



RESEARCH REPORT 2013



UNIVERSITY OF
KWAZULU-NATALTM
INYUVESI
YAKWAZULU-NATALI

INSPIRING GREATNESS



UNIVERSITY OF
KWAZULU-NATAL™
INYUVESI
YAKWAZULU-NATALI



CONTENTS

RESEARCH REPORT 2013

A Research Ethos	2
Driving Research Capacity	4
Research Focus Areas	10
Leading Research Centres	24
South African Research Chairs Initiative (SARChI)	31
NRF-Rated Researchers	43
Fellows of the University	56
DST Women in Science 2013	60
L'Oreal-UNESCO Science Fellowships	62
Prolific Researchers	64
Top Published Researchers	78
Emerging Researchers	82
Doctoral Graduates	84
Research Grants and Contracts 2013	97
Statutory Income from the NRF	108
Titles Published by UKZN Press	110



Produced by:

The Research Office and Corporate Relations Division
University of KwaZulu-Natal
Telephone: +27 (0) 31 260 2381
Email: dvcresearch@ukzn.ac.za
Website: www.ukzn.ac.za

Design and Layout: ▲ Artworks Communications

Photography: Anand Govender, Independent Newspapers,
Corporate Relations Archive, Thembinkosi Dwayisa
(Sunday Times), Artworks Communications
Printing: Atlas Printers



A RESEARCH ETHOS

MESSAGE FROM THE VICE-CHANCELLOR AND PRINCIPAL
PROFESSOR MALEGAPURU W MAKGOBA

“The scholarly and scientific work of our academics and researchers must be applauded. As a research-intensive institution your contributions underpin the excellent standing of the University at a global level.”

The University of KwaZulu-Natal (UKZN) was rated number one in Africa for the first time in the Webometrics Rankings released in August last year. Webometrics currently uses two criteria to measure the ranking of websites, namely, ‘Visibility’ of the website (which is the impact the website has) and ‘Activity’ on the website.

The latter is composed of three equally weighted sub-criteria: Presence, Openness and Excellence. The Webometrics of World Universities is an initiative of the Cybermetrics Laboratory in Spain and is the largest academic ranking of Higher Education Institutions using an *a priori* scientific model for the building of the composite indicator. In this context, the achievement by UKZN is significant as the rankings show an increase in ratings from fifth position to first on the African continent.

Globally UKZN is now placed at 381 as compared to 773 in 2012. A total of 11 994 Higher Education Institutions (HEIs) were assessed globally of which 974 were HEIs in Africa. In terms of access to research publications, informal scholarly communication and electronic publications, the University has achieved a significant goal and a special tribute must go to staff, students, the Research Office and Corporate Relations for achieving this.

The greatest improvement and the main contributing factor for the increase in the ranking is the Impact Criterion which is calculated from the number of links on diverse third-party sites to the UKZN website. Those links are seen as recognising the institutional prestige, the academic performance, the value of the information, and the usefulness of the services as introduced in the webpages according to the criteria of millions of web editors the world over. The University has also seen an increase in rankings in terms of ‘Openness’ and ‘Excellence’.

Openness is a measure of the number of rich files published on institutional research repositories according to the academic search engine, Google Scholar. One of the contributing factors that has led to the increased ‘Openness Ranking’ is the regular updating of the database by the Research Office. Excellence is measured by the number of academic papers published in high impact international journals and hence, the increase in Openness and Excellence rankings reflects an increase in both the quantity and quality of academic papers being published from UKZN.

