Story Day Africa.
- Dr Ranka Primorac, from the University of Southampton, United Kingdom.
- Dr Nicklaus Hällén, from Uppsala University, Sweden.
- Mr Ayodabo Sunday, from Elizade University, Nigeria.

Above left: Members of Urban Connection In African popular Imaginaries (UCAPI) and Arts on Our Mind (AOOM) at the Second Afems Conference.

Above: UCAPI Squad with Ms Ingrid Nayame (Writer-in-Residence) and Dr Nicklas Hällén (Visiting Researcher from Uppsala University).

Credit: Department of Literary Studies in English
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Other Publications

Attree, L. (2018) Unbound. In: To be on not to be: #DeletingFacebook (online - https://unbound.com/boundless/2018/05/10/to-be-or-not-to-be-deleting-facebook/).


Distinguished Visitors

Spencer, L.G.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Kenqu, A.Y.

Leff, C.W.

Peer Reviewed Subsidy-Earning Journal Research Publications

Cornwell, D.G.N.

Cornwell, D.G.N.

Klopper, D.

Laue, K.A.


Thorpe, A.

Wylie, D.


Wyrill, B.

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During 2018, the Department of Management continued to promote and develop research capability by integrating the development of research thinking and skills into its teaching, particularly at the fourth-year level where students are exposed to a research methodology module and produce a research report. The Department also offers a structured research component on the Masters and PhD programme.

**Postgraduates / Graduations**

During 2018, ten (10) Masters students and four (4) PhD candidates were registered in the Department. Two (2) candidates graduated with their PhD degrees at the 2019 graduation ceremony.

**Distinguished Visitors / International Visits**

Mr T Temme from the Hochschule Osnabruceck University of Applied Sciences, Osnabruceck, Germany presented a simulation business game to the Management Honours students.

Professor Lynette Louw and Mr Mattheus Louw lectured at the Shanghai University of Business and Economics, Shanghai, China and at the School of Economics, Utrecht University, Utrecht, Netherlands.

**Significant Research Aligned Events**

Staff and students of the Department presented their research at conferences and published their research work in various journals and conference proceedings. Staff in the Department were also involved in editing and authoring textbooks, chapters for textbooks as well as other research or academic work for publication.
Books/Chapters/Monographs

Mayer, C.H.

Distinguished Visitors

Temme, T.

International Visits

Louw, L.

Louw, L.
Louw, L. School of Economics, Utrecht University, Utrecht, Netherlands. Invited to co-lecture on "Personal leadership development in a globalised world" at the Summer School. 2 - 6 July 2018.

Louw, M.

Louw, M.
Louw, M. School of Economics, Utrecht University, Utrecht, Netherlands. Invited to co-lecture on "Personal leadership development in a globalised world" at the Summer School. 2 - 6 July 2018.

Peer Reviewed Subsidy-Earning Journal Research Publications

Chigwendere, F.B. and Louw, L.

Louw, L.

Mayer, C.H.


Peer-reviewed Proceedings


The department is engaged in a number of active areas of research in mathematics and applied mathematics. Particular focus areas include:

- Functional analysis including measure theory and martingales;
- Algebraic graph theory;
- Geometric control, particularly invariant optimal control problems on matrix Lie groups (of low dimension), primarily in aspects regarding controllability, geometry of extremals, stability and integrability;
- Computational and analytical relativity, and in particular calculation of gravitational waves from black hole interactions and the study of fluid solutions to the Einstein equations.

**Postgraduates / Graduations**

The department supervised two (2) Masters students and five (5) PhD candidates across both the Mathematics and Applied Maths divisions.

**Distinguished Visitors / International Visits**

Our academic staff made research visits to India, Germany, Hungary, Romania, Slovenia, Australia, and the United Kingdom.

**Significant Research Aligned Events**

The department was proud to host the 61st Congress of the South African Mathematical Society (SAMS) from December 03-05 2018. More than one hundred and thirty (130) researchers and students from across the country and around the world visited Grahamstown for three (3) days of fascinating seminars and discussion around all areas of Mathematics and Applied Maths. This event was jointly funded by SAMS, the Centre of Excellence for Mathematics and Statistical Sciences (CoE-MASS), and a generous contribution from the Rhodes University Capacity Development Programme.
In 2018, we were also pleased to formalize our participation in the CoE-MASS by becoming a partner institute.

The department continues its participation in the National Astrophysics and Space Sciences Program (NASSP) as an associate member of the Cape Town node. Our participation provides opportunities to offer graduate projects as part of the program, as well as opportunities to offer graduate courses in astrophysics. We continue to actively use its local computer cluster and has become one of the most active users at the Centre for High Performance Computing (CHPC) in Cape Town.
Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Bishop, N.T.

Pollney, D.

Peer Reviewed Subsidy-Earning Journal Research Publications

Barrett, D.I. and Remsing, C.C.

Barrett, D.I., Mclean, C.E. and Remsing, C.C.

Bishop, N.T.

Ganguly, A.

Peer-reviewed Proceedings

Bester, H., Larena, J. and Bishop, N.T.

Bishop, N.T., Bester, H. and Larena, J.

John, A.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Andriantiana, E.O.D.

Barrett, D.I. and Remsing, C.C.

Remsing, C.C.

Rhodes University Main Administration Building.
Credit: Rhodes University Communications and Advancement Division
The Department of Music and Musicology produces an array of research that traverses traditional and non-traditional outputs, and these are delivered in addition to supplying an onerous teaching and learning programme.

Accredited traditional research produced by Associate Professor Jeffrey Brukman and Dr Boudina McConnachie is located in an African context, and this feeds into decolonising the undergraduate teaching programme as well as providing the basis for (South) African-centred Postgraduate music studies.

Jazz composer, pianist and educator, Dr Nishlyn Ramanna, has added to this African focus through enriching his compositional oeuvre with works in the African jazz idiom. These form the basis for the repertoire contained in his latest CD, Piano Passions (2018).

During 2018 Associate Professor Catherine Foxcroft and Ms Jo-Nette LeKay performed repertoire drawn from the Western art music canon at various South African concert locales.

Postgraduates / Graduations

PhD candidate, Bongani Ndodana-Breen (supervised by Associate Professor Brukman), graduated in April 2018 with a composition portfolio situated in South Africa’s political and historical climate. Topics explored were African migration, the Freedom Charter and political icon, Winnie Madikizela-Mandela.

Distinguished Visitors / International Visits

Associate Professor Brukman read a paper in Perth, Australia as part of the 41st Musicological Society of Australia Conference. He was also a panelist in a National Research Foundation (NRF) Research Project that is exploring aspects of Todd Matsikiza’s artistic profile (University of KwaZulu-Natal (UKZN): South African Society for Research in Music).
Dr McConnachie presented research at two (2) Ghanaian institutions: University of the Cape Coast and the School for the Performing Arts, Accra.

Associate Professor Foxcroft presented two (2) papers at a music perception and cognition conference held in Graz, Austria. She also participated as a faculty member for the 6th University of Stellenbosch International Piano Symposium.

Dr Ramanna performed a programme of his original compositions at the Howard College Theatre, UKZN, Durban.
Concerts, Exhibitions, Performances, Workshops, Events

Foxcroft, C.


LeKay, J.


LeKay, J.

McConnachie, B.


Ramanna, N.


Ramanna, N. and Thorpe, C.J.

Distinguished Visitors

Foxcroft, C.
LeKay, J.
J LeKay. University of Cape Town, Grahamstown, South Africa.
Voice Workshop / Masterclass with Mr Patrick Tikolo. September 2018.

International Visits

McConnachie, B.

Peer Reviewed Subsidy-Earning Journal Research Publications

Brukman, J.

McConnachie, B.

Peer-reviewed Proceedings

McConnachie, B.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Brukman, J.


Foxcroft, C.

In as far as the International Library of African Music (ILAM) has its origins in African Studies and is motivated by the same, it is committed to a platform upon which a renewed vision of the music archive is taking shape. This vision includes the dual role of ILAM serving as an archive and as a centre of excellence for the study of African music performance.

In the medium term, ILAM will retain its core services but also develop into a Centre for the Study of African Music Performance, with the understanding that such a Centre is already in the making and that voices from abroad and the continent are looking at ILAM to provide the lead for the formation of such a Centre. Research will be performance based, linked with conservation, teaching, development, community engagement and the expansion of core services.

Current activities at ILAM include the mentoring of young African authors to circumvent the dominance of non-African authors of African music (the past few editions of African Music bears testimony to the idea of developmental editing where an inexperienced author is mentored from the first draft to publication).

In the extent of its partnerships with community based organisations, ILAM has been working with two (2) arts based community projects in Grahamstown/Makhanda since the early 2000s. Since 2011 we have been engaged in a participatory research project with a developmental organisation who uses the data for a heritage route and education; its residencies of world renowned musicians from countries such as Mozambique (Venancio Mbande Junior), Uganda (Bisaso Ssempeke) and Ghana (numerous) in the past three (3) years.

Its appeal to scholars, composers and Postgraduate students from many parts of the globe, allows ILAM to enjoy its status as the most advanced music archive on the continent. While the archive is concerned with African music, it is also a nexus of relationships from our doorstep to the furthest corners of the globe. The archive is not only about sound but also about the development of relationships such that it is at the vanguard of how a new South Africa may be imagined.
A particular interest at ILAM is the means by which musical performance and music studies may bring about a new awareness influenced by economic development and social cohesion. We ask how may the music archive be imagined in a context of vociferous demands for the decolonization of knowledge production and in the academic sector? And argue that it is through the study of sound, rather than music, with “music” being a western construct, that sound studies connect profoundly with other disciplines, to the past, the present and to the future.

At ILAM, words such as the “decolonial” is not mere rhetoric but a part of its lived experience from one day to the next. ILAM has not been able to achieve this on its own. Indeed, a critical step is the development of partnerships through which resources are developed and shared.

Today ILAM is proof of the connectivity among peoples, and its future as a place where Africa is reimagined through sound should hopefully engage all of us.

**Postgraduates / Graduations**

1. ILAM’s sound engineer, **Elijah Madiba** graduated with a MMus degree in Ethnomusicology. His topic dealt with the digital return of music to local musicians in the Eastern Cape.

2. The Postgraduate student who has performed excellently is **Obianuju Njoku**. She is a Doctoral candidate in her second year of enrolment. Her achievements are as follows:

   - An article titled, “An Assessment of Soundtracks and Viewers’ Interest in Nigerian Home Videos”, in *Fulafia Journal of Humanities and Social Sciences*.
   - A presentation at the International Library of African Music seminar titled “Chronicling Fieldwork Experience in Ethnomusicology: The Nupe Paradigm”.
   - Taught several groups of IMS students and presented them for performances drawing on various music cultures from Africa.
- Participated in the interdisciplinary postgraduate conference of Rhodes University, where she presented a paper titled, “Dynamics of Ethnicity and Nationhood in Nigeria: The Nupe Paradigm”.
- Awarded a student grant to attend a writing workshop and Conference in Durban in organised by the South African Society for Research in Music (SASRIM) in collaboration with the National Institute for the Humanities and Social Sciences. She presented a paper titled, “Still We March On: Sounds of Resistance and Nationalism in the Nigerian Biafra War”. The conference was from 29 August to 1 September.
- Gave a joint presentation with Dr. Stephen Ogundipe; an African Humanities Postdoctoral Research Fellow from Nigeria. The title of the presentation was “Neither Here nor There: Alterity and Mimesis in Ilorin Women Music Forms”. This presentation took place at the International Library of African Music (ILAM), Rhodes University.

Distinguished Visitors / International Visits

ILAM successfully hosted Venancio Bande Junior from 15 July to 11 August 2018. He taught at ILAM and Nelson Mandela University (NMU) and performed in Port Elizabeth. Unfortunately the concert for RU was cancelled due to the death of a student.

One of our distinguished visitors was the esteemed anthropologist of music, Veit Erlmann who ILAM co-hosted with the music department. Erlmann gave a talk entitled “Lion’s share: Remaking South African Copyright”. He gave two (2) seminars in the music department and the anthropology department.

Another guest was John-Doe Dordzro, an African Humanities Programme (AHP) fellow who visited ILAM from January to March 2018. During his time he made a valuable contribution to the IMS African Music Ensemble classes. He also co-ordinated two (2) traditional dance performances with students in a performance called “Atsiegbekor Dance”.

