



ACADEMIC ACHIEVERS' AWARDS

19 October 2023



UNIVERSITEIT VAN PRETORIA
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Congratulations

*to all our **ACADEMIC ACHIEVERS** who push the **UNIVERSITY OF PRETORIA** to greater heights.*

CONTENTS

WELCOME MESSAGE

Professor Themba Mosia | Interim Vice-Chancellor and Principal 4

MESSAGE FROM THE CHAIRPERSON OF COUNCIL

Mr Kuseni Dlamini 7

KEYNOTE ADDRESS

Ms Lerato Mathabatha | Director – Public Sector, Microsoft, South Africa 8

CHANCELLOR'S AWARD FOR RESEARCH

Professor Nigel Bennett 12

Professor De Wet Swanepoel 15

EXCEPTIONAL ACADEMIC ACHIEVERS AWARD

Professor Andriëtte Bekker 19

Professor Evans Chirwa 20

Professor Paxie Chirwa 23

Professor Teresa Coutinho 24

Professor Ian Craig 27

Professor Rangan Gupta 28

Professor James Maina 31

Professor Andrew McKechnie 32

Professor Siona O'Connell 35

Professor Theresa Rossouw 36

Professor Dire Tladi 39

Professor Fanus Venter 40

EXCEPTIONAL YOUNG RESEARCHERS AWARD

Professor Inger Fabris-Rotelli 45

Professor Priscilla Gutura 46

Dr Charne Lavery 49

Professor Derik le Roux 50

Dr Tendani Mawela 53

Dr Markus Wilken 54

TEACHING EXCELLENCE AWARD

Individual award – Dr Carin Combrinck 59

Group award – Professor Tania Hanekom 60

COMMUNITY ENGAGEMENT AWARD

Dr Gerna Wessels 65

The Conversation Africa

AWARDS FOR SCIENCE COMMUNICATION

(For the period 1 January 2022 to December 2023)

AWARD 1 – For the single most-read article 68

Professor Sandy Africa

AWARD 2 – Author who published the most articles 69

Professor Daniel Bradlow

NRF-RATED RESEARCHERS

A-RATED RESEARCHERS

Dr Juergen Richt	72
Professor Yves van de Peer	72

B-RATED RESEARCHERS

Professor Steve Cornelius	73
Professor Ian Craig	73
Professor Irma Eloff	73
Professor Johann Engelbrecht	74
Professor Charles Fombad	74
Professor Geoffrey Fosgate	74
Dr Manjunath Gandhi	75
Professor André Ganswindt	75
Professor Jaco Greeff	75
Professor Stephan Heyns	76
Professor Kobus Maree	76
Dr William McCluskey	76
Professor Anita Michel	77
Professor Alf Nilssen	77
Professor Catherine Parr	77
Professor Linda Theron	78
Professor Corlia van Heerden	78

C-RATED RESEARCHERS

Dr Funmi Adebesein	79
Professor Kolawole Adeyemo	79
Professor Joe Amadi-Echendu	79
Professor Joseph Anochie-Boateng	80
Professor Mohammad Arashi	80
Dr Michael Ayomoh	80
Dr Felix Bello	81
Dr Jacques Beukes	81
Professor Christiaan Bezuidenhout	81
Professor Paulette Bloomer	82
Dr Christina Breed	82
Professor Martin Breitenbach	82
Professor Paxie Chirwa	83
Dr Sekelwa Cosa	83
Professor Ignacy Cukrowski	83
Professor Michael Daramola	84
Professor Olawande Daramola	84
Professor Carina de Villiers	84
Professor Gerrie du Rand	85
Professor Elda du Toit	85
Professor Elsa du Toit	85
Professor Tuan Duong	86
Professor Augustin Fosu	86
Professor Andrie Garbers-Craig	86
Professor Roula Inglesi-Lotz	87
Dr Christine Jansen van Rensburg	87
Professor Andre Jordaan	87
Professor Johan Joubert	88
Dr Eder Kikianty	88
Professor Ulrike Kistner	88
Professor Kerstin Krüger	89
Professor Tjaart Krüger	89
Dr Charne Lavery	89
Dr Tung Lê	90
Professor Willem le Roux	90

Dr Heike Lutermann	90
Professor Margaret Chitiga-Mabugu	91
Professor Ncholu Manyala	91
Professor David Maree	91
Professor Vukosi Marivate	92
Professor Simnikiwe Mayaphi	92
Professor Zitha Mokomane	92
Professor Pierre Mostert	93
Professor Roelf Mostert	93
Professor Alfred Musekiwa	93
Dr Ndokuyakhe Ndlovu	94
Dr Lieza Odendaal	94
Professor Annet Oguttu	94
Professor Marinda Oosthuizen	95
Dr Beulah Pretorius	95
Professor Corinne Sandwith	95
Professor Mohsen Sharifpur	96
Professor Linda Harms-Smith	96
Dr Gary Stafford	96
Professor Philip Stevens	97
Professor Johan Thom	97
Professor Noëlani van den Berg	97
Professor Jacquie van der Waals	98
Professor Henriette van Heerden	98
Dr Jurie van Vuuren	98
Professor Saloshna Vandeyar	99
Professor Thiru Vandeyar	99
Professor Cori Wielenga	99
Professor Albert Wocke	100
Professor Abdullahi Yusuf	100

Y-RATED RESEARCHERS

Dr Babatunde Awoyemi	101
Dr Michael Barrett-Berg	101
Professor Hendrik Brink	101
Dr Geoffrey Brown	102
Dr Allan de Freitas	102
Dr Jurgens de Lange	102
Dr Rory du Plessis	103
Dr Renata Eccles	103
Dr Jarishma Gokul	103
Dr Calisto Guambe	104
Dr Abe Kasonga	104
Dr Sesuai Madanha	104
Dr Frikkie Malan	105
Dr Benjamim Mapossa	105
Dr Rahaba Marima	105
Professor Adrino Mazenda	106
Dr Fiona Mumoki	106
Dr Bianca Parry	106
Dr Jack Radcliffe	107
Dr David Read	107
Dr Odirilwe Selomane	107
Dr Nkululeko Sibanda	108
Dr Ansie Smit	108
Professor Shepherd Tichapondwa	108
Dr Danielle Twilley	109
Dr Mia Wege	109

NATIONAL RESEARCH FOUNDATION RATING CATEGORIES

111

Doing research that matters is one of the core themes of the University of Pretoria (UP). We pride ourselves in producing research that is impactful to society, that is why the Academic Achievers' event is a staple on our annual diary. At UP, we have Africa in our heart and we aspire to become an African global university, exerting influence through three major pathways: teaching and learning, research, and service to society. That is why we are proud to celebrate the more than 120 NRF-rated researchers as well as exceptional achievers mentioned in this book. These are the researchers that have ensured that we continue to produce groundbreaking research at a global level.

These Academic Achievers are part of the brain trust that is responsible for the University producing research such as the cutting-edge multidisciplinary study on the effects of grazing in deserts; a study investigating termite and microbial wood discovery and decay; the discovery of the world's largest fish breeding colony in the Weddell Sea off the coast of Antarctica, and being part of the high-level team to detect and characterise the genome of strains of the old-world Middelburg virus.

Thanks to our academics, the University of Pretoria has made significant progress in the 2024 Quacquarelli Symonds World University Rankings, and is now ranked at the 323rd position worldwide, a notable improvement. This move up the rankings is the most significant compared to the improved positions of other South African universities ranked in the top five in Africa. UP is ranked third in South Africa and fourth in Africa in the inaugural Times Higher Education Sub-Saharan Africa University Rankings for 2023.

UP has also been ranked as a highly innovative university in the 2023 World University Rankings for Innovation (WURI). Our high-tech business incubator, TuksNovation, is ranked 44th on the WURI Industrial Application ranking, while the University itself is ranked in the 101-200 band in the WURI Global Top 100 Innovative Universities ranking, which evaluated 423 universities for the 2023 list. UP is the only South African university ranked in the 2023 WURI.

We are also proud to be named among the top 200 universities on the 2023 World University Rankings for Innovation. We are especially pleased because these rankings evaluate universities' practical contributions to society, highlighting the ways in which research and educational programmes are being used to create real change in our local and global societies.

This year, UP once again demonstrated its strong performance in the 2023 Academic Ranking of World Universities, widely known as the Shanghai Ranking, by retaining its joint-third national ranking in South Africa. With this, UP reaffirms its status as a prominent research-intensive institution within the country.

Our strong research focus underpins why we signed a memorandum of understanding with French higher education and research institution Collège de France to collaborate on research programmes, doctoral supervision and staff exchanges.

I would like to offer my gratitude to all the Academic Achievers. You are the ones who ensure that the University of Pretoria produces a world of answers, answers that help create sustainable futures for South Africa, the continent and the world. You are the reason why UP is ranked first in Africa for Environmental Impact and third for Social Impact, which, very importantly, highlights our role as a catalyst for promoting beneficial transformations and advancement across the continent.

Thank you.

WELCOME

Professor Themba Mosia

Interim Vice-Chancellor and Principal



MESSAGE

Mr Kuseni Dlamini

Chairperson of Council



I am immensely proud to declare that the University of Pretoria (UP) is a shining example of excellence, innovation, and relevance. This achievement is attributed to the UP community, where exceptional academics – showcased within this publication – play a pivotal role in cultivating a culture of top-tier education, research, and engagement, even amid the formidable challenges confronting our higher education sector and nation.

Nurturing a culture of accomplishment and distinction in both basic and advanced education is fundamental for a nation's prosperity. Although this culture has suffered over the years in South Africa, UP shines as a beacon of potential, an affirmation that regardless of one's background, achieving graduation and academic success at this distinguished research-intensive University is attainable.

The theme of UP's 2026 strategy, 'Destination 2026 and beyond', is vital. Our world requires well-educated, astute leaders who envision pathways toward a superior nation and a better world. Universities play a pivotal role in achieving this vision. At UP, we continuously reimagine, reconsider, and reposition the University to create greater social, environmental, and economic influence.

UP's scholars are driving innovative education and research across all fields to tackle the global issues outlined in the Strategic Development Goals and Africa Agenda 2063. The University is at the forefront, harnessing new technologies and systems to propel humanity forward.

A common thread unifying all UP endeavours is our unwavering commitment to upholding the highest standards, ethical principles, and values. I extend my gratitude and congratulations to our academics for their exceptional contributions.

Ms Lerato Mathabatha is the Public Sector Director at Microsoft South Africa. She is a thought leader within the organisation, driving public sector industry-oriented technology innovations that enable the crucial role of transforming the way governments operate, interact with citizens and deliver services. Her prior positions include Director of Energy and Manufacturing, Solution Sales Manager in Microsoft for Modern Workplace – focusing on securing Modern enterprises, and various roles related to Commercial Executive and client executive in Enterprise Commercial and Public Sector.

She is an MBA candidate at the University of Cape Town's Graduate School of Business; has an Advanced Management Program qualification from the Wits Business School; Business Strategy and Acumen from INSEAD; Microsoft Certified Professional (various technology offerings); and an Ndiip Info Technology majoring in Software Development from Pretoria Technikon.

Ms Mathabatha's outlook on the world is that the workplace and corporations have fundamentally changed over the past three years. Leaders need to adapt speedily from a people, technological, economic and market perspective. For her, the challenge for leaders is navigating and creating clarity and success through ambiguity, uncertainty, and change. Ms Mathabatha gets excited about Microsoft's work on gender diversity and early-in-career initiatives in the workplace. She is passionate about developing individuals and teams to do their best work and deliver exceptional results.

She is a mother of two girls aged 14 and 12. If anything makes her lose sleep, it is ensuring that they grow up to become well-rounded citizens who appreciate the world they live in. She enjoys high-intensity fight club exercises in her free time, travelling, reading modern poetry and spending time with family.

KEYNOTE ADDRESS

Ms Lerato Mathabatha

*Director – Public Sector,
Microsoft, South Africa*



CHANCELLOR'S AWARD

Emeritus Justice Sisi Khampepe

Chancellor



The Chancellor's Award is made in recognition of exceptional achievement in the field of research aimed at the advancement of science, and the associated promotion of the interests of the University of Pretoria.

Recipients

Professor Nigel Bennett
Professor De Wet Swanepoel



PROFESSOR NIGEL BENNETT

Professor Bennett is a full professor in the Department of Zoology and Entomology and holds the Austin Roberts Chair of African Mammalogy at the Mammal Research Institute, both of which are in the Faculty of Natural and Agricultural Sciences.

Professor Bennett's research focus is ecology, animal physiology and behaviour, using the African mole-rat as his model animal. He and his co-workers have investigated the ecological and physiological factors that affect the control of reproduction and sociality. Unlike other researchers investigating cooperative breeding in mammals, he has done so from various perspectives. The strength of this multi-faceted approach is that it has led to an integrated understanding of reproductive suppression in mole-rats of a type that has not been achieved for any other taxa. His research has set the benchmark for understanding the phylogenetic and ecological constraints regulating reproductive success and social evolution in mammalian species. His research record ranks him among the best researchers studying the social regulation of reproduction in any group of mammals worldwide.

He has been a visiting professor at the School of Chemical and Biological Sciences, Queen Mary College, University of London since 2005 and, more recently, a visiting professor at the Department of Zoology, King Saud University, Saudi Arabia. He has been awarded the UP Chancellor's Medal for his research on three occasions and has received the Exceptional Academic Achiever Award for the past 14 years. He is a fellow of the Zoological Society of London, a fellow of the Royal Society of South Africa, a member of the Academy of Sciences of South Africa, and a

fellow of the African Academy of Sciences. He has received the Gold medal from the Zoological Society of Southern Africa and the Havenga Prize for outstanding contributions to life sciences awarded by the Academy of Science and Arts of South Africa. UP awarded him the University of Pretoria Commemorative Research Medal for being one of the top 100 scientists of the century.

In 2021 he was made an honorary member of the American Society of Mammalogists (less than one hundred luminaries have been awarded this title in a century). In 2022 Professor Bennett was awarded the prestigious JFW Herschel Medal from the Royal Society of South Africa.

He has served as president of the Zoological Community of Southern Africa for two years. Professor Bennett was editor-in-chief of the *Journal of Zoology*, London, for 15 years and a past editor of *Proceedings of the Royal Society of London Biological Sciences B*. In 2013 he took on the handling editor position at *Biology Letters*, another Royal Society journal. He has published 473 papers in international peer-reviewed scientific journals, co-authored a specialist book published by Cambridge University Press and has penned 15 chapters in books. Professor Bennett is the world leader in African mole-rat biology, particularly reproductive physiology.





PROFESSOR DE WET SWANEPOEL

Professor Swanepoel is a professor in audiology in the Department of Speech-Language Pathology and Audiology, where he directs research for the World Health Organization (WHO) Collaborating Center for Prevention of Deafness and Hearing Loss.

Professor Swanepoel is also an adjunct professor in the Department of Otolaryngology – Head and Neck Surgery, University of Colorado School of Medicine, Anschutz Medical Campus. Previous adjunct affiliations include the School of Behavioral and Brain Sciences, University of Texas at Dallas; Ear Sciences Centre, School of Surgery, University of Western Australia and invited professor to the University of Orebro, Sweden and as Raine visiting professor to the University of Western Australia.

Professor Swanepoel is a globally recognised researcher, health innovator and speaker with over 20 years of experience. He has been at the forefront of innovation in digital hearing health technologies and service-delivery models to make ear and hearing healthcare more accessible and affordable. He has spearheaded research on early identification and diagnostic techniques for hearing loss, which has expanded into telehealth and digital innovations for ear and hearing care. His work has pioneered and validated several tele-audiology applications and service-delivery models now used clinically. In partnership with the WHO, his research led to the developing and releasing of the hearWHO app in 2019, which has screened nearly 500 million people in more than 190 countries worldwide.

In recognition of his work, he won the Olusegun Obasanjo Prize for Scientific Breakthrough and/or Technological Innovation from the African Academy of Sciences. He was a finalist for the Institute of Information Technology Professionals (IITPSA) Presidents Technology Excellence Award. Professor Swanepoel is a regular

keynote speaker at international events for global organisations, including the WHO and American and British Academies of Audiology, and has featured on national and international TV and radio (CNN, Sky News, CNBC, BBC). He holds several patents and is a co-founder and scientific advisor of a digital health company, the hearX Group.

Professor Swanepoel has published over 250 peer-reviewed articles, books and book chapters and is funded by the US National Institutes of Health, the UK Academy of Medical Sciences, the Oppenheimer Foundation, the National Research Foundation and industry. He is a fellow of the African Academy of Science and the Academy of Science of South Africa. He is a former president of the International Society of Audiology and editor-in-chief of a leading peer-reviewed subject journal, the *International Journal of Audiology*.

In 2022, Professor Swanepoel was awarded an A2 rating from the NRF in recognition of his research's high quality and broad impact as a leading international scholar.

EXCEPTIONAL ACADEMIC ACHIEVERS AWARDS

This is awarded annually to senior academics who have already achieved the status of Professor, are regarded highly by their peers, and have consistently excelled in the areas of under- and postgraduate teaching and learning, research, community service and administration over a period of time.

Any academic who has been awarded an A-rating by the NRF in the year under consideration automatically qualifies as an Exceptional Achiever for as long as he or she remains an A-rated researcher.

Recipients

Professor Andriëtte Bekker
Professor Evans Chirwa
Professor Paxie Chirwa
Professor Teresa Coutinho
Professor Ian Craig
Professor Rangan Gupta
Professor James Maina
Professor Andrew McKechnie
Professor Siona O'Connell
Professor Theresa Rossouw
Professor Dire Tladi
Professor Fanus Venter



PROFESSOR ANDRIËTTE BEKKER

Professor Bekker is a full professor in Statistics and was the Head of the Department of Statistics in the Faculty of Natural and Agricultural Sciences, from July 2012 to February 2022.

During her tenure as the Head of the Department of Statistics, she steered the department to become a student-centric research unit. Her goal was to ensure that the vast number of students taught by this department received the best teaching possible while encouraging the establishment and growth of several core statistical research areas within the department. She initiated various research groups linked to active international researchers, significantly increased the number of rated researchers and accredited papers of the department, and obtained various funding sources to contribute financially to the department's and its students' research endeavours.

Professor Bekker has been a high achiever from the start. She holds a BSc (Mathematical Sciences), BSc Honours (Mathematical Statistics), and an MSc (Mathematical Statistics) degree – all of them obtained cum laude. Professor Bekker received the S2A3 medal from the Southern Africa Association for the Advancement of Science. She also received her PhD in Mathematical Statistics and a Higher Education Diploma.

She is internationally recognised for contributing to multivariate and matrix variate distribution theory. Her expertise furthermore includes graphical network modelling and directional statistics.

She is also an elected member of the International Statistical Institute and serves on several national and international, educational and academic research boards.

She has published over one hundred peer-reviewed papers, in fundamental statistical research and edited books, with innovations in multivariate statistical modelling and advancements in modern statistical computation and methodology. She is the academic research leader of the Statistical Theory and Applied Statistics focus area within the Department of Science and the Technology/National Research Foundation (DST-NRF) Centre of Excellence in Mathematical and Statistical Sciences.

Throughout her tenure at the Department of Statistics, she made it her goal to identify, encourage and promote students and colleagues from under-represented minorities in the field of statistics. She continues to contribute significantly to the human capacity development of Southern Africa through the multitude of students for whom she acts as supervisor and mentor.

PROFESSOR EVANS CHIRWA

Professor Chirwa is a full Professor in the Department of Chemical Engineering in the Faculty of Engineering, Built Environment and Information Technology, where he researches advanced water treatment for application in water reclamation and creation of new water.

He holds the following degrees: BSc (Civil Engineering) from the University of Malawi, MSc (Civil Engineering) and PhD (Civil Engineering) from the University of Kentucky (USA).

Professor Chirwa believes in building South Africa's water sector capacity through tuition, research and stakeholder involvement. Over the years, he has developed a post-graduate research programme geared at producing the best water engineers in Africa through collaboration with funding bodies and research entities in the region.

In 2014/15, Professor Chirwa spent time at the University of Kentucky as a Visiting Professor (September 2014 to July 2015) to research the biological treatment of the toxic elements – lead (Pb²⁺), arsenic (As³⁺) and selenite (Se⁶⁺) in water. Professor Chirwa's international footprint increased rapidly after the Visiting Professor appointment at UKY, as evidenced by the invitations to present as keynote speaker at several local and international events from 2018 to 2023.

Since joining the University of Pretoria, Professor Chirwa has raised R120,8 million (approx. \$8.4m) in funds for research and laboratory upgrades. During his tenure at the University of Pretoria, he has published 220 papers in peer-reviewed journals, over 144 papers in peer-reviewed conference proceedings, and 12 book chapters.

In addition, he has produced 26 PhD and 52 MSc/MEng graduates in the past sixteen years. He has served as an invited keynote speaker at the Italian Association of Chemical Engineering (AIDIC), International Water Association (IWA) and other international conferences. He serves as editor for the acclaimed international water research journal *Water Science and Technology*, published by the IWA Publishers in the United Kingdom.

Based on his work on biological analogues in advanced water treatment and water recovery with applications in metal-halide heterogeneous photocatalysis, Professor

Chirwa won the 2022 National Science and Technology Forum (NSTF) Award in the category – Water Research Commission Award. In 2021 he was elected as a Senior Fellow of the Water Institute of Southern Africa (SFWISA) based on the impact of his work on the South African water sector in research, governance and human capacity building.

His most recent projects include: (i) the newly funded NRF Awarded project on Biogenic Catalytic Anode and Air-Cathode configured Microbial Fuel Cells with reduced internal resistance using marine electrogenic bacteria, and projects on solar photocatalysis, (ii) black Titanium dioxide (TiO₂) 3D graphene oxide solar desalination of seawater and (iii) recovery of clean water from brackish water using the low/zero-energy Forward Osmosis (FO) membrane process. His projects are geared towards resolving the water, energy and pollution problems in a world faced with rapid population growth, urban immigration and rural/peri urban development – which has resulted in increased water demand and degradation of water quality in water bodies in the vicinity of the settlements.

The inter- and trans-disciplinary programme he established in the Water and Environmental Engineering Programme at the University of Pretoria has resulted in a fast-growing doctoral and master's programme. This resulted in the establishment and expansion of international collaboration with participation from the University of Kentucky (USA), Qatar University (Doha, Qatar), Universiti Teknologi Malaysia (Malaysia), University of Cairo (Egypt), and many local universities in Southern Africa.

Professor Chirwa is currently a C2 NRF-rated researcher and is registered to practice as a Professional Engineer P.E. in Maryland State Board of Engineers (USA), Pr.Eng. with the Engineering Council of South Africa (ECSA) (South Africa), and P.Eng. with the Malawi Board of Engineering (Malawi).





PROFESSOR PAXIE CHIRWA

Professor Chirwa is a full professor of forest science in the Department of Plant and Soil Sciences, Faculty of Natural and Agricultural Sciences. He is also the Director and Chair of the Forest Postgraduate Programme.

Professor Chirwa's research focuses on forests and people with three focus areas of socioecological, sustainable livelihoods, and increasingly linked to climate change. The socioecological focus tries to understand forests' and woodlands' structure, composition, and regeneration in response to human resource use and other disturbances. The sustainable livelihood research investigates the multi-functional use of trees in a landscape in space and time (agroforestry), including tree crop interactions. This research also examines governance in participatory forestry models to promote sustainable forestry management. Lastly, the climate change focus area looks at mitigation and adaptation interventions using forestry and agroforestry. The key approach to his research is multidisciplinary; therefore, he works with botanists, ecologists, soil scientists, geospatial analysts, and social scientists.

Professor Chirwa collaborates internationally with several partners, including Freiburg University on an agroforestry project for southern Africa, African Forest Forum on a project 'Strengthening management and use of forest ecosystems for sustainable development in Africa' and is involved in the research on climate change in human-dominated landscapes with his postgraduate students. He is also an extraordinary professor of forest science at Stellenbosch University and a committee member of two reference groups for the Water Research Commission for the Water Utilisation in Agriculture. He is a member of the Southern African Institute of Forestry Scientists and the African Forest Forum. He has conducted international scientific and technical consultations for the United Nations Forum on Forests (UNFF), the United Nations Food and Agriculture Organization, the World Agroforestry Centre, the

African Forest Forum, and SADC Forestry and Natural Resources, including one on the impact of COVID-19 on forestry in southern Africa. He also supports the newly founded African Agricultural Transformation Initiative (AATI) through the Alliance for a Green Revolution in Africa (AGRA) in establishing the Agricultural Delivery Units in Ghana, Kenya, Malawi, and Senegal.