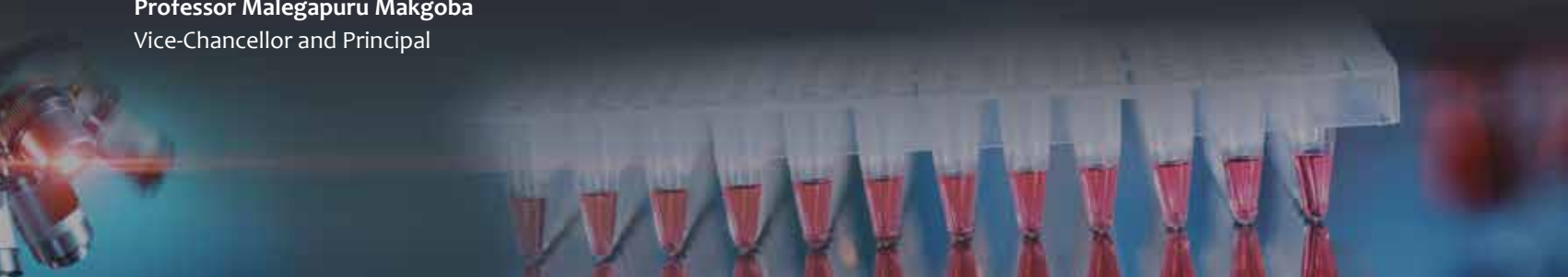
The scholarly and scientific work of our academics and researchers must be applauded. As a research-intensive institution your contributions underpin the excellent standing of the University at a global level. This is not only reflected

“UKZN is now one of the leading research universities on the continent and globally as measured by all the world university ranking bodies.”

in the recent rating as described above but the research productivity which not only exceeds the previous year's in terms of publications, but also the number of staff publishing and the increase in per capita output. This is a clear demonstration that the research ethos has been embraced across all sectors of the research community, which is also indicative of the success in the capacity building and transformation initiatives of the institution.

UKZN is now one of the leading research universities on the continent and globally as measured by all the world university ranking bodies. The increase in the number of funded research projects indicates an enhanced institutional capacity and a reputation that is attracting world-renowned scholars. I would like to take this opportunity to thank all the staff and students for their hard work, which contributes to the reputation and recognition of UKZN as a research-led institution. I would also like to welcome Professor Jonathan Blackledge who, as the new Deputy Vice-Chancellor for Research, is set to enhance the research ethos of the University and expand it further. I look forward to the exciting new developments that he and his office are in the process of establishing.

Professor Malegapuru Makgoba
Vice-Chancellor and Principal





DRIVING RESEARCH CAPACITY

MESSAGE FROM THE DEPUTY VICE-CHANCELLOR FOR RESEARCH
PROFESSOR JONATHAN BLACKLEDGE

“The institutional commitment to research is compounded in the quantity and diversity of its doctoral and postdoctoral scholarships which increased markedly in 2013.”

The research productivity in 2013 has been excellent in all respects with an overall increase of 13% compared with 2012.

As in previous years, UKZN's research productivity for 2013 was compounded by steady and sustained growth in terms of the number of publications, the postgraduate research throughput, the funding awarded and the participation in research by staff across the entire spectrum of the Institution's academic portfolio, making the University one of Africa's premier research focused academic establishments.

In July 2014, the University was ranked in the top 2.1% of the world's leading academic institutions by the Centre for World University Rankings. It has been ranked in the top 3% of the World's Universities by the Academic Ranking of World Universities, the QS World University Rankings and the Times Higher Education Ranking. The Academic Ranking of World Universities identifies UKZN as one of the top three Universities in Africa while the Institution is ranked 45th out of a total of 700 Universities, according to the Times Higher Education's first ranking of the BRICS and emerging economies Universities.

As reported by the Vice-Chancellor and Principal, Professor Malegapuru Makgoba, the recent Webometrics Rankings places the University first on the African

continent. This achievement reflects both the teaching and research excellence within the University and will be a source of satisfaction to both staff and students alike. It is thus with great pleasure and personal satisfaction that I present this 2013 Research Report and would like to take this opportunity to thank and congratulate my predecessor, Professor Nelson Ijumba, for his ceaseless determination in developing the research portfolio of the University.