Another guest was Jia Sui Ling who is enrolled for a PhD at the prestigious Shanghai Conservatory of Music. She departed in early May 2018 after spending six (6) weeks at ILAM as part of her research into archival practices.

Significant Research Aligned Events

In August 2018 a colloquium was held by Dr Stephen Ogundipe, an African Humanities Postdoctoral Research Fellow from Nigeria. The title of the presentation was “Neither Here nor There: Alterity and Mimesis in Ilorin Women Music Forms.” This presentation took place at the International Library of African Music (ILAM) and was shared with another paper entitled, “Neither Here nor There: Alterity and Mimesis in Ilorin Women Music Forms” by Obianuju Njoku.
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Other Publications


International Visits

Watkins, L.W. University of Virginia, Charlotte, United States of America. Afro-future collaborations. 18 - 23 April 2018.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


The year 2018 was a great year for the Faculty of Pharmacy. We emphasised the relevance and engagement with real world problems in our research themes within the different research groups in the Faculty. Creativity and innovation is the cornerstone of our vision for our research focus to ensure we position ourselves as the destination of choice for postgraduate studies in pharmacy in South Africa.

The Faculty of Pharmacy has undoubtedly grown in terms of size, scope and stature. We had challenges, which we learned from, and we have had our own significant achievements.

In 2018 a total of eleven (11) PhD candidates were registered which reflected a continued upward trend of about ten percent (10%) and in the MSc/MPharm programme there was no change in the total number of registered students (32), which was the number registered in 2017.

A total of ten (10) PharmD candidates were registered and the number will be reduced as the programme in its current form is being phased out. The total number of students in the Faculty has stabilised over the past five (5) year period. A high demand for postgraduate spaces was evident with all researchers indicating that they could not take on more students because of limited research space and funding.

Only a few students received internal and external funding opportunities at the MSc/MPharm and Doctoral level. We hope to implement a plan for all students to attend workshops to help them prepare research proposals and submit applications for scholarships. We continued to encourage supervisors and students to respond to funding calls - including the National Research Foundation (NRF) Innovation Scholarships for Master and Doctoral studies, which are also open to non-South African candidates.

We have concluded that we are on the right path in terms of the attitude and focus towards research as the number of supervisors in the Faculty serve to increase capacity. In 2018, the number of research-active, full-time academic staff increased marginally to eleven (11) (or 65%) in 2018, up from ten (10) (59%) in 2017.
This increase is partly the consequence of a more liberal approach that we are seeing in the Research Office, which continues to provide support to new academic staff through the Research Committee, and partly due to the increase and establishment of a research culture amongst all staff. Professor Sunitha Srinivas was appointed a Visiting Professor. The recruitment strategy has had an impact that has enabled new staff members to be accommodated in a Faculty that seeks to create a supportive environment and platform across the divisions of Pharmacy Practice, Pharmacology, Pharmaceutical Chemistry and Pharmaceutics.

There were two (2) NRF-rated researchers in the Faculty in 2018 and we hope in the next year the number will increase. We pride ourselves in having two (2) Professors in the Faculty who are in the top thirty (30) list of researchers at Rhodes University. This is a new phenomenon in Health Sciences at Rhodes University. Furthermore, we hope that they will continue to contribute to development of staff through mentoring and enhance postgraduate research skills through facilitation of workshops on dissertation writing, project and experimental designs amongst others.

**Postgraduates / Graduations**

Dr Chiluba Mwila graduated with a PhD in Pharmaceutics under the tutelage of Professor Roderick Walker and was appointed as the new Head of the Department of Pharmacy at the University of Zambia. Ms Clarris Magadza successfully completed the Critical Discourse Analysis Course run by the Linguistics Department between July and November 2018.

**Distinguished Visitors / International Visits**

Dr Leonie Goosen (right) was invited by Professor Yu Fei, current Executive Dean of the International School at Jinan University, Guangzhou, Guangdong, People’s Republic of China, to give lectures over a period of four weeks in Medicinal Chemistry and Pharmaceutical English to the third year Pharmacy Students. Credit: Faculty of Pharmacy

Professor Dowse (right) was invited to be a plenary speaker at a combined Australian conference of the International Society for Maxillofacial Rehabilitation (ISMR) and the Australian and New Zealand Head and Neck Cancer Society (ANZHNCS). Credit: Faculty of Pharmacy

Professor Roderick Walker presented an oral paper at the 78th Pharmacy World Congress (FIP) Glasgow, Scotland, United Kingdom on lipid-based carriers as drug delivery vehicles that target the brain.

Professor Ros Dowse was an invited plenary speaker at a combined conference of the International Society for Maxillofacial Rehabilitation (ISMR) and the Australian and New Zealand Head and Neck Cancer Society (ANZHNCS).
Dr Carmen Oltmann is on the international organising committee of the Life Long Learning in Pharmacy conference that was held in Brisbane, Australia (July 2018). She presented a paper: “Developing South African Health Professions Educators for the 21st Century”.

Visiting Professor Beverley Glass was at Rhodes University in March 2018 and she gave lectures and explained her research to staff and students. Her work focuses on stability of pharmaceutical drugs.

Dr Leonie Goosen was invited by Professor Yu Pei, current Executive Dean of the International School at Jinan University, Guangzhou, Guangdong, People's Republic of China, to give lectures over a period of four (4) weeks in Medicinal Chemistry and Pharmaceutical English to third year Pharmacy Students. She also conducted discussions on teaching and learning and curriculum with a number of colleagues at the College of Pharmacy of Jinan University.

Dr Richard Beteck, a Postdoctoral Research Fellow in Dr Khanye’s research group, attended the 4th International Conference on Antimicrobials, Multiple Drug Resistance & Antibiotics Resistance (Antibiotics Resistance 2018) in April 2018, in Las Vegas, United States of America (USA). This was a platform to widen the imminent discoveries in the field of antibiotics and antibiotic resistance.

Professor Roman Tandlich was invited to the University of Zilina in Slovakia where he gave lectures and presented his research on Disaster Management. In November 2018, he also attended The International Emergency Management Society (TIEMS) Annual Conference, which was held at the University of Santo Tomas, Philippines, where he was elected the Director for Africa for TIEMS.

Dr Nosiphiwe Ngqwala attended the African National Young Academicians of Science meeting which was held at the Académie Nationale des Sciences, Arts et Lettres du Bénin (ANSALB) in Cotonou, Benin, in November 2018.
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events

Kanfer, I.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Govender, K., Sharma, S. and Srinivas, S.

Hill, P.W.

Tandlich, R., Angala, A.N., Vhiriri, E.P., Ngqwala, N.P. and Srinivas, S.

Tandlich, R., Ngqwala, N.P., Madikizela, P., Srinivas, S. and Oosthuizen, R.

Peer Reviewed Subsidy-Earning Journal Research Publications

Barford, K., Ramela, T. and Dowse, R.

Chigumete, T.G. and Srinivas, S.

Dowse, R.

Dube, C. and Tandlich, R.


Isolambo Nigambo, C., Walker, R.B. and Krause, R.W.M. (2018) pH-Dependent release of isonicotinic acid (4-hydroxy-

Peer-reviewed Proceedings


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


Duxbury, T., Papphis, S. and Tandlich, R. Building resilience through rural community health development: A participatory action research and systems analysis approach. Rhodes University
Ms Samantha Mukozhiwa achieved her Master's degree in Pharmaceutics.
Credit: Faculty of Pharmacy
I would like to highlight the visit to the Department by Professor Derek Matravers, and the research activities of Professor Uchenna Okeja. In addition, Dr Laurence Bloom had a monograph published in Ancient Greek Philosophy, and Professor Okeja edited an important collection of essays on African Philosophy and global justice.

Distinguished Visitors / International Visits

Derek Matravers, Professor of Philosophy, The Open University, United Kingdom (UK), visited the Department as the Hugh le May Fellow from February to June 2018. During this time, he worked on the philosophy of cultural heritage - including teaching an MA course. He presented his work to the Department, and also gave papers at Fort Hare, University of Cape Town (UCT), University of the Witwatersrand (Wits), and the University of Johannesburg (UJ). His visit to Rhodes has already resulted in one (1) published paper 'The Reconstruction of Damaged or Destroyed Heritage' in Philosophical Perspectives on Ruins, Monuments, and Memorials: Artifact and Memory (eds.) Jeanette Bicknell, Jennifer Judkins, and Carolyn Korsmeyer (New York: Routledge). Two (2) more papers, eventually a monograph co-written with Helen Frowe, are also due to be published.

Professor Chris Megone, Inter-Disciplinary Applied Ethics, University of Leeds, UK, (National Teaching Fellow), and former Hugh Le May Fellow (1996-1997), visited the Department from August 2017 to August 2018. During this time, he worked on a book: Rational Desires: a neo-Aristotelian approach. The Department proved to be (in the opinion of Chris Megone) "a highly conducive environment for conducting serious philosophical research -- both staff and graduate students helped contribute to an excellent community for productive philosophical reflection". In addition to working towards completing the book, his visit to Rhodes has already resulted in two (2) published papers: ‘Character and Leadership: Ancient Wisdom for the 21st Century’ in Journal of Character and Leadership Development, February 2019; and "Aristotelian Lessons After the Global Financial Crisis Banking, Responsibility, Culture and

**Significant Research Aligned Events**

During the academic year of 2018, **Professor Uchenna Okeja** held fellowship appointments at Forschungskolleg Humanwissenschaften in Bad Homburg, Germany, the University of Chicago, Harvard University and the University of British Columbia, Vancouver. He gave the 2018 “Director's Lecture” at the Center for African Studies at Harvard University and two (2) public lectures at the University of British Columbia. These lectures were on aspects of his current book project in political philosophy.

The Department hosted a workshop, entitled ‘What-Is Questions and Philosophy’, and organized by **Professor Ward Jones** (11-13 May 2018). Thirteen (13) papers were presented, three (3) of the speakers were from overseas and the rest from all over South Africa. **Professor Jones** commented that “The workshop was exciting, with the broadest range of interests and topics that I have ever seen at conference with no parallel sessions. The venue was often packed with philosophy Postgraduate students, as well as members of the university at large.”

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*Professor Pedro Tabensky at the Allan Gray Orbis Foundation’s ‘Connect Camp’ for their Scholars in April 2018. Credit: Allan Gray Orbis Foundation*


Distinguished Visitors


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


Tabensky, P.

Tabensky, P. Plenary Talk on Teaching Ethics. Expert Workshop for University Lecturers: “Enhancing Capacity to Teach Integrity and Ethics”, Universidad del Rosario, Bogota, Colombia. October 2018.


One of the top stories for 2018 was the publication of the clearest image yet of the super massive black hole at the centre of the Milky Way galaxy as imaged by the MeerKAT radio telescope in Carnarvon, Northern Cape. The Department of Physics and Electronics through its Square Kilometre Array (SKA) team is proud to be associated with this achievement.

Postgraduates / Graduations

We were pleased to congratulate three (3) students who graduated with a BSc, three (3) with a BSc (Honours), six (6) with a MSc and one (1) with a PhD. At Honours level, the department awards a meritorious prize, the Basil Schönland prize, to the best student in the Physics Honours class provided the student obtains a first class pass in their final examination. The prize for 2017 was awarded in 2018 to Ms. Shannon Beahan.

Distinguished Visitors / International Visits

The department welcomed Professor Russ Taylor in August 2018. Professor Taylor gave a talk on MeerKAT telescope, the precursor of the Square Kilometre Array mid-frequency dish array which will be commissioned in this decade in Africa. The talk looked at MIGHTEE, one of the MeerKAT large survey projects designed to pave way for SKA research in cosmology and galaxy evolution. Professor Taylor is currently Professor and SKA Research Chair, University of Cape Town and University of the Western Cape and Director, Inter-University Institute for Data Intensive Astronomy.

Significant Research Aligned Events

The Luminescence Research Laboratory, headed by Professor ML Chithambo, ran the National Workshop on Kinetic Analysis in Thermoluminescence between 29-31 May 2018 in Pretoria, South Africa. The aim of the workshop was to offer students and other interested participants a detailed and hands-on workshop on kinetic analysis of thermoluminescence and related techniques.
### Books/Chapters/Monographs


### Conferences, Exhibitions, Performances, Workshops, Events


### International Visits

- **Medved, A.J.M.** Ben-Gurion University, Beer Sheva, Israel. Collaboration in Theoretical Physics. 11 June - 26 July 2018.