Professor Chirwa recently co-edited a premier book for an important vegetation type in southern Africa, the miombo, titled *Miombo Woodlands in a Changing Environment: Securing the Resilience and Sustainability of People and Woodlands*. In recognition of his scientific standing by the international scientific community, he was appointed to the International Scientific Committee for the World Congress on Agroforestry, held 17–20 July 2022 at the Centre des congrès de Québec, Canada. In 2023, he received a C1 Rating from the National Research Foundation.

Professor Chirwa has been able to secure funding for research and bursaries both locally and internationally, including from South African Forestry Company Limited (SAFCOL), Mondi, Sappi, Merensky, York Timbers, EU-ACP Mobility Funding, Borlaug Higher Education for Agricultural Research and Development (BHEARD), MasterCard Foundation, The Deutscher Akademischer Austauschdienst (DAAD), African Forest Forum, among others. Recently, he was awarded bursary support for 15 MScs from the Fibre Processing and Manufacturing (FP&M) SETA.

PROFESSOR TERESA COUTINHO

Professor Coutinho is a staff member of the Department of Biochemistry, Genetics and Microbiology, Deputy Director of the Centre of Microbial Ecology and Genomics and member of the management committee of the Forestry and Agricultural Biotechnology Institute.

She lectures plant pathology in the Department of Plant and Soil Sciences. Professor Coutinho holds a BSc, BSc (Hons), MSc and PhD from the University of KwaZulu-Natal (formerly the University of Natal). Her research interest is primarily in phytobacteriology, but she has in the past conducted research on fungal tree pathogens when part of the Tree Protection Co-operative programme.

Professor Coutinho has been involved in the training of 26 doctoral and 44 master's students (to completion of their degrees). She has 163 scientific articles in peer-reviewed journals and has contributed chapters to several books, including *Bergey's Manual of Systematic Bacteriology*. Professor Coutinho has edited and contributed to two books on plant pathology in South Africa and has an h-index of 47 (Scopus). She is an editor of reviews, an associate editor of *Phytoparasitica*, an associate editor of the *South African Journal of Science*, and a senior editor of the *Journal of Plant Pathology* and the *Canadian*

Journal of Plant Pathology. In 2020, the International Year of Plant Health, she was the guest editor of a special South African *Journal of Science* issue focused on this topic. She is the former president of the Southern African Society of Plant Pathology (2011–2015) and the secretary-general of the International Society of Plant Pathology (2023–2028). She is also co-chair of the Specialist Committee of this society on plant pathogenic bacterial nomenclature (2018–present).

In 2022, Research.com ranked scientists in plant Science and agronomy based on their h-indexes. Professor Coutinho was listed as 732 in the world ranking and 10th in South Africa. She has a B2 rating from the NRF.





PROFESSOR IAN CRAIG

Professor Craig is a professor in the Department of Electrical, Electronic and Computer Engineering, where he heads the control systems group.

He received a BEng degree in electronic engineering from the University of Pretoria, an SM degree from the Massachusetts Institute of Technology, and a PhD and MBA from the University of the Witwatersrand.

Professor Craig's research focuses on model-based control and optimisation in the process industries with the idea of helping industries achieve their commercial targets by making processes more efficient and meeting their sustainability (ESG) targets by saving water and energy and reducing carbon emissions. He also researches model-based control of infectious diseases, including developing treatment strategies to reduce the disease burden in a population and model-based analysis and control of the transmission of tuberculosis and COVID-19.

Professor Craig was editor-in-chief of the *Control Engineering Practice* and currently serves as associate editor. He is a past president of the International Federation of Automatic Control (IFAC).

Currently, he serves as the chair of the IFAC Foundation Board and vice-chair of the IFAC Publications Board. Professor Craig is a fellow of the South African Academy of Engineering and received the Exceptional Academic Achiever Award from the University of Pretoria five times and the Chinese Government Friendship Award. He presented plenary addresses at the 2020 Chinese Process Control Conference and the Control Conference Africa (2021).

He presented invited addresses at the third meeting of the BRICS Academies of Sciences (2020) and the 2022 BRICS Forum on the Development of Industrial Internet and Digital Manufacturing.

Professor Craig holds a B2 rating from the NRF.

PROFESSOR RANGAN GUPTA

Professor Gupta is a full professor at the Department of Economics in the Faculty of Economic and Management Sciences.

In 2005 he received his PhD from the University of Connecticut, Storrs, USA, and joined UP as a senior lecturer. He became a full professor in 2009.

His research focuses on macroeconomics, primarily monetary theory and policy, and time series econometrics applied to energy and financial economics. His current research concentrates on climate finance. He has published over 750 articles in accredited international journals of high repute and impact, along with collaborators worldwide. He is a B2-rated researcher by the NRF.

He received the same award (Exceptional Academic Achiever) in 2019 and has been included in the Clarivate Highly Cited Researchers list for 2021 and 2022.

Professor Gupta received the best researcher award at the Faculty of Economic and Management Sciences for eight consecutive years. He is an associate editor of *Energy Economics* – a leading energy economics and finance journal.





PROFESSOR JAMES MAINA

Professor Maina is the Deputy Dean for Research and Postgraduate Studies in the Faculty of Engineering, Built Environment, and Information Technology.

He obtained his BSc (Hons) in civil engineering from the University of Dar Es Salaam in Tanzania and his MEng and PhD in civil engineering from the University of Miyazaki in Japan. He is registered as a professional engineer with the Engineering Council of South Africa (ECSA), is a fellow member of the South African Institution of Civil Engineering (SAICE) and the South African Academy of Engineering (SAAE) and in 2021, he was elected to the Academy of Sciences of South Africa (ASSAf).

Professor Maina has published over 150 technical reports and scientific articles in peer-reviewed journals and conference proceedings. He is a reviewer of several journals and conferences, and in 2022 his three students graduated with PhD in civil engineering degrees. Between 2013 and 2017, he assisted Qatar as a senior pavement expert, and later as the technical director and leading pavement expert in delivering a quality road transport and infrastructure network as Qatar prepared for the 2022 FIFA World Cup Finals. Professor Maina is an architect of a suite of software packages used in several countries, including South Africa, Japan, Australia, Canada and the USA, as highway design and analysis tools.

Professor Maina collaborates with the South African National Roads Agency (SANRAL) and the Council for Scientific and Industrial Research (CSIR) in his research. He is also involved in international collaborations with Chang'an University, Shandong Jianzhu University in China, and the University of Dar es Salaam, Tanzania National Roads Agency (TANROADS) in Tanzania. He is a member of the Standing Committee on Pavement Condition Evaluation – AKP10, of the Transportation Research Board (TRB), USA, 2022 to date, a member of the Subcommittee on Sustainability Impacts and Strategies - AKM20, Transportation Research Board (TRB), USA, 2020 to date. He was the chair of the South African Transport Conference (SATC) from 2016 to 2022.

Professor Maina received a B3 rating from the NRF in 2019.

PROFESSOR ANDREW MCKECHNIE

Professor McKechnie is in the Department of Zoology and Entomology, Faculty of Natural and Agricultural Sciences.

He holds the South African Research Chair in Conservation Physiology at the South African National Biodiversity Institute and co-hosted by the University of Pretoria. He currently holds a B2 rating from the National Research Foundation.

Professor McKechnie's research focuses on predicting (and increasingly documenting) the impacts of global heating on birds and small mammals. An ecological and evolutionary physiologist by training, most of his current work concerns the thermal physiology of birds, with an emphasis on developing mechanistic, process-based models of how birds are affected by rapid anthropogenic climate change.

Along with Associate Professor Susie Cunningham, Director of the FitzPatrick Institute of African Ornithology at the University of Cape Town, he leads the Hot Birds Research Project (HBRP), a team involving researchers at three South African and several overseas universities. Since its inception in 2009, the HBRP has yielded novel insights into the risks posed to arid-zone bird assemblages by acute exposure to extreme heat events and the sublethal fitness costs of chronic exposure to sustained

hot weather. Papers emanating from this research have appeared in high-impact journals, including *Proceedings of the National Academy of Science*, *Nature Communications* and *Functional Ecology*. More recently, the HBRP has expanded its research programme to include mesic habitats, with recent work on adaptive variation in avian body temperature challenging long-standing paradigms in evolutionary physiology.

Professor McKechnie is a subject editor of the journal *Global Change Biology* and serves on the editorial boards of *Emu-Austral Ornithology* and *Journal of Comparative Physiology B*. He regularly writes for semi-popular magazines and is a scientific advisor for *African Birdlife* magazine. He is a fellow of the Royal Society of South Africa, an elected honorary fellow of the American Ornithological Society, and a member of the Academy of Science of South Africa. His publications include 152 peer-reviewed papers and 107 magazine articles, and three of his graduated PhD students now hold academic positions at research-intensive South African universities.





PROFESSOR SIONA O'CONNELL

Professor O'Connell (PhD) is an African Studies scholar and practitioner in the School of the Arts.

Her research focus falls within three areas: memory studies, creative studies and restorative justice in postcolonial and post-apartheid South Africa.

She is widely respected for her work on the effects of race-based land dispossession. In addition to directing and producing 10 documentary films, her co-edited book, *Hanging on a Wire* won the 2018 National Institute for the Humanities and Social Sciences (NIHSS) Humanities and Social award for the best non-fiction edited volume. Her monograph on forced removals in Cape Town, *An Impossible Return: Cape Town's Forced Removals*, continues to garner broad recommendations.

Professor O'Connell was a Trilateral Reconnections Project Fellow (Brown University), is a Brown International Advanced Research Institutes (BIARI)

alumnus, was the NEH Distinguished Visiting Professor of the Humanities at Colgate University in the USA in 2018–19 as well as Visiting Professor at Aarhus University in Denmark in 2021 and 2022.

She is the South African lead investigator on an international interdisciplinary project bringing together climate change, heritage, food, and resilience.

She is the Chairperson of the Academy of Science of South Africa (ASSAf) Humanities Standing Committee and a founding member of Critical African Studies at the University of Pretoria.

PROFESSOR THERESA ROSSOUW

Professor Rossouw is a professor in the Department of Immunology.

She is a member of the Gauteng Provincial Health Research Committee, the president of the South African Immunology Society, a member of the World Health Organization Research and Innovation working group on HIV-associated drug resistance, and the associate editor of *Microbial Immunology – Frontiers in Immunology*.

Professor Rossouw has an MBChB (cum laude), an MPhil in philosophy (cum laude), an MPH in epidemiology and biostatistics (cum laude), a DPhil in biomedical ethics (from Stellenbosch University) and a PhD in medical immunology (from the University of Pretoria). Her focal research areas are HIV infection, especially drug resistance, systemic immune activation, and immunothrombosis, as well as COVID-19, with a focus on immunopathology and long COVID. She also works in biomedical and research ethics and has a special interest in autonomy and vulnerable populations. She is the co-chairperson of the Research Ethics Committee of the Faculty of Health Sciences at the University of Pretoria and the past chairperson of the Research Ethics Committee of the Human Sciences Research Council.

Professor Rossouw has supervised 23 master's and five doctoral students to completion and has published 101 research articles in accredited journals and nine book chapters. She has presented 76 peer-reviewed research papers and serves on the scientific and organising committees of various national and international

conferences. She frequently reviews theses, dissertations, research articles, and guidelines. She is passionate about community and science engagement, especially raising awareness about immunological diseases. To this end, she has appeared on various television programmes and contributed articles to *The Conversation*, *Sowetan*, and *News24*.

In 2022, she was awarded the Faculty of Health Sciences Champion of Research in the category of visibility and impact and took home the first prize. She was also a finalist for the National Science and Technology Forum award, namely the TW Kambule NSTF Award, as a researcher with a contribution of up to 15 years of research work from the commencement of her career.

She has a C2 rating from the NRF and received a silver medal from the Medical Research Council, a scientific achievement award in recognition of excellence in research, in 2023.





PROFESSOR DIRE TLADI

Professor Tladi is a professor of international law based at Future Africa.

He is the incumbent NRF SARChI Chair in International Constitutional Law and holds the Future Africa Chair in Global Equity in Africa. He is a B1 NRF-rated researcher.

Professor Tladi's main research area is in public international law, where he writes on various topics, including international environmental law, the law on peace and security and the law of the sea. The leitmotif of Professor Tladi's work over the past decade has been the promotion of solidarity in international law. In particular, he has raised the question of whether international law can live up to its lofty ideals of communitarianism. In particular, his research seeks ways that international law can reflect the interests of the most vulnerable in the international community. In this context, Professor Tladi's research has pondered the rules of international law on poverty, common but differentiated responsibilities principles in international law, peremptory norms of general international law, and the common heritage of humankind, among others.

Professor Tladi has been a member of the UN International Law Commission since 2010 and was re-elected in 2016 for a term that ended in 2022. During his time on the International Law Commission, Professor Tladi served in various capacities, including as its Chairman in 2022, Vice Chairman in 2021, Rapporteur (General) in 2014 and Chairman of the Drafting Committee in 2013. Most importantly, Professor Tladi served as Special Rapporteur on Peremptory Norms of General International Law (*Jus Cogens*) between 2015 and 2022. The International Law Commission adopted, in 2015,

a complete set of Draft Conclusions on Jus Cogens based on five reports prepared by Professor Tladi between 2015 and 2022.

Professor Tladi is also a member of the Institut de Droit International, serving on various commissions, including the place of social justice in international law and distributive justice and international law.

In 2021, Professor Tladi delivered a special lecture at the prestigious Hague Academy of International Law. He routinely lectures in the UN Regional Court on International Law.

Professor Tladi has also been involved in international law and has served as counsel before international courts and tribunals. He is currently co-counsel for Mozambique and Sierra Leone in the advisory proceedings before the International Tribunal on the Law of the Sea to address the obligations of States under the Law of the Sea Convention for climate change-related harms.

In 2019 Professor Tladi was a Distinguished Global Visiting Professor at the University of California Irvine, and in 2023 was a visiting Professor at the Centre for International Law at the University of Singapore.

Finally, it is worth noting that Professor Tladi is a candidate for election to the International Court of Justice.

PROFESSOR FANUS VENTER

Professor Venter is a professor in the Department of Biochemistry, Genetics and Microbiology and Deputy Director of the Forestry and Agriculture Biotechnology Institute.

The main focus of his research is bacterial evolution, systematics and diversity. He heads an active research programme which, through comparative genomics, attempts to understand the functions, biology and evolution of bacteria associated with plants and aquatic environments. His particular interest is in the bacterial systematics of the nitrogen-fixing *Paraburkholderia*, *Bradyrhizobium* and *Mesorhizobium* species isolated from indigenous legumes in South Africa. His group has already described several new species belonging to these genera.

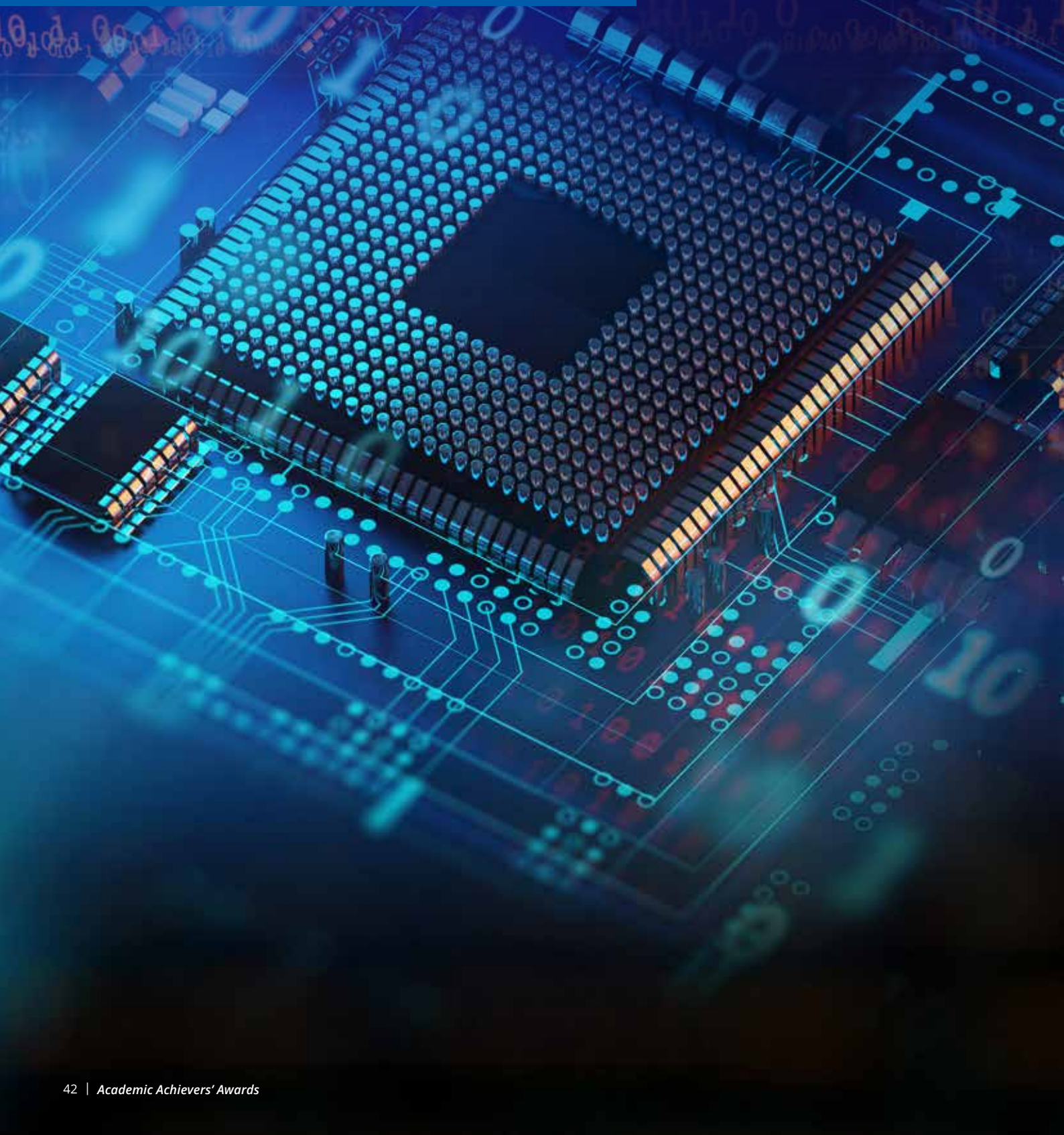
In 2023 he was part of a small group of international bacterial systematists involved in establishing the SeqCode, and he currently serves as the secretary of its executive board. The SeqCode is an international code for the nomenclature of prokaryotes based on genome sequences as type material and allows for the naming of both cultured and uncultured bacteria and archaea, which has not been possible before.

In addition to teaching and managing his research programmes, he serves on the International Committee on Systematics of Prokaryotes and is President of the Southern African Society for Systematic Biology. He serves on the Board of the Bergey's Manual Trust. He is also a member of the editorial board of the journal *Systematic and Applied Microbiology* and associate editor of the *International Journal of Systematic and Evolutionary Microbiology*.

Professor Venter received a B2 rating from the NRF.



EXCEPTIONAL YOUNG ACHIEVERS



This award is given to exceptional young achievers in the field of research, as seen against the University's strategic goals of achieving academic excellence, international competitiveness and local relevance.

Any person who has been evaluated by the NRF as a P-rated researcher automatically enjoys Exceptional Young Researcher status.

Recipients

Professor Inger Fabris-Rotelli
Professor Priscilla Gutura
Dr Charne Lavery
Professor Derik le Roux
Dr Tendani Mawela
Dr Markus Wilken



PROFESSOR INGER FABRIS-ROTELLI

Professor Fabris-Rotelli is an associate professor in the Department of Statistics.

She has been at the Department of Statistics since 2004. She holds a PhD in Mathematical Sciences, obtained in 2013, an MSc in Applied Mathematics, a double BSc (Hons) in Mathematical Statistics and Applied Mathematics and a BSc in Applied Mathematics.

Professor Fabris-Rotelli has supervised 56 honours and 24 master's students to completion and is currently supervising six honours, six master's and seven doctoral students with her singular passion for postgraduate supervision.

She has published 27 peer-reviewed journal articles, 21 peer-reviewed conference proceedings papers and one book chapter.

She was part of the South African Statistical Association (SASA) executive from 2012–2018 and a director on the ICCSSA (Institute of Certificated and Chartered Statisticians in South Africa) board since 2019.

Professor Fabris-Rotelli is the current president of the South African Statistical Association (SASA) and the CEO of ICCSSA. She is also a member of ISI (International Statistical Institute), Society for Industrial and Applied Mathematics and Institute of Mathematical Statistics internationally, the Golden Key Society, SASA, S2A3 (Southern Africa Association for the Advancement of Science), South African Mathematics Society, ICCSSA

(registered as a Chartered Statistician from 2019), Geo-Information Society of South Africa, Southern African Mathematical Sciences Association, Geostatistical Association of South Africa and RLadies Johannesburg co-chair locally. She is a South African Council for Natural Scientific Professions council member elected for 2021–2025. Her research interests are in spatial statistics and GIS, as well as remote sensing and general image processing, including spatial epidemiology and criminology. She has several countrywide research collaboration groups, namely Spatial Epidemiological Modelling and StatSNetSA (a capacity development research group for building doctoral supervision skills in academic Statistics in South Africa and further supporting young academics in Statistics in South Africa). Both these groups have resulted in a number of publications, postgraduate student growth and young academic development.

Professor Fabris-Rotelli is an Abe Bailey Fellow (2007 tour award), is a 2018 fellow of the TUKS Young Researcher Leadership Program, and was selected as a BRICS Young Scientist 2020 in Artificial Intelligence.

Professor Fabris-Rotelli received a Y2 rating from the NRF in 2020.

PROFESSOR PRISCILLA GUTURA

Professor Gutura is an associate professor in the Department of Social Work and Criminology in the Faculty of Humanities.

She lectures two primary methods of social work: casework and community work at the undergraduate level. She also supervises postgraduate students. Professor Gutura serves on the Faculty's Research Ethics Committee and the Faculty's Marketing Committee as the department's webmaster.

Professor Gutura holds a BSW, MSW and PhD in Social Work. In 2014, at the age of 28, she became one of the first young black females to obtain a PhD at the University of Fort Hare and one of the first young black females to be awarded a doctoral degree in the field of social work in South Africa. Furthermore, not only was her obtaining a PhD at such a young age one of her best achievements, but she became a role model and inspiration to other young black students she crossed paths with, particularly female students. This has also led to her current research focus on women.

Professor Gutura's research career commenced with her postdoctoral research, which focused on the impact of social grants on reducing poverty. In her research, she discovered that women made up most social assistance grant beneficiaries while being severely affected by gender-based violence from economic and physical insecurity. This discovery ignited an extension to her research area to focus on issues affecting women and children, particularly gender-based violence. Therefore, Professor Gutura's ongoing research focuses on exploring how social protection can realise gender equality outcomes and empower women to reduce gender-based violence.

Due to the high levels of gender-based violence in South Africa, with women being disproportionately affected, Professor Gutura searches for solutions to tackle this

pandemic by economically empowering women because poverty and inequality, among other factors, lead to the vulnerability of women to violence. Therefore, she would like to develop theoretical and practical understandings of the impact of social protection on economically empowering women and its importance in the process of social transformation to realise gender equality in South Africa. Further, Professor Gutura's research also involves exploring men's potential feelings of disempowerment and injured masculinity with programmes involving women's empowerment which may result in men reacting with violence towards women.

In 2017, Professor Gutura was selected for the NRF-UP Mentorship Programme for Black Academics. In 2023, she was selected to be one of the fellows of the prestigious Future Professors Programme (Phase 01) of the Department of Higher Education and Training. Professor Gutura has held a Y2 rating from the NRF since 2020. She has supervised 12 master's students and two doctoral students to completion. She has gained professional recognition from her peers in her field of expertise, evident in her occasionally serving as a peer reviewer for several journals such as the *Journal of Social Work and Social Sciences Review* and the *Southern African Journal of Social Work and Social Development*. She is an external examiner for postgraduate students' research for local and international universities. She has also presented at local and international conferences such as the CRISOWO International Social Work Conference and the International Conference on Gender and Sexuality. Prof Gutura has published 35 articles in local and international journals and three book chapters and is finalising a scholarly book on gender-sensitive social work. She is an assistant editor of *Ubuntu: Journal of Conflict and Social Transformation*.





DR CHARNE LAVERY

Dr Lavery is a senior lecturer in the Department of English, teaching literary studies at undergraduate and postgraduate levels.

She holds the following degrees: BA (English, History and Philosophy) and Honours (English) from the University of Cape Town, and MSt (English 1900 to the present) and DPhil (English) from the University of Oxford.