In addition to government funding, 2013 has seen a further drive to attract funds through grants and contracts with industry. This reflects an enhanced capacity for the University to develop commercial collaborations and partnerships and is indicative of its 'calling' to exercise its massive entrepreneurial potential. This is in keeping with the institutional vision of being the 'Premier University of African Scholarship', where UKZN is seen not only as a centre of academic excellence for its teaching and research activities, but a major player in the commercialisation of its research outputs and thereby its engagement with industry and commerce. This is in alignment with the development of a knowledge-based economy in which the University sector collaborates with both government and industry. The concept of an 'Entrepreneurial University' is designed to close the gap between research undertaken at academic institutions and the potential commercialisation of their

“The University continues to enjoy a range of accolades for its research staff.”

research activities, and, in this respect, UKZN is now set to embrace entrepreneurship with the same vitality and determination which underpins its scholastic activities.

The Institutional commitment to research is compounded in the quantity and diversity of its doctoral and postdoctoral scholarships which increased markedly in 2013. The number of doctoral degrees awarded increased by 24% compared to 2012, closely matched by an increase by 15% for Masters by Research awards. Funding from the National Research Foundation increased by 7% compared with 2012. Indeed, in all aspects of the University's research portfolio there was a significant annual rise in the research output as reflected in the Research Productivity Units of staff which increased by 13% from the previous year.

The University continues to enjoy a range of accolades for its research staff. For example, National Research Foundation A-ratings were awarded to Professor Michael Chapman and Professor Fernando Albericio in 2012 and 2013, respectively, and the South African Young Academy of Science inaugurated Dr Sershen Naidoo as one of the top ten Young Scientists in November, 2013.

International collaboration also continues to grow with some of the world's finest research institutes.

A notable example in 2013 includes the work of the Africa Centre, whose new Director, Professor Deenan

Pillay, is a world leading Virologist from University College, London. The growing international reputation UKZN holds is consistent with the diversity and quality of researchers that it is now attracting worldwide and the extent to which staff and research students are presenting their work at prestigious international conferences.