### Peer Reviewed Subsidy-Earning Journal Research Publications

Galaxy bias from galaxy-galaxy lensing in the DES science sample for BAO measurement.


Kamatzi-Joseph, Z.T.

Kamatzi-Joseph, Z.T. and Habarulema, J.B.

Kenyon, J. S. and Smirnov, O.M.

Makhathini, S., Heywood, I. and Smirnov, O.M.

Matamba, T.M. and Habarulema, J.B.

Medved, A.J.M.

Molenar, G.

Shawa, M.M.W. and Medved, A.J.M.


Shawa, M.M.W.


Sirothia, S.

Sirothia, S. and Heywood, I.

Matamba, T.M.


Mooley, K.P.

Sirothia, S. and Medved, A.J.M.

Sirothia, S.

Sirothia, S. and Medved, A.J.M.


Sirothia, S.

Sirothia, S. and Heywood, I.
The Department of Political and International Studies aims to be a place of vigorous scholarly enquiry and robust intellectual debate.

Some of the ways in which we achieved this during 2018 were as follows:

- Our weekly Friday seminar series at which visiting scholars as well as our own colleagues and Postgraduate students present papers.
- Quarterly public dialogues where invited guests deliberate on topics of pressing intellectual and more general public concern.
- Our annual week long Teach In which in 2018 focused on a very topical issue: the land question.
- Regular Visiting Professors and lecturers who teach on our Postgraduate programme.

We are also very happy with our 2018 research output which includes one (1) book, seven (7) book chapters, ten (10) subsidy-earning journal articles and many other contributions to intellectual enquiry through popular publications and conference presentations.

Distinguished Visitors / International Visits

In 2018, we were very happy to welcome several visitors to the department. Every year, we host three (3) visiting lecturers who teach on our Postgraduate course ‘African Peace and Security’. In 2018, the visitors were Dr Andrews Atta-Asamoah (Institute of Security Studies), Dr Naila Salihu (Kofi Annan Institute) and Dr Paul-Simon Handy (United Nations Security Council Panel of Experts on the Central African Republic).

In July 2018, we welcomed Professor Ahmed Salem from Zayed University in the United Arab Emirates. Professor Salem came to teach a course on Critical and Non-Western International Relations Theory to our Postgraduate students.

Another visitor who taught on our Postgraduate programme was Dr Muhammed Haron from the University of Botswana who taught a course on Religion and International Relations.
The department was also very pleased to host Dr Issaka Souaré (United Nations Standby Team of Senior Mediation Advisors) who gave a seminar to Postgraduate students.

**Significant Research Aligned Events**

The biennial conference held by the South African Association of Political Studies (SAAPS) in Pretoria (September 2018) was a valuable event for the department. Two (2) colleagues from the department, **Associate Professor Matthews** and **Ms Phyllis**, attended this conference along with Honours student, **Ms Gcotelwa Jimlongo**. Ms Jimlongo was awarded the SAAPS national ‘Best Honours Student’ prize for an essay she wrote for a course on African feminism presented by Ms Shingi Mtero. At the conference, our department was elected to run the next SAAPS conference to be held in 2020.

Another important event was our hosting of a dialogue with the Kenyan Ambassador to South Africa, HE High Commissioner Jean Kamau, who was co-hosted by the East African Society (EASoc). The dialogue was chaired by Politics Lecturer, Shingi Mtero, with its theme centred around Kenya’s democracy and its prominent role in the African region.
Books/Chapters/Monographs


Other Publications


Souare, I. Dr I Souare. United Nations Standby Team of Senior Mediation Advisors, Montreal, Canada. Gave a seminar to staff and postgraduate students in the department. March 2018.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Diaz, F.A.

Jordaan, E.C.


Magadla, S.

Matthews, S.

Phyllis, Y.

Below: Dialogue with Kenyan Ambassador, Jean Njeri Kamau
Bottom: Professor Bischoff (centre) presenting a seminar at Jinan University, China.

Credit: Department of Political and International Studies
The year 2018 was another productive one for the Psychology Department. Scholarly works include a variety of books, chapters, workshops, peer-reviewed articles, reports and presentations. Academic staff, Research Associates and students presented their research in South Africa, the United States of America, Chile, Germany, the Netherlands and Australia.

Research themes continue to be diverse and prominent, which include: Research methods and ethics; community-based learning and community engagement; sexualities; pregnancy, mothering and abortion, and reproductive justice; psychoanalysis in research; counselling psychology; neuropsychology; neurocognitive test norms; higher education; psychotherapy and counselling; environmental behaviour; decoloniality; autism; alcohol use disorders; and workplace relations.

The Critical Studies in Sexualities and Reproduction Unit (CSSR), led by Distinguished Professor Catriona Macleod, continues to be a very active multidisciplinary research unit that attracts many Postgraduate students.

Postgraduates / Graduations
Dr Samantha Thomas, supervised by Professor Anthony Collins (a Research Associate of the Psychology Department), graduates with a PhD at the graduation ceremony in April 2019. Dr Ulandi du Plessis also graduated with her PhD. Though she was supervised by Distinguished Professor Catriona Macleod of the Psychology Department, she was registered in the Institute of Social and Economic Research (ISER) at Rhodes University. These two (2) Doctoral graduates will receive their degrees along with twenty-two (22) Masters and forty-five (45) Honours graduates.

Pumla Gobodo-Madikizela, an author, Professor and Clinical Psychologist who trained at Rhodes University and who holds the Research Chair in Studies in Historical Trauma and Transformation in the Faculty of Arts and Social Sciences at Stellenbosch University, was nominated for an Honorary Doctoral degree, which she will receive at the graduation ceremony in April 2019.
Significant Research Aligned Events

The CSSR Unit, Rhodes University, the Sexual and Reproductive Justice Coalition (South Africa), and the International Campaign for Women's Right to Safe Abortion, in partnership with the Department of Social Development (South African government) and a range of international partners co-hosted the International Abortion and Reproductive Justice conference.

The conference built on two (2) previous conferences with the same name held in Canada in August 2014, and in Northern Ireland in July 2016. The aim of this third iteration was to bring the conversation, scholarship, and exploration of issues and activism to those living in jurisdictions where abortion access is highly restricted, while at the same time hearing from scholars, activists and service providers from across the globe. The hosting of the conference in Africa was thus highly pertinent. The organising committee consisted of representatives from a range of southern African countries, each with varying challenges regarding access to abortion.

The conference was attended by two hundred and eighty (280) delegates from thirty (30) countries across the globe, including many delegates from African countries. Delegates came from universities, research institutes, national NGOs, international NGOs and activist groups. The conference, thus, provided the opportunity for Southern African organisations to learn from African and international counterparts and vice versa. There were also many networking opportunities.

Finally, in recognition of her outstanding scholarly achievements and intellectual leadership, Catriona Macleod was awarded the title of Distinguished Professor by Rhodes University.


**PUBLICATIONS**

Symposium held in May 2018. Credit: Department of Psychology


**Concerts, Exhibitions, Performances, Workshops, Events**

Truter, S.


**Distinguished Visitors**

Bannigan, K. and Akhurst, J.

K Bannigan and J Akhurst. University of Plymouth, Plymouth, United Kingdom. 4-day series of workshops on Systematic Reviews. May 2018.

Inman, J. and Akhurst, J.


**Other Publications**


in Higher Education.

While transferring: An exploratory study of how transferability of skills is key in the transformation of higher education.


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)


Lewis, C. Lewis, C. The relevance of career counselling in the current context of higher education. SA Association for Counselling and Development


What was particularly pleasing about 2018 was the increase in the number of joint staff/student publications and conference papers. A special congratulations to Professor Noel Pearse, who with Professor Lilla Stack, was the joint recipient of the 2017 Commerce Faculty Researcher of the Year Award, announced in 2018.

The 4th Archbishop Thabo Makgoba Development Trust (ATMDT) Annual Lecture on Values Based Leadership, fully lived up to expectations with Dr Makhosi Khoza delivering a powerful, at times witty, yet insightful, sobering and honest assessment of the country's leadership needs. She reminded the audience that the Constitution is our "collective moral signature". The highlight of the evening was without doubt the reminiscing of her interaction with former President Nelson Mandela.

During the course of 2018, we ran fourteen (14) Rhodes University accredited certificate short course programmes, with three hundred and seven (307) Certificates of Competence being issued. This in addition to a number of training workshops that we run for various organizations.

Postgraduates / Graduations

Fourteen (14) MBA and fifty-five (55) (twenty-three (23) were part-time) Postgraduates Diploma in Enterprise Management students graduated, of whom three (3), Kirsten Drake, Candice Jacobs and Abongile Sipondo obtained the diploma with distinction. The MBA Fellowship Award recipients as voted by their peers, was jointly shared by Carol Cuthbert and Shaun Wyngaard, the ATMDT Prize recipient for the Responsible Leadership essay was Erica Da Silva Mbatha and the FNB Economics Prize recipient was Cornelia Blignaut.

Distinguished Visitors

Wainer, M.

International Visits
International visits by Rhodes Business School staff and students in 2018 were:

Greyling, L.
- "South Africa & Sustainability": Lecture for School of Business and Economics (guest lecture arranged between the Emerging Markets programme and Oikos), Maastricht University, Netherlands, 15 March 2018.

Rafferty, K.
- Leadership Development: Role Transition from Functional/Technical to Manager. Two 5-day seminars for Mercedes Benz, Australia.

Skae, F.O.
- Regional workshop on the WTO instruments in the interest of agribusiness, FAO, Odessa, Ukraine, 11-13 September 2018. Moderated session on “Building capacity for developing successful agri-food exports”.
- 12th World Trade Promotion Organizations Conference, 25 - 26 October, Paris, France. Trade and Investment Ecosystems: Delivering for Growth. Moderated session on “Alliances for Action (A4A)”, which bridges the knowledge, sustainability and inclusiveness “gaps” faced by value chain operators at local, national and international level.

MBA Students
Linda Fleming and Aphiwe Nkosimbini participated in a Strategy and Marketing for Emerging Countries programme at Universidade Paulista (UNIP) - International Business Schools Americas (IBS), Sao Paulo, Brazil; Lusanda Mqeta and Vuyokazi Zozi in Design Thinking; Managing Diversity; Digital Business Models, Montpellier Business School, France; and Tinashe Nyamujara in Business Process Management & IT, Utrecht University, The Netherlands.
Concerts, Exhibitions, Performances, Workshops, Events

Pearse, N.J.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Pearse, N.J.

Peer Reviewed Subsidy-Earning Journal Research Publications

Simataa, G. and Pearse, N.J.

Peer-reviewed Proceedings

Cuthbert, C. and Skae, F.O.

Pearse, N.J.


Ternel, M. and Greyling, L.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Cuthbert, C. and Skae, F.O.

Pearse, N.J.

Pearse, N.J. and Gavaza, M.A.

Assessing the Organizational Maturity Level of a Community Radio Station with the Introduction of Social Media. World Media Economics & Management Conference, Lagoon Beach Hotel, Cape Town, South Africa. April 2018.

Pearse, N.J. and Greyling, L.


Pearse, N.J. and Mohapeloa, M.M.E.


Pearse, N.J. and Gavaza, M.A.

Professor Noel Pearse.
Credit: Rhodes Business School

Dr Makhosi Busisiwe Khoza, guest speaker at the 4th Archbishop Thabo Makgoba Development (ATMDT) Annual Lecture.
Credit: Rhodes University Communications and Advancement Division
The School of Languages and Literatures is a large academic department made of six (6) sections: African Languages, Afrikaans and Netherlandic, Chinese, Classical, French and German Studies.

The year 2018 was rich in research activities for staff and students in the School of Languages and Literatures. At both national and international levels, academic staff took part in various activities across the disciplines. Staff in the School of Languages and Literatures published papers, book chapters, journal articles, and conference proceedings.