Her research is in the fields of post-colonial literature and the environmental humanities. She is the author of *Writing Ocean Worlds: Indian Ocean Fiction in English* (Palgrave 2021). Her next book, *By the Deep Sea: Vertical Indian Ocean*, is contracted with Yale University Press. She is also the co-editor of three books: *Maritime Mobilities in Anglophone Literature and Culture* (Palgrave 2023) with Alexandra Ganser, *Reading from the South: African Print Cultures and Oceanic Turns in Isabel Hofmeyr's Work* (Wits Press 2023) with Sarah Nuttall, and *Reading for Water: Materiality and Method* (Routledge 2024) with Isabel Hofmeyr and Sarah Nuttall. Dr Lavery was recently appointed lead editor of the Oxford University Press Handbook on Literature and the Blue Humanities.

Dr Lavery founded and co-directs, with Isabel Hofmeyr, Oceanic Humanities for the Global South (www.oceanichumanities.com). She has been awarded several research grants. She is currently the principal investigator of a National Research Foundation (NRF) National Antarctic Programme (SANAP) project, Antarctica, Africa and the Arts (UP, 2021-2023), and co-investigator on Elemental Reading: New Directions in South African Literature (Wits, 2023-2025). She is a member of the Standing Committee on Humanities and Social Sciences (SC-HASS) of the Scientific Committee on Antarctic Research (SCAR) and a HASS delegate on the South African National Committee to SCAR. She co-directed a part of the international collaboration COVID in Antarctica with Elizabeth Leane from the University of Tasmania and is setting up a Seabed Humanities Collective with colleagues from the UK and Australia.

She is also a contributing author to 'Chapter 9: Africa' of the International Panel on Climate Change (IPCC) Working Group II Sixth Assessment Report (2022).

Dr Lavery has published 13 peer-reviewed journal articles and seven book chapters. She co-edited three special issues of international journals, namely 'Water' (*Wasafiri: International Contemporary Writing*), 'Thinking Oceanically' (*Eastern African Literary and Cultural Studies*) and 'Reading for Water' (*Interventions: International Journal of Post-colonial Studies*). Dr Lavery has organised conferences in Durban, Cape Agulhas, the Island of Mozambique and Rome, and several more online.

She has given many conference papers and has been invited to speak at events worldwide, including, most recently, a keynote lecture at the University of Reunion and talks at the University of California Santa Cruz and Stanford University.

Dr Lavery is co-editor of the book series *Maritime Literature and Culture* (Palgrave) with Meg Samuelson and Alexandra Ganser. She is a board member of two journals, *Global Nineteenth-Century Studies* (Liverpool) and *Alizés* (Presses Universitaires Indianocéaniques).

Dr Lavery is an advisory board member of the University of Pretoria's Centre for Asian Studies in Africa (CASA). She is active in the public humanities, with three articles in *The Conversation* and several podcasts on her research.

PROFESSOR DERIK LE ROUX

Professor Le Roux is an associate professor in the Department of Electrical, Electronic and Computer Engineering, in the Faculty of Engineering, Build Environment and Information Technology.

He received his BEng (2009) cum laude, MEng (2013) and PhD (2017) degrees from UP.

Professor Le Roux research interests are to resolve impediments to implementing advanced process control for the mineral processing industry. Specifically, he focuses on realistic approaches to system analysis and synthesis for complex systems, the design of accurate control-relevant process models for model-based control and observer design, and the development of advanced control strategies that can be implemented with relative ease. He is a Y1 NRF-rated researcher with over 18 journal publications and over 30 published conference papers.

He served as treasurer of the South African Council for Automation and Control (SACAC) since 2015, as a member of the publication board of the International Federation of Automatic Control (IFAC) since 2017, as the IFAC Database

Task Force Chair since 2019, and as a member of the Early Career Advisory Board for the journal *Control Engineering Practice* since 2021. He was a guest editor in 2022/2023 of a special issue on mining, mineral and metal processing in the *Journal of Process Control*. He served as International Program Committee (IPC) co-chair for two international IFAC conferences.

He received the Teaching Excellence Laureates Award for 2022/2023 from UP as part of a team of lecturers in the Department of Electrical, Electronic and Computer Engineering. He is registered as a professional engineer with the Engineering Council of South Africa.





DR TENDANI MAWELA

Dr Mawela is an associate professor and MIT ICT Management programme coordinator in the Department of Informatics, part of the School of Information Technology in the Faculty of Engineering, Built Environment and Information Technology.

She completed an MBA at the Wits Business School and a PhD at the University of Pretoria. She also holds the following qualifications: BCom Informatics, HDIP in Computer Auditing, Certificate in IT Project Management, and a Postgraduate Certificate in Higher Education. Her primary research interests are applying information and communication technologies for social and economic development, digital skills, and inclusion.

Her research also focuses on the public value of digital government systems and the use of technology to support government operations, service delivery, citizen participation and governance. She has published numerous scientific articles in local and international journals. Additionally, she has presented papers at local and international conferences and served as a special issue editor for a journal on digital skills. She has served as conference co-chair and organising committee member for the e-Skills Colloquium since 2018. She has previously held the role of principal researcher for the K4I Digital

Skills Research Project of the National Electronic Media Institute of South Africa , which concentrates on initiatives that develop South African citizens' digital skills capacity. She serves as president of the council of the South African Institute of Computer Scientists and Information Technologists and has a professional Association for Information Systems membership. She is also a member of the International Development Informatics Association executive committee for 2022–2024.

Dr Mawela received a Y2 rating from the NRF in 2020.

DR MARKUS WILKEN

Dr Wilken is a lecturer in the Department of Biochemistry, Genetics and Microbiology in the Faculty of Natural and Agricultural Sciences.

He obtained his PhD in Genetics from the University of Pretoria in 2016, after which he completed two postdoctoral fellowships, including one from the Claude Leon Foundation. He teaches and coordinates courses on genetics at both the undergraduate and postgraduate levels.

Dr Wilken is also a member of the management committees of the DSI-NRF Centre of Excellence in Plant Health Biotechnology, the Grain Research Programme and the Tree Protection Cooperative Programme in the Forestry and Agricultural Biotechnology Institute. His research focuses on genetics and genomics of plant pathogenic fungi of importance to the Forestry and Agricultural sectors.

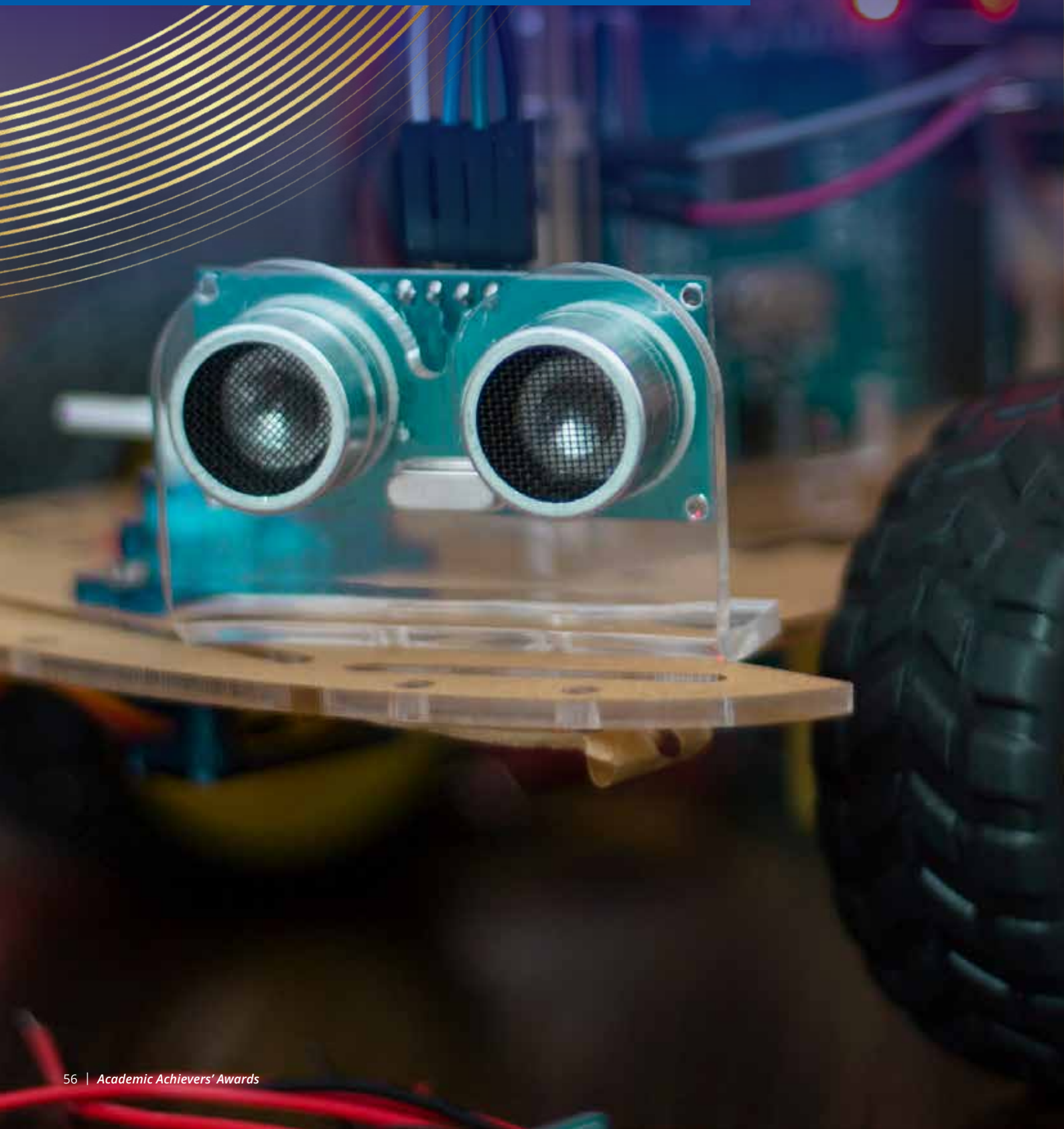
Dr Wilken has supervised and co-supervised 15 honours, 12 MSc and five PhD students and published over 40 papers for an h-index of 17.

He has also participated in and presented his work in oral and poster presentations at national and international conferences. Dr Wilken is a member of the Early Career Editorial Board of the mycological journal *Fungal Genetics and Biology* and has acted as a reviewer for several international journals.

Dr Wilken received a Y2 rating from the NRF in 2022.



TEACHING EXCELLENCE AWARD



The Laureates are awarded to nominated projects that display teaching practices with clear purpose and intent, and which have a strong alignment between the different elements in the broader context, to address identified needs or gaps with the aim of innovating to optimise teaching and learning.

These nominations show significant evidence of impact on student learning, are sustainable and can be replicated in other contexts.

These projects contribute to best practice in teaching and display significant evidence of innovation that addresses the identified challenges.

Recipients

Individual award

Dr Carin Combrinck

Group award

Professor Tania Hanekom



DR CARIN COMBRINCK

Dr Combrinck is a senior lecturer in the Department of Architecture, Faculty of Engineering, Built Environment and Information Technology, where she coordinates the honours programme and serves as the director of the Unit for Urban Citizenship.

She is responsible for several courses that collectively contribute to teaching urban citizenship within the Department of Architecture. Over more than a decade of teaching, she has intended to embed critical thinking in her students to transform the architectural profession to be more responsive to South Africa's socio-spatial legacies of segregation and injustice. Her teaching methods synthesise philosophies of cognitive transfer, reflection and transformation according to the appropriate levels of moral and ethical development in the different year groups, ensuing in a scaffolded approach in which epistemic shifts may occur. These methods rely on seminars, embedded community engagement, collaborative group work, peer evaluation, regular reflection, and facilitated discussion. Her research interests consider both the role that the profession should play in the urban challenges faced in our country and how to position our educational processes to prepare architectural graduates for this challenge. She values integrating research and pedagogy with intentional and impactful community engagement.

With a focus on urban citizenship, Dr Combrinck's research on the role of architecture in the upgrade of informal settlements has evolved into a deeper understanding of the authorship role in the design, manifesting in co-design and public interest design in architecture. The emphasis of her work has been on developing an approach to all three pillars of the educational mandate – community

engagement, teaching and learning and research – that addresses this shift in the discourse of architecture to prepare young graduates for a transformed and engaged profession.

Her work has been published in peer-reviewed journals and scholarly books, and she has contributed to international conferences related to her teaching and research. Through her collaboration with Chalmers University of Technology in Gothenburg, Sweden, she has contributed towards the development of the *ukuDoba* methodology, aimed at fine-grained geospatial data capture in informal settlements, and coordinated the collaboration between the Urban Citizen Studios and Reality Studio. Through this collaboration, significant shifts in the design studio could be achieved towards the role of architects in empowering communities in marginal urban settings.

Over the past years, Dr Combrinck has been acknowledged for her community work through the UP Community Engagement Award in 2019 and the UP Laureate Award for Teaching and Learning in 2023.

PROFESSOR TANIA HANEKOM

Professor Hanekom is a full professor in the Department of Electrical, Electronic and Computer Engineering in the Faculty of Engineering, Built Environment and Information Technology.

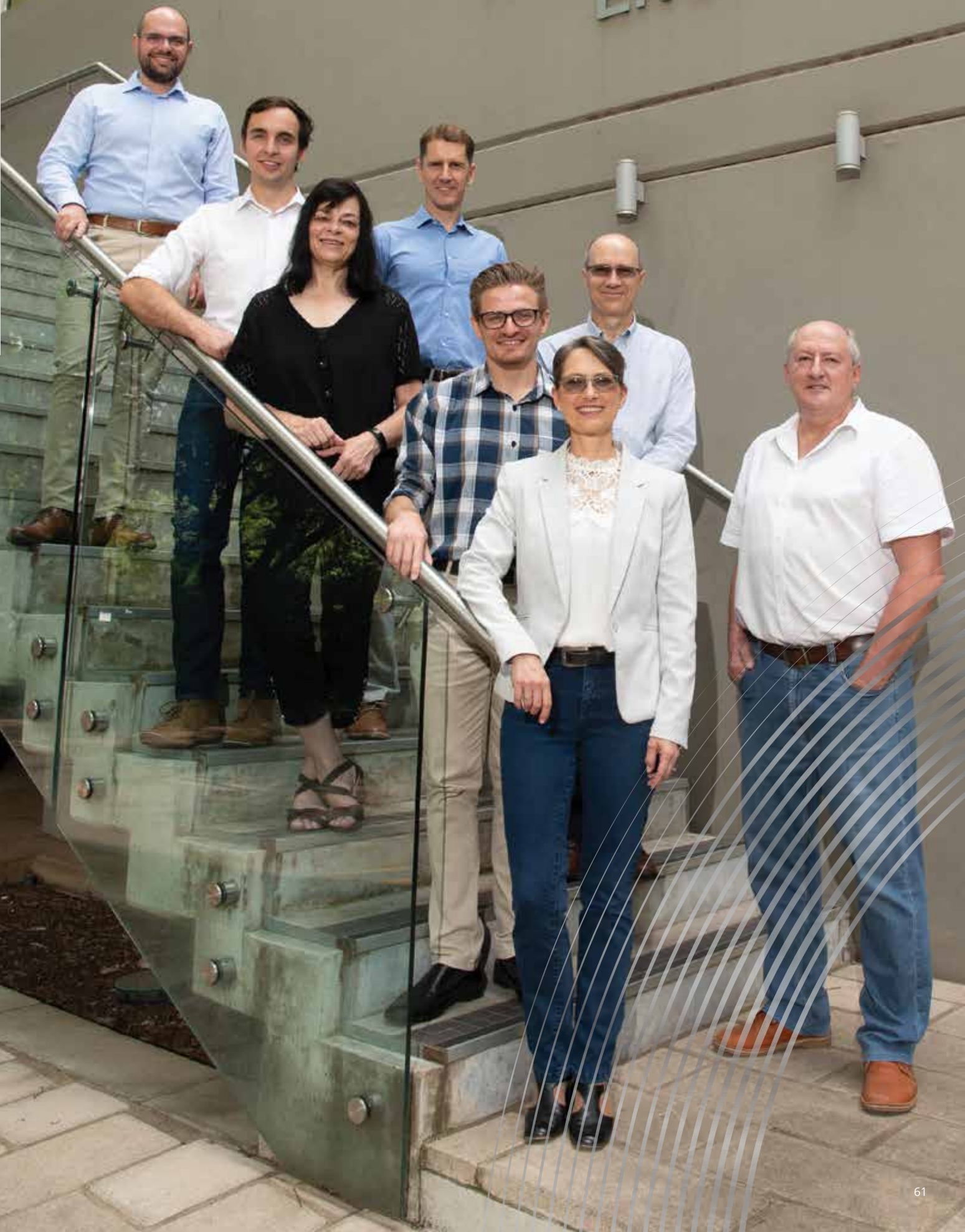
She has coordinated the undergraduate programmes in this department since 2015 and is the creator of the very popular annual Tuks-EBIT Robot Race. This fun education-in-action event, is strongly supported by the engineering industry and celebrated its tenth year in 2023. It means that between a quarter and a third of all the electrical, electronic and computer engineering students who graduated in South Africa over the past decade have participated in and benefited from this event. Prof T, as she is known among students, received numerous teaching and learning awards for this initiative, including the University of Pretoria Chancellor's Award and a national award for excellence in teaching and learning. She has a soft spot for the youth of our country and believes that a world-class education holds the key to the upliftment of both the students that will be graduating as engineers and the communities they will be serving.

Building on the foundation of the Robot Race, she leads the development of an integrated curriculum with robot cars at its core. For this initiative, the team from the Department of Electrical, Electronic and Computer Engineering (EECE) was awarded the 2022/2023 Teaching Excellence Laureate. The team consists of Willem van Jaarsveld, who is instrumental in the technical support of the microcontrollers module taught by Professor Hanekom. This module forms the backbone of

the integrated curriculum; Professor Trudi Joubert, who introduces a rudimentary version of the robot car navigation system in the second-year digital electronics module preceding the microcontrollers module and follows this up with the design of the robot cars' sensor system in the third-year analogue electronics module; Professor Tinus Stander and Dr Werner Badenhorst, who use the robot car as a platform to teach engineering systems design principles in the third-year design modules; Professors Ian Craig and Derik le Roux who introduce sophisticated control system principles to students through the robot car platform in the third-year control systems module; and Mr Pieter Roodt who manages the development of the Tuks Robot School initiative that engages both final year and second-year students in teaching high school learners the basics of robotics.

Professor Hanekom holds a C2 rating from the NRF for her research in biomedical engineering, specifically in computational anatomy and physiology of the electrically stimulated human auditory system. She is the mother of three children and wife to Professor Johan Hanekom, and together they work as colleagues in a husband-wife research team. She also holds provincial colours in masters athletics in the 100-meter sprint, long jump and high jump events.

INGENIEURSWIRTSCHAFT ENGINEERING



COMMUNITY ENGAGEMENT AWARD



The Community Engagement Award is awarded annually to one individual to recognise community engagement as a long-standing and valued tradition in higher education and an extensive, high-impact practice in teaching at the University of Pretoria.

The criteria for the award are aligned with those for the MacJannet Award, which is internationally administered by the Talloires Network.

Recipient

Dr Gerna Wessels



DR GERNA WESSELS

Dr Wessels is a senior lecturer in the Department of Social Work and Criminology, in the Faculty of Humanities.

She is the coordinator of the practice component of the Bachelor of Social Work (BSW) programme, in addition to her work as a practice lecturer on different year levels. She was the first practice lecturer to be appointed in the department on a permanent full-time basis in 2011 after spending 18 years as a fourth-year-practice lecturer, seconded to an NPO on a contract basis.

Fourth-year students spend 500 hours per year engaging in work-integrated learning at non-profit organisations (NPOs), community-based organisations (CBOs), government institutions and the private sector. They engage in the communities and receive support and supervision from registered social workers at the placement organisations, while a team of practice lecturers is responsible for maintaining the programme's academic standard. Since her appointment as practice coordinator in 2011, Dr Wessels recognised the value of and facilitated the building of solid relationships with the field organisations and field supervisors, which form the basis of the successful and ongoing collaborative process. She initiated the process of engaging the field supervisors (currently 42) in the students' mid-term progress assessments, where they provide valuable feedback on the students' functioning at the placements and also participate in planning discussions.

In 2017, fourth-year students commenced submitting all reports and assignments via ClickUP. In addition, Dr Wessels introduced electronic Portfolios of Evidence, which students still submit before their final oral exams. Another innovative activity was to provide an audio recording of the oral exam, accompanied by a critical reflection and completed exam rubric, to be a moderator at any South African or international university. The POE can also be downloaded and provided to the external examiner. These proactive developments were valuable during the COVID-19 lockdown, as most activities could continue as usual.

Another pioneering development in the MWP 400 module aimed at engaging the community in developing

and sustaining projects was to integrate group work with community engagement projects. Small groups promote community participation in the following ways: Informing the specific project by sharing their needs and strengths to be taken up in a project; sustaining the outcomes after the project is terminated, and it may also form an integral part of the project ensuring that the students address the needs of the community and not their own needs.

Each student implements their community engagement project focused on sustainable development and promoting social, economic and environmental justice. To make a difference in communities, it is non-negotiable for students to develop an understanding of the lived experiences of community members. Students do not oppressively use a 'top-down' approach but build communities' capacity to take ownership of the projects once the students leave the community.

To keep abreast of new developments in the field, Dr Wessels regularly attends national and international conferences and has presented several papers, mainly on practice teaching. Some focus areas are student-centredness and participation, empowering practice teaching, assessment in social work practice teaching, student burnout and student supervision. She also has a keen interest in social work with groups. She has published articles in *Die Maatskaplike Werk Praktisyn-Navorsing/The Social Work Practitioner-Researcher*; *South African Journal of Social Work and Social Development* and contributed to conference proceedings of the XL International Symposium of the International Association for Social Work with Groups. She also published two chapters in edited, peer-reviewed books within these fields of interest.

In 2022, Dr Wessels received a Humanities Teaching Excellence Award in the Community Engagement category. This was awarded for her contribution to developing the Community Engagement curriculum for undergraduate studies in Social Work in practice, especially in the MWP 400 module.



The Conversation Africa
AWARDS FOR SCIENCE
COMMUNICATION

*The University of Pretoria confers awards under **The Conversation Africa Science Communication Awards** category.*

*The **Conversation Africa** gives all higher education institutions an opportunity to share their research outputs with fellow academics across the globe as well as with civil society.*

The platform therefore places academics in a better position to identify opportunities to collaborate and conduct research with their peers across disciplines.

*Our partnership with **The Conversation Africa** has increased the visibility of the work of UP researchers and academics, helping them reach wider audiences beyond academic research communities.*

Recipients

(For the period 1 January 2022 to December 2023)

AWARD 1 – For the single most-read article

Professor Sandy Africa

AWARD 2 – Author who published the most articles

Professor Danny Bradlow

AWARD 1 – For the single most-read article

Professor Sandy Africa

Professor Africa is an associate professor in Political Sciences. She currently serves as the Deputy Dean for Teaching and Learning in the Faculty of Humanities.



Her research interests include the study of post-conflict transitions, oversight of security systems, and themes in national security and civil liberties, particularly in Africa. She serves on the editorial board of the *Strategic Review for Southern Africa* and *Politikon*.

Professor Africa has held leadership and collaborative roles across several global and regional networks, bringing academics, policymakers and security practitioners together to strengthen democratic control and accountability of security services: the African Security Sector Network, the Southern African Defence and Security Network, the Geneva Centre for Security Sector Governance; the Southern Voices Network of the Wilson Centre's Africa Programme, and the African Policing Civilian Oversight Forum, where she serves as a trustee.

South Africa's President Cyril Ramaphosa appointed Professor Africa to chair an Expert Panel into the July 2021 civil unrest. She holds a PhD in Management from the University of the Witwatersrand, an MA in African Politics from UNISA, and a BA Honours in Comparative Government and Administration from the University of Natal.

AWARD 2 – Author who published the most articles

Professor Daniel Bradlow

Professor Bradlow is a professor/Senior Research Fellow in the Centre for Advancement of Scholarship.

Until the end of 2022, he was the SARChi Professor of International Development Law and African Economic Relations in the Centre for Human Rights at the University of Pretoria.

He is a UP alumnus, having obtained his LLD from UP in 2010. He is also a Compliance Officer in the Social and Environmental Compliance Unit of the United Nations Development Programme and an emeritus professor of law at American University Washington College of Law.

He was previously the head of the International Economic Relations and Policy Department of the South African Reserve Bank and the chair of the Independent Review Mechanism at the African Development Bank.

His research focuses on the legal aspects of global financial governance and sovereign debt. He has published widely on these issues. His most recent publications include *The Law of the International Financial Institutions* (Oxford University Press, 2023), *Sovereign Debt in the SADC Region*, DD Bradlow and M Masamba (eds) (Pretoria University Law Press, 2022), and 'A Proposal for a new approach to restructuring African Eurobonds: The DOVE Fund and Principles', *SouthViews* No. 242, Nov 2022.