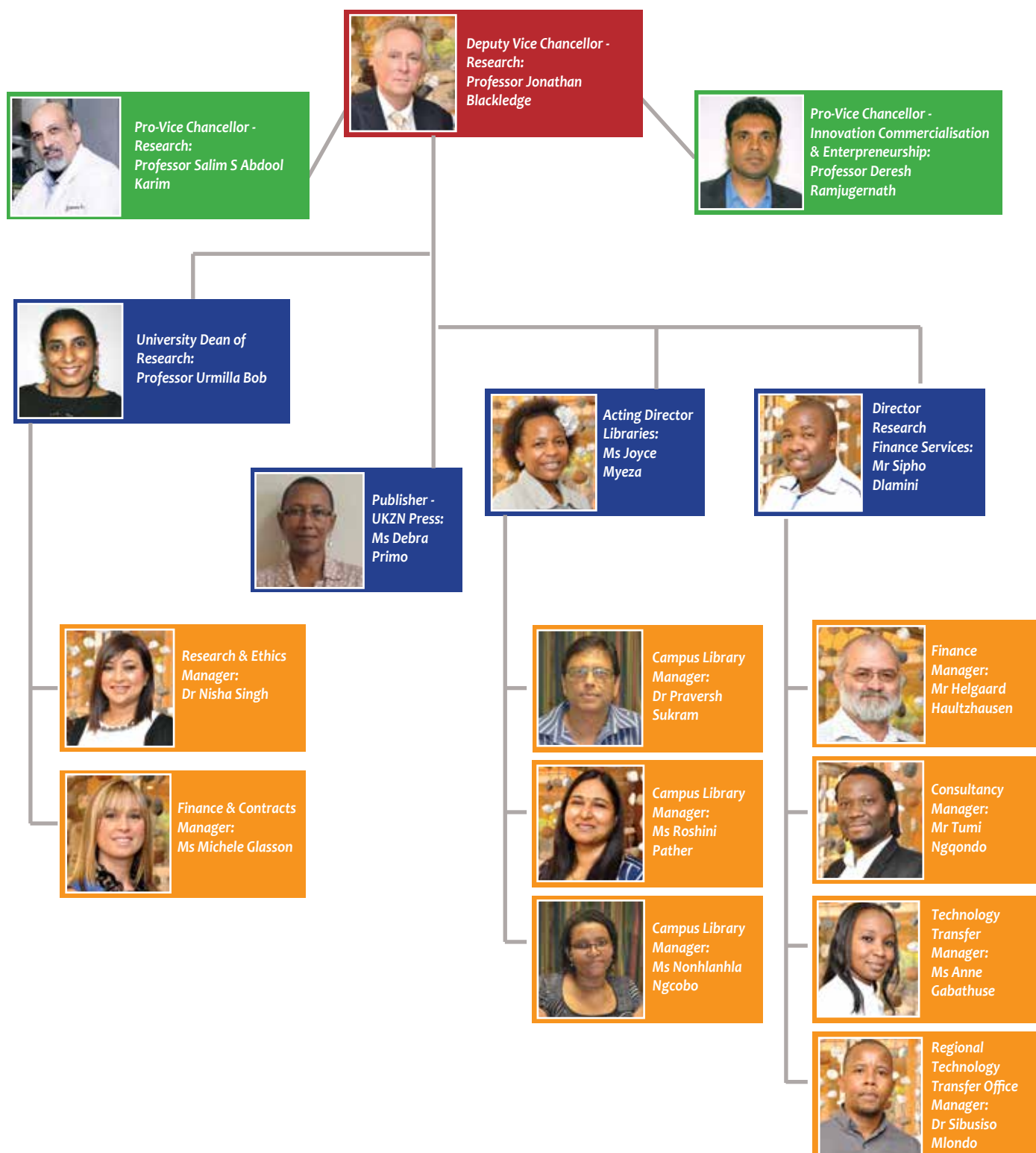
I would like to congratulate all the researchers for their scholarship and dedication, and, on their behalf, acknowledge the support we have enjoyed from our funders and collaborators. The contributions made by individual researchers and research groups are too numerous to cover and this report merely highlights the wealth of research activities that are prevalent throughout the University and have contributed to the institutional achievements for 2013.