French Studies Section hosted in September the 25th Summit of the Association for French Studies in Southern Africa. The main theme of this conference was “Dialogue, Différences et Transgression”. This was an international event that took place at Rhodes University only for the second time, the first time having been in 2006. This conference was attended by scholars from various universities in South Africa, and from various countries such as France, Algeria, Zimbabwe, Lesotho, Australia, Mauritius, Ivory Coast, Mali, Cameroon, Democratic Republic of Congo, Nigeria, Mozambique.

Postgraduates / Graduations
In terms of student activities, the School of Languages and Literatures has succeeded to graduate several MA and PhD students in different disciplines. Three (3) very important MAs were produced in African Language Studies, all of them with distinction! The theses' titles are:

- Docrat, Zakeera, The role of African languages in the South African legal system: Towards a transformative agenda (in African Language Studies);
- Collins, Morgan Gwyneth, Action Research: Developing ICC skills in German studies at Rhodes University (in German Studies);
Furthermore, the School of Languages and Literatures produced five (5) PhDs, four (4) in African Languages and one (1) in French Studies. The theses titles are:

- Maahlamela, Tebogo David, *Sepedi Oral Poetry with reference to Kiba traditional dance of South Africa* (in African Language Studies);
- Mavela, Xolani, *An investigation of Further Education and Training (FET) students’ written responses to isiXhosa literature* (in African Language Studies);
- Somlata, Zakhile, *A critique of Language Planning and Implementation strategies used in selected institutions of Higher Learning in South Africa* (in African Language Studies);

**Distinguished Visitors / International Visits**

*Professor PK Mwepu* was invited to give a keynote speech in November at Université d’Angers (France) for his research production on the prominent writer and *Julien Kilanga Musinde*, who received the Emeritus Professorship title at that institution. *Professor Mwepu* also gave a keynote speech on foreign language teaching methods at the University of Zimbabwe during the ORBOR Conference in August.

**Significant Research Aligned Events**

The School of Languages and Literatures hosted *Emeritus Professor Eckerhard Wolff*, Chair: African Linguistics; University of Leipzig, as part of Hugh le May Fellowship. Professor Wolff gave several lectures on African languages and cultures, including: “Linguistic Plurality and Diversity - Why the ‘North’ cannot understand the ‘South’: When European experience clashes with African reality.”

Professor Wolff continued his visit at the School of Languages and Literatures from October 2017 to March 2018. He also took part in the evaluation of research projects for staff and Postgraduate students in the School.


Mose, P.


Mukenga, A.N.


Mukenga, A.N. and Ndoungami, J.B.


Mwepu, P.K.


Ortner, G. J. and Weber, U.S.


Silhólo, E.


Van Schoor, D.J.


Van Schoor, D.J.


Weber, U.S.


Weber, U.S.


Wolff, H.E.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Cordell, C.J.


Mwepu, P.K.


Mukenga, A.N.


Mukenga, A.N. and Kayumba, V.N.


Wolff, H.E.


Mose, P.


Mukenga, A.N.


Mukenga, A.N. and Ndoungami, J.B.


Mwepu, P.K.


Ortner, G. J. and Weber, U.S.


Silhólo, E.


Van Schoor, D.J.


Van Schoor, D.J.


Weber, U.S.


Weber, U.S.


Wolff, H.E.

The Department has had another exceptionally 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 contributions to the Department’s publication record by Professor Kirk Helliker and Professor Lucien van der Walt.

Professor Helliker and Professor van der Walt co-edited two (2) books, both of which were published by Routledge. Professor Helliker also authored six (6) chapters and one (1) journal article, while Professor Van der Walt authored five (5) chapters and two (2) journal articles, and presented five (5) conference papers.

In addition, the academic staff in the Department continued their extraordinary higher degree supervision record with sixty (60) Postgraduate students graduating in April 2019.

Postgraduates / Graduations


Associate Professor Michael Drewett, Professor Kirk Helliker, and Professor Monty Roodt continued their exceptional higher degree supervision record with six (6) of their PhD candidates graduating. The six (6) Doctoral theses focused on different regions and included topics on South Africa’s education transformation, land and water politics in Zimbabwe, an ethnography of gays and lesbians in Harare, non-governmental organisations in learner performance and retention in Joza, urban governance and social accountability in Bulawayo, and land restitution and resettlement in the Eastern Cape.

Significant Research Aligned Events

Members of staff and Postgraduate students published short papers in the media and presented papers at numerous conferences, both national and international, throughout the year, including the South African Sociological Association (SASA) Annual Conference in July 2018.
Professor Lucien van der Walt delivered the keynote address, titled “What are we fighting for? Possibilities for decent work, unions and rights in Africa”, at the Conference on Trade Union Transformation in Sub-Saharan Africa, Ledger Plaza Bahari Beach Hotel, Kunduchi, Dar es Salaam, Tanzania, Friedrich Ebert Stiftung (FES), 29 October-2 November 2018. Professor van der Walt also piloted the new Sociology/NALSU short course programme “Policy, Theory and Research for Labour Movements” with a two (2) day workshop with the Uitenhage Local of the National Union of Metalworkers of South Africa (NUMSA), 24-25 November 2018, on the topic of “The South African Political Economy and the Global Crisis.”

Mr Leroy Maisiri (PhD candidate in Sociology), Professor Lucien van der Walt, and Ayanda Kota of the Unemployed People’s Movement (UPM) in the Eastern Cape, co-designed and co-facilitated a three (3) day workshop and political school with the UPM on 7-9 November 2018, on the topic “Autonomy, Land, Self-Management: Alternatives and the Russian and Spanish Revolutions”. The workshop was held in the Bantu Stephen Biko Student Union Building, at Rhodes University and attended by forty-five (45) people from the UPM in Grahamstown/ Makhanda and Peddie as well as members of the local waste-pickers collective.

Professor Gilton Klerck received the British Academy of Management’s Best Reviewer of 2018 award. Professor Klerck was also re-appointed to serve on the editorial board of the British Journal of Management and the review panels of the South African Journal of Labour Relations and the South African Journal of Human Resource Management.

In 2018, the Labour Studies Seminar Series ran fifteen (15) public events, including seven (7) book launches partnered by the relevant publishers (Routledge, Wits University Press, UKZN Press, and Zed Books). The Series has grown into the largest and best attended seminar series in the economic and social sciences on campus, with a notable turnout of students.
Books/Chapters/Monographs


Maiseiri, L.J.
Maiseiri, L.J. and Van Der Walt, L.
Van Der Walt, L.

Peer Reviewed Non-Subsidy-Earning Journal Research Publications

Mathekga, J. M.
Moyo, S.
Roodt, J. J. and Xaba, M.B.
Van Der Walt, L.

Peer Reviewed Subsidy-Earning Journal Research Publications

Alfers, L.
Drewett, M.
Gimenez Amoros, L.
Helliker, K. and Bhatasara, S.
Park, Y.J.

Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Maiseiri, L.J.
Maiseiri, L.J.
Maisiri, L.J.
Mathekga, J. M.
Mathekga, J. M.
Sibuyi, L.N.

Van Der Walt, L.


Wilson, J.K.

Xaba, M.B.

The Department of Statistics continued pursuing a broad range of research interests and activities during 2018.

Professor Radloff’s research collaborations with the Departments of Entomology and Psychology resulted in two (2) peer-reviewed journal articles and two (2) conference presentations.

Dr Chinomona presented a paper on the paradigm shift from surveys to big data in financial research at the BigSurv18 conference, held at the Research and Expertise Centre for Survey Methodology in Barcelona, Spain. Subsequently he has submitted a paper on estimating the risk factors of HIV in Zimbabwe using hierarchical modelling with survey data to the BMC Infectious Diseases journal.

Ms Maqubela presented a novel paper on peer teaching in the first year undergraduate statistics class and how indigenous language mediates the learning experience at the 10th International Conference on Teaching Statistics (ICOTS 10) in Kyoto, Japan.

In collaboration with Dr Ngqwala, Ms Maqubela organised a Black Women in Science event aimed at facilitating conversation among black women at Rhodes University about the challenges this community face as a minority in the Sciences and how best to support each other.

Ms Maqubela received a TOP Women Standard Bank award (2018) and was a top ten (10) finalist for McKinsey’s Next Generation Women Leaders in SA (2018).

Postgraduates / Graduations

Mr Sitha Mtwa graduated with a Masters of Science in the Department of Statistics. Four (4) students graduated with a Bachelor of Science Honours, one (1) with a Bachelor of Commerce Honours and one (1) with a Bachelor of Business Science in the Department of Statistics.

Ms Amy Langston, Ms Hannah Maclean and Mr Grant Tarr attained distinctions. Ms Langston has been awarded the Patrick and Margaret Flanagan Scholarship to continue her studies at the School of Mathematics and Statistics, University of Glasgow.

Seven (7) students attained distinctions in Mathematical Statistics 3.
Distinguished Visitors and Significant Research Aligned Events

Professor James Allison from North West University presented three (3) highly informative and interesting seminars to the staff and postgraduate students of the Departments of Statistics at Rhodes, Fort Hare and Nelson Mandela Universities.

The first two (2) seminars were presented at Nelson Mandela University. In the first seminar Professor Allison discussed the development of two (2) new tests for symmetry. In the second he discussed a particular differential equation and how this could be utilized in a goodness-of-fit test for the Rayleigh distribution. The third seminar, presented at Rhodes University, discussed testing the adequacy of semi-parametric transformation models using the empirical characteristic function.
Peer Reviewed Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Chinomona, A.

Maqubela, T.Z.

Radloff, S.E.

The staff, Research Associates and Postgraduate students within the Department of Zoology and Entomology published a total of eight-five (85) subsidy-earning research articles on a diverse range of topics during 2018, the greater majority of which were published in top local and international ISI accredited peer reviewed journals. Over the corresponding period, staff within the department also contributed to two (2) book chapters and a conference proceeding.

The high research publication output reflects the strong research collaborations established by the academic and research staff with research institutes and universities in southern and North Africa, Europe, North and South America, Asia and Australasia.

In recognition of their high standing within the science community, a number of academic staff within the department were successful in their applications for research funds and presented keynote lectures at both local and international conferences. Staff within the department were also hosted by a number of local and international universities and were invited to review scientific peer review articles and research programmes both locally and internationally.

Postgraduates / Graduations

The department continued to have a highly vibrant Postgraduate school with no less than eleven (11) Honours students, twenty-eight (28) MSc students and twenty-one (21) PhD candidates registered within the department. A total of twenty-one (21) MSc students and PhD candidates graduated from the department. Several Postgraduate students attended both local and international conferences where their papers were well received.

Distinguished Visitors / International Visits

During 2018, the department hosted Professor Mark Brigham from the University of Regina, Canada. During his sabbatical, Professor Brigham in collaboration with Dr Ben Smit, conducted research on the biology of bats and nightjars and presented a number of departmental and public lectures.
Associate Professor Andrew Cameron also from the University of Regina, visited the department and initiated a research project to characterize the bacteria fauna of three (3) species of bats found in the Eastern Cape.

Dr Andrew McConnachie from the Department of Primary Industry, Australia, visited the department in October and conducted research on the biocontrol of invasive cactus and contributed to the Annual Weeds Short Course run by the Centre for Biological Control (CBC) under the Directorship of Professor Martin Hill. The CBC also hosted three (3) scientists from the University of Gdansk in December as part of a Poland-South Africa bilateral agreement on citrus research.

Finally, the department played host to Drs Gerado Zardi and Katy Nicastro from the University of Algarve (Portugal) and Dr Laurent Seuront from the CNRS (France) during which time they conducted studies on the effects of plastic leachates on animal behaviour. This research was conducted in collaboration with Distinguished Professor Christopher McQuaid, Director of the SARChI Chair in Marine Ecology.

Significant Research Aligned Events

During the course of the year, the CBC successfully released a biological control agent, a fly, against a submerged water weed - Egeria densa. Additionally the unit also identified a number of other potentially important biological control agents for invasive weeds/plant, initiated the Highlands Weeds Research Programme and embarked on a research project focusing on the honey bush tea industry.

Finally, Professor Martin Villet’s forensic entomology expertise was employed in rhinoceros poaching investigations.
Books/Chapters/Monographs


Peer Reviewed Subsidy-Earning Journals


Moore, S.D. and Hill, M.P.


Moore, S.D., Pepper, M., Marsberg, T., Albertyn, S. and Hill, M.P.


Moyo, S. and Richoux, N.B.


Mvundaba, S.F., Owen, C.A. and Hill, M.P.