NRF-RATED RESEARCHERS

A-rated researchers

B-rated researchers

C-rated researchers

Y-rated researchers



A-rated researchers



Dr Juergen Richt

Dr Juergen Richt is the Regents and University Distinguished Professor at Kansas State University in the College of Veterinary Medicine. He is also the director of the DHS Center of Excellence for Emerging and Zoonotic Animal Diseases and the NIH COBRE Center on Emerging and Zoonotic Infectious Diseases. A native of Germany, Dr Richt received his DVM from the University of Munich and his doctorate in virology from the University of Giessen.

Dr Richt's career, which includes an eight-year assignment as Lead Scientist and Veterinary Medical Officer at the US Department of Agriculture's National Animal Disease Center, has been spent developing novel testing methods, vaccines and other remedies for several transboundary animal and zoonotic diseases. For example, his Rift Valley Fever (RVF) virus studies led to the development of novel domestic and wild ruminant models for RVF and a safe, efficacious, and DIVA-compatible subunit RVF vaccine.

He is the author of more than 300 peer-reviewed articles published in prestigious journals such as *Nature Biotechnology*, *Science*, *Journal of Experimental Medicine*, *PNAS*, *Cell Host Microbe* and *Journal of Virology*.

Dr Richt received an A2 rating from the NRF.



Professor Yves van de Peer

Professor Yves Van de Peer is a part-time professor at the Centre for Microbial Ecology and Genomics, Department of Biochemistry, Genetics and Microbiology, University of Pretoria.

He is also a full professor at Ghent University, group leader at the VIB-UGent Center for Plant Systems Biology, and part-time professor at the College of Horticulture, Academy for Advanced Interdisciplinary Studies, Nanjing Agricultural University, Nanjing, China.

Because of his unique expertise and experience in gene prediction, genome annotation, and (plant) genome analysis, his research group has been, and still is, involved in many international genome projects. Prof Van de Peer's most significant contributions are in gene and genome duplication and polyploidy. His group was the first to develop mathematical models to show that gene retention following whole genome duplication differs considerably from gene retention following small-scale gene duplications. Also, Prof Van de Peer has been one of the first to link polyploidy with the origin of the angiosperms and provided exciting evidence that whole genome duplication, albeit often an evolutionary dead end, has been instrumental in coping with environmental turmoil. Prof Van de Peer published more than 550 papers in high-profile journals such as *Nature*, *Nature Plants*, *Nature Communications*, *Nature Genetics*, *Nature Reviews Genetics*, *Science*, *PNAS*, and *The Plant Cell*. He currently has a Google Scholar H-index of 134, and his work has been cited more than 90,000 times.

Prof Van de Peer received a A1 rating from the NRF.

B-rated researchers

Professor Steve Cornelius is Head of the Department of Private Law, where he teaches the law of contract and law of delict at the undergraduate level. He is the course coordinator for the LLM in the law of contract and the LLM in private law programmes. He obtained BLuris and LLB degrees from the University of South Africa and an LLD from the University of Pretoria. He has been admitted as an advocate of the High Court of South Africa.

Prof Cornelius has published over 85 journal articles, three books, and 13 chapters. His principal field of research is the legal concept of fair play in sports and the significance of fundamental human rights in sports. In addition, he also conducts research on the drafting and interpretation of contracts.

He serves on the Independent Doping Hearing Panel for South African sport, the Independent Hearing Panel of the Badminton World Federation, the Council on Anti-Illegal Betting and Related Financial Crime of the Asian Racing Federation and the Council of Experts of the Canadian Sports Law and Governance Association.

Prof Cornelius received a B2 rating from the NRF.



Professor Steve Cornelius

Professor Ian Craig is a professor in the Department of Electrical, Electronic and Computer Engineering, where he heads the control systems group.

Prof Craig's research focuses on model-based control and optimisation in the process industries with the idea of helping industries achieve their commercial targets by making processes more efficient and meeting their sustainability (ESG) targets by saving water and energy and reducing carbon emissions. He also researches model-based control of infectious diseases, including developing treatment strategies to reduce the disease burden in a population and model-based analysis and control of the transmission of tuberculosis and COVID-19.

He was editor-in-chief of the *Control Engineering Practice* and currently serves as associate editor. He is a past president of the International Federation of Automatic Control (IFAC). Currently, he serves as the chair of the IFAC Foundation Board and vice-chair of the IFAC Publications Board.

Prof Craig is a fellow of the South African Academy of Engineering and received the Exceptional Academic Achiever Award five times and the Chinese Government Friendship Award. He presented plenary addresses at the 2020 Chinese Process Control Conference and the Control Conference Africa (2021). He presented invited addresses at the third meeting of the BRICS Academies of Sciences (2020) and the 2022 BRICS Forum on the Development of Industrial Internet and Digital Manufacturing.

Prof Craig received a B2 rating from the NRF.



Professor Ian Craig

Professor Irma Eloff is a professor of educational psychology at the University of Pretoria and a registered educational psychologist. She is a former Dean of the Faculty of Education at the University of Pretoria. In 2018 she was awarded a Förderkreis 1669 Wissenschaft Gesellschaft professorship at the University of Innsbruck in Austria, where she is an adjunct professor.

Her research has been included in the Academic Impact Series of the United Nations and *The Oxford Encyclopedia of Educational Psychology*. She is an Academy of Science of South Africa (ASSAf) member and has held visiting professorships in the USA, UK, Europe and South Africa.

Her research is conducted within the double helix of health and well-being (SDG 3) and quality education (SDG 4), specifically within interdisciplinary sustainability sciences. For the past two decades, she has focused on various manifestations of well-being, often regarding education. Her theoretical departure point is within the broad realm of positive psychology. Following a strength-based approach, simultaneously individual and systemic, it challenges the preceding hegemonic discourses of pathology within psychology. Her work seeks a deeper understanding of how individuals and systems create, sustain and develop well-being over time.

Prof Eloff received a B2 rating from the NRF.



Professor Irma Eloff



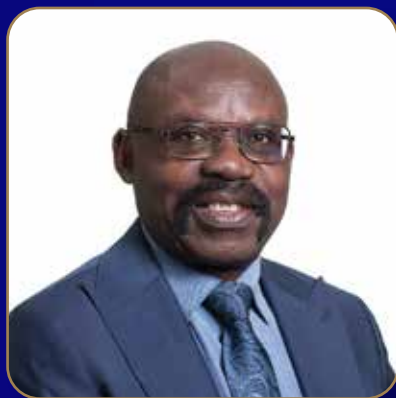
Professor Johann Engelbrecht

Professor Johann Engelbrecht is a professor of mathematics education. He was previously a Deputy Dean of the Faculty of Natural and Agricultural Sciences, and until 2013 he acted as vice-principal of the University.

He has been extensively involved in mathematical activities in South Africa and internationally. Until recently, he was the executive director of the SA Mathematics Foundation. He founded the international Delta movement, a southern hemisphere collaboration in undergraduate mathematics education. He is an active researcher in the field of mathematics education. His international involvement includes numerous research and keynote presentations, membership of international scientific committees for international conferences, research papers in international academic journals and joint research projects with colleagues in many countries. Recently his primary work has been in blended and online learning of mathematics, and he has been a guest editor for several special issues of top international journals in the field. Among other awards, he received the SA Mathematical Society Award for the Advancement of Mathematics.

Most importantly: he is married to Heloise with three (own) and two (new) children and four grandchildren who give meaning to his life.

Prof Engelbrecht received a B3 rating from the NRF.



Professor Charles Fombad

Professor Charles Fombad is a full professor in the Centre for Human Rights in the Faculty of Law. He is presently the Director of the Institute for International and Comparative Law in Africa (ICLA).

Prof Fombad's research field can broadly be characterised as 'comparative constitutionalism in Africa'. In his work, he often provides a holistic and comprehensive perspective based on his extensive experience and ability to bridge the 'common law' and 'civil law' African legal traditions. Over his career, he has published over 100 articles in peer review accredited journals; 65 book chapters in peer-reviewed books; and 17 books (authored, co-authored, edited or co-edited). Prof Fombad is a member of the Academy of Science of South Africa, an associate member of the International Academy of Comparative Law and a fellow of the Stellenbosch Institute for Advanced Study. Prof Fombad is also the editor-in-chief of the Pretoria University Law Press (PULP), which publishes five accredited journals and has published over 250 books on African law.

As a result of his research, Prof Fombad has received several best article awards and a best researcher award from his previous employer. In 2021 he received the University of Pretoria's Chancellor's Award for Research.

Prof Fombad received a B1 rating from the NRF.



Professor Geoffrey Fosgate

Professor Geoffrey Fosgate is a specialist in veterinary public health as a diplomate of the American College of Veterinary Preventive Medicine. He received his BS (Animal Science) and veterinary qualifications (DVM) from Cornell University in Ithaca, New York, USA. He spent two years in private veterinary practice before completing his PhD in epidemiology from the University of California, Davis, USA. Prof Fosgate was an associate professor of epidemiology with tenure at the College of Veterinary Medicine, Texas A&M University, before relocating to South Africa.

Prof Fosgate is currently a professor in the Department of Production Animal Studies at the University of Pretoria. His research focus is the epidemiology of infectious diseases, with specific expertise in the validation of diagnostic tests for the surveillance and control of infectious diseases of livestock. He also has extensive experience in biostatistical consulting and clinical epidemiology. He is a co-editor-in-chief of *Preventive Veterinary Medicine*, the leading international journal for veterinary epidemiological research, and serves on the editorial boards of four other international journals. He has published extensively within his expertise and received the 2022 MSD Researcher of the Year Award for the Faculty of Veterinary Science.

Prof Fosgate received a B2 rating from the NRF.

Dr Manjunath Gandhi is a senior lecturer at the Department of Mathematics and Applied Mathematics in the Faculty of Natural and Agricultural Sciences. His research interests include dynamical systems, data-driven modelling and machine learning.

He, along with Prof Herbert Jaeger, introduced the mathematical framework of nonautonomous dynamical systems that also established a zero-one probability law for the stability of reservoir computing systems. This is a machine learning methodology that is state-of-the-art in many applications. The ability of natural systems, be it a single cell or an organ like the brain, to respond to external stimuli with the required responsiveness and accuracy has intrigued scientists for a long time. Such systems that respond to stimuli are modelled as nonautonomous dynamical systems. Dr Gandhi's papers in *Nonlinearity* and *Proceedings of the Royal Society* established necessary and sufficient conditions for a class of nonautonomous dynamical systems to have this stimuli-related stability.

Dr Gandhi has a PhD from the Indian Institute of Science and has worked as a postdoctoral researcher in Ireland, France, Germany and Singapore. He and Prof Juan-Pablo Ortega's group at Nanyang Technological University, Singapore, plan to learn the plasma dynamics in a nuclear fusion reactor, encouraged by their recent success in learning dynamics from chaotic systems.

Dr Gandhi received a B3 rating from the NRF.

Professor André Ganswindt's area of expertise is behavioural endocrinology. He addresses proximate and ultimate questions concerning regulative endocrine mechanisms, which, combined with other factors, like social or ecological changes, influence and control animal behaviour. His Endocrine Research Laboratory, established at UP in 2009, is developing and validating non-invasive tools for monitoring reproductive function and responses to stressors in captive and free-ranging animals and interlinking these approaches with studies on animal conservation, climate change, human-wildlife conflict, land transformation, and urbanisation.

Prof Ganswindt is a member of, among others, the Elephant Specialist Advisory Group South Africa and the International Society for Behavioral Ecology. He is currently the president of the Zoological Society of Southern Africa. In 2020, he was awarded membership of the Academy of Science of South Africa, and in 2022 he became a fellow of the Royal Society of South Africa. Since 2021, he is the incumbent of the Oppenheimer Chair for Emerging African Scientists in Non-invasive Wildlife Research.

So far, Prof Ganswindt has published 170 peer-reviewed articles (Web of Science h-index: 24) and three book chapters, been cited 2142 times in total, and presented at over 60 (inter)national conferences and workshops. He is an associated editor of the *Royal Society Open Science* and *African Zoology*, a topic editor for *Diversity*, and a review editor of *Frontiers in Behavioural Neuroscience*, *Frontiers in Experimental Endocrinology*, and *Frontiers in Mammal Science*.

Prof Ganswindt received a B2 rating from the NRF.

Professor Jaco Greeff is a full professor in the Genetics section of the Department of Biochemistry, Genetics and Microbiology in the Faculty of Natural and Agricultural Sciences.

He is a behavioural and evolutionary ecologist interested in determining how crucial natural selection has been in shaping organisms' behaviour. He studies one of the most famous examples of adaptation – sex ratios. He uses models to predict optimal behaviour and genetics to identify offspring's mothers and compare models' abilities to explain the numbers of sons and daughters mother fig wasps have. Through experiments and thorough data analyses, he finds that natural selection is not as important as many claim. Simple behavioural patterns with some limited adaptive value seem more likely to have additional but coincidental fitness benefits. A sobering take-home message of the work is that even traits thought to be "designed" perfectly by Mother Nature appear to result from chance events.

He received a University of Pretoria Exceptional Achiever Award in 2021 and cherishes the best dad award he received in 2023.

Prof Greeff received a B3 rating from the NRF.



Dr Manjunath Gandhi



Professor André Ganswindt



Professor Jaco Greeff



Professor Stephan Heyns

Professor Stephan Heyns is a professor in the Department of Mechanical and Aeronautical Engineering in the Faculty of Engineering, Built Environment and Information Technology, and the Director of the Department's Centre for Asset Integrity Management. This Centre focuses on the structural integrity of mechanical systems and explores various aspects of the asset life cycle, ranging from structural analysis and structural testing to condition monitoring, diagnostics and prognostics, and on using this information to make well-founded maintenance-management decisions.

His personal research focuses on machine and structural health monitoring using vibration-based condition monitoring. He has a particular interest in monitoring under non-stationary conditions, human vibration and new vibration measurement techniques, including optical measurement techniques, as well as various other aspects of the broader physical asset integrity management problem.

Prof Heyns is the author or co-author of more than 127 peer-reviewed journal articles and more than 136 national and international conference papers, and has successfully supervised and/or co-supervised 87 master's and 23 doctoral students.

He is a fellow of the South African Academy of Engineering, an honorary fellow of the SA Institution of Mechanical Engineers, a fellow of the International Society of Engineering Asset Management and a fellow of the Royal Aeronautical Society.

Prof Heyns received a B3 rating from the NRF.



Professor Kobus Maree

Professor Kobus Maree of the Department of Educational Psychology at the University of Pretoria has made it his life's work to help people find their life's purpose.

He is a world-renowned researcher and educational psychologist, cited by acclaimed researchers in the field and is generally acknowledged as one of the leading global experts in career counselling.

He lectures counselling for career construction to educational and counselling master's psychology students at UP. His research is aligned with the 'Leave No One Behind'-pledge (UNESCO). Prof Maree has received multiple awards, including a fellowship from the International Association of Applied Psychology (IAAP) in 2014 and the Psychological Society of South Africa in 2017. In 2018 and again in 2022, he was elected a member-at-large of the IAAP.

Prof Maree received a B1 rating from the NRF.



Dr William McCluskey

Dr William McCluskey is an extraordinary professor at the African Tax Institute in the Faculty of Economic and Management Sciences, University of Pretoria. In 1999, he obtained his PhD from the University of Ulster, Northern Ireland. He was appointed Professor of Property Studies at Lincoln University, Christchurch, New Zealand from 2001-02. He also held several international appointments, including visiting professor at the University of Lodz, Poland and the University of Technology, Malaysia.

He was awarded the Vice-Chancellor's Book Award in 2018 for the book *Property Tax in Africa – Status, Challenges and Prospects*.

His main professional and academic interests are in real estate valuation, property tax administration, computer-assisted mass appraisal modelling and geographic information systems. He has researched the potential use of artificial intelligence in property tax valuations. He has published widely, including several authored and edited books, papers in international peer-reviewed journals and has been a keynote speaker at international conferences.

He is a technical adviser on property tax issues with the International Monetary Fund, World Bank, United Nations Habitat, European Union and the Food and Agriculture Organisation. He has been involved in several missions advising on property tax and real property valuation issues, including Albania, Botswana, China, Gambia, Georgia, Kazakhstan, Kenya, Lesotho, Northern Ireland, Philippines, Poland, Mauritius, Slovenia, Sri Lanka, Tanzania, Uganda, Thailand and Vietnam. He is a fellow of the Royal Institution of Chartered Surveyors.

Dr McCluskey received a B1 rating from the NRF.

Professor Anita Michel is a professor in the Department of Veterinary Tropical Diseases in the Faculty of Veterinary Science.

Her research focuses on bovine tuberculosis and brucellosis, both infectious diseases affecting domestic and wild animals and are an impediment to livestock production, wildlife conservation and human health. Although the disease occurs worldwide, South Africa and the region face many unique challenges due to its biodiversity and multi-faceted interfaces where contact between humans and wild and domestic animals creates ample opportunities for disease transmission. Prof Michel and her postgraduate students have primarily studied the disease epidemiology, ways to improve disease diagnosis and explore new control measures. Recently the first study to trial a vaccine against tuberculosis in buffalo has been completed. A special 'One Health' approach to address the knowledge gap regarding the role of bovine tuberculosis in human health and that of human tuberculosis in animals has been launched and will bring closer collaboration between animal health and human health professionals. Prof Michel has ranked among the top ten researchers of the Veterinary Faculty for the past 11 years, and she was ranked in place six among animal scientists in South Africa in 2023.

Prof Michel received a B1 rating from the NRF.

Professor Alf Nilsen is a professor in the Department of Sociology and director of the Centre for Asian Studies in Asia in the Faculty of Humanities. He received his PhD in sociology from the University of Bergen in 2006.

Prof Nilsen's work focuses on social movements and the politics and political economy of democracy and development in the global South, with a particular focus on India and Asia. His early work focused on the social movements of indigenous (Adivasi) communities in rural India, and how these movements engaged in struggles against dispossession and for democratisation of the local state. He has also worked extensively on law and lawmaking as a terrain of mobilisation for social movements in India. More recently, Prof Nilsen's research has come to focus on the rise of right-wing populism in India and the global South.

He is the author of numerous articles and book chapters. His monographs include *Dispossession and Resistance in India: The River and the Rage* (Routledge, 2010), *We Make Our Own History* (Pluto Press, 2014), and *Adivasis and the State: Subalternity and Citizenship in India's Bhil Heartland* (Cambridge University Press, 2018). He has co-edited several books, including *Social Movements in the Global South: Dispossession, Development and Resistance* (Palgrave, 2011), *New Subaltern Politics: Reconceptualizing Hegemony and Resistance in Contemporary India* (Oxford University Press, 2015), and *Rising Powers, People Rising: Neoliberalization and its Discontents in the BRICS Countries* (Routledge, 2021).

Prof Nilsen received a B3 rating from the NRF.

Professor Catherine Parr is an extraordinary professor in the Department of Zoology and Entomology at the University of Pretoria. She also holds a chair in Tropical Ecology at the University of Liverpool, United Kingdom. She received her PhD in 2004 from the University of Pretoria before moving to Darwin in northern Australia for a postdoctoral fellowship with the Commonwealth Scientific and Industrial Research Organisation. She then spent more than five years at the University of Oxford as the Trapnell Fellow in African Ecology at the Environmental Change Institute.

She is a community and ecosystem ecologist interested in understanding how communities are structured, and ecosystems function. She is a global expert in tropical ecology, particularly in savannas, fire ecology and social insects.

Prof Parr is leading some of the most ambitious, large-scale field experiments in the tropics involving manipulations of ants and termites to better understand their role in ecosystems. Much of her work is in Africa (South Africa, Kenya, Ghana, Gabon), where she is passionate about conserving tropical grassy systems and strengthening research capacity. She has published over 120 peer-reviewed papers and has over 9000 citations (Google Scholar).

Prof Parr received a B1 rating from the NRF.



Professor Anita Michel



Professor Alf Nilsen



Professor Catherine Parr



Professor Linda Theron

Professor Linda Theron is a full professor in the Department of Educational Psychology in the Faculty of Education.

Since she completed her doctoral research in 2000, she has focused on adolescent and emerging adult resilience, with a particular interest in how situational and cultural contexts shape the resilience of African youth challenged by structural violence.

She has led and co-led funded resilience studies with sites in Canada, China, Colombia, Eswatini, Finland, India, Russia, and South Africa. She is an (action) associate editor of two respected peer-reviewed journals: *Child Abuse & Neglect* (Elsevier) and the *Journal of Adolescent Research* (Sage). She currently serves on the editorial boards of *Adversity and Resilience Science* (Springer), *Child Indicators Research* (Springer), *Ecology & Society* (Resilience Alliance), the *Journal of Adolescence* (Elsevier), and *School Psychology International* (Sage). In 2023 she received the Leicester Institute for Advanced Studies Short Stay Research Fellowship Award, the Faculty of Education Best Researcher Award in 2022 and 2020, and the Faculty of Education Best Postgraduate Supervisor Award in 2020 and 2019. She is a member of the Academy of Science of South Africa.

Prof Theron received a B1 rating from the NRF.



Professor Corlia van Heerden

Professor Corlia van Heerden is a professor in Mercantile Law and the incumbent of the ABSA Chair in Banking Law in Africa in the Faculty of Law. She obtained a B.Proc, LLB, LLM (Civil Procedure), LLM (Insolvency Law) and an LLD.

Her areas of expertise are banking regulation, credit law and consumer protection law. She is also an International Monetary Fund (IMF)-accredited banking law expert and has conducted banking law-related missions and desk reviews for the IMF. She is co-author of the expert publications *The Guide to the National Credit Act (2008 et seq)* as well as *Commentary on the Consumer Protection Act (2014 et seq)* and is also a co-author of Sharrock (ed) *The Law of Banking and Payment in South Africa* (2016). Being an expert on the recently adopted Twin Peaks Model of Financial Regulation, she was invited to contribute to a chapter on the role of the central bank in the South African Twin Peaks Model (co-written with her former doctoral student, Dr Gerda Van Niekerk), published in the prestigious *The Cambridge Handbook of Twin Peak Financial Regulation* (2020) (Godwin & Schmulow (eds)). She has 63 publications in accredited peer-reviewed law journals, regularly presents papers at conferences, and is often invited to present expert lectures to regulators, ombuds and practitioners. She has also lectured abroad on invitation by the University of Ghent, Belgium.

Prof Van Heerden received a B2 rating from the NRF.

C-rated researchers

Dr Funmi Adebesein is a senior lecturer in the Department of Informatics in the Faculty of Engineering, Built Environment and Information Technology.

She was active in the healthcare field for nearly 15 years as a professional nurse before embarking on a new career in information technology in 2001. She has never looked back on this decision.

Her research interest primarily lies in the use of information systems for sustainable development, specifically in the healthcare domain and user experience (UX) design. One of the pinnacles of Dr Adebesein's research was the publication of a research paper in a 4.95 impact factor journal, the *Journal of Medical Internet Research mHealth and uHealth* in 2020. Her successful rating in January 2023 is a recognition of her research contributions by her peers.

Dr Adebesein received a C3 rating from the NRF.



Dr Funmi Adebesein

Professor Kolawole Adeyemo is an associate professor in the Department of Education Management and Policy Studies in the Faculty of Education. He holds a PhD in educational management from Cavite State University in the Philippines (2011) and completed a University of Pretoria Vice-Chancellor's postdoctoral fellowship from 2012 to 2014.

He is a researcher in international and comparative studies in higher education. His work often involves exploring new populations of internationally mobile students and issues of policy in emerging and underresearched regional higher education destinations. He has worked as a visiting scholar at Indiana University Bloomington in the United States, Aarhus University in Denmark and visiting professor at the University of Victoria in Canada.

Prof Adeyemo is the South Africa Country Director for the Society of Transnational Academic Researchers (STAR) and assistant editor of the *Journal of International Students*, a top-10 ranked academic journal in higher education. His recent book, *Rhetoric of the Asia Higher Education Rankings*, published by Brill-Sense (2023), analyses the implications of the Quacquarelli Symonds (QS) world university rankings to gain insights into the usefulness of reputation rankings in addressing social inequality.

Prof Adeyemo received a C2 rating from the NRF.



Professor Kolawole Adeyemo

Professor Joe Amadi-Echendu is an emeritus professor of Engineering and Technology Management at the Graduate School of Technology Management.

He is certified as a chartered engineer in the United Kingdom and a professional engineer in South Africa. He was a rated researcher during his academic career in the UK and recently served as an experienced researcher on European Union Horizon 2020-MSCA-RISE-2014 Sustain Owner Project 645733. From 2009 to 2013, he served as the founding director of the Institute for the Management of Engineering, Technology and Innovation (METI) at the University of Port Harcourt, Nigeria.