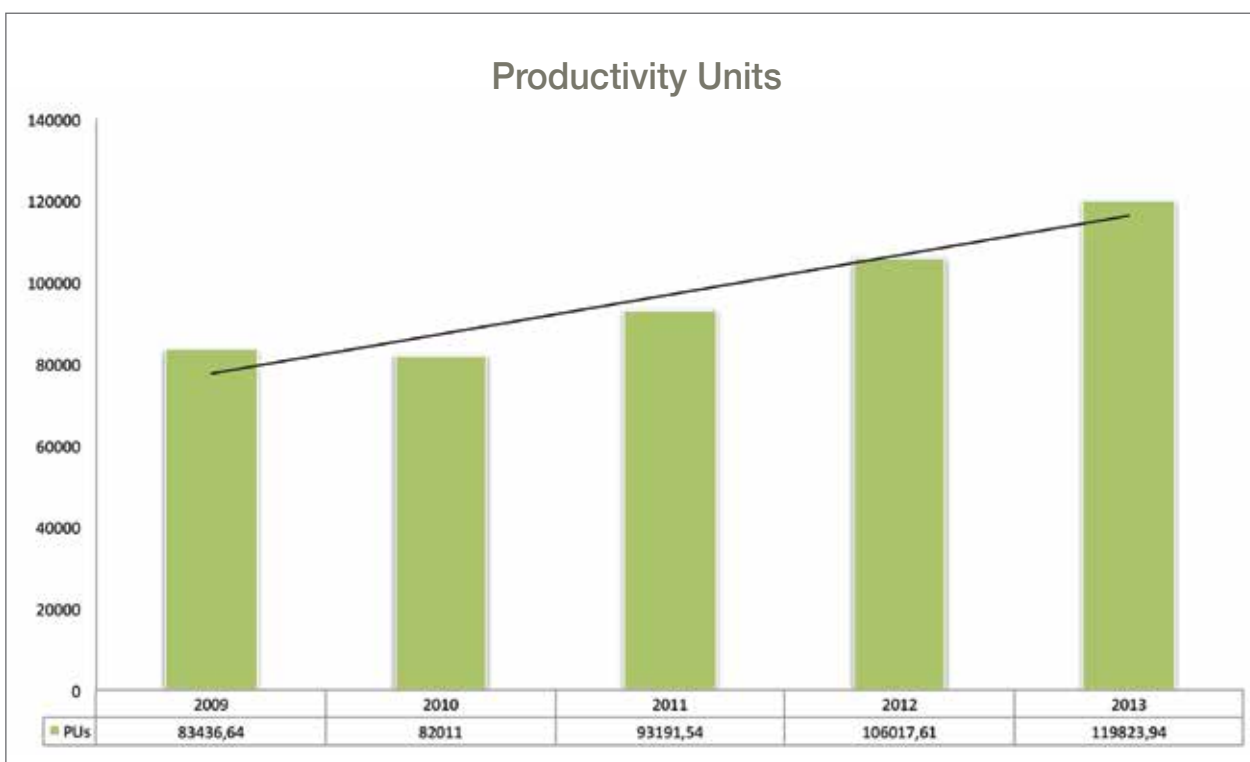
Professor Jonathan Blackledge

Deputy Vice-Chancellor: Research



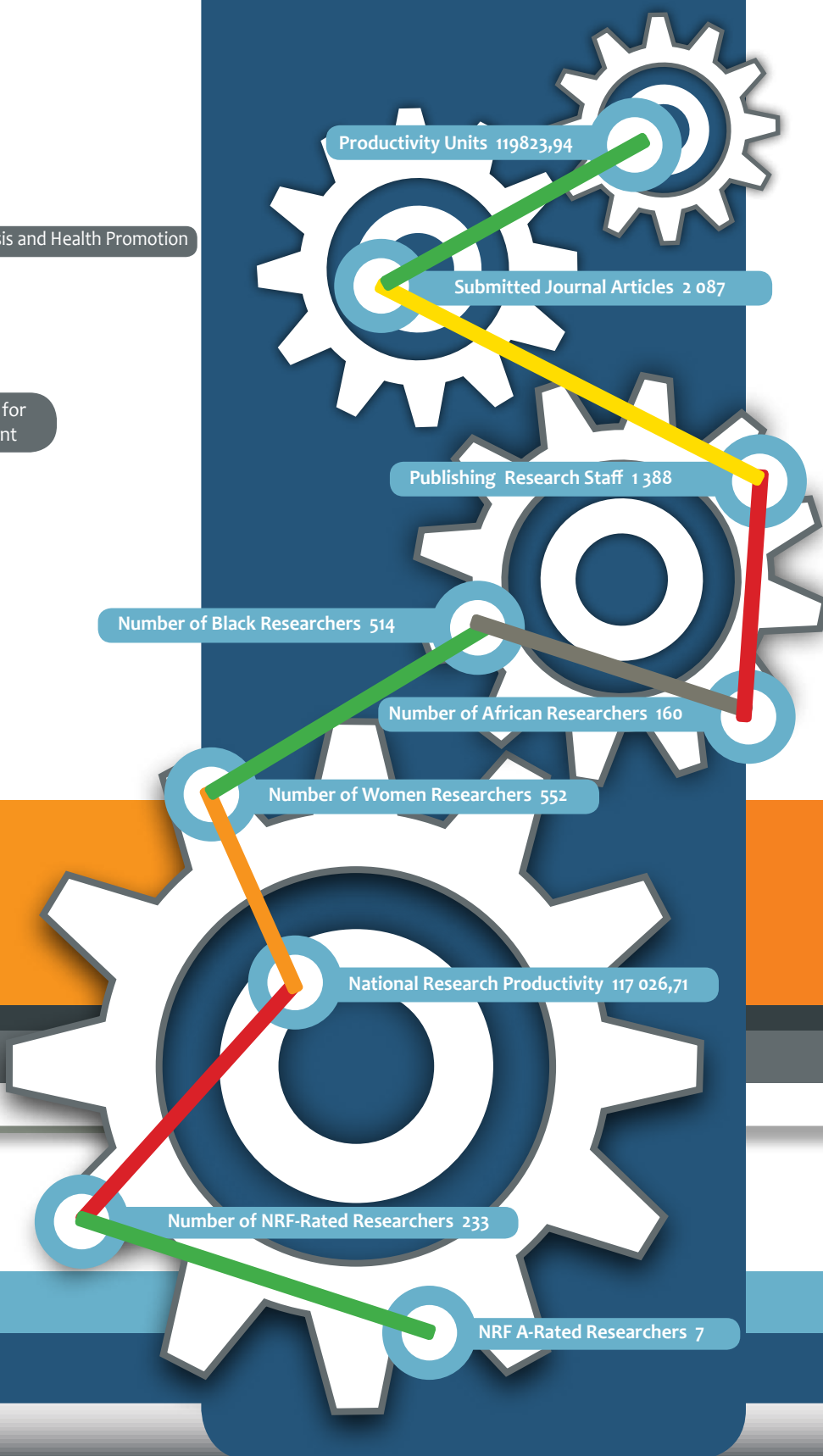
RESEARCH PORTFOLIO ORGANOGRAM





Productivity Units (PUs)

Productivity Units (PUs) refer to the units that are allocated to staff at UKZN following the processing and evaluation of all the research outputs, inclusive of national research productivity, supervision, NRF rating, journal editorials, creative contributions, patents and staff who graduated with PhDs. A PU is a weighted value allocated to different categories of research outputs as per the Senate norms and is aligned to Author Units (AUs). The AUs accrued by student publications are allocated to their supervisors. The PU model is specific to UKZN and seeks to holistically evaluate research outputs. PUs per staff member is calculated by multiplying the AU by the value of the respective research output. The table showing the weighted value of each accredited research output is published on the Research Office website. An overall PU growth of 44 % and an average yearly growth of 10% has been attained at UKZN over the past 5 years.



SARChI Chairs 10

Gravitating Systems
Evolutionary

Biology

Systems Biology of HIV and AIDS

Quantum Information Processing and Communication

Fluorine Process Engineering
and Separation Technology

Indigenous Health Care Systems
Economic Development

Applied Poverty
Reduction Assessment

Land Use Planning and
Management

Rural Agronomy
and Development

Emerging Researchers 50

Prolific Researchers 129

Postdoctoral Fellows 294

Number of Doctoral Degrees Awarded 207

Number of Masters Degrees Awarded 865

Research Centres 112

UKZN Press Published 13

Number of Patents 3



RESEARCH FOCUS AREAS

The University of KwaZulu-Natal has identified a number of research focus areas which we believe are critical to supporting our vision, not only as a notable centre of African scholarship in South Africa, but as an integral player in the global partnership embodied in the Millennium Development Goals, which seek to restore a sense of meaningful development to some of the world's poorest countries.



Research focus areas not only characterise institutional research direction, but are also critical to how the institution is perceived in its engagement in multidisciplinary partnerships to address scientific and societal agendas.

Through sustained research involving multi-disciplinary and crossborder collaborations, the University's efforts are pushing research boundaries, impacting international research trends, and drawing South Africa and Africa into a global network of knowledge production and academic excellence.