Neil, H.A.


Neil, H.A. and Froneman, P.W.


Neumann, P. and Hepburn, R.


Osvald, K.H. and Smit, B.


Parker, D.M.


Parker, D.M. and Bernard, R.T.F.


Parker, D.M. and Watermeyer, J.P.


Paterson, I.D.


Pollard, M. and Hodgson, A.N.


Porti, F.


Richoux, N.B., Bergamino, L., Moyo, S. and Dalu, T.


Smit, B.


Strange, E.F. and Hill, J.M.


Sutton, G.F.


Sutton, G.F. and Paterson, I.D.


Weaver, K.N.


Welch, R.J. and Parker, D.M.


Weston, M.J. and Froneman, P.W.


Zardi, G.J.


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

Acheampong, M.A.A., Hill, M.P., Moore, S.D. and Coombes, C.A.


Baso, N.C. and Hill, M.P.


Cowie, B. and Paterson, I.D.


Downey, P.O., Paterson, I.D. and Mngqeta, Z.


Faun, S.


Griffith, T.C., Paterson, I.D. and Owen, C.A.


Heshula, L.U.P.


Hill, M.P.


Hill, M.P. and Moore, S.D.


Van Der Merwe, M., Knox, C.M., Hill, M.P. and Moore, S.D. Yeast-baculovirus synergism: Investigating mixed infections for improved management of the false codling moth, Thaumatotibia leucotreta. 2018 International Congress of Invertebrate Pathology and Microbial Control and the 51st Annual Meeting of the Society for Invertebrate Pathology. QT Gold Coast hotel, Gold Coast, Australia. August 2018.


Ivey, P.J. and Weaver, K.N. Ivey, P.J. and Weaver, K.N. Landowners and researcher in partnership to ensure the success of biological control in South Africa. XV International Symposium on the Biological Control of Weeds. Hotel Bellevue, Engelberg, Switzerland. August 2018.


Martin, G.D.


Martin, G.D., Hill, M.P. and Weyl, P.S.R.


Mauda, E.V., Char, L.D. and Martin, G.D.

Miller, B.E. and Hill, M.P.

Moffatt, S.N. and Hill, M.P.

Mutale, T., Paterson, I.D. and Hill, M.P.

Naidu, P., Naidu, P. and Paterson, I.D.

Owen, C.A. and Hill, M.P.

Paterson, I.D.


Paterson, I.D. and Hill, M.P.
Paterson, I.D., Hill, M.P. and Coetzee, J.A. Cryptic species in biological control: a biocontrol agent that we didn’t know we had. 1st International Congress on Biological Control: Biological Control for a Healthy Planet. Beijing, China. May 2018.

Paterson, I.D., Muskett, P.C., Mannheimer, C.A. and Mcconnachie, A.J.

Reid, M.K. and Hill, M.P.

Richoux, N.B. and Moyo, S.


Sutton, G.F. and Canavan, K.

Upfold, J.K., Hill, M.P., Coombes, C.A. and Moore, S.D.

Villet, M.H.

Wansell, S.N.L.

Weaver, K.N. and Ivey, P.J.
Weaver, K.N. and Ivey, P.J. Taking biological control to our communities. XV International Symposium on the Biological Control of Weeds. Hotel Bellevue, Engelberg, Switzerland. August 2018.
Weyl, P.S.R., Martin, G.D. and Hill, M.P.


Zozo, E. and Paterson, I.D.
Staff at the Albany Museum continue to contribute actively to research outputs at Rhodes University, in addition to supervision of third year and Postgraduate student projects and undergraduate teaching.

**Postgraduates / Graduations**

Two (2) PhD candidates were supervised during 2018 by the Department of Freshwater Invertebrates and Palaeontology respectively. One (1) MSc student is being jointly supervised between the Palaeontology and Freshwater Invertebrates departments. Two (2) Honours students were supervised in the Departments of Zoology and Entomology (both graduated). Two (2) Postdoctoral Research Fellows were also based at the Museum, in the Department of Freshwater Invertebrates and in Palaeontology.

A highlight for the Palaeontology students as a group, was their joint award of the ‘Bob and Laura Brain Trophy’ for enthusiasm in the palaeosciences, at the Palaeontological Society of Southern Africa Congress held in July 2018, in Bloemfontein. We managed to obtain funding for all five (5) Postgraduate students and one (1) Postdoctoral Research Fellow, two (2) research staff at the Albany Museum, to attend and present seven (7) papers at the conference.

**Distinguished Visitors / International Visits**

Ms Efe Ogidiaka from Delta State University, Nigeria, visited the Department of Freshwater Invertebrates for three (3) months from the end of February to the end of May 2018. She learned about collecting and identifying aquatic insects and museum curation skills.

Professor Per Ahlgren of Uppsala University (Sweden) visited the Department of Earth Sciences between 11-21 April 2018, to work on remains of a four (4) metre long predatory tristichopterid fish, Hyneria with Dr Rob Gess.

Dr Alice Clement of Flinders University visited between the 23 May - 06 April to work on a new genus and species of lungfish with Dr Rob Gess of the Department of Earth Sciences.
Significant Research Aligned Events

The Department of Freshwater Invertebrates, represented by Dr Helen James and Dr Ferdy de Moor, took part in the National Geographic Okavango Wilderness Expedition Project (NGOWP) in Angola in April 2018, surveying the freshwater invertebrates occurring in the upper Lungué-Bungo River and tributaries.

The Lungué-Bungo River catchment is an important source of water for the Zambezi River system, providing a continual water supply to rivers flowing into the Zambezi River long after the rainy season is over. This was done in order to compare the diversity to adjacent catchments, which feed the Okavango Delta.

Dr James was awarded National Research Foundation (NRF) Knowledge, Interchange and Collaboration (KIC) funding to attend the conference, Joint XV International Conference on Ephemeroptera, XIX International Symposium on Plecoptera in Aracruz, Brazil in June 2018. She was given additional funding for this by Rhodes University to take PhD student, Ina Ferreira, to the conference, and subsequently visit a colleague at the Laboratório de Sistemática e Ecologia de Insetos, Departamento de Ciências Agrárias e Biológicas, Universidade Federal do Espírito Santo, Brazil, where she could interact with other students doing related projects on Brazilian mayflies.

Mr Musa Mlambo was awarded funding by National Geographic to carry out research in Gorongosa National Park in Mozambique, and by Rhodes University to attend the 9th International Congress of Dipterology in Windhoek, Namibia, 25-30 November 2018, followed by a week’s fieldwork.

Dr James spent three (3) weeks in the Natural History Museum, London in December, examining species and developing future collaborative projects. She also gave an invited lecture about the research being done in Angola as part of an “African Refugia and Biodiversity Hotspots” symposium.

A new curator of the Department of Entomology and Arachnology, Dr Terence Bellingan, was appointed in February after some nine (9) months of stagnation. He has taken over curatorship and stewardship of the entomological and arachnological collections. Research within the department has focussed primarily on the true flies (Diptera), with the highlight of the 2018 year seeing Dr Bellingan visit what is arguably the best fly collection in South Africa, housed at the KwaZulu-Natal Museum in Pietermaritzburg, to examine the hoverfly (Diptera: Syrphidae) collection. A single peer-reviewed publication was produced by Dr Bellingan, and a poster was presented at a local conference. Field based research was undertaken as well, with successful collecting trips around the Eastern Cape and further afield producing valuable specimens towards collaborative research projects.

The Department of Earth Sciences was strongly represented at the biennial congress of the Palaeontological Society of Southern Africa, held in July 2018, in Bloemfontein, with two (2) researchers, one (1) research assistant, two (2) Postdoctoral Research Fellows and five (5) Rhodes Postgraduate students attending and presenting talks and posters (funded by the DST-NRF CoE in Palaeosciences, Palaeontological Scientific Trust, the NRF African Origins Platform and the Millenium Trust).

Aviwe Matiwane (Botany PhD candidate), Chris Harris (research assistant), Sydney Moyo (Postdoctoral Research Fellow) and Rose Prevec (HoD) also attended the International Palaeontology Congress in Paris, France, in July. Another phenomenal fieldtrip to the Onder Karoo Lagerstätte near Sutherland was conducted in May by Rose Prevec and her team, and...
several hundred new insect fossils and many plant fossils were added to the growing collection. The fieldtrip provided the team of students, postdocs and volunteers the opportunity to learn palaeontological field techniques. Several publications describing some of the plants and insect fossils are in preparation.

The research highlight of the year for Dr Robert Gess was the publication in Science of, "A tetrapod fauna from within the Devonian Antarctic Circle". It describes Africa’s earliest (by eighty (80) million years), four-legged animals, the three hundred and sixty (360) million year-old Umzantsia amazana and Tutusius umlambo from Waterloo Farm outside Makhanda.

A very successful press release was held on the 08 June 2018 at the Origins Centre at the University of the Witwatersrand (Wits) (hub of the CoE in Palaeosciences), addressed by amongst others Dr Robert Gess and Ms Mmamoloko Kubayi-Ngubane, the Minister of Science and Technology. The Museum was represented by museum manager Mr Manzi Vabaza and Rev Linda Dyani.

Dr Gess also published a description of the first known sphenophyte (horsetail) plant from a Devonian high latitude setting, and one of only four (4) Devonian sphenophytes known with associated vegetative and fertile structures.

Emeritus curator, Dr Billy de Klerk continued various research and outreach activities, with the submission of two (2) publications, and engagement with the Kitching Fossil Exploration Centre in Nieu Bethesda, and conservation efforts of a spectacular trackway site on the Karoo farm ‘Asante Sana’.

The Selmar Schonland Herbarium, staffed by Mr Tony Dold (Rhodes University) and Mr Phumlani Cimi, continues to provide an essential research and plant identification service to Rhodes University students and the public at large (see the Rhodes University Department of Botany report for details).
Concerts, Exhibitions, Performances, Workshops, Events

Barber-James, H.M. and Holland, A.J.  

Bellingan, T.A., Holland, A., Barber-James, H., Mlambo, M. and Prevec, R.  

Gess, R.W.  
Gess, R.W. (8th June 2018): Press release for “A tetrapod fauna from within the Devonian Antarctic Circle. Science: 360 (6393)” in conjunction with CoE Palaeosciences at Wits University. Addressed by Professor Tawane Kupe (Vice-Principal of Wits), Prof. B.S. Rubidge (Director of CoE Palaeosciences), Minister of Science and Technology, Mmamoloko Kubayi-Ngubane and Dr Robert W. Gess (principal author).

Holland, A.J., Prevec, R., James, H.J., Mlambo, M. and Camagu, K.  
Poole, T. ‘The Whispering Spring’, solo fine art exhibition, Galerie M, Bochum, Germany. Collaborators: Holland, A.J., Prevec, R., James, H.J., Mlambo, M., Camagu, K., Zezethu Mnqeta, Mbunge Mbunge

Books/Chapters/Monographs

Dold, A.P.  

Other Publications

Barber-James, H.M., Ferreira, I.S., de Moor, F.C. and Mlambo, M.C.  

Ferreira, I.S., Barber-James, H.M., and de Moor, F.C.  

Ferreira, I.S., Barber-James, H.M., and de Moor, F.C.  

Gess, R.W.  


Matiwane, A. and Prevec, R.  
**PUBLICATIONS**

**Peer Reviewed Subsidy-Earning Journal Research Publications**

Bellingan, T.A.

Cimi, P. V.

de Moor, F. C.

Dold, A. P.

Gess, R. W.


Mlambo, M. C.

Mlambo, M. C., Holland, A. J., and Barber-James, H. M.

**Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)**

Barber-James, H. M.


de Moor, F.C. and Ferreira, I.S. Preliminary report on Trichoptera from the headwaters of the Cuanavale, Quembo and Cuando Rivers in Angola. 16th International Symposium on Trichoptera. Prince of Songkla University, Surat Thani Campus, Surat Thani. Thailand. june 2018.


Institute for Environmental Biotechnology, Rhodes University (EBRU) targets research and development in environmental biotechnology at the interface between the fundamental and applied sciences.