Prof Amadi-Echendu is the founding editor-in-chief of Springer's *Engineering Asset Management Review* (EAMR) series and indexed in Scopus. He has sole-authored the textbook *Managing Engineered Assets: Principles & Practical Concepts*, published by Springer, and co-edited another seven books published by Springer and indexed by Scopus and EI Compendex. Prof Amadi-Echendu concurrently serves as the treasurer on the executive committee and board of directors of the International Association for the Management of Technology (IAMOT) since 2018. Since 2016, he has been the chair of the board of directors of the International Society of Engineering Asset Management.

Prof Amadi-Echendu received a C2 rating from NRF.



Professor Joe Amadi-Echendu



Professor Joseph Anochie-Boateng

Professor Joseph Anochie-Boateng is an associate professor in the Department of Civil Engineering in the Faculty of Engineering, Built Environment, and Information Technology.

In 2007, he received a PhD in civil engineering from the University of Illinois at Urbana-Champaign (USA). Based on an assessment of his research outputs in 2023, his name was included on the National Research Foundation researchers list in South Africa. He joined the University of Pretoria in 2022 after working for the CSIR as a researcher in pavement engineering for 14 years, where he pioneered and led high-impact research in the use of modern laser technology for road and railway applications and introduced the use of crushed glass in asphalt mixes. He has conducted research in highway and airport pavement engineering, imaging-based modelling of crushed stone morphology, forensic investigation into pavement failures, and sustainable roads.

In 2021, he was appointed by the South African National Roads Agency Limited to lead a three-year research panel project on asphalt technology. He teaches undergraduate and postgraduate courses on engineering mechanics (statics), pavement materials and pavement design. He works closely with the South African Road Federation to develop the necessary skills for Southern Africa. He is a registered professional engineer with the Engineering Council of South Africa.

Prof Anochie-Boateng received a C2 rating from the NRF.



Professor Mohammad Arashi

Professor Mohammad Arashi is a professor and Director of the Data Science Laboratory at the Ferdowsi University of Mashhad in Iran and an extraordinary professor at the University of Pretoria.

He has co-authored three John Wiley books and co-edited one Springer book. He has published more than 150 peer-reviewed papers, and his fields of interest are shrinkage estimation, statistical/machine learning, high-dimensional statistics, probabilistic graphical and network modelling, and longitudinal data analysis. Prof Arashi is an elected member of the International statistical institute and has won several local and international awards.

Prof Arashi received a C2 rating from the NRF.



Dr Michael Ayomoh

Dr Michael Ayomoh is a senior lecturer in the Industrial and Systems Engineering Department. He received a master's degree in industrial engineering in 2003 and a PhD in Systems Engineering (Robotics) in 2009 from the Universities of Ibadan and Lagos, respectively. He completed his postdoctoral fellowship with the Department of Mechatronics Engineering at Nelson Mandela Metropolitan University, Port Elizabeth, focusing on precision engineering modelling. His expertise covers different aspects of intelligent systems, including Robotics systems modelling, Manufacturing Systems, Complex Systems and Management Systems.

He has published in several high-impact factor Scopus and ISI-indexed journals and presented peer-reviewed conference papers indexed in Google Scholar and Research Gate. He has supervised 25 postgraduate students to completion, served as a parallel session chair for conferences, and been part of different research grant-winning teams, including the UN-OWSD and Commonwealth of Nations full scholarships for his PhD students.

Dr Ayomoh received a C3 rating from the NRF.

Dr Felix Bello is a senior lecturer in the Division of Tourism Management, Department of Marketing Management in the Faculty of Economic and Management Sciences.

He obtained his PhD in tourism in 2015 from the University of Otago in New Zealand. His research focuses on sustainable tourism development and planning, mainly on protected area-based tourism, community participation, community-based tourism and sustainable development goals (SDGs). He has published in leading international tourism journals. He is an Association for Tourism and Leisure Education and Research (ATLAS) member.

Dr Bello is currently the principal investigator of a collaborative interdisciplinary research project funded by the World Universities Network (WUN), involving four other academics from four international universities (the University of Technology Sydney, Makerere University, Namibia University of Science and Technology and Mzuzu University), examining the contribution of protected area based tourism to SDGs.

Dr Bello received a C3 rating from the NRF.



Dr Felix Bello

Dr Jacques Beukes has a PhD in practical theology (Community Development) and is a senior lecturer in practical theology within the Department of Practical Theology and Mission Studies, in the Faculty of Theology and Religion. He made a concerted effort to connect the threefold nexus of youth, faith, and environmental consciousness. He has formed an African-German network to write *Youth, Faith, and Environmental Consciousness: A Case for Sustainable Development*.

In 2021, an *HTS* (previously also known as *Hervormde Teologiese Studies*) special collection was produced as a result of this endeavour with Dr Beukes as editor-in-chief together with Ignatius Swart (University of the Western Cape) and Juliane Storke (Humboldt University). This partnership will continue under the South African-German Research Hub on Religion and Sustainability project consortium.

Dr Beukes' research focus and field of expertise is the nexus of theology, development, and the youth. This research focus has grown in importance since this nexus in relation to the ecological and climate change debate has received little attention within practical theology. Dr Beukes serves on the board of the International Society for the Research and Study of Diaconia and Christian Social Practice (ReDi). He serves on the editorial board of *Religion and Development*. He is also a member of the Society for Practical Theology in South Africa, the International Academy of Practical Theology, the British and Irish Association for Practical Theology, and the Diakonia World Federation's Theology of Diakonia Committee.

Dr Beukes received a C2 rating from the NRF.



Dr Jacques Beukes

Professor Christiaan Bezuidenhout holds the following degrees: BA (Criminology), BA Honours (Criminology), MA (Criminology), DPhil (Criminology), and an MSc in Criminology and Criminal Justice from the University of Oxford. He is attached to the Department of Social Work and Criminology, University of Pretoria, where he is a full Professor of Criminology.

His niche areas of expertise include psychocriminology, criminal justice and juvenile delinquency. He has completed a cross-cultural study with an American colleague, focussing on the legal and policing dilemmas of trafficking in humans. He is currently busy with a collaborative research project focussing on child adversity and misbehaviour.

He has actively participated in various community engagement projects on crime management and risk assessment. He was awarded the 2019/2020 University of Pretoria Institutional Community Engagement Award for this. He recently completed a research project (2021-2022) at East Carolina University (ECU) in the United States of America (USA) as part of his 9-month Fulbright Research Scholarship regarding the role of Females in Law Enforcement.

Prof Bezuidenhout received a C2 rating from the NRF.



Professor Christiaan Bezuidenhout



Professor Paulette Bloomer

Professor Paulette Bloomer is a professor of genetics in the Department of Biochemistry, Genetics and Microbiology and the Deputy Dean: Teaching and Learning, Faculty of Natural and Agricultural Sciences. Prof Bloomer completed a PhD in zoology at UP and postdoctoral fellowships at the University of Georgia (USA), University of Cape Town and UP. She has been a UP academic since January 1999, leading the Molecular Ecology and Evolution Programme.

She has studied the phylogeography and conservation genetics of southern African vertebrate animals, emphasising mammals, birds and fishes. The research aims to understand the ecological and evolutionary processes determining species distributions and functioning of animal populations, with implications for conservation management and sustainable utilisation. Over the past five years, she participated in translational efforts to more fully integrate genetic diversity data into policies and actions linked to the maintenance of biodiversity. She serves on the Conservation Genetics Specialist Group and the Afrotheria Specialist Group of the International Union for Conservation of Nature (IUCN). She is an active member of several local societies. She is passionate about student training and has supervised over 100 postgraduate students and postdoctoral researchers.

Prof Bloomer received a C2 rating from the NRF.



Dr Christina Breed

Dr Christina Breed is a senior lecturer in the Department of Architecture, Faculty of Engineering, Built Environment and Information Technology, where she coordinates the professional master's programme in landscape architecture and the postgraduate research methodology courses. She is a professionally registered landscape architect and former president of the Institute for Landscape Architecture in South Africa.

Her research focuses on green infrastructure, nature-based solutions and landscape design. It unites biodiversity concepts with ecosystem services and human values, contributing to the limited work recognising landscape designers as actors in social-ecological systems. Her research mainly includes qualitative ethnographic approaches to design and urban planning, considering aspects of place, cultural identity, social perceptions, and values. Since 2021 she has been part of two multidisciplinary, international research projects (funded by the Danish Ministry of Foreign Affairs) that entail working with and across landscape design to biological sciences, spatial and human geography disciplines. She is one of two rated landscape architecture researchers in South Africa.

Dr Breed received a C2 rating from the NRF.



Professor Martin Breitenbach

Professor Martin Breitenbach is an associate professor in the Department of Economics in the Faculty of Economic and Management Sciences.

His research centres on finding empirical evidence to answer important policy questions that are not addressed in the literature. His recent research covers policy-related research in public sector efficiency, international trade and finance and the environment.

In South Africa, he evaluated the state's most important and vulnerable sectors for their efficiency in providing public goods: education, public health and water. He was able to identify not only the inefficient decision-making units in these sectors but also to point out how and where efficiency can be improved, and savings realised. In public healthcare, he was one of the first researchers to use efficiency analysis to analyse the efficiency of public healthcare systems globally during the COVID-19 pandemic. His findings have important policy implications as they indicate that rich countries are less efficient in using resources in the public healthcare system than smaller, resource-constrained countries.

Recently, he initiated research into the relationship between economic complexity and the ability of a country to shield itself from economic shocks, comparing developed with developing countries. He also investigated the nexus between trade-led economic growth, poverty, and environmental quality and the possible asymmetries in these relationships, especially in Africa.

Prof Breitenbach received a C2 rating from the NRF.

Professor Paxie Chirwa is a professor of forest science in the Department of Plant and Soil Sciences. He is also a forest chair for the Forest Science Postgraduate Programme in the Faculty of Natural and Agricultural Sciences.

His area of specialisation is socio-ecological systems in forests. He works in forest ecosystems in Africa, including the miombo dry forests and woodlands of southern Africa. He has supervised over 21 doctoral and 40 master's students. He has published over 150 scientific articles in internationally peer-reviewed journals, 21 book chapters and edited three books. He has acted as guest editor of three special issues of forestry journals: the *International Forestry Review*, *Agroforestry Systems*, and the *Southern Forest: A Journal of Forest Science*. He recently was one of the co-editors of the book *Miombo Woodlands in a Changing Environment: Securing the Resilience and Sustainability of People and Woodlands*.

He was also an International Scientific Committee member for the 2022 Quebec World Congress on Agroforestry. Prof Chirwa is an associate editor of *Agroforestry Systems* and *Journal of Forestry Research* and an editorial advisory board member of *Southern Forests: A Journal of Forest Science*. He is also the editor of *Scientific African*, the *Malawi Journal of Agriculture, Natural Resources & Development Studies*, and *Carbon Footprints*.

Prof Chirwa received a C1 rating from the NRF.



Professor Paxie Chirwa

Dr Sekelwa Cosa is a senior lecturer at the University of Pretoria, Department of Biochemistry, Genetics and Microbiology.

She serves as a principal investigator, leading a research group and training postgraduate students in a research niche investigating medicinal plants as a potential source of anti-infective agents to attenuate virulence in bacterial pathogens by contributing to combating multidrug-resistant (MDR) bacterial infections. She has authored and co-authored more than 25 research papers published in various accredited journals. Her published works led to her being recognised by various journals yielding to serve as guest editor of *Frontiers in Microbiology* (2022), an editorial board member for an international *Journal of Traditional and Integrative Medical* [Ayur scientifica (ISSN2456-9135)] and a reviewer for various research journals. She has graduated several postgraduate students. Her research led to ongoing international research collaborations with China, India and Italy.

Her PhD research article was nominated and selected as the third prize of Molecules 2015 Best Paper Award (<http://www.mdpi.com/1420-3049/16/3/2431>) and received the Top Student Award at the South African Society for Microbiology (SASM) Conference, in 2011. She served as a member of various societies, including SASM, the American Society for Microbiology, the Organisation for Women in Science for the Developing World (SA), the Tuks Young Research Leader Programme, and Structured Training for African Researchers (2017). She received recognition for the Best First-year Lecturer nomination in 2021.

Dr Cosa received a C2 rating from the NRF.



Dr Sekelwa Cosa

Professor Ignacy Cukrowski (130 papers, 18 plenary and 13 keynote or invited lectures) is a full-time Professor Emeritus in the Department of Chemistry, Faculty of Natural and Agricultural Sciences. In 1982 he received a PhD from the Maria Curie-Skłodowska University in Poland, a postdoctoral fellow at the Columbia University, New York, USA (1989), and in 2001 he received a DSc degree from the Nicolaus Copernicus University (Poland). He established the Electrochemical Society of South Africa in 1998 and was its first president.

He has developed new theories for studying metal complexes by voltammetry. He wrote a dedicated 105 page chapter in the book titled *Emerging Analytical Techniques for Chemical Speciation Studies* by World Scientific, in 2023. Recent computational and theoretical chemistry research is focused on the fundamentals of inter- and intra-molecular interactions in and between molecules. His novel concept of 'A unified molecular-wide and electron density based concept of chemical bonding' was published in the journal *Wiley Interdisciplinary Reviews: Computational Molecular Science* (only by invitation, IF > 26, 2021). Prof Cukrowski mentored a student achiever from the Indian Institute of Technology, Kharagpur (among the top 260 QS world rankings) in learning about the latest Quantum Mechanics and chemical bonding contributions at the University of Pretoria (2023).

Prof Cukrowski received a C1 rating from the NRF in 2022.



Professor Ignacy Cukrowski



Professor Michael Daramola

Professor Michael Daramola is a professor and Head of the Department of Chemical Engineering at the University of Pretoria. He is a global scholar with training, teaching and research experiences from The Netherlands, France, the United States, South Africa, Singapore, Ghana and Nigeria. He is a chartered engineer with the Engineering Council of the UK and a registered engineer with the Council for Regulation of Engineering in Nigeria.

Prof Daramola's primary research focuses on sustainable energy and environment, with major activities in developing and applying nanomaterials in waste treatment and valorisation. The research provides understanding and develops concepts in providing solutions in sustainable energy and environment. Prof Daramola has been among the world's top two percent of scientists since 2021. He serves on the editorial boards of international journals such as *ACS Sustainable Chemistry and Engineering*, *Materials Today Proceedings*, *Groundwater for Sustainable Development*, *Membranes*, and *Frontiers in Chemical Engineering*. He was the Associate Editor of *Chemical Engineering Communications* from 2016 to 2020. He was a finalist in the 2021/2022 NSTF-South32 Awards in TW Kambule-NSTF Award: Researcher category and in Engineering Research Capacity Development Award category. He is the national panel member of the South African Bureau of Standard's (SABS) Technical Committee on carbon dioxide capture, transportation and geological storage (SABS/TC 0265 or ISO/TC 265) and also a national ISO/TC 323 'Circular economy' panel member. Prof Daramola has produced 54 graduate students (doctorate and master's) and mentored more than 15 early career researchers and academics (postdocs and lecturers). Prof Daramola has contributed enormously to knowledge creation in engineering with more than 240 publications including one patent, fifteen book chapters, and two edited books.

Prof Daramola received a C2 rating from the NRF.



Professor Olawande Daramola

Professor Olawande Daramola is a professor in the Department of Informatics in the Faculty of Engineering, Built Environment and Information Technology. In 2009, he completed a PhD in Computer Science from Covenant University, Ota (Nigeria). He was a postdoctoral fellow in the Department of Informatics of the Norwegian University of Science and Technology, Norway, between 2010–2012 under the Alain Bensoussan Fellowship programme of the European Research Consortium for Mathematics and Informatics (ERCIM).

He worked in the Nigerian university system between 2000–2017, rising to the position of Associate Professor of Computer Science (2014) and Deputy Dean of the College of Science and Technology at Covenant University (Nigeria) in 2016. He was appointed Associate Professor of Information Technology at the Cape Peninsula University of Technology in 2017, from where he joined the University of Pretoria in 2023. He has conducted research in Artificial Intelligence, machine learning, data science, and information systems. In the past five years, he has served on various grant assessment panels of the NRF and the SAMRC. In the past three years, he has won four competitive research grants the NRF and SAMRC awarded, totalling over R5 million.

Prof Daramola received a C3 rating from the NRF.



Professor Carina de Villiers

Professor Carina de Villiers is an emeritus professor in the Department of Informatics in the School of Information Technology, Faculty of Engineering, Built Environment and Information Technology. She has been an NRF-rated researcher since 2000 and received her fourth re-rating in 2022. Her main research area focuses on teaching Information Systems (IS). An aspect that came to the fore is using different theories in pure IS research that can be applied in research on the teaching of IS. These theories resulted in several publications and conference papers. In 2020 she was one of ten international IS scholars who developed the new curriculum IS2020 that the ACM and AIS recommend.

A highlight in her career is her third successful application in 2019 for international accreditation for the BCom (Informatics) programme through the USA Accreditation Board for Engineering and Technology (ABET). This IS programme is the only one in Africa with international accreditation from ABET.

Prof De Villiers serves on several editorial boards, including two top IS journals, *Information Technology for Development* and *Information Systems Research*. She is also actively involved in the Association for Information Systems (AIS) and the South African Institute for Computer Scientists and Information Technologists.

Prof De Villiers received a C2 rating from the NRF.

Professor Gerrie du Rand is an associate professor in the Department of Consumer and Food Sciences and is currently in a post-retirement position. She received her PhD in tourism management at the University of Pretoria in 2006. In 2013 she spent a semester at Iowa State University, USA, as a visiting professor and researcher. She was awarded the Dux Docens Award in 2009 for best lecturer at UP.

Her passion for merging culinary arts and science stimulated the creation of the BSc degree in culinary science at UP, the only degree of its kind in Africa. Her vision to establish state-of-the-art facilities for culinary training was realised by refurbishing the culinary training laboratories to world-class standards at the Department of Consumer and Food Sciences.

Culinary tourism is her field of expertise and has allowed her to contribute to the literature regarding food tourism in South Africa, specifically regarding using culinary mapping and applying geographic information system techniques. She has conducted research in the field of culinary practices, the use of local foods and culinary heritage. Her research is acknowledged locally and globally. She serves as academy director on the World Food Travel Association board.

Prof Du Rand received a C1 rating from the NRF.



Professor Gerrie du Rand

Professor Elda du Toit is an associate professor in the Department of Financial Management in the Faculty of Economic and Management Sciences. In 2013 she received her DCom degree in financial management sciences from the University of Pretoria. She is registered with the Chartered Institute of Management Accountants as an associate chartered management accountant and chartered global management accountant.

She is the coordinator of the MCom Financial Management Sciences programme. She also teaches research methodology to the honours and master's students in the Department of Financial Management and supervises several master's and doctoral students.

Her main research interest is the content and quality of disclosures companies make available to their stakeholders. She takes a critical stance against disclosures that do not add value to the decision-making processes of various stakeholders. Prof Du Toit has contributed to several peer-reviewed journals and presented several research papers at national and international conferences. In 2018, she received the Best Senior Researcher Award in financial sciences from the Faculty of Economic and Management Sciences, and in 2022, she was the first runner-up for the reward.

Prof Du Toit received a C3 rating from the NRF.



Professor Elda du Toit

Professor Elsa du Toit is an associate professor in the Department of Plant and Soil Sciences in the Faculty of Natural and Agricultural Sciences. With a specialisation in horticulture, her primary focus revolves around plant propagation and the cultivation of multipurpose crops. Her research delves into exploring these crops' medicinal, nutritional, and reproductive features, aiming to unlock their full potential.

Throughout her career, she has made advanced contributions to horticulture. Her extensive body of work includes the publication of over 70 peer-reviewed scientific articles and contributions to several chapters and a book. Additionally, she has produced numerous comprehensive technical reports for various sectors of the South African government.

One of Prof Du Toit's most significant achievements lies in her role as the supervisor and co-supervisor of 46 postgraduate students who completed their studies under her guidance.

Notably, she manages and supervises students in her tissue culture laboratory at the University of Pretoria, which has gained recognition and support from the avocado industry. Through this laboratory, she researches rootstock micropropagation, ensuring this vital crop's sustainable growth and development. With her ongoing pursuit of knowledge and dedication to sustainable crop production, she continues to make valuable contributions to the scientific community, fostering growth and innovation in the plant and soil sciences field.

Prof Du Toit received a C2 rating from the NRF.



Professor Elsa du Toit

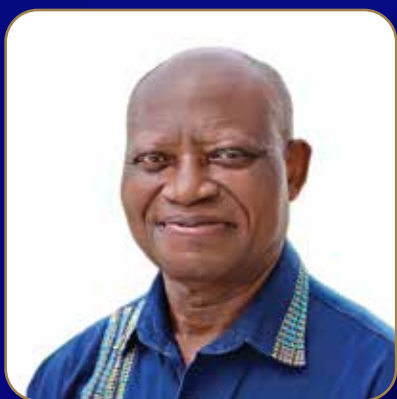


Professor Tuan Duong

Professor Tuan Duong is an associate professor in the Department of Biochemistry, Genetics, and Microbiology at the Forestry and Agricultural Biotechnology Institute within the Faculty of Natural and Agricultural Sciences. He obtained a BSc in Biotechnology and an MSc in Biology from Vietnam National University, as well as a PhD in Genetics from the University of Pretoria.

Prof Duong's research expertise lies in the systematics, genetics, and genomics of fungi, particularly on plant pathogenic fungi. His recent research has predominantly centred around utilising genomic datasets to gain insights into the evolutionary and genetic mechanisms underlying pathogenicity and host adaptation in fungal plant pathogens. He has authored over 80 scientific articles in peer-reviewed journals. In recognition of his outstanding research contributions, Prof Duong was honoured with the Exceptional Young Researchers Award by the University of Pretoria in 2021.

Prof Duong received a C2 rating from the NRF.



Professor Augustin Fosu

Professor Augustin Fosu is an economist and extraordinary professor in the Faculty of Economic and Management Sciences. He is also, inter alia, Research Associate at the Centre for the Study of African Economies at the University of Oxford, UK.

His current research includes: 'Growth, Inequality and Poverty', 'Determinants of Export Diversification', 'Importance of Debt for Growth and for Fiscal Allocation', and 'Institutions/governance and Economic Performance'. His research ranks him among the top 5% of economics authors globally. In 2018, he received the Elsevier Atlas Award at the University of Oxford for his published article: 'Growth, Inequality, and Poverty Reduction in Developing Countries: Recent Global Evidence'.

He was appointed in 2021 by the UN Secretary-General to the 24-member global UN Committee of Experts on Public Administration (UN-CEPA). In 2000, he was a member of the Eminent Panel on Ghana Priorities and of the Ghana President's Fiscal Responsibility Advisory Council. He is Editor-in-Chief, *Journal of African Trade* (Afreximbank; Elsevier, D.C.); and Managing Editor, *Journal of African Economies* (University of Oxford; Oxford, University Press).

In addition, he serves or has recently served on numerous editorial boards of journals, including the *European Journal of Development Research*, *Journal of Development Studies*, *World Bank Economic Review*, and *World Development*. For four years in a row, he has submitted by invitation nominees to the Committee for the Prize in Economic Sciences in Memory of Alfred Nobel, The Royal Swedish Academy of Sciences.

Prof Fosu received a C1 rating from the NRF.



Professor Andrie Garbers-Craig

Professor Andrie Garbers-Craig is a professor in the Department of Materials Science and Metallurgical Engineering and has held the Anglo-American Chair in Pyrometallurgy since 2009. Her research focuses on phase evolution in materials during high-temperature processes and how the resultant phase relations impact material properties and processes.

All her research projects are industry-related and address the needs of the pyrometallurgical and refractory materials communities. During the past eight years, she concentrated on phase and microstructure development in iron ore concentrate, pellets, micropellets and sinter; pre-treatment and process steps in pyrometallurgical operations. This was to enhance process understanding and improve product quality and energy saving; as well as wear mechanisms in refractory materials, modification of magnesia-chromite bricks to achieve increased density, phase formation and microstructures in freeze linings that form in PGM smelters; and Cr(VI) formation in Cr₂O₃-containing castables.

She appeared on Stanford University's list of the top two percent of most-cited scientists in the world in 2021, is a member of the editorial board of the *Journal of Mineral Processing and Extractive Metallurgy*, a fellow of the South African Academy of Engineering, as well as a fellow of the Southern African Institute of Mining and Metallurgy.

Prof Garbers-Craig received a C1 rating from the NRF.

Professor Roula Inglesi-Lotz is a professor in the Department of Economics in the Faculty of Economic and Management Sciences. She completed her undergraduate studies in Greece at the University of Macedonia before she came to the University of Pretoria, where she completed her MCom in economics (cum laude) and her doctorate in economics in 2011. Her research focuses on energy and environmental issues seeking answers to pressing issues associated with traditional ways of consuming and generating energy and investigating new and alternative solutions for higher efficiency in energy consumption and renewable fuels for generating energy.