Our areas of research focus include:

- African Indigenous Knowledge Systems;
- Agriculture and Food Security;
- Biotechnology;
- Energy and Technology for Sustainable Development;
- Gender, Race and Identity Studies;
- HIV and AIDS, Tuberculosis and Health Promotion;
- Maritime Studies;
- Social Development and Economic Studies; and
- Water, Environment and Biodiversity.

Agriculture and Food Security

Agriculture and Food Security remain a focus of UKZN's broader research agenda, with our scientists training African plant and animal breeders in Africa and sustaining the critical mass of African expertise required to alleviate hunger on the continent.

This research area is a home to several research institutes concerned with eradicating food deprivation and enhancing sustainable livelihoods among the people and nations of Africa, namely the African Centre for Crop Improvement (ACCI), African Centre for Food Security (ACFS), and Poultry Research. The research in these institutes has led to extensive publications, which in turn resulted in a paradigm shift in the way plants and animals are handled throughout the world.

The ACCI, located within the School of Agricultural, Earth and Environmental Sciences, was established in 2001 to train African plant breeders in the area of African food security crops. Its vision is: African scientists solving Africa's food problems.

The ACCI was initially funded solely by the Rockefeller Foundation but in 2007 the Bill & Melinda Gates Foundation came on board through a consortium known as the Alliance for a Green Revolution in Africa (AGRA) which is funding a second round of five cohorts of 10 students. This brings to more than 80 the number of PhDs in plant breeding that the ACCI aims to train.

A key feature of the project is that AGRA has committed itself to ongoing funding of ACCI graduates who continue to breed their chosen food crop, aiming to deliver registered cultivars to farmers. Graduates have started to register a range of new crop cultivars in their home countries.

Aware of the growing food security crisis in Africa, the School of Agricultural, Earth and Environmental Sciences established the ACFS in 2006 to contribute to building and sustaining the critical mass of African expertise required to alleviate hunger on the continent. The ACFS remains a SADC Centre of Excellence and delivers food security short courses for 13 SADC countries each year at UKZN and facilitates such training in six other SADC universities through an MOU.

The ACFS, one of very few institutions internationally providing accredited capacity development for food security research and policy analysis, aims to contribute towards eradicating food deprivation and enhance sustainable livelihoods among people and nations of sub-Saharan Africa. In 2013, the ACFS was leading over R 6 million worth of funded food security projects focusing on water-use-

security, farming women's household food security and livelihoods, smallholder irrigation, nutrition and graduated 10 Masters students.

UKZN has developed a model that has been taken up by poultry scientists and producers around the world. Research over the past two decades has involved the development of simulation models that predict food intake and growth of broilers and pigs, and reproductive activity in broiler breeders and laying hens.

These simulation models have optimised the way in which broilers and pigs should be fed so as to maximise any one of a number of objective functions, such as margin over feed cost or feed conversion efficiency. The research has led to extensive publications on the lighting management of broiler breeders and has resulted in a paradigm shift in the way that these birds are managed throughout the world.

The Institute has impressive training facilities, including accommodation, lecture rooms, computers and a wide range of ongoing poultry operations, and these are housed on the University's research and training farm, Ukulinga.



African Indigenous Knowledge Systems

In-line with the institutional vision 'to be a Premier University of African Scholarship' and promoting Africa-led globalisation, UKZN has identified African Indigenous Knowledge Systems (AIKS) as a strategic focus area for research, teaching and community engagement.

Taking into consideration the holistic and multi-disciplinary nature of AIKS, the scope of research undertaken in the field is quite comprehensive.

The scope of research in this area is wide - there are more than 3 000 medicinal plants presently traded and used in African traditional medicine – and ranges from pharmacological screening of coniferous plants such as *African Podocarpaceae* and the pharmacological potential of plants from the *Orchidaceae* family to investigations into the effect of storage on the phytochemical composition and biological activities of certain Southern African medicinal species.

Research includes screening, isolation and identification of biologically active and toxic compounds in medicinal plants used for the treatment of stomach ailments, venereal diseases, asthma and tuberculosis among other diseases.