Environmental biotechnology is defined as the branch of biotechnology that addresses environmental problems, such as the removal of pollution, renewable energy generation, biomass production, by exploiting biological processes (Nature.com 2018). As such, environmental biotechnology may be regarded as the cornerstone of a circular economy which, is an economic system aimed at minimising waste and making the most of resources. Rather than the more traditional ‘take, make, waste’ model of production, environmental biotechnology has a regenerative approach to resources. Focus areas thus include: wastewater treatment and beneficiation, renewable energy derivation and implementation (e.g. biomass-to-biogas), biological systems; land rehabilitation and decontamination technology (e.g. post-mining, hydrocarbon spillages, etc.), natural products, agricultural, and microalgae biotechnology.

Basic activities are supported by a strong emphasis on technology transfer from laboratory to full-scale commercial/industrial process application and implementation. In brief, use of natural products/microbes to perform industrially important tasks in an environmentally sustainable way is the focus of attention.

Potable water is a scarce resource in many parts of the world and there is increasing pressure on food production systems. Also, increasing pressure is being exerted to obtain energy from sources other than fossil fuels. At EBRU, we have been exploring integration of microalgae-based bioprocess technologies to achieve wastewater treatment, water recycle and re-use, energy production, and biomass utilisation. Efforts to establish a fully operational solar-driven microalgae bio-refinery for use not only in wastewater remediation but to transform waste and biomass to energy, fuels, and other useful materials (valorisation), with particular focus on environmental quality and sustainability goals remains challenging.
Six (6) Postgraduate students were registered at EBRU for higher degrees in Environmental Biotechnology in 2018 - two (2) PhD and four (4) MSc.

In addition, Dr Yinka Titilawo joined EBRU as a recipient of a prestigious Rhodes University Postdoctoral Research Fellowship (2018-2019). Dr Titilawo brings substantial experience in the area of molecular biology and broader aspects of microbiology and chemistry with training in molecular characterization of bacterial/fungal biocatalysts. More broadly his area of expertise intersects with EBRU’s core mandate, including: wastewater treatment, enzymology, multi-drug resistance, natural products, microbial cultivation and beneficiation.

**Significant Research Aligned Events**

Collaboration between EBRU and the consortium ReNEWal (Recycling Nutrients, Energy & Water via Algae with partners from Sweden: UmU & Swedish University of Agricultural Science, SLU; and Norway: Norwegian Institute for Water Research, NIVA) continues. The consortium seeks to elaborate a bioprocess for provision of safe and affordable water for all.
Patents


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

The period of January to December 2018 was stand-out year for the Institute for the Study of the Englishes of Africa (ISEA) staff members and Research Associate, Dr Brian Willan.

In an exceptionally productive year, Dr Willan launched his revised monograph, Sol Plaatje: A Life of Solomon Tshekisho Plaatje 1876-1932, at various centres in South Africa. He also published a chapter in Illuminating Lives: biographies of fascinating people from South African history. The highlight was winning the prestigious 2018 National Institute for the Humanities and Social Sciences Award for Best Non-Fiction Edited Volume, together with co-editors Janet Remmington and Bhekizizwe Peterson, for Sol Plaatje’s Native Life in South Africa: Past and Present.

With regard to undergraduates, a new cohort of BEd in English Language Teaching (ELT) students began their first year in April 2018. Twenty-Eight (28) are from the John Taole Gaetsewe and ZF Mgcawu districts in the Northern Cape, funded by the Sishen Iron Ore Company Community Development Trust. There are also four (4) self-funded students from the Eastern and Western Cape. The postgraduates are seven (7) MEd students and two (2) Doctoral candidates registered for part-time studies in education being supervised and co-supervised by Professor Hendricks, Dr Mawela, Professor Mbelani, and Ms McCarthy. In addition, Dr Mawela is co-supervising three (3) MEd students and one (1) Doctoral candidate with Professor Mgqwashu.

Nine (9) full-time and thirteen (13) part-time students registered for the MA in Creative Writing (MACW) in 2018. MACW staff member Stacy Hardy was shortlisted for the 2018 Caine Prize for African Writing, an annual literary award for the best original short story by an African writer. She travelled to London to participate in workshops, readings and meetings with publishers. Demonstrating her creative range, Stacy Hardy’s play, Museum of Lungs, created in collaboration with musicians and composers Neo Muyanga (South Africa) and Nancy Mourir (Egypt), and director Laila Solman (Egypt), premiered at the Market Theatre in Johannesburg (September, 2018) before an extensive two (2) month European tour (Switzerland, Belgium, Germany and France), culminating with performances in Egypt.
A musical and poetic biographical performance that explores vulnerability as a core of strength, and illness as a site of resistance and transformation, the play has received excellent responses and very good reviews in the media.

Other MACW colleagues' achievements include Paul Wessels receiving a CATALyst Certificate, while Mxolisi Nyezwa and Mangaliso Buzani organised a successful three (3) day Phulaphulani writing workshop, 04-06 July 2018, for isiXhosa writers in Grahamstown attended by twenty (20) participants. The workshop was conducted under the auspices of the Imbizo Arts programme, with logistical support from the MACW. Three (3) current full-time MACW students also participated in the workshop.

The MACW hosted a record four (4) writers and scholars thanks to the Andrew W. Mellon Foundation-funded programme: the Writers-in-Residence programme welcomed Efemia Chela, Dr Tinashe Mushakavanhu, and Mlindelwa Mralatya, while Professor Alan Ziegler was the Scholar-in-Residence.

Warm congratulations also to Dr Hleze Kunju who was the recipient of numerous awards in 2018: the Golden Key International Honour Society, Mail & Guardian Top 200 Inspirational Young South Africans, the MEC’s ‘Excellence Recognition Special Award’ at the Eastern Cape Department of Sports, Recreation, Arts and Culture Awards, and the Runner-up in the Golden Shield Heritage Awards for Academic Excellence.

From January 2019, the MACW will be located in the School of Languages and Literatures. While we are sad at the departure of this stellar course, initiated and offered in the ISEA since 2011, we are very pleased that the course leaves with a large, generous grant from the Andrew W. Mellon Foundation which will ensure that it can build on its enviable track record. We wish all concerned the very best in their new location and intellectual home.

**Postgraduates / Graduations**

The MACW graduated eighteen (18) students in April, nine (9) with distinctions. The BEd in ELT graduated thirty-seven (37) students: twenty-eight (28) were teachers from the John Taole Gaetsewe district in the Northern Cape, funded by the Sishen Iron Ore Company Community Development Trust, and twelve (12) were English teachers and Subject Advisers, funded by the Eastern Cape Provincial Basic Education Department. Six (6) graduated with distinction, three (3) each from the Northern and Eastern Cape.

During this ceremony, Rejoice Mawela was awarded her Doctorate titled "Using reading to learn pedagogy to enhance the English first additional language teachers’ classroom practice".

**Distinguished Visitors / International Visits**

- Professor Logan Athiemoolam, Nelson Mandela University.
- Romeo Mafa Bavuma, Umhlobo Wenene.
- Efemia Chela.
- Angela Govender, British Council.
- Kevin McCaughey, Regional English Language Office, U.S. Embassy, Pretoria.
- Heziwell Mhunduru, Rössing Foundation, Windhoek.
- Dr Nhlanhla Mpofu, Sol Plaatje University.
- Mlindelwa Mralatya (popularly known as Nkunz’ Emdaka).
- Dr Tinashe Mushakavanhu.
- Ongama Mtimka, Nelson Mandela University.
- Professor Raymond Sangabau, University of Kinshasa.
- Dr Brian Willan.
- Professor Alan Ziegler, Columbia University.
ISEA staff international academic engagements

Professor Monica Hendricks was awarded a ten (10) day study exchange programme by the US State Department to visit schools in the United States of America and attend the International TESOL conference in Chicago, 21-31 March 2018.

Dr Rejoice Mawela presented “The Reading to Learn Pedagogic Approach: A solution to the Literacy Crisis in Rural Classrooms”, at the Africa TESOL 3rd International Conference, Dakar, Senegal, 4-6 May 2018.

Significant Research Aligned Events

The ISEA, together with the Eastern Cape English Educators’ Association, hosted the 6th biennial Networking teachers’ conference, 10-12 July 2018, with the theme of “Teaching literature for understanding to young children and adolescents”.

The MACW public reading, performance and discussion on 18-19 July 2018 which brought together three (3) Andrew W. Mellon Foundation-funded scholars and cultural practitioners, Professor Alan Ziegler, Dr Tinashe Mushakavanhu and Nkunj’ Emdaka, was a memorable affair.

Research Associate Dr Brian Willan launched his revised book, Sol Plaatje: A Life of Solomon Tshekiso Plaatje 1876-1932, at NELM in Grahamstown, on 9 October 2018 on the anniversary of Plaatje’s birthday, with Professor Jeff Peires as discussant.

Carol Leff was awarded an National Research Foundation (NRF) doctoral completion scholarship for six (6) months sabbatical leave, July-December 2018. We gratefully acknowledge Deputy Vice Chancellor (DVC), Research and Development, Dr Clayton and Professor Martin, the Dean of Humanities, for additional financial support.

Volume thirty (30) of the journal Shakespeare in Southern Africa, published in print and online in January, was a special volume on the theme of “Decolonising Shakespeare: Contestations and re-imaginings for a post-liberation South Africa”. The volume emerged from the Decolonising Shakespeare conference held at University of KwaZulu-Natal, Howard Campus in October 2016, and included ten (10) articles/essays and three (3) reviews.
Books/Chapters/Monographs


Concerts, Exhibitions, Performances, Workshops, Events


Other Publications


**Peer Reviewed Subsidy-Earning Journal Research Publications**


Dr Hleze Kunju was the recipient of numerous awards in 2018: the Golden Key International Honour Society, Mail & Guardian Top 200 Inspirational Young South Africans, the MEC’s ‘Excellence Recognition Special Award’ at the Eastern Cape Department of Sports, Recreation, Arts and Culture Awards, and the Runner-up in the Golden Shield Heritage Awards for Academic Excellence.

Credit: Rhodes University Communication and Advancement Division
Books/Chapters/Monographs


**Other Publications**


**Peer Reviewed Non-Subsidy-Earning Journal Research Publications**


**Peer Reviewed Subsidy-Earning Journal Research Publications**


The Institute for Water Research (IWR) has a long-standing national, continental and international reputation. In Africa, our reputation was grown through the Carnegie RISE Programme, (2008-2016), and we are now reaping the benefits and expanding and deepening our reach.

Dr Raphael Tshimanga, University of Kinshasa, is a research partner in the international CRuHM project, a large initiative to model the hydrology of the Congo River. This links to the most important IWR development in 2018: the recognition of the IWR as the African Research Universities’ Alliance (ARUA) Water Centre of Excellence (CoE) host (http://arua.org.za/arua-centre-of-excellence-coe-in-water/), with Professor Tally Palmer as the Director of the CoE, and Dr Jane Tanner (IWR) and Professor Zerihun Wolde (University of Addis Ababa) as Co-Directors.

Rhodes University has invested in the Water CoE to support the ARUA initiative, and Professor Ernest Aryeetey has negotiated an ARUA partnership with the United Kingdom’s Global Change Research Fund, so the CoE will have the opportunity of more than matching the University investment.

ARUA comprises sixteen (16) African Universities recognised as offering continental research leadership. The Vice Chancellors of the respective Universities founded the Alliance in 2015, and 2017 saw member Universities motivate to host the Centres of Excellence. The Water CoE node partners are: Rhodes University, Addis Ababa University, University of Dar es Salaam, Lagos University, University of Rwanda, Makerere University and University of Cape Town. The ARUA Water CoE has a research agenda related to the Sustainable Development Goals, and will be officially launched in the first half of 2019.

In another nationally publicised achievement, Dr Mantel’s South African Rivers map was well received, with requests for a high-resolution map for professional use for Business Insider and a book on molluscs coming out next year. The Business Insider article on how the map came about can be read at the following link: https://www.businessinsider.co.za/survey-to-figure-out-why-map-of-south-african-rivers-captivatespeople-2018-9.
Postgraduates / Graduations

The IWR had three (3) Doctoral, and five (5) Masters graduates in 2018: one (1) PhD and two (2) MSc’s in Hydrology, and one (1) PhD and three (3) MSc’s in Water Resource Science.

Seven (7) students successfully graduated with an Environmental Water Management Honours degree taking a majority of courses offered with the IWR. This innovative course was initialed with a foundational module on Adaptive Water Resource Management, included new specialist courses in Aquatic Ecology and Hydrology, and retained the long-standing Environmental Water Quality module.