She is the Head of the Energy Economics Unit in the Faculty and a project leader of the UNDP Just Energy Transition (JET) Platform in 2023. She has been the vice president for Membership and Affiliate Relations of the International Association for Energy Economics since 2021. She is among the founding members of the South African Association for Energy Economics, where she served as president for four years.

She was co-chair of the Global Young Academy in 2021/22 and the South African Young Academy of Science in 2019/20.

She serves on the editorial boards of top international journals such as *Energy Policy* (JEPO), *Energy Economics* (ENECO) and *Environmental Science and Pollution Research* (ESPR). She was awarded the 2017 Women in Science prize in the social sciences and humanities categories by the South African Department of Science and Technology.

Prof Inglesi-Lotz received a C1 rating from the NRF.

Dr Christine Jansen van Rensburg, a senior lecturer in the Department of Animal Science in the Faculty of Natural and Agricultural Sciences, achieved an MSc (Agriculture) (Animal Nutrition) with distinction in 2000, followed by a PhD in Animal Science in 2005, both from the University of Pretoria.

In her recent research, Dr Jansen van Rensburg has focused on exploring innovative approaches to enhance the production efficiency of monogastric farm animals. The exponential growth of the global population and the diminishing availability of affordable resources have significantly elevated the demand for animal protein and the cost of animal production. Through her research, she works towards ensuring sustainability by improving gastrointestinal health, enhancing feed digestibility, and accurately determining the nutrient requirements of monogastric animals.

Her research during the past eight years has made valuable contributions to the poultry and swine industries in South Africa. Under her guidance, 36 MSc (Agriculture) and three doctoral students have successfully completed their degrees.

Dr Jansen van Rensburg received a C3 rating from the NRF.

Professor Andre Jordaan is a professor in the Department of Economics in Faculty of Economic and Management Sciences. His main research interests are international economics and trade. He is a recipient of the Junior Researcher and Top Achiever Award and the Dean of Economic and Management Sciences Faculty Research Award.

Prof Jordaan is the co-author of three textbooks, and his reviewing activities include all leading local and several international journals. He obtained a post-doctoral and two research bursaries from Trade and Industrial Policy Strategies (TIPS). His most significant research contribution of late was a study in cooperation with the Physikalisch-Technische Bundesanstalt Braunschweig und Berlin on the Continental Free Trade Area. He also was instrumental in completing an international trade model for South Africa and 147 trading partners within 33 economic sectors for trade policy analysis by the Department of Trade and Industry.

He completed a postdoctoral fellowship at the Free University in Amsterdam and lectured at universities in the United States, Germany, Australia and Chile. He is the South African representative of an international network based at the University of Applied Sciences in Berlin, Germany. He is a member of Switzerland's United Nations Conference on Trade and Development.

Prof Jordaan received a C2 rating from the NRF.



Professor Roula Inglesi-Lotz



Dr Christine Jansen van Rensburg



Professor Andre Jordaan



Professor Johan Joubert

Professor Johan Joubert is a professor in the Department of Industrial and Systems Engineering and affiliated with the Centre for Transport Development in the Faculty of Engineering, Built Environment and Information Technology. His research focuses on developing decision-support models under uncertainty, especially related to access inequality and transport infrastructure spending. A particular interest is multi-modal, multi-agent simulation models in the (freight) transport domain.

His research appears in many leading international transport journals, including *Transportation*, the *Journal of Transport Geography*, *Transportation Research*, *Cities*, and *Networks & Spatial Economics*. He is now a professor at the KU Leuven Institute for Mobility in Belgium.

He is a former Fellow of the *Mobility Cultures in Mega-cities* programme sponsored by the Institute for Mobility Research (ifmo), a research facility of the BMW Group. He is a director for the International Institute for City Logistics and has been visiting professor at both ETH Zürich in Switzerland and the University of Natural Resources and Life Sciences (BOKU) in Vienna, Austria. He is a registered professional engineer with the Engineering Council of South Africa (ECSA); in 2007, he received the President's Award from the Southern African Institute for Industrial and Systems Engineering (SAIIE), and in 2018 the SAIIE award for Most Outstanding Industrial Engineering Researcher.

Prof Joubert received a C1 rating from the NRF.



Dr Eder Kikianty

Dr Eder Kikianty is a senior lecturer in the Department of Mathematics and Applied Mathematics. After completing her BSc from Bandung Institute of Technology in Indonesia in 2005, she received a scholarship to Victoria University in Australia. She received her PhD in 2010 and was awarded the University Medal for Best Doctoral Dissertation and the Vice-Chancellor's Award for Excellence in Postgraduate Research.

Her research interests include the geometry of Banach spaces, function and sequence spaces, and the history of mathematics in South Africa. She primarily works in generalising inner products in Banach spaces, studying geometrical constants of Banach spaces, focusing on the Morrey function spaces and Morrey sequence spaces. Her recent work in the history of mathematics observed a more intricate history of mathematics being fostered locally, in contrast to the imperialist view that European settlers implanted the education system in South Africa.

She works with a number of high performing students, exposing them to research seminars and international level competitions. In 2020, she received the Excellence in Teaching Award from the Faculty of Natural and Agricultural Sciences and the Excellence in Teaching Award from the Department of Mathematics and Applied Mathematics in recognition of her involvement in training students. She maintains a close relationship with researchers from her alma mater in Indonesia and has been invited as a plenary speaker for workshops and symposiums and to present a postgraduate course.

Dr Kikianty received a C2 rating from the NRF.

Professor Ulrike Kistner

Professor Ulrike Kistner is professor emerita in the Department of Philosophy, where her teaching and research have been focused on social theory and political philosophy. In political philosophy, she has published on theories of totalitarianism, a post-colonial nomos, and the relation between 'race' and 'class' in Marx's thought.

She has been pursuing an interest in psychoanalytic theory, which has resulted in publications about trauma, the death drive, and the psychology of (de-)colonisation. Bringing psychoanalysis into the interface with social theory and political philosophy, she is currently working on group/mass psychology.

In the course of her work, she bumped up against issues in translation. This has led to work in and on philosophical translation, including the translation (2016) of the first edition of Freud's *Three Essays on a Theory of Sexuality*. Other issues of philosophical translation came up in discussions around Fanon's reading of Hegel, which resulted in a compilation of essays, edited together with Philippe Van Haute, under the title *Violence, Slavery and Freedom between Hegel and Fanon* (2020). She has undertaken further translations for the journal *Radical Philosophy* and the Vienna Freud Museum; more recently, she completed the translation of a political biography of Hendrik Verwoerd.

Prof Kistner's research has benefitted from various scholarships and fellowships, including those of the Humboldt Foundation and the Netherlands Institute of Advanced Studies.

Professor Kerstin Krüger is an extraordinary professor in the Department of Zoology and Entomology in the Faculty of Natural and Agricultural Sciences and an associate of the Forestry and Agricultural Biotechnology Institute at the University of Pretoria. She also leads the Department of Phytopathology at KWS, a global plant breeding company.

Her integrated pest management (IPM)-based programme focuses on agriculturally important pest insects and diseases. Her research bridges the gap between academia and application in the agricultural sector. The focus is on managing agriculturally important insect vectors of plant diseases and other pest insects on crops and the impact of climate change on insect herbivores, their natural enemies, and crop protection strategies. She seeks to develop environmentally-friendly pest management solutions to improve food security and the livelihood of farmers.

She served as a member of several national and international bodies and has been an invited speaker at national and international meetings.

Prof Krüger received a C2 rating from the NRF.



Professor Kerstin Krüger

Professor Tjaart Krüger is an associate professor in the Department of Physics in the Faculty of Natural and Agricultural Sciences. He completed his PhD cum laude and a postdoctoral fellowship at the Vrije Universiteit Amsterdam.

He is passionate about multidisciplinary research and performs his research in molecular biophysics, a field at the confluence of physics, biology, chemistry, statistics, and even information technology and engineering. His main interest is to resolve the molecular details of energy transfer and regulation in various photosynthetic organisms' light-harvesting complexes and apply the underlying design principles to solar cells. His research involves various laser spectroscopy techniques and theoretical and computational approaches and has been published in nearly 60 journal articles, three book chapters, and an advanced textbook on optical spectroscopy. He has also written several popular science articles and was recently interviewed on the radio station SAfm.

Prof Krüger received the Meiring Naudé Medal from the Royal Society of South Africa in 2019 and the CSIR National Laser Centre Innovation Excellence Award in 2020. He is a South African Young Academy of Science member and serves on the editorial board of *The Journal of Physical Chemistry Letters*.

Prof Krüger received a C1 rating from the NRF.



Professor Tjaart Krüger

Dr Charne Lavery is a senior lecturer in the Department of English in the Faculty of Humanities. Her research is in postcolonial literary studies and the environmental humanities, focusing on water and oceans. She is the author of *Writing Ocean Worlds: Indian Ocean Fiction in English* (Palgrave 2021). Her next book is provisionally titled *By the Deep Sea: Vertical Indian Ocean* (contracted with Yale University Press). She is co-editor of the books *Maritime Mobilities in Anglophone Literature and Culture* (Palgrave 2023) and *Reading from the South: African Print Cultures and Oceanic Turns in Isabel Hofmeyr's Work* (Wits Press 2023).

Dr Lavery is the founder and co-director, with Professor Isabel Hofmeyr from the University of the Witwatersrand, of Oceanic Humanities for the Global South (2018–present). She is the principal investigator on the National Research Fund's 'Antarctica, Africa and the Arts' project, a co-editor of the Palgrave book series *Maritime Literature and Culture* and a board member of the journals *Global Nineteenth-Century Studies* and *Alizés*.

She was awarded the Exceptional Young Researcher Award by the University of Pretoria in 2022 and a Stellenbosch Institute for Advanced Studies fellowship for 2023.

Dr Lavery received a C2 rating from the NRF.



Dr Charne Lavery



Dr Tung Lê

Dr Tung Lê is a senior lecturer in the Department of Mathematics and Applied Mathematics.

In 2008, Dr Lê received his PhD in Pure Mathematics at Wayne State University, Michigan. Before joining the University of Pretoria, he was at the University of Aberdeen and North West University.

His research interests are group theory, representation theory of finite groups, and finite geometry, especially finite groups of Lie type and their subgroups, and the automorphism groups of designs and codes.

Dr Lê received a C1 rating from the NRF.



Professor Willem le Roux

Professor Willem le Roux is an associate professor in the Department of Mechanical and Aeronautical Engineering in the Faculty of Engineering, Built Environment and Information Technology. He completed his PhD in 2014 at the University of Pretoria. He is registered with the Engineering Council of South Africa as a professional engineer.

He is researching small-scale solar thermal energy conversion systems, where the subjects of Thermodynamics and Thermal Engineering are mainly applied. His primary focus is on concentrating solar power systems, including the solar-dish Brayton cycle, where a solar dish is applied to run a turbine in a power generation cycle.

In 2020, he received funding from Innovate UK to develop and demonstrate a semi-renewable, grid-independent combined heat and power system (SolarTurbo-CHP) at UP. The project collaborated with Cranfield University (UK), Birmingham University (UK), and local and UK industry partners. He has also attracted funding from the Technology Innovation Agency and, more recently, from the Department of Science and Innovation (DSI) to demonstrate the technology for power generation in rural communities using the concentrated power of the sun.

Prof Le Roux received a C2 rating from the NRF.



Dr Heike Lutermann

Dr Heike Lutermann is an extraordinary lecturer, previously a senior lecturer in the Department of Zoology and Entomology in the Faculty of Natural and Agricultural Sciences. She received a PhD in Biology from the Leibniz University in Hannover, Germany and first joined the University of Pretoria as a postdoctoral researcher in 2003.

As a behavioural ecologist, Dr Lutermann's research focuses on identifying and understanding the drivers of spatiotemporal patterns in the distribution of parasites of endemic small mammals. She pursues an interdisciplinary approach to evaluate how climate factors, host behaviour and physiology affect parasite burden on small mammal hosts that may sustain vectors and pathogens of medical and veterinary importance.

Dr Lutermann's diverse expertise is reflected in the more than 60 peer-reviewed articles in international journals in ecology, behaviour and parasitology, as well as several book chapters. She has served as editor for two international ISI-rated journals and regularly acts as reviewer for various scientific journals. Nationally, Dr Lutermann belonged to the executive committees of the Parasitological and the Zoological Societies of Southern Africa, and she has acted as a panel member and reviewer for the NRF.

Dr Lutermann received a C2 rating from the NRF.

Professor Margaret Chitiga-Mabugu is an economist and the current Dean of the Faculty of Economic and Management Sciences at the University of Pretoria. With a diverse background in research, teaching, and administration, she has vast experience in economic development.

Prof Chitiga-Mabugu obtained her PhD in economics from the University of Gothenburg in Sweden and has since dedicated her research to analysing the impact of policies on society and the economy. Her research has been widely published in top-tier international journals and has received recognition from esteemed institutions.

Beyond her academic work, Prof Chitiga-Mabugu is an active member of several advisory councils and networks, including the Stockholm Environment Institute's Science Advisory Council, the Academy of Science of South Africa, the Advisory Group to Phase II of Southern Africa – Towards Inclusive Economic Development programme, and the Partnership for Economic Policy network. She also co-chairs the International Technical Group for the Climate Action for Jobs Initiative, confirming her commitment to sustainable development.

Prof Chitiga-Mabugu received a C1 rating from the NRF.

Professor Ncholu Manyala is a professor of physics and former SARCHI Chair in Carbon Technology and Materials. Prof Manyala obtained his PhD from Louisiana State University, working in low-temperature transport and magnetic properties of strongly correlated materials. During this time, he published two papers in *Nature* and one in *Nature Materials* in this field.

Prof Manyala's recent research interest is in nano-carbon-based materials and their applications in energy storage (supercapacitors). Prof Manyala has published over 160 papers and graduated over 26 PhD students in this subject with an h-index of 47 and 42 from Google Scholar and Scopus, respectively. He is a member of the International Society of Electrochemistry, the South African Microscopy Society and the South African Institute of Physics.

Prof Manyala received a C1 rating from the NRF.

Professor David Maree is a full professor in the Department of Psychology, Faculty of Humanities. He teaches social research methods to undergraduate students and psychometrics to MA research psychology students. He is the chair of the Department's research committee and coordinates the MA and PhD studies programme.

His work in psychometrics focuses on applying Rasch modelling to multi-cultural assessment and exploring bifactorial exploratory structural equation modelling (BESEM) in assessing the performance and measurement invariance of multidimensional psychological instruments. His research methodology focus is on developing a critical realist metatheoretical framework that can accommodate both quantitative and qualitative approaches in psychological science.

Besides being an active member of the Psychological Society of South Africa (PsySSA), he is one of the founding members of the recently established Assessment Standards of South Africa, aiming to guide and assess instrument development in South Africa.

Prof Maree received a C2 rating from the NRF.



Professor Margaret Chitiga-Mabugu



Professor Ncholu Manyala



Professor David Maree



Professor Vukosi Marivate

Professor Vukosi Marivate is the ABSA UP Chair of Data Science and an associate professor in the Department of Computer Science in the Faculty of Engineering, Built Environment and Information Technology. He obtained his PhD in computer science from Rutgers University, USA, as a Fulbright Fellow. Prof Marivate co-founded the world-renowned Deep Learning Indaba and Masakhane Natural Language Processing (NLP).

His research focuses on developing methods to extract insights from data, focusing on the intersection of machine learning, artificial intelligence, and natural language processing. He has given tutorials and talks at leading venues and worked on projects related to science, energy, public safety and utilities. Prof Marivate led the COVID19ZA project that worked to make South Africa's COVID data openly available for researchers. He sits on policy panels like that of the African Union, which is drafting the Artificial Intelligence Policy for Africa.

Prof Marivate is part of the 2023 Young Global Leaders of the World Economic Forum cohort. He was a finalist in the 2022 National Science and Technology Forum Awards in the emerging researcher category. He is part of the Masakhane NLP team that won the inaugural Wikimedia Research Award and was a Harvard-South Africa Fellow. Prof Marivate is a recipient of the Google Research Scholar Award and the JP Morgan AI Research Award, among others. He has collaborated with the *Mail & Guardian*, *Nthavela* newspaper, the government of Sierra Leone and many more.

Prof Marivate received a C3 rating from the NRF.



Professor Simnikiwe Mayaphi

Professor Simnikiwe Mayaphi is an associate professor and Head of the Department of Medical Virology at the University of Pretoria and National Health Laboratory Service – Tshwane Academic Division.

He is a clinical virologist and obtained his PhD from UP in 2019. He is actively involved in teaching and training activities and providing virology diagnostic laboratory services. His research focus is mainly on HIV and opportunistic infections and diagnostic virology aimed at optimising laboratory services. The latter includes COVID-19-related research.

Prof Mayaphi supported the National Department of Health in developing guidelines in his area of expertise and was part of a technical working group that developed the first national hepatitis guidelines in South Africa, which were approved in 2019.

Prof Mayaphi is a scientific advisory panel member for Polio Research Foundation grants. He serves in various national committees that look at strengthening COVID-19 surveillance, diagnosis, treatment and prevention services. He also occasionally serves as a member of the steering committees for local and international conferences. He received the Exceptional Young Researcher's Award at UP in 2018.

Prof Mayaphi received a C2 rating from the NRF.



Professor Zitha Mokomane

Professor Zitha Mokomane is a professor and Head of the Department of Sociology in the Faculty of Humanities. Her area of research interest and expertise is in the fields of Family Demography; work-family interface; social policy, and social protection.

Her research – undertaken largely within the African and Global South perspective – seeks relentlessly to generate a new understanding of how prevailing socioeconomic and demographic changes interact with various family dynamics to impact the welfare, well-being, and functioning of families and their members, particularly women, children, and youth.

Over the past eight years Prof Mokomane has been appointed to expert groups on broad family and social protection issues by a number of international organisations and has also led several research projects in these areas. She is the associate editor of the *Journal of Population Research* and an editorial board member of two journals: *Societal Impacts* and *Canadian Studies in Population*.

In 2019 she received the Established Researcher the Year Award from the Faculty of Humanities.

Prof Mokomane received a C2 rating from the NRF.

Professor Pierre Mostert is a professor in the Department of Marketing Management in the Faculty of Economic and Management Sciences.

His research focuses on services marketing and business relationships, studied from both business and customer perspectives. More recently, he extended his research to consider not only the positive business-to-business and business-to-consumer relationships but also negative relationships. By considering positive and negative perspectives, his research provides practitioners and academics with a more holistic relational approach to inform strategies and operational decisions.

Prof Mostert's negative customer-business relationships focus on the broad field of anti-consumption, particularly brand avoidance and hate. With the rapid growth of technology and the internet, consumers are empowered to express their dislike and hate towards brands more efficiently and to wider audiences than ever before.

Prof Mostert is expanding his anti-consumption, brand avoidance, and brand hate research by exploring how this new field can be linked to – and negatively influence – established research areas, such as consumer complaint behaviour, service failures, and service recovery.

Prof Mostert received a C2 rating from the NRF.

Professor Roelf Mostert is the Director of the Industrial Metals and Minerals Research Institute and the acting Head of the Materials Science and Metallurgical Engineering Department within the Faculty of Engineering, Built Environment and Information Technology. He is a registered professional engineer at the Engineering Council of South Africa and an associate member of the Association of Arbitrators.

After receiving his undergraduate degree from the above Department, he entered employment in the industry and continued his postgraduate research, leading to his PhD in 1989. After 35 years of engineering work locally and globally, he entered UP's employ as an associate professor and Head of Department. He teaches at undergraduate and postgraduate levels on the deformation and failure of materials, and his research on structural integrity and materials damage mechanisms has earned him local and global recognition in industry and academia. In 2020, Prof Mostert was the recipient of an Annual Teaching and Learning Award in the Faculty of Engineering, Built Environment and Information Technology for his contribution to the improvements made to student success in the high-impact modules Materials Science 113 and 123, where he introduced a web-based solution which overcame specific challenges in student performance.

Prof Mostert received a C2 rating from the NRF.

Professor Alfred Musekiwa is an associate professor and Head of the Division of Health Measurement Sciences in the School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria. In 2018 he obtained his PhD in biostatistics from the University of KwaZulu-Natal. He completed his Biostatistics Post-Doctoral Fellowship at the Johns Hopkins University's Bloomberg School of Public Health in the USA in 2019.

Prof Musekiwa is recognised as an applied biostatistician and established research scientist with expertise in conducting systematic reviews and meta-analyses. This skill is critical in evidence synthesis to guide policy and clinical decision-making. He co-founded the Evidence Synthesis Research Unit at UP, facilitating capacity building in this field. His other major research contributions include providing statistical support to healthcare researchers working on a wide range of public healthcare applications. He is also interested in HIV/AIDS among adolescent girls and young women in sub-Saharan Africa.

He has more than 70 peer-reviewed research articles (h-index 25), which is very high, especially against a background of teaching, postgraduate supervision, statistical consulting, and administrative responsibilities.

Prof Musekiwa received a C2 rating from the NRF.



Professor Pierre Mostert



Professor Roelf Mostert



Professor Alfred Musekiwa



Dr Ndukuyakhe Ndlovu

Dr Ndukuyakhe Ndlovu, previously a senior lecturer within the Department of Anthropology and Archaeology at the University of Pretoria, is now a Research Associate at the same academic institution. He received a PhD in Archaeology from Newcastle University in the United Kingdom in 2013. Before that, he completed a BA Degree (Archaeology and Geography, 2000), BA Honours Degree (Climatology and Environmental Studies, 2001), a Postgraduate Diploma in Science (Rock Art Studies, 2003), and an MA (Anthropology, 2005) from the University of the Witwatersrand and Rhodes Universities respectively. Dr Ndlovu's research focuses on Southern African rock art, heritage management in Southern Africa, and the political history of archaeology in Southern Africa.

He is currently the Manager for Archaeology at the South African National Parks. Dr Ndlovu has published over 30 publications in accredited journals and books. He has supervised 15 honours students, 9 master's students, and two doctoral graduates. He previously served as the Editor-in-Chief of *The South African Archaeological Bulletin*. Dr Ndlovu has also served on editorial boards of journals in South Africa and around the world. He was previously a Board member for heritage agencies in the country.

Dr Ndlovu received a C2 rating from the NRF.



Dr Lieza Odendaal

Dr Lieza Odendaal is a senior lecturer in the Department of Paraclinical Sciences in the Faculty of Veterinary Science. She qualified as a veterinarian in 1993 and worked in various capacities in government, including import and export control of animal products and negotiating with veterinary authorities of importing countries regarding animal and meat safety control measures. She also studied veterinary pathology at a postgraduate level and taught this in the Veterinary Pathology Section for three years. For the past 15 years, she has taught meat hygiene, pathology, meat inspection, and animal welfare in the Veterinary Public Health Section. She obtained her PhD in 2020. The title of her thesis was: Lesions and Cellular Tropism of natural Rift Valley fever virus infection in sheep. Dr Odendaal provided the first comprehensive description of lesions and viral antigens in the placenta, showing that transmission of the virus to foetal organs, including the liver and brain, often does not occur. Detailed morphological descriptions were illustrated by an extensive collection of high-quality images, which improves future interpretation of the pathogenesis of the disease which is also fatal for humans including unborn babies. Dr Odendaal authored and co-authored 14 manuscripts published in journals in veterinary science and virology and cited 192 times since 2018.

Dr Odendaal received a C2 rating from the NRF.



Professor Annet Oguttu

Professor Annet Oguttu is a tax law professor in the Department of Taxation and the African Tax Institute in the Faculty of Economic and Management Sciences. She holds a doctorate in tax law. Her field of specialisation is international tax law, and she has so far published 45 in internationally accredited journals. She is the author of *Base Erosion and Profit Shifting: A Blueprint for Africa's Response*, *International Tax Law: Offshore Tax Avoidance in South Africa*, co-author of *Tax Law: An Introduction* and has written several book chapters in other tax textbooks.

She is a research fellow of the Centre for Studies in African Taxation housed at the International Bureau for Fiscal Documentation, the Abe Greenbaum Research Fellowship of the School of Taxation and Business Law at the University of New South Wales, and the University of Michigan's Presidential Scholars Fellowship.

Prof Oguttu is a member of the United Nations' High-Level Panel on International Financial Accountability, Transparency and Integrity for Achieving the 2030 Agenda for Sustainable Development (FACTI Panel) and the Davis Tax Committee. She has also served as a commissioner of the South African Law Reform Commission.