Other studies include the investigation into heavy metal and microbial contamination of medicinal plants and commercial herbal products. Work is also being done to investigate the phytochemical reservoir of plants and their possible contribution as antioxidants, antimicrobial and antiviral agents as well as enzyme inhibitors for possible use as anti-retroviral agents and treatment of inflammatory responses and neurodegenerative diseases such as Alzheimer's disease.



Biotechnology

Biotechnology is a broad multi-disciplinary area which is defined by the United Nations Convention on Biological Diversity as 'any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use'.

Biotechnology has a range of applications in medicine, industry, agriculture, and the environment. UKZN provides a common link to various biotechnology research projects and has a wide curriculum geared to train students in areas of biotechnology ranging from the bio-engineering of industrial yeast for controlled flocculation to biofuel production, mitochondrial enzyme regulation, the development of biomarkers of water pollution in aquatic organisms, development of diagnostic tests for neglected tropical diseases of importance in Africa (malaria, trypanosomiasis, trichinellosis, schistosomiasis) and an examination of the microbial response to climate changes in soils, and the implications on carbon-cycle feedbacks.

DIABETES: Development of a novel non-genetic animal model for Type-2 diabetes is under way using rats. This research also focuses on the analysis of the chemical composition of several functional foods and medicinal plants and extracts as well as their effects on non-communicable chronic diseases.

MALARIA: To combat the scourge of malaria in Africa, a research team is focused on malaria-related biochemistry, diagnostics, vaccines, metabolism, sequestration, immune-modulation, anti-malarial drug action and potential drug targets. The team is looking at developing new ways to diagnose malaria with a simple and cost-effective dipstick assay. To understand how the disease affects cells of the immune system during a malaria infection and under the influence of anti-malarial drug therapy, an X-Ray microanalysis is used which enables the measurement of minute changes in the concentrations of elements within individual cells. The expression, location and structure of the protein are being studied.

HUMAN AND ANIMAL AFRICAN TRYPANOSOMIASIS (SLEEPING SICKNESS AND NAGANA): Trypanosomiasis, a parasitic disease in humans and livestock, is caused by different species of trypanosomes that are spread by tsetse flies in sub-Saharan Africa, as far south as northern KwaZulu-Natal. Research focuses on the proteolytic enzymes released by the parasite during infection that are responsible for the symptoms of the disease to develop diagnostic assays and chemotherapeutic intervention strategies. Techniques

in recombinant expression of proteins, protein purification and characterisation, immunochemistry and the production of antibodies are employed.

STEM CELL RESEARCH: Research is conducted involving the regulation of skeletal muscle formation from mouse and human stem cells. The effect of extracellular and growth factors as well as anti-retrovirals (ARVs) on this process is being investigated. In addition, the generation of in vitro three dimensional, functional, skeletal muscle is under development.

Techniques used include tissue culture, primary cell isolation, fluorescence and confocal microscopy (including live cell imaging), wound healing assays and standard protein determination methods.

NANO-THERAPEUTICS: Research is conducted into the use of nanotechnology in foreign gene delivery (classical and mitochondrial gene therapy), expression and gene silencing mediated by RNA interference. UKZN has a dedicated cell/tissue culture facility which is also actively involved in assays looking at the in vitro cytotoxic effects of natural products.

GENETICS: Quantitative, population and molecular genetics technologies are employed in unveiling the contribution that genes make to important traits in animals. Molecular techniques are used to examine genetic factors underpinning biological diversity in the field of evolutionary biology. In the field of redox systems biology, the focus is on elucidating how the components in biological systems are integrated to give functional properties.

MICROBIOLOGY: Research is conducted into the role and function of micro-organisms in a wide range of environmental and biotechnological processes. These include screening for biocatalysts from environmental samples, optimisation of biotechnological processes by artificial intelligence tools, isolation and characterisation of