Ms Ntombekhaya Mgaba, a Senior Technical Officer within the Unilever Centre for Environmental Water Quality (UCEWQ), was awarded the Rhodes University Thomas Alty and Vice- Chancellor’s Award for 2018. The Thomas Alty Award is made to a member of staff who is awarded a Masters or PhD degree while in the service of the University. Ms Mgaba graduated with her Masters’ degree in Water Resource Science.

Distinguished Visitors / International Visits

International partnerships have been deepened with Montpellier, Coventry and Sheffield Universities, and Professor Jill Slinger at the Delft University Technology continues to be an active partner.

PhD candidate, Mr Dennis Choruma, was selected to attend and present at the summer school on Sustainability in the Food-Water-Ecosystem Nexus jointly organised by Makerere University and University of Bonn. The summer school was a great opportunity for Mr Choruma to network and meet with fellow PhD candidates, Postdoctoral Research Fellow and senior academics in the field of sustainability research.

Dr Odume and Mr Dennis Choruma visited and spent two (2) weeks at the International Institute for Applied Systems Analysis (IIASA). They used the period to receive training on two (2) IIASA models: the Biogeochemistry BGC-MAN model and the Environmental Policy Integrated (EPIC) model. Mr Choruma is now able to apply these models to his PhD research project.
Dr Tanner was awarded a grant by the University of Montpellier to visit the IRSTEA Centre (National Research Institute of Science and Technology for Environment and Agriculture) in Toulouse, France. Dr Tanner will learn about agent-based modelling, and discuss potential future collaboration with the Centre.

The hydrology group has been working with the University of Leeds on a project called CatchX which aimed to translate global hydrological data into easily downloadable information online. The IWR was responsible for testing the hydrological information which yielded some interesting results on commonly used global datasets.

Professor Elion Adar from Ben Gurion University in Israel visited the IWR to give two (2) talks and assist MSc student, Ms Caitlin Smith, in her modelling work. Ms Smith is using a mixing cell model developed by Professor Adar for her MSc research. Professor Adar holds the Alain POHER Chair in Hydrogeology and Arid Zones and is one of Israel’s leading researchers in water sources, use and technology.

PhD candidate Mr Pierre Kabuya presented his work on the Congo River Basin at the 3rd International Conference on African Large River Basin Hydrology (ICALRBH) which was held in Algiers, Algeria from 06-09 May 2018. The conference hosted a special session on the CRuHM project, where Mr Kabuya presented his work on the use of hydrological indices to constrain a rainfall - runoff model in the data-scarce environment of the upper Congo River Basin.

Mr Pierre Kabuya and Mr Goda Bola attended the AGU/Chapman Conference on Hydrological Research in the Congo Basin held in Washington DC, United States of America from 25-27 September 2018. Mr Kabuya presented his work on the parameterisation of the hydrodynamic processes of the Kamalondo wetland systems in the upper Congo Basin, while Mr Bola presented on his research on constraining hydrological model outputs for the upper Kasai in the Congo Basin.

PhD candidate Mr David Gwapedza attended the 9th International Congress on Environmental Modelling and Software (IEMS) at Colorado State University Fort Collins, United States of America. Mr Gwapedza presented a paper titled ‘Spatial scale issues associated with the application of the MUSLE’.

**Significant Research-Aligned Events**

Within Makhanda (Grahamstown), Doctoral candidate Mr Matthew Weaver, together with Ms Notiswa Libala and Ms Mateboho Ralekhetla, supported and provided leadership within the Makana Water Forum, which had increasing traction with the Department of Water and Sanitation and the Makana Local Municipality.

The UCEWQ welcomed Dr Nnadozie as a Postdoctoral Research Fellow. Dr Nnadozie is a Microbiologist by training, specialising in metagenomics and computational microbiology. Dr Nnadozie is working closely with Dr Odume to develop a research niche in microbial water quality within the Centre.

The national, DEA-funded, Tsitsa Project remained a strategic entry point for IWR and UCEWQ research to contribute to addressing critical sustainability challenges in South Africa. Professor Tally Palmer is the Land and Water Governance Community of Practice research leader, with a team of Postgraduate candidates and support staff, while UCEWQ research contributes to bio-physical understandings. The IWR is a thought and practice leader in the Tsitsa Project, and has participated in a number of...
workshops and Science-Management meetings where ideas regarding the project are shaped.

Dr Gloria Ezenne joined the Hydrology group as a Postdoctoral Research Fellow from the University of Nigeria in April 2018. Dr Ezenne’s expertise on evapotranspiration is assisting us in developing capacity within the IWR in the use of high-level field equipment that measures actual evapotranspiration and carbon fluxes. The high-technology instruments used in this research - a scintilometer and two eddy covariance systems, were secured from National Research Foundation (NRF) funding, by Dr Tony Palmer and Dr Sukhmani Mantel.

The Royal Society-DFID Africa Capacity Building Initiative CRuHM (Congo River User Hydraulic and Morphology) project continues to move forward. The project is a collaboration between the IWR; the University of Kinshasa in DRC; the University of Dar es Salaam in Tanzania; the University of Bristol and the University of Leeds in the United Kingdom. Annual field trips focusing on carrying out large scale hydraulic and geomorphological science research on the main navigable channels of the Congo River are undertaken, with the aim of addressing the severe lack of basic scientific knowledge and understanding in these water engineering fields for the world’s second largest river.

A sad farewell

It is with great sadness that we record the death of Emeritus Professor Jay O’Keeffe, a founding Director of the IWR. Professor O’Keeffe graduated with his PhD from Imperial College London, and joined Rhodes University in 1983 as a Postdoctoral Research Fellow in the then Institute for Freshwater Studies (IFWS), led at the time by Emeritus Professor Brian Allanson.

Professor O’Keeffe went on to become the Director of the IFWS, and in 1991, together with Emeritus Professor Denis Hughes, founded the IWR. Professor O’Keeffe was a charismatic pioneer of Environmental Flows science, and a fine academic with an extensive international reputation. Professor O’Keeffe will be remembered and missed.
Books/Chapters/Monographs


Peer Reviewed Non-Subsidy-Earning Journal Research Publications


Research Papers Presented at Academic/Scientific Conferences (Non-peer-reviewed Proceedings)

During the course of 2018 the PSAM staff engaged in various research, advocacy and capacity building initiatives that seek to give effect to its 2016 - 2019 Strategic Plan. The most significant of these are detailed below.

**Distinguished Visitors / International Visits**

On 26 June 2018, Ms Zukiswa Kota of the PSAM travelled to Brazil where she co-presented with the Chief Director of South Africa’s National Treasury’s Budget Office at the launch of the Brazilian government’s budget transparency portal. The objectives of the engagement included an international peer-learning exchange organized by the Global Initiative on Fiscal Transparency (GIFT). Ms Kota is lead co-ordinator of a civil society coalition called Imali Yethu (www.imaliyethu.org.za) that is promoting open budgeting in South Africa and which is collaborating with National Treasury to develop www.vulekamali.gov.za - South Africa’s first online budget portal concerned with supporting more open budgeting and great public participation in government budget processes.

Professor Thuli Madonsela, Chair in Social Justice, Faculty of Law at Stellenbosch University, was the keynote speaker at the PSAM Social Accountability Conference held in September 2018 in Johannesburg.

In September 2018, Gertrude Mugizi and Khazikhe Sakala from the PSAM’s Regional Learning Programme participated in a multi-stakeholder social accountability learning conference in Maputo where both presented during panel discussions.
Between 14 and 19 October 2018 the PSAM director Jay Kruse participated in the annual meeting of the GIFT held in Cascais, Portugal. During the meeting three (3) main issues for the network were addressed:

1) analysis of the progress of each country represented regarding global measurements of fiscal transparency;
2) presentation of the process for the IBP - GIFT pilots of public participation in the budget process and
3) changes in the Network operating rules and procedures.

A salient result of the meeting was the support given to changes to the operating rules.

**Significant Research Aligned Events**

Dr Malila was invited as a keynote presenter at the UNESCO Roundtable on Accountability through Sustainable Development Goals' Monitoring - the Roles of Government and Media. The roundtable was organised by the UNESCO Regional Office for Southern Africa in collaboration with Media Education Monitoring in Southern Africa (MEMOSA) and held on 27 July 2018.

Dr Malila, presented her research on media and accountability at the 13th International Conference of the International Society for Third Sector Research held in July 2018. The paper, 'Tapping into the potential of the media in Social Accountability advocacy - Challenges for NGOs in social accountability reporting in South Africa' examined the way in which civil society and the media can build better relationships for promoting stronger accountability of public officials.

Lindelwa Nxele, presented her research on social accountability information access at the 8th International Interdisciplinary Conference, held 27-30 July 2018 in Nairobi, Kenya.

The biennial PSAM Social Accountability Conference took place 11-12 September 2018, in Johannesburg. The conference was attended by more than seventy (70) participants, who engaged in plenary discussions, small breakaway sessions and a marketplace gallery/exhibition. The keynote address was given by Professor Thuli Madonsela, Chair in Social Justice, Faculty of Law at Stellenbosch University. The conference theme was ‘Exploring what it takes to enhance social accountability practice’. A post-conference evaluation was conducted and confirmed the value and worth of the conference for attendees. A conference report was drafted and circulated to participants and appears on the PSAM website at: http://psam.org.za/wp-content/uploads/2019/01/PSAM-2018-conference-report-final.pdf

Also in September 2018, the PSAM published Strategic Plan Evaluations (SPEs). The Education SPE outlined areas of incongruence in departmental plans and it was disseminated to key stakeholders. The Human Settlements SPE was geared at providing direct input on research areas sought by the Eastern Cape Department of Human Settlements.

Expenditure Tracking Reports (ETRs) are a critical monitoring and advocacy tool for the PSAM. The Education ETR was disseminated in November 2018 and interrogated expenditure within the Early Childhood Development (ECD) programme of the Eastern Cape Department of Education (ECDoE).

The research was profiled in a news article in the Daily Dispatch: ECD underspending is failing our children on 23 November 2018.
Books/Chapters/Monographs


Other Publications

Malila, V.

Malila, V.

Peer Reviewed Subsidy-Earning Journal Research Publications

Nxele, L.L.
A milestone was reached last year when Rhodes University Mathematics Education Project (RUMEP) celebrated its 25th anniversary as a professional development in-service unit of Rhodes University. Alumni from all over the Eastern Cape gathered at the Gavin Rely Postgraduate Village to reflect on the achievements of the unit since its inception in 1993.

Dr Siwe Mabizela, the Vice Chancellor of Rhodes University welcomed all those who were present as well as one of the funders, the CEO from the Sishen Iron Ore Community Trust, Mr Vusie Maile.

One of the first alumni to graduate from RUMEP, Dr Witness Siyepu from the Cape Peninsula University of Technology was the guest speaker. Other speakers included Professor Ngcoza, a RUMEP Board Member, and various alumni who spoke on the happy times they experienced while studying at RUMEP.

A short publication was produced and dedicated to its long serving founding member and chairperson of the Board, the late Professor Wesley Kotze from the Mathematics Department. It was from its inception in 1993 that he, together with Professor John Stoker and Professor Terry Marsh were the core founders of RUMEP.

RUMEP became a unit of Rhodes University in 1993, which grew out of a series of outreach workshops conducted for primary school teachers. At the beginning of 1994, these workshops were refined in accordance with the vision and mission of a project being run in South Africa by Cambridge University and sponsored by the British Council. RUMEP enjoyed the distinction of having its work accredited by the Cambridge University Local Examinations Syndicate (UCLES) during 1994 and 1995.

Following negotiations with the Faculty of Education in 1996, the focus of RUMEP shifted to the teaching of a Further Diploma in Education (Mathematics Education) accredited by Rhodes University. The Advanced Certificate in Education and later the BEd (in-service) degree have been further developments in the unit. Whilst the BEd programme has remained the core activity of RUMEP, a number of other programmes have developed over the years.
Prominent amongst these has been the Farm School Project which gave rise to the Collegial Cluster and MathsNet Project.

RUMEP works mainly in rural schools in the Eastern, and for the past seven (7) years in the Northern Cape where poor school infrastructure and other challenges such as a lack of furniture, few teaching resources and a lack of library and computer facilities exist.