She served as the president of the board of directors of the South African Institute of Tax Professionals. She is the chair of the Advisory Board of the African Tax Research Network, which is housed at African Tax Administration (ATAF) and a board member of the Tax Faculty.

Prof Oguttu received a C1 rating from the NRF.

Professor Marinda Oosthuizen is the Deputy Dean: Research and Postgraduate Studies and full professor of Veterinary Molecular Parasitology, Faculty of Veterinary Science, University of Pretoria. Her research focuses on tick-borne pathogen discovery, identification and molecular characterisation of novel tick-transmitted blood-borne parasites in domestic and wild animals, and molecular diagnostic assay development. Her current USA National Institutes of Health funded project (RO1), in collaboration with Washington State University, is focussed on an in-depth study of tick-borne zoonotic infections at the human/livestock/wildlife interface and their contribution to acute febrile illness in rural South Africa.

She was the joint winner of the Faculty's Researcher of the Year Award in 2011 and has since remained among the Top 10 (x7) or Top 20 (x3) researchers in the Faculty. She was nominated for the Department of Science and Technology 2019 South African Women in Science Awards under the category Distinguished Woman Researchers. Prof Oosthuizen was nominated for the UP Exceptional Supervisors Award in 2016.

She is the elected Senate representative for the STEM disciplines on the UP Council. She serves on the General Council of the Institute of Tropical Medicine, Antwerp, Belgium. Prof Oosthuizen is the elected secretary of the International Society for Tropical Medicine and a council member of the Parasitological Society of Southern Africa.

Prof Oosthuizen received a C1 rating from the NRF.

Dr Beulah Pretorius is a researcher at the Department of Animal Science in the Faculty of Natural and Agricultural Sciences and an extraordinary lecturer at the School of Health Systems and Public Health, Faculty of Health Sciences. She was also the project manager for the ARUA UKRI/GCRF CaBFoodS-Africa project focusing on capacity building in food security in Africa.

Dr Pretorius is a nutrition scientist with a keen interest in micronutrients, food composition and nutrient bioavailability, linking nutrient quantity and quality of foods for attaining nutrition and food security for all. She has a passion for improving the future of many through better, evidence-based nutrition solutions. Current food systems are increasingly homogenised to a limited number of foods, decreasing dietary diversity and leading to nutrient deficiency in vulnerable populations. Increasing dietary diversity is one of the best practices for sustainable intake of macro- and micronutrients. Dr Pretorius' research explores the nutritional significance of less familiar foods for sustainable food and nutrition security. She has extensive knowledge of nutrient analyses in food and feed and has managed an accredited analytical laboratory. She holds an MSc in Biochemistry and a PhD in Human Nutrition.

Dr Pretorius received a C2 rating from the NRF.

Professor Corinne Sandwith, BA (Hons) University of KwaZulu-Natal (UKZN) MA (UKZN) PhD (UKZN), is a professor in and Head of the Department of English in the Faculty of Humanities.

Her research is situated within the overlapping fields of book history, periodical studies and black intellectual-aesthetic history. Her first monograph retrieved a largely forgotten history of readers, reading practices and cultural debates in early apartheid South Africa, with a particular focus on literary magazines and oppositional reading sites. Her current book project reads the colonial newspaper as an overlooked site of Black intellectual, political and aesthetic engagement. Bringing a wide range of newspapers within a single frame, this study offers a critical new mapping of the South African Black print sphere, drawing attention to the significance of the colonial newspaper as a site of formal experimentalism and print sociability.

In recent years, Prof Sandwith has received several invitations to be part of prestigious book and intellectual history projects, including *The Edinburgh Companion to British Colonial Periodicals*, *The Cambridge Companion to Twentieth-Century Literature and Politics* and *Print Cultures and African Literature, 1860–1960* published by Cambridge University Press.

Prof Sandwith received a C1 rating from the NRF.



Professor Marinda Oosthuizen



Dr Beulah Pretorius



Professor Corinne Sandwith



Professor Mohsen Sharifpur

Professor Mohsen Sharifpur is a full professor in the Department of Mechanical and Aeronautical Engineering in the Faculty of Engineering, Built Environment and Information Technology.

His research includes convective nanofluids, convective multiphase flow, computational fluid dynamics, and Fluid Dynamics from the Nanoscale to the Universe scale.

He established a Nanofluid Research Laboratory at UP in 2010, one of Africa's most active and productive nanofluid research laboratories. He is an innovative thinker and, based on fluid dynamics, constructal law, nature and patterns in nature, and cosmology data, he invented a new general and multidiscipline theory as the "*Source and Sink Theory*". His general-multidiscipline theory has the potential to describe the early universe better than previous theories, and the link to the online article is <https://dx.doi.org/10.22606/tp.2020.51001>. He believes his theory is the case for the future. Prof Sharifpur has authored or co-authored more than 350 peer-reviewed papers published in accredited journals and international conference proceedings. At UP, he has supervised more than 30 postdoctoral researchers, PhD and Master's students.

Prof Sharifpur has been the editor or guest editor for several journals in his field. He was within the top two percent of highly cited researchers worldwide for 2020, 2021 and 2022. He is regularly invited as a keynote speaker at international conferences. He is on the scientific committees of several international conferences.

Prof Sharifpur received a C2 rating from the NRF.



Professor Linda Harms-Smith

Professor Linda Harms-Smith is an associate professor in the Department of Social Work and Criminology. Her commitment to and interest in social justice, the imperative for social change, and the belief that a better world is possible have led her to pursue critical questions around social transformation, decoloniality and the role of ideology.

As a social worker, she has explored these areas critically concerning the material and the psycho-political while challenging and resisting the dominance of Eurocentric Western knowledges. The broad concept of decoloniality has been interrogated through studies on anti-colonial theorists for social work; Fanonian perspectives in critical pedagogy; critical and radical social work approaches; strategies for disrupting coloniality; students' critical conscientisation around racism and oppression; and working towards decoloniality and anti-racism in the curriculum.

Significant recognition for her work over the past few years includes frequent invitations to present papers and lectures at conferences and universities internationally; being invited to contribute chapters, articles and co-edit publications around decoloniality; being awarded funding and drawing together research teams for collaborative projects such as racism and COVID-19, international collaboration on decoloniality in higher education; human rights and social work; and leading initiatives on critical and radical social work, anti-racism, and curriculum transformation.

Prof Harms-Smith received a C1 rating from the NRF.



Dr Gary Stafford

Dr Gary Stafford is a senior lecturer in the Department of Plant and Soil Sciences in the Faculty of Natural and Agricultural Sciences. He has been a Marie Curie International Incoming Postdoctoral Fellowships and a Swiss Government Excellence Scholarships recipient.

Dr Stafford has been conducting research on various aspects of African Traditional Medicine since starting an MSc on 'the effect of storage on the chemistry and biological activity of several South African medicinal plants' in 2002, at the University of KwaZulu-Natal (UKZN). As a classically trained ethnobotanist his main research interests have been on the utilisation, production and development of plants used in traditional medicine and for food in southern Africa. He is particularly interested in those with neurobiological activity for the improvement of mental health and well-being.

Dr Stafford received a C3 rating from the NRF.

Professor Philip Stevens is a full professor in Criminal Law and Statutory Crimes and holds the degrees LLB (cum laude), LLM (cum laude) and LLD (Doctorate in Criminal Law) from the University of Pretoria. His primary focus areas for research are criminal law and mental health law, with specific reference to the interface between criminal law and mental health law. He is an associate member of the Pretoria Bar.

Some of his publications are *Paraphilia and sex offending – a South African Criminal Law Perspective* in the *International Journal of Law and Psychiatry* (2016), *Ethical issues pertaining to forensic assessments in mental capacity assessments-reflections from South Africa – Psychiatry, Psychology and Law* (2017); and *A Mother's Love? Postpartum disorders, the DSM-5 and criminal responsibility – a South African medicolegal perspective – Psychiatry, Psychology and Law* (2018).

Some of the papers he presented are “Hannibal revisited: Antisocial personality disorder versus psychopathy – medicolegal perspectives from South Africa” at the XXXV congress by the International Academy of Law and Mental Health held in Prague in 2017; and “My brain made me do it – Reflections on the role of neuroscience in assessing criminal responsibility – A South African medico-legal perspective” at the XXXVI International Congress on Law and Mental Health held in Rome, Italy in 2019.

Prof Stevens received a C2 rating from the NRF.

Professor Johan Thom lives and works in Pretoria as a visual artist. He holds a PhD in Fine Art from the Slade School of Fine Art (UCL) on a Cannon Collins Commonwealth Scholarship and is an associate professor and coordinator of Fine Art at the University of Pretoria.

Prof Thom's artistic interests have gradually shifted from the body as a site of identity to a close exploration of the performative, material relationship between the body and found objects. His solo exhibitions include the Johannesburg Art Gallery, Iwalewahaus, Nirox Project Space, the Goodman Gallery and Kalashnikov Gallery. Group exhibitions include the Venice Biennale, the Canary Islands Biennale and the Palazzo delle Papesse.

He has participated in conferences, workshops and artistic programmes at the Venice Biennale, the University of Cambridge, the Slade School of Fine Art, dOCUMENTA 13, the University of Pretoria, 'The Octopus Programme', University of Applied Arts Vienna, the African Centre for the Study of the United States (IDSVA, Wits, UP, Nirox), 'A Research of Doing' (University of Applied Arts Vienna, The Centre For the Less Good Idea and UP), 'Listening at The Edge', Pro Helvetia, and elsewhere.

Prof Thom has been awarded numerous grants, residencies and fellowships including the Ampersand Foundation Fellowship, the Clair and Eduardo Villa Trust, Britto Arts Trust in Bangladesh, Pro Helvetia Residency Sierre, Switzerland and most recently the Casa Wabi Foundation.

Prof Thom received a C2 rating from the NRF.

Professor Noëlani van den Berg is a professor in the Department of Biochemistry, Genetics and Microbiology and the incumbent Hans Merensky Chair in Avocado Research in the Forestry and Agricultural Biotechnology Institute, Faculty of Natural and Agricultural Sciences.

She is a molecular plant pathologist, and her research is focused on unravelling the complex interaction between avocado and its two most important root rot pathogens, *Phytophthora cinnamomi* and *Rosellinia necatrix*. Through a multidisciplinary approach, including plant pathology, molecular biology and generating both genomic and transcriptomic resources, the research has significantly contributed to understanding the host defence mechanisms against the many pathogen effectors released during host infection. In the past three years, she has been the author of 16 articles in respected international scientific journals and presented the research at several local and international conferences. Since joining the University she has been a supervisor/co-supervisor of 24 master's and five doctoral students and hosted six postdoctoral fellows.

Prof Van den Berg received a C1 rating from the NRF.



Professor Philip Stevens



Professor Johan Thom



Professor Noëlani van den Berg



Professor Jacquie van der Waals

Professor Jacquie van der Waals is an extraordinary professor in the Department of Plant and Soil Sciences. Prof Van der Waals began her career in potatoes in 1998 with a PhD in the epidemiology of early blight on potatoes. She subsequently established the Potato Pathology Programme at the University of Pretoria in 2000. The first two decades of her career focused on understanding and managing potato pathogens, working towards potato health and establishing a dynamic team of postgraduate students.

Prof Van der Waals established herself as an authority on soil-borne diseases of potatoes, both in the South African and global potato industries, and gave keynote presentations at several local and international conferences. In 2022 she was presented the prestigious *Solanum tuberosum* award by Potatoes South Africa as a token of appreciation for how she executed her task and contributed to the company's vision, mission and values.

In 2022 Prof Van der Waals left the employ of UP to join Citrus Research International as Programme Manager of Preharvest Disease Research. Her research focus now is sustainable management of fruit and foliar diseases of citrus.

Prof Van der Waals received a C1 rating from the NRF.



Professor Henriette van Heerden

Professor Henriette van Heerden is a professor at the Department of Veterinary Tropical Diseases, Faculty of Veterinary Science, who started at the University of Pretoria (UP) in 2008.

Prof Van Heerden (née Britz) obtained a PhD at UP, where after she joined the ARC-Onderstepoort Veterinary Institute and worked on the Heartwater programme that completed the sequencing of the entire 1.51 Mb genome of *Ehrlichia ruminantium*. She started her academic career in the Department of Biochemistry at the University of Johannesburg in 2003. She started in January 2008 at the Department of Veterinary Tropical Diseases (DVTD) at UP, where she is currently a professor. At DVTD, she established research projects in zoonotic diseases, primarily focusing on anthrax and brucellosis. The projects predominantly focus on bacterial zoonotic diseases with a specific emphasis on the epidemiology and diagnosis of diseases such as *Brucella* species and *Bacillus anthracis*, as well as vaccine development. The aim is to improve the capability to understand, detect and control these diseases in wildlife and livestock. The multidisciplinary research projects include bacteriology, immunology, ecology, epidemiology and molecular biology characterisation of brucellosis and anthrax and anthrax vaccine development, consequently linking national and international collaborations.

Prof Van Heerden received a C1 rating from the NRF.



Dr Jurie van Vuuren

Dr Jurie van Vuuren is a professor at the University of Pretoria and coordinator of the Danie Cronje, SAB Chair in Entrepreneurship in the Department of Business Management. He initiated and developed the first bachelor's degree specialising in entrepreneurship in South Africa and was instrumental in developing the master's and doctoral degrees offered by the Department.

At age 25, Dr Van Vuuren started the first of four entrepreneurial start-ups in the horticulture, tourism, services and training and development industries. In 2002 he started in collaboration with Enterprises UP, an Entrepreneurship Education and Training and Consulting portfolio that has trained over 26 000 delegates all over South Africa and the African continent since then. He authored articles in South African journals and over 20 international conference proceedings. He has lectured at universities in South Africa, the USA, New Zealand, the Netherlands and African countries. Furthermore, Dr Van Vuuren was involved with several projects as a management consultant and project leader for Enterprises UP.

He has supervised 28 doctoral students and several master's students. He has published in various national and international journals and presented conference papers worldwide.

Dr Van Vuuren is one of the top sales generators at Enterprises UP. At the same time, he acted as HOD in the Department of Business Management and as a senior professor at UP for the past 27 years.

Dr Van Vuuren received a C2 rating from the NRF.

Professor Saloshna Vandeyar is a full professor and the Deputy Dean: Research and Postgraduate Studies in the Faculty of Education at the University of Pretoria. She was the Director of the Centre for Diversity and Social Cohesion. She served on the Senior Appointments Committee of the University.

She is an award-winning researcher with four international awards (2015, 2012, 2011, 2006) and three national awards. She was the runner-up for the Women in Science Award, 2017; finalist for the NSTF Lifetime Award 2014; and the Shoprite Checkers Woman of the Year, 2006. She also won the Gauteng Woman in Excellence Award in 2018. She is the recipient of five institutional research awards, two community awards for research and two merit awards for teacher professionalism and excellence.

Her research focuses on social, cultural and cognitive justice education, focusing on race inequalities and how all other kinds of inequalities are produced and reproduced in educational spaces by educational processes, practices and discourses. She serves on several editorial boards; has published widely (six scholarly books; 52 journal articles, 16 book chapters, numerous conference proceedings); has numerous international networks and has presented many invited keynote addresses. She has recently developed a theoretical framework called 'pedagogy of compassion' for diverse educational spaces.

Prof Vandeyar received a C1 rating from the NRF.

Professor Thiru Vandeyar, an associate professor in the Department of Science, Mathematics and Technology Education, has been in the education profession for over 43 years. His journey through education includes enriched learner experiences through race-differentiated syllabi, student protest actions, teacher strikes, curriculum transformations, educational language-conflict issues, and educational paradigm shifts.

His teaching experience covers all levels within the school hierarchy (teacher, HOD-mathematics, deputy-principal, and principal). It spans all levels of the education system (primary school, secondary school, teacher training college and higher education). He holds several degrees, including an MEd and a PhD in Computer Integrated Education. His various research grants promoted his research niche of ICT pedagogical best practices in teaching, hybrid learning and ICT education policy implementation. He coordinated the PhD (CIE) programme, supervised several doctoral, master's, and honours students and taught ICT in the undergraduate and PGCE programmes. Hallmarks of his innovative practice include using augmented reality, constructivist concept mapping, critical reflective practices and exploring cutting-edge technology to enhance teaching pedagogy and effective learning across various social-cultural contexts. Prof Vandeyar has published prolifically in both national and internationally accredited journals. In 2018 he achieved the UP-laureate award for Teaching Excellence.

Prof Vandeyar received a C2 rating from the NRF.

Professor Cori Wielenga is an associate professor in the Department of Political Sciences and the Director of the Centre for Mediation in Africa. She received her PhD in Conflict Resolution and Peace Studies from the University of KwaZulu-Natal in 2011. She was then awarded a postdoctoral fellowship at the University of Pretoria and secured a full-time position in the Department of Political Sciences at the University in 2018. Prof Wielenga has conducted policy-relevant research in peacebuilding, mediation and transitional justice. She contributed to developing the African Union's Transitional Justice policy, ratified in 2019. Through the work of the Centre for Mediation in Africa, Prof Wielenga has facilitated the training of women mediators on the African continent and developed online and offline training programmes for mediators. She has convened multiple policy-relevant stakeholder engagements between government departments, think tanks, civil society organisations, embassies and academics around the United Nations Women, Peace and Security agenda, peacebuilding and transitional justice.

Her most recent work has involved understanding the role of traditional leaders in governance and justice systems and within the Women, Peace and Security agenda. Prof Wielenga has secured millions of rands in funding from the NIHSS, NRF, CODESRIA, African Peacebuilding Network and Embassies in Pretoria through her work with the Centre for Mediation in Africa.

Prof Wielenga received a C2 rating from the NRF.



Professor Saloshna Vandeyar



Professor Thiru Vandeyar



Professor Cori Wielenga



Professor Albert Wocke

Professor Albert Wocke is a professor and permanent faculty member at the Gordon Institute of Business Science (GIBS). He heads up the Case Study Hub at GIBS and is the lead faculty of the MPhil Programme in International Business. Prof Wocke has been with GIBS since 2000, when he joined after a career as a trade union official. He was a founding member of the Public Service Bargaining Council. He represented the labour movement in the Public Finance and Monetary Policy Chamber of the National Economic Development and Labour Council.

Prof Wocke is a department head at GIBS and previously convened the NRF rating panel for management and administration. He has published widely with various academic and other articles. He is an Academy of International Business member and regularly reviews international and local academic journals. Prof Wocke regularly reviews academic journals, including the *California Management Review* and *European Business Review*. Several of his cases have been on the bestseller list at Harvard Business Publishing. He has supervised more than 200 MBA and MPhil students and graduated seven PhDs.

Since joining GIBS, Prof Wocke has taught international business strategy and human resources, strategy, and organisational behaviour. His research interests include institutions in emerging markets, industrial relations, the design and impact of HR strategy in multinational corporations and talent management in emerging markets. He regularly presents at the annual conference of the Academy of International Business, has presented papers at the American Academy of Management and the Royal Geographic Society, and has lectured in many locations, including Botswana, Kenya, Ghana, the UAE, Hong Kong, and Namibia.

Prof Wocke received a C2 rating from the NRF.



Professor Abdullahi Yusuf

Professor Abdullahi Yusuf is an associate professor in the Department of Zoology and Entomology in the Faculty of Natural and Agricultural Sciences, and a member of the Social Insects Research Group. He is also a principal investigator within the South African Research Chairs Initiative (SARCHI) in Mathematical Models and Methods in Bioengineering and Biosciences of the Department of Science and Technology and the National Research Foundation. He is affiliated with the Forestry Agricultural Biotechnology Institute and Innovation Africa@UP at the University of Pretoria.

He is a chemical ecologist interested in basic and applied chemical ecology to understand the evolution of organisation in insect societies and explore semiochemicals for managing and controlling insect pests and vectors. His current research focuses on understanding the physiological, behavioural and genetic basis of pheromone communication and reproductive dominance in honeybees and developing semiochemical-based management tools for invasive pests of agricultural importance and vectors of neglected tropical diseases and the use of edible insects.

In 2019, Prof Yusuf received the alumni award for networking initiatives and a Tandem research fellowships from the Alexander von Humboldt Foundation to conduct research in honeybee genetics at the Molecular Ecology Research Group, Martin Luther University, Halle-Wittenberg Germany. In 2021, he was appointed as Ambassador Scientist of the Alexander von Humboldt Foundation in South Africa.

Prof Yusuf received a C2 rating from the NRF.

Y-rated researchers

Dr Babatunde Awoyemi is a research fellow in the Department of Electrical, Electronic and Computer Engineering at the University of Pretoria. He completed his doctorate in 2017. He completed his master's degree in 2014 at the University of KwaZulu-Natal.

His research areas are next-generation wireless communications, particularly cognitive radio networks, advanced wireless sensor networks, the Internet of Things, edge computing, and sixth-generation networks. He also develops artificial intelligence and machine learning-based solutions for physical and medium access control (MAC) layer problems in emerging next-generation networks. He has in-depth knowledge of optimisation, queuing theory and network restoration and their applications in next-generation wireless communication networks.

He recently co-authored a book, *Developments in Cognitive Radio Networks: Future Directions for Beyond 5G*, which Springer International published in 2022.

Dr Awoyemi received a Y2 rating from the NRF.



Dr Babatunde Awoyemi

Dr Michael Barrett-Berg is the conductor of the Tuks Camerata and a senior lecturer in the Department of Music in the Faculty of Humanities. He serves on the Advisory Board of the World Choir Council (Germany) and the International Choral Conductors Federation (Italy). He is an active member of the American Choral Directors Association (ACDA) and the International Federation of Choral Music.

Dr Barrett-Berg has more than 40 compositions and arrangements published internationally, focusing on producing traditional South African works for choirs. As a performing artist, he aims to record and produce albums that celebrate South African music, both Western and African. His research focuses on the value of choral music education within a multicultural South Africa, particularly on adapting teaching strategies to suit a diverse environment.

Under his directorship, the Tuks Camerata has won international awards, is regularly invited to perform at conferences and symposia, and produced four music albums, all to critical acclaim. In March 2025, the Camerata will perform as a headline choir at the National ACDA in Dallas, USA – the first choir from Africa to receive this honour. He is a sought-after clinician, workshop presenter, adjudicator and lecturer. He will be the artistic director for the African Asia Pacific Choir Games in Mauritius in 2025. He is also the conductor and managing director of South Africa's largest community, the Capital Singers.

Dr Barrett-Berg received a Y2 rating from the NRF.



Dr Michael Barrett-Berg

Professor Hendrik Brink is an associate professor in the Department of Chemical Engineering in the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria. His research focuses on waste valorisation for sustainable development and promoting a circular economy.

Prof Brink has achieved outstanding research excellence in his relatively short research career. He has co-authored 73 publications (65 accredited journal articles); 34 of his publications appeared in top-tier journals such as the *Chemical Engineering Journal*, *Journal of Cleaner Production*, *Journal of Hazardous Materials*, *Journal of Colloid and Interface Science*, and *New Biotechnology*.

His research impact is evident, with 438 citations and an h-index of 11. The University of Pretoria recognised his contributions with the Exceptional Young Researcher Award in 2019. In 2022, he received an NRF Y rating and was promoted to associate professor. Prof Brink has also been actively involved in research projects, successfully supervising and co-supervising four doctoral and 16 master's degree projects, with several receiving distinctions. He supervises four doctoral candidates and ten master's degree candidates, some nearing completion.

Overall, Prof Brink's early career has been highly productive, and he continues to create opportunities for future contributions to research.

Prof Brink received a Y2 rating from the NRF.



Professor Hendrik Brink



Dr Geoffrey Brown

Dr Geoffrey Brown is a senior lecturer in the Section Reproduction, Department of Production Animal Studies in the Faculty of Veterinary Science. He is a clinical specialist in theriogenology (the branch of veterinary science that specialises in animal reproduction).

Dr Brown is an active veterinary practitioner in veterinary students' didactic and experiential training. Among many other topics, he is interested in the effect of the incubation environment on foetal development in reptiles and has conducted research in that field. He described the movement of calcium and phosphorus from the egg to the foetus in the Nile crocodile. Recently, he designed and built a fluctuating temperature incubator to study the effect of fluctuating incubation temperatures on Nile crocodile foetal development.

Dr Brown received a Y2 rating from the NRF.



Dr Allan de Freitas

Dr Allan de Freitas is a senior lecturer at the Department of Electrical, Electronic and Computer Engineering at the University of Pretoria.

He obtained his PhD from the University of Sheffield, United Kingdom, with the Department of Automatic Control and Systems Engineering in 2017. During his time in the United Kingdom, he held the position of an early-stage researcher as part of an Initial Training Network funded by the European Union under the Marie Curie Actions in the Seventh Framework Programme. He is a registered professional engineer with the Engineering Council of South Africa.