A distinguishing feature throughout the existence of RUMEP has been its sharp classroom practice focus and reflective practitioner dimension which has enabled a much more grounded approach through which theory has been translated into effective action. The ultimate goal of the project is to assist teachers and learners to improve their mathematical knowledge, thinking and understanding.

Postgraduates / Graduations

A total of thirty seven students (37) graduated with a BEd in-service (Mathematics Education) degree. Three (3) students namely Tania Bothma, Farai Nyamavuvu and Gertrude Phirimana all graduated with distinction.

Distinguished Visitors

- Mr T Mutsago. Head of Projects, Sishen Iron Ore Community Trust, Kathu, South Africa. To discuss budget and close report. 31 August 2018.
- Dr SW Siyepu. Senior Lecturer - Cape Peninsula University of Technology, Western Cape, South Africa. RUMEP 25th anniversary celebration at the Gavin Relly Postgraduate Village. 21 April 2018.
- Mr J Thomas. Lecturer - Sol Plaatje University, Kimberley, South Africa. To discuss collaboration on the BEd course. 17 September 2018.

Significant Research Aligned Events

The BEd ‘How I teach’ reflective conference took place from the 3-5 October 2018 where all final year students presented their research findings on a mathematics topic of their choice to fellow colleagues and staff.

Ms Malene Nyamunetsa gave a well-constructed and convincing presentation at the How I Teach Conference.
Credit: RUMEP

Mr Bazolele Mdungwana delivering his presentation at the How I Teach Conference.
Credit: RUMEP
Concerts, Exhibitions, Performances, Workshops, Events


Peer Reviewed Non-Subsidy-Earning Journal Research Publications

The National Research Foundation (NRF) - South African Institute for Aquatic Biodiversity (SAIAB) Research Division continues to break historic institutional records in terms of postgraduate students supervised and annual research outputs, especially the number of International Scientific Indexing (ISI)-rated publications. Altogether six (6) BSc Honours, twenty-five (25) MSc and thirty (30) PhD projects were undertaken in 2018, a fine achievement by a staff of only eight (8) full-time scientists and a small cohort of Postdoctoral Research Fellows.

In addition, fourteen (14) students received their Postgraduate degrees in 2018 during graduation ceremonies at a variety of South African universities.

The productivity of NRF-SAIAB research staff, students, Postdoctoral Research Fellows and Honorary Research Associates continued at a high level during 2018, with one hundred and one (101) ISI-rated scientific papers. In terms of conference and symposium papers, fifty (50) presentations were delivered at a wide variety of national and international venues.

Professor Alan Whitfield retired in 2018. In addition to publishing several important global and local review papers on fishes, Professor Whitfield completed a monograph on the biology and ecology of fishes in southern African estuaries, a major work that is considered essential reading and an invaluable resource book for estuarine ecologists.

The Acoustic Tracking Array Platform (ATAP), managed by Professor Paul Cowley, continues to yield new discoveries about the underwater lives of fishes and sharks equipped with acoustic transmitters. The platform recorded an amazing longshore migration of more one thousand seven hundred (1700) kilometre by a leervis, Lichia amia, tagged in the Berg Estuary on the west coast that moved all the way to north of Durban on the KwaZulu-Natal coastline, where this species is known to spawn. The utility of the platform was highlighted by a paper published by ATAP’s Data Scientist, Dr Taryn Murray, on movements and multiple habitat connectivity by estuary-dependent juvenile leervis.
A new project was initiated by the University of Miami in the De Hoop marine reserve where researchers have tagged a number of sharks. This project compliments NRF-SAIAB’s ongoing project on the connectivity of important coastal fishery species between the De Hoop reserve and the nearby Breede Estuary.

In 2018 the hundredth animal to be tagged at Ponta do Oura in Mozambique, which is a key monitoring site from which to record transboundary movements by a host of shark species and the spawning aggregation dynamics of giant kingfish Caranx ignobilis.

During 2018, Dr Nikki James and her research team focussed on two (2) themes:
- The impact of climate change (extreme events, pH and temperature) on fish communities. PhD candidate Kerry-Ann van der Walt is nearing completion of her work into using thermal tolerance limits and thermal optima to predict how coastal organisms may respond to climate change.
- The relative value of different coastal nursery habitats for marine and estuarine fish species. Three (3) PhD candidates are based in Algoa Bay: Two (2) candidates, Ms Phakama Nedo and Ms Phumza Ndaleni are looking at coastal and estuarine fish and habitat associations and Ms Carla Edworthy is monitoring ocean acidification in the Bay and how life history determines the response of fish species to ocean acidification. A highlight for the year was being awarded funding from the NRF Marine and Coastal funding instrument to further explore the connectivity of coastal and estuarine nursery habitats.

Dr Anthony Bernard and his team were involved in numerous collaborative research projects throughout the South West Indian Ocean (Comoros, Kenya, Madagascar, Mozambique and Tanzania). Using equipment from the marine remote imagery platform (remote operated vehicles and baited remote underwater stereo-video systems), this research aimed to collect vital data on the status of reef fish and elasmobranch populations and gain a better understanding of local and regional distribution patterns of reef fish.

A further highlight for 2018 was the success of an application for a Marine and Coastal Research Grant. This grant is a collaboration between researchers from the marine remote imagery platform (Dr Anthony Bernard) and the genetics platform (Dr Gwynneth Matcher and Dr Gavin Gouws) within SAIAB, and aims to test the capabilities of environmental DNA (eDNA) to investigate the spatial ecology of reef fishes and non-invasively collected genetic material from fishes for individual identification.

Research advances in 2018 by the Coastal and Ocean Sciences Team (COST), led by Dr Francesca Porri, highlight a re-assessment of South African mangroves, which reviews the literature from the past fifty (50) years and dedicated results from recent surveys. Additional research output from COST features the establishment of a community of practice consortium to provide transdisciplinary knowledge for the Algoa Bay Project. Thermally-induced metabolic activity of ecologically important estuarine macrobenthos has also been portrayed. Research operations have continued in 2018 investigating the patterns of larval distribution and settlement/recruitment of benthic invertebrates as well as on the role of mangrove microhabitats as nurseries for fish and invertebrate larvae. Work on this last topic has included a research visit by the leader of the team and PhD candidate to a collaborator at the University of Hong Kong, to facilitate a focal workshop as well as to pursue field and laboratory based research.
Organismal research has continued through physiological experiments on metabolism in invertebrate larvae as well as settlers and recruits to highlight possible physiological bottlenecks to population viability in benthic systems.

In 2018 the ACEP Geophysics and Mapping Platform (GeMaP), in collaboration with the Council for Geoscience, completed the first high-resolution bathymetric survey of the deeply dissected Pondoland continental shelf. The survey was carried out under “Canyon Connections”, an ACEP-funded project, which seeks to evaluate the ecological role of submarine canyons on the east coast of South Africa. This portion of the Pondoland continental shelf represents a prehistoric, palaeo-coastal plain exposed during times of low sea level. The aim of the project’s geological component is to understand the geological evolution of the associated submarine canyon systems and determine the type and distribution of benthic habitat around the canyon heads.

Dr Errol Wiles continues to develop GeMaP which, from 2019 onwards, will offer increased support to geological and biological research along the east coast between fifteen (15) and two hundred and fifty (250) metres depth.

Dr Gavin Gouws published nine (9) papers during 2018, with another three (3) accepted and due to appear in early 2019. Among these, was a paper detailing only the third high-throughput, highly variable, population genetic marker to be developed for the true freshwater crabs and the first such marker for African freshwater crabs.

One (1) MSc student, Ms Yonela Sithole, graduated, with another, Mr Martinus Scheepers, submitting a thesis which was passed cum laude for graduation in April 2019.

Professor Olaf Weyl delivered a keynote presentation at the Pan African Fish and Fisheries Association (PAFFA) Congress in Malawi. A major highlight of his research in 2018 was the outputs from a collaboration with Queen’s University Belfast on disease vector mosquito control. The research elucidated the efficiency of predation by predatory zooplankton on container-breeding mosquitoes; an important step in determining the feasibility of using zooplankton for mosquito control in water tanks.

Professor Weyl also presented a keynote address entitled “One man’s meat is another’s poison: benefits, impacts and conflicts of fisheries based on alien species in South Africa” at the PAFFA Conference.

Professor Weyl’s research group made major contributions to understanding the impacts of climate change on freshwater ecosystems in South Africa. Seminal outputs included a review of the vulnerability of Cape Fold Ecoregion freshwater fishes to climate change and other human impacts, and research on how temperature mediates the impact of non-native rainbow trout on native freshwater fishes in South Africa’s Cape Fold Ecoregion.

A high profile paper from this research group is the announcement of “The Alliance for Freshwater Life: A global call to unite efforts for freshwater biodiversity science and conservation”. The paper, published in Aquatic Conservation: Marine and Freshwater Ecosystems with co-authors from twenty-three (23) international organisations, highlights the pressures on freshwater ecosystems and introduces the Alliance for Freshwater Life, a global initiative, uniting specialists in research, data synthesis, conservation, education and outreach, and policy-making. This expert network aims to provide the critical mass required for the effective representation of freshwater biodiversity at policy meetings, to develop solutions balancing the needs of development and
conservation, and to better convey the important role freshwater ecosystems play in human well-being.

Dr Albert Chakona’s research group continued to deliver high impact taxonomic research on freshwater fishes of southern Africa with taxonomic revisions of fishes of the genera *Nannocharax*, *Amatolacypris*, *Amphilius natalensis*, and *Hippopotamyrus ansorgii*. A major highlight was the publication of a comprehensive paper which documents the existence of hidden diversity and uncovered taxonomic conflicts in stream fishes from the Eastern Zimbabwe Highlands freshwater ecoregion. These findings add to the growing body of evidence that shows that a large proportion of freshwater fishes in southern Africa remain scientifically undocumented, because many river systems in this region are poorly explored. The publication details a classic example where underestimation of taxonomic diversity and poor understanding of the spatial distribution of species can misdirect conservation efforts, because the Eastern Zimbabwe Highlands freshwater ecoregion is currently not listed among the priority freshwater Key Biodiversity Areas within the broader Eastern Afromontane Biodiversity Hotspot. This is unfortunate because the highly sensitive Afromontane streams and rivers in this region have been severely transformed and are experiencing ongoing human impacts, including illegal mining activities, deforestation, increased sedimentation, uncontrolled burning and introduction of non-native invasive species.

Dr Willem Coetzer and co-author Dr Michelle Hamer published a commentary article in the *South African Journal of Science*, entitled ‘Managing South African biodiversity research data: Meeting the challenges of rapidly developing information technology’. The authors offered a perspective on the community of practitioners in natural science museums, observing that while collection managers are increasingly responsible for what is termed research data management, they are not equipped with the skills to use relational database technology.

The subject of data publication or data sharing was also explored. The skills to standardise data, so that the data may be published, are also lacking in the community. Publication of standardised data is important because this is how the integrity and security of data should be preserved (i.e. as an off-site backup). But outdated attitudes to data publication still prevent many datasets from being preserved or shared with other researchers.

A new initiative by SAIAB, termed the Biodiversity Data Curation Platform, seeks to enhance the capacity for biodiversity informatics among South African natural science museums, primarily by encouraging museums to adopt Specify software, the design of which is very suitable for capacity development in biodiversity research data management (e.g. a user can import a large batch of records to speed up data entry).
Books/Chapters/Monographs

Turpie, J.

Peer Reviewed Subsidy-Earning Journal Research Publications

Bennett, R.H., Cowley, P.D. and Filmalter, J.D.

Chakona, A.


Cowley, P.D.


Cowley, P.D. and Bennett, R.H.

Cowley, P.D. and Whitfield, A.K.

Cuthbert, R.N., Wasserman, R.J. and Weyl, O.L.F.


Cuthbert, R.N., Wasserman, R.J., Mofu, L. and Weyl, O.L.F.


NRF-SAIAB PhD candidate, Takudzwa Madzivanzira surveying invasive redclaw crayfish in the Kavango River, Caprivi Strip, Namibia. Credit: SAIAB


Other Publications

Gordon, L.

Peer Reviewed Subsidy-Earning Journal Research Publications

Gordon, L.


O'Halloran, P.

Patel, R.