Dr De Freitas' research interests encompass many areas within signal processing, including Bayesian methods, Monte Carlo methods, nonlinear estimation, target tracking, sensor data fusion, and machine learning. His expertise extends to both theoretical and applied levels, focusing on applications in radar tracking, precision farming, and smart grids. His multidisciplinary approach enables him to tackle complex challenges and develop innovative solutions.

Dr De Freitas received a Y2 rating from the NRF.



Dr Jurgens de Lange

Dr Jurgens de Lange is a senior theoretical and computational chemistry lecturer at the Department of Chemistry, Faculty of Natural and Agricultural Sciences. He is an early career researcher and achieved his PhD from the University of Pretoria in 2018.

His research focuses on developing quantum chemical models to describe electron delocalisation patterns. During and after completion of his PhD, he developed the fragment, atomic, localised, delocalised and interatomic (FALDI) electron density decomposition scheme. FALDI translates holistic, physical models to reductionist, atomistic chemistry.

As a fully human- and machine-readable model, it is currently being developed to train machine-learning models on fundamental chemistry concepts.

Dr De Lange is on the executive committee of the North Section of the South African Chemical Institute. He is also the principal double bassist of the Gauteng Philharmonic Orchestra.

Dr De Lange received a Y2 rating from the NRF.

Dr Rory du Plessis is a senior lecturer and programme coordinator for visual studies in the School of the Arts in the Faculty of Humanities. In 2014, he was awarded a pre-doc fellowship at the Max Planck Institute for the History of Science, Berlin, Germany. In 2018, he received his PhD in mental health from the Centre for Ethics and Philosophy of Health Sciences, University of Pretoria. He is the co-editor of the academic journal, *Image & Text*.

His primary research niche is a hermeneutic analysis of the archived records of the Grahamstown Lunatic Asylum, circa 1890 to 1920. From this research niche, he has pioneered three novel contributions to the history of psychiatry. Firstly, he is the first researcher in the country to analyse the visual culture and photography of the asylum. Secondly, he has explored the re-admission pathways of asylum patients; this is a noteworthy area of research that historians of psychiatry have tended to overlook. Thirdly, he has broken new research ground by offering the first study on the lives and experiences of people with intellectual disabilities who were institutionalised at the asylum. This project presents the first on the history of intellectual disability in South Africa.

Dr Du Plessis received a Y1 rating from the NRF.



Dr Rory du Plessis

Dr Renata Eccles is a senior lecturer in the Department of Speech-Language Pathology and Audiology in the Faculty of Humanities. She engages in theoretical and clinical undergraduate student training and postgraduate research studies. Dr Eccles is the head of the communication pathology modules within her department. These modules focus on the shared aspects of the speech-language pathology and audiology fields, such as community engagement and early intervention. She shares the coordination of the final-year communication pathology practical module, where early communication intervention services are offered to families of young children with communication difficulties.

Dr Eccles and her colleague, Dr Esedra Krüger were awarded the University of Pretoria Community Engagement Award in 2021 for their coordination and outputs in this module. Her research focuses on early intervention and innovative responses to developmental and academic challenges young children in South Africa face, including visual impairment, developmental delays and literacy acquisition. She is also interested in interprofessional education and collaboration in teaching and research. She has partnerships with Stellenbosch University, Texas Woman's University, and the African Interprofessional Education Network (AfriPEN).

Dr Eccles received a Y2 rating from NRF.



Dr Renata Eccles

Dr Jarishma Gokul (PhD Polar Microbiology) is a lecturer in the Department of Plant and Soil Sciences in the nGAP programme. She received her PhD in Polar Microbiology at Aberystwyth University, Wales (2017). Her research, centred on the systems biology of dynamic Arctic supraglacial microbial ecosystems, yielded five publications in international peer-reviewed journals and popular media. Her current research focuses on microbial ecology and systems biology of polar and temperate terrestrial and marine landscapes using omics technique as well as the soil-plant-food-human microbiome nexus.

Dr Gokul was the recipient of two DST-NRF postdoctoral fellowships, at the Centre for Microbial Ecology and Genomics (CMEG) (2018-2020) and Plant Pathology (2020), for researching the impacts of climate change on Antarctic soil microbiomes and agricultural microbiomes related to food production and health, respectively.

She began lecturing in the Department of Plant and Soil Sciences in 2021, where she coordinates numerous microbiome-based research activities within the Department. During this time, she has been a fellow in the 2021-2022 cohort of the ARUA - UKRI GCRF Food Systems Research Network for Africa (FSNet-Africa) and was also awarded as one of the #InspiringFiftySA women in STEM in 2021.

Dr Gokul received a Y2 rating from the NRF



Dr Jarishma Gokul



Dr Calisto Guambe

Dr Calisto Guambe was a lecturer in the Department of Mathematics and Applied Mathematics in the Faculty of Natural and Agricultural Sciences until August 2022. He is currently an assistant professor in the Department of Mathematics and Informatics, Faculty of Science at Eduardo Mondlane University, Mozambique.

His research focuses on Stochastic Calculus, Mathematical Finance, Financial Engineering, and Actuarial Mathematics. Under these areas, he studies various stochastic optimal control problems in financial and actuarial mathematics. This research was published in seven articles in high-impact quality peer-reviewed journals in the past three years.

In 2021, he was awarded the Research Development Programme (RDP) Grant for three years.

He has served as a Secretary of the Local Organising Committee to organise the 2022 Southern Africa Mathematical Sciences Association conference held in Maputo, which has attracted many international researchers.

Dr Guambe received a Y2 rating from the NRF.



Dr Abe Kasonga

Dr Abe Kasonga is a senior lecturer in the Department of Physiology in the Faculty of Health Sciences. He received his PhD in 2018 from the University of Pretoria. His research has focused on investigating novel therapeutics that target G-protein coupled receptors in treating bone degenerative disorders such as osteoporosis. He has been awarded the NRF Thuthuka grant from 2017-2019 and again from 2020-2022.

Dr Kasonga has co-authored 13 papers in international peer-reviewed journals, which have received over 200 citations. He presented his research at the International Society for the Study of Fatty Acids and Lipids (ISSFAL) conference in 2016, where he was awarded a Top 3 New Investigator Award. He again presented at ISSFAL in 2018 and was awarded a Top 10 New Investigator Award.

Dr Kasonga received a Y2 rating from the NRF.



Dr Sesuai Madanha

Dr Sesuai Madanha is a senior lecturer in the Department of Mathematics and Applied Mathematics in the Faculty of Natural and Agricultural Sciences. He has received awards and scholarships, including Best Postgraduate Presentation at the South African Mathematical Society (SAMS) Congress, 2015, DSI-NRF CoE-MaSS Postgraduate Bursary and PhD Pilot Programme Bursary, University of Pretoria.

He was a lecturer in mathematics at the University of Zimbabwe and a postdoctoral fellow at the University of KwaZulu-Natal. In 2020 he joined the University of Pretoria as a lecturer. In 2021, he was awarded the Research Development Programme (RDP) Grant for three years. His research is on the products of finite groups and the character theory of finite groups. He serves as a reviewer for some highly regarded mathematics journals.

He has contributed to organising workshops and conferences in South Africa, which have attracted many international researchers. Dr Madanha has presented papers on his work in South Africa, Mozambique, Namibia, the US and Switzerland. He is a member of the South African Mathematical Association, South African Mathematical Sciences Association and the American Mathematical Society.

Dr Madanha received a Y2 rating from the NRF.

Dr Frikkie Malan is a lecturer and crystallographer in the Department of Chemistry, in the Faculty of Natural and Agricultural Sciences. He is involved in the teaching of Inorganic Chemistry modules at second, third, and honours levels and is the leader of his recently established research group. As a crystallographer and manager of the XRD facility in the department, he is interested in elucidating the solid-state molecular structure of compounds to ascertain their identity and determine other interesting chemical properties.

His research focuses on the design, economic synthesis, and characterisation of new transition metal compounds with a purpose. Application of the novel compounds as biologically active agents, as evaluated in anti-cancer and anti-bacterial studies, as well as catalysts in various carbon-carbon, carbon-oxygen, and carbon-nitrogen bond activation reactions, form part of the primary focus areas. As an alumnus of the annual Lindau Nobel Laureate Meetings, where he had the privilege to meet more than 25 Nobel prize winners in chemistry, he derives inspiration from the hard work, perseverance and curiosity each laureate exhibits. He is a recipient of the NRF Thuthuka grant (second cycle, 2021–2024) and an author of 51 international peer-reviewed journal articles.

Dr Malan received a Y2 rating from the NRF.

Dr Benjamim Mapossa is a researcher associate in the Department of Chemical Engineering, University of Pretoria, South Africa, and the Department of Chemical and Petroleum Engineering, University of Calgary, Canada. In 2016, he received a master's degree from the Federal University of Campina Grande, Brazil. In 2019, he obtained his PhD from the University of Pretoria. After defending his thesis, he started working as a postdoctoral researcher.

He has conducted research in materials science and technologies, focusing on the structure, processing, and properties of polymer nanocomposites with fillers towards diverse applications. The research work covers chemical and polymer technology and nanomagnetic materials. This research has culminated in several papers published in international peer-reviewed journals, peer-reviewed conference proceedings, and book chapters.

Dr Mapossa has supervised seven postgraduate students (honours, master's and doctoral levels). Furthermore, he has been invited as external examiner of final-year students, master's dissertations and doctoral theses in South Africa and Brazil. He has been an NRF reviewer for a PhD proposal grant. Dr Mapossa has also reviewed papers for various ISI journals.

Dr Mapossa received a Y2 rating from the NRF.

Dr Rahaba Marima is a senior Pan African Cancer Research Institute (PACRI) research scientist. She leads her research in cancer genomics, cancer health disparities and precision oncology. She is involved in mentoring and teaching the cancer research elective module, third-year MBChB. She also teaches Genomics 101 courses for clinician scientists and cancer researchers. Dr Marima supervises seven master's students in medical oncology and one doctoral student. She also co-supervises two clinician scientists, PhD students, and an MMed. Since she joined the University of Pretoria three years ago, she has authored 20 articles and seven book chapters, with an additional two published conference proceedings and has an h-index of 7. She is a regular reviewer of leading Oncology journals and guest editor of the *Journal of Biological Regulators and Homeostatic Agents*. She also serves as a member of the cervical cancer HPV screening committee within PACRI.

Additionally, in 2021, she was one of the global 15 and the only South African awardee of the AACR Global Scholar In Training Award. She is also a Golden-Key International Honour Society member and a member of Human Heredity and Health in Africa. Furthermore, Dr Marima is a member of the South African Society for Biochemistry and Molecular Biology, Southern African Society for Human Genetics, American Society of Cell Biology, African Organisation of Research and Training in Cancer and American Association for Cancer Research. Understanding and redressing cancer health disparities in underserved communities is critical to her research.

Dr Marima received a Y2 rating from the NRF.



Dr Frikkie Malan



Dr Benjamim Mapossa



Dr Rahaba Marima



Professor Adrino Mazenda

Professor Adrino Mazenda is an associate professor and member of the Economic Management Sciences (EMS) ethics committee in the School of Public Management and Administration.

His research focuses on social policy, contributing to global food security, and the poverty debate from an interdisciplinary perspective. He has published extensively in this area, with some of his publications appearing in *The Conversation*: a platform for cutting-edge academic research engagement. Moreover, he has been visible in the media (television and radio).

In addition, Prof Mazenda has received several grants for research and travel. In 2022, he received the best EMS Faculty Emerging Researcher Award in management sciences. He serves as a member of the City of Johannesburg's migration advisory panel and is involved in various community engagement activities.

Prof Mazenda received a Y2 rating from NRF.



Dr Fiona Mumoki

Dr Fiona Mumoki is a postdoctoral research fellow with the Social Insects Research Group at the Department of Zoology and Entomology, where she is unpacking the molecular underpinnings of behaviour and reproductive division of labour in social insects.

Her research interests span various aspects of the lives of social insects. She earned a PhD in entomology in 2020, working with Professors Robin Crewe, Christian Pirk and Abdullahi Yusuf, exploring the molecular basis of reproductive dominance in the Cape honey bee – *Apis mellifera capensis*. While at the International Center for Insect Physiology and Ecology in Nairobi, Kenya, Dr Mumoki spent time examining aspects of the health and ecology of honey bees in East Africa, aimed at developing molecular tools for diagnosing honey bee diseases. She earned a master's degree in genetics in 2014 under the supervision of Dr Daniel Masiga (The International Centre of Insect Physiology and Ecology) and Professor Anne T Muigai (Jomo Kenyatta University of Agriculture and Technology, Kenya).

Dr Mumoki has received various awards and fellowships, including the NRF innovation postdoctoral fellowship (2021), the University of Pretoria Postdoctoral Fellowship (2020), L'Oréal-UNESCO for Women in Science Fellowship for sub-Saharan Africa (2018), African Women in Agricultural Research and Development Fellowship (2015), Organisation for Women in Science for the Developing World postgraduate fellowship (2015).

Dr Mumoki received a Y2 rating from the NRF.



Dr Bianca Parry

Dr Bianca Parry is the Programme Director: Research at the Centre for Mediation in Africa in the Department of Political Studies, Faculty of Humanities.

In 2019, she received a PhD in Psychology from the University of South Africa. In 2021, her postdoctoral research project on developing academic resources and online platforms to democratise educational opportunities for incarcerated women was awarded the Working Groups Programme research grant from the National Institute for the Humanities and Social Sciences.

She has presented and published internationally on the lived experiences of marginalised and vulnerable communities in South Africa, specifically focusing on women and gender. In 2019, her research was recognised with a Special Commendation from the British Psychological Society's Psychology of Women and Equalities Section. In 2021, her research on the effects of the COVID-19 pandemic in South Africa was recognised by the United Nations civil society component of the Commission on the Status of Women, where she was invited as a panellist for their plenary discussion of "Global Mental Health in a Global Pandemic: Understanding the Impact of COVID-19 on the Mental Balance of Women."

Dr Parry received a Y2 rating from the NRF.

Dr Jack Radcliffe is a lecturer of astrophysics in the Department of Physics in the Faculty of Natural and Agricultural Sciences, and is an honorary research fellow at the University of Manchester (UK). In 2019, he received his PhD from the University of Manchester and the University of Groningen (Netherlands). He then moved to the University of Pretoria as a postdoctoral fellow before becoming a lecturer in 2021.

His research focuses on the supermassive black holes in the centre of all galaxies using premier radio telescopes worldwide. This research has been significant, and was published in a press release in 2021 that was featured in national and international media outlets.

Recently, he has begun to focus on the Square Kilometre Array, a world-leading international telescope being built in South Africa and Australia. Over the past seven years, he has taught the next generation of radio astronomers from sub-Saharan Africa through the Development in Africa with Radio Astronomy programme. He has contributed to developing the new astrophysics group at the University of Pretoria.

Dr Radcliffe received a Y1 rating from the NRF.



Dr Jack Radcliffe

Dr David Read is a postdoctoral fellow in the Department of Biochemistry, Genetics and Microbiology, in the Faculty of Natural and Agricultural Sciences at the University of Pretoria.

He obtained his PhD from the University of Pretoria in 2015, specialising in plant virology. Since then, Dr Read has held several highly productive postdoctoral fellowships at the Agricultural Research Council and UP.

Dr Read currently leads the Plant Virology Group at the Forestry and Agricultural Biotechnology Institute at UP, where he supervises students at various stages of postgraduate training and serves as a guest lecturer within the Faculty.

During his PhD, Dr Read significantly contributed to current knowledge of the citrus tristeza virus in South Africa. Over the past five years, he has been at the forefront of plant virus discovery in South Africa, particularly on previously understudied crop species, publishing dozens of manuscripts in highly respected journals. Dr Read is an ambassador for the British Society of Plant Pathology and serves on the Equality, Equity, Diversity and Inclusion Committee.

Dr Read received a Y2 rating from the NRF.



Dr David Read

Dr Odirilwe Selomane is a senior lecturer in the Department of Agricultural Economics, Extension and Rural Development in the Faculty of Natural and Agricultural Sciences.

His research lies broadly in Sustainability Science. He studies nature's contributions to people, ecosystem services and human wellbeing, natural capital accounting, the nexus of food/biodiversity/climate change/water, and sustainability indicators and measurements. He is currently involved in several projects in South Africa and internationally, from calculating a strong environmental sustainability index for South Africa to embedding behavioural change in Integrated Assessment Models.

He was nominated and appointed as a Coordinating Lead Author of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services from 2022–2024, working on a chapter on the future of nexuses (biodiversity, food, water, health and climate change). This role within an IPBES assessment, shared with two other experts, is to assume overall responsibility for coordinating a chapter of the assessment report.

Dr Selomane received a Y1 rating from the NRF.



Dr Odirilwe Selomane



Dr Nkululeko Sibanda

Dr Nkululeko Sibanda is a lecturer and researcher in the School of Arts: Drama, Faculty of Humanities.

In 2018, he received his PhD from the University of KwaZulu-Natal (Howard College). Following his PhD, he has worked at several universities in Zimbabwe, including Great Zimbabwe University, University of Zimbabwe and Lupane State University. His research adopts inter- and multi-disciplinary approaches, not only to theatre practice but to the generality of cultural production and practice, that destabilise the assumed primacy of modern Western structures of visual language, knowledge, and semiotic models as well as expose the hidden and calamitous objectives of Western epistemological and ontological positions that foregrounded professional theatre training and practice in particularly Zimbabwe and generally Africa. Through his research and teaching, he seeks to interrogate and theorise the processes of cultural production and their significance within the multi-faceted performance and visual genres emerging from the communities on the margins as a counter framework.

Dr Sibanda received a Y2 rating from the NRF.



Dr Ansie Smit

Dr Ansie Smit is a senior lecturer in the Department of Geology in the Faculty of Natural and Agricultural Sciences. With a background in financial mathematics and mathematical statistics, Dr Smit was employed at the UP Natural Hazard Centre in 2009.

In 2019 she received a PhD from the University of Pretoria, where her thesis focused on the statistical modelling of various geological, meteorological, and hydrological natural disasters when faced with incomplete datasets containing different forms of aleatory and epistemic uncertainty. In 2020 she accepted a lecturing post in the Department of Geology with teaching and supervision responsibilities in both the department and the Department of Statistics.

Her research interests cover multidisciplinary theoretical and applied fields of statistics and geosciences with direct applications in the insurance, mining, construction, and nuclear industries. It includes developing and applying methodologies to counter the effect of missing data in statistical procedures, accounting for high levels of aleatory and epistemic uncertainty in data, numerical and computing techniques, data analysis, and other applied statistical methods necessary for hazard and risk assessment, including geo- and spatial statistics, Bayesian statistics, and extreme value theory.

Dr Smit received a Y2 rating from the NRF.



Professor Shepherd Tichapondwa

Professor Shepherd Tichapondwa is an associate professor in the Department of Chemical Engineering in the Faculty of Engineering, Built Environment and Information Technology. He holds the following qualifications: BEng (Hons) (Chemical Engineering) (National University of Science and Technology, Zimbabwe), BEng (Hons), MEng (Chemical Engineering) and PhD (Engineering) from the University of Pretoria.

His research focuses on the synthesis, formulation and application of materials for various applications. In particular, the research covers pyrotechnics and energetic materials, where we seek to develop "green" time delay compositions and lead-free primary explosives for use in commercial and military detonators. Additionally, he is actively involved in developing advanced drinking and wastewater treatment technologies.

His main project involves the development of visible light-activated photocatalysts that can be applied to degrade refractory and emerging organic pollutants. His other focus areas include synthesising and tailoring cost-effective adsorbent materials, microbial fuel cells, phytoremediation and phytomining. His research activities have culminated in several scientific peer-reviewed journal articles, and he has presented at national and international conferences. He also received the University of Pretoria's Exceptional Young Researchers Award in 2021.

Prof Tichapondwa received a Y2 rating from the NRF.

Dr Danielle Twilley is a senior postdoctoral researcher at the University of Pretoria in the Department of Plant and Soil Sciences in the Faculty of Natural and Agricultural Sciences.

Her research focuses on developing potential drugs from medicinal plants and natural products for treating melanoma and angiogenesis associated with cancer metastasis. She has published 25 articles in peer-reviewed accredited journals and eight book chapters, presented at several national and international conferences and has been granted a US and an Australian patent for her research on the potential of South African plants for treating skin cancer. She has served as a guest editor for *Pharmaceuticals* (MDPI) and a reviewer for *Frontiers in Pharmacology*. She has an h-index of 14 (Google Scholar) with an average of 1017 citations.

Dr Twilley co-supervises three doctoral, four master's and one honours student and has previously co-supervised two master's and six honours students. She was recognised by the L'Oreal-UNESCO International Rising Talents programme and received the L'Oreal-UNESCO Women in Science Sub-Saharan Regional Award, the South African Women in Science Award and the Biotech Fundi Postgraduate Award. She has successfully obtained funding through the Gauteng Accelerator Program (GAP) Biosciences Innovation Award and the Technology Innovation Agency.

Dr Twilley received a Y2 rating from the NRF.

Dr Mia Wege is a lecturer in the Department of Zoology and Entomology in the Faculty of Natural and Agricultural Sciences.

Dr Wege is interested in using novel developing technologies and quantitative methods to understand species distributions and relationships with their environment.

Her research broadly focuses on the distribution, habitat use, foraging ecology and population dynamics of marine predators, with a specific interest in seals and Antarctica and the impacts of climate change on these populations.

Currently, Dr Wege has several projects targeting the Weddell Sea in Antarctica and serves on the international expert panel of Southern Ocean scientists designing a Marine Protected Area in the region. She is an NRF-funded South African National Antarctic Programme co-principal investigator studying Ross seals. She is also an associated guest scientist of the Alfred Wegener Institute for Polar and Marine Research in Germany. In this project she and her team deploy specialised satellite trackers that collect oceanographic and behavioural data on Weddell Seals. The seals are the oceanographic samplers that help us understand warm and cold-water fluxes in the Weddell Sea from a global change perspective. This study has among others, led to the discovery of the largest ever nesting fish colony in the Antarctic waters. She has also worked on novel methods to count seals in the Weddell Sea from satellite images.

Dr Wege received a Y1 rating from the NRF.



Dr Danielle Twilley



Dr Mia Wege

NATIONAL RESEARCH FOUNDATION RATING CATEGORIES

Definitions of rating categories

Category	Definition	Sub-category	Description
A	Researchers who are unequivocally recognised by their peers as leading international scholars in their field for the high quality and impact of their recent research outputs	A1	A researcher in this group is recognised by all reviewers as a leading scholar in his/her field internationally for the high quality and wide impact (ie beyond a narrow field of specialisation) of his/her recent research outputs.
		A2	A researcher in this group is recognised by the overriding majority of reviewers as a leading scholar in his/her field internationally for the high quality and impact (either wide or confined) of his/her recent research outputs.
B	Researchers who enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs	B1	All reviewers concur that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs, with some of them indicating that he/she is a leading international scholar in the field.
		B2	All or the overriding majority of reviewers are firmly convinced that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs.
		B3	Most of the reviewers are convinced that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs.
C	Established researchers with a sustained recent record of productivity in the field who are recognised by their peers as having: <ul style="list-style-type: none"> produced a body of quality work, the core of which has coherence and attests to ongoing engagement with the field and demonstrated the ability to conceptualise problems and apply research methods to investigating them 	C1	While all reviewers concur that the applicant is an established researcher (as described), some of them indicate that he/she already enjoys considerable international recognition for his/her high-quality recent research outputs.
		C2	All or the overriding majority of reviewers are firmly convinced that the applicant is an established researcher (as described).
		C3	Most of the reviewers concur that the applicant is an established researcher (as described).
P	Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of application and who, on the basis of exceptional potential demonstrated in their published doctoral work and/or their research outputs in their early postdoctoral careers are considered likely to become future leaders in their field		Researchers in this group are recognised by all or the overriding majority of reviewers as having demonstrated the potential of becoming future leaders in their field, on the basis of exceptional research performance and output from their doctoral and/or early postdoctoral research careers.
Y	Young researchers (40 years or younger), who have held the doctorate or equivalent qualification for less than five years at the time of application, and who are recognised as having the potential to establish themselves as researchers within a five-year period after evaluation, based on their performance and productivity as researchers during their doctoral studies and/or early postdoctoral careers	Y1	A young researcher (within five years from PhD) who is recognised by all reviewers as having the potential (demonstrated by research products) to establish him-/herself as a researcher with some of them indicating that he/she has the potential to become a future leader in his/her field OR A young researcher (within five years from PhD) who is recognised by all or the overriding majority of reviewers as having the potential to establish him-/herself as a researcher of considerable international standing on the basis of the quality and impact of her/his recent research outputs
		Y2	A researcher in this group is recognised by all or the overriding majority of reviewers as having the potential to establish him-/herself as a researcher (demonstrated by recent research products).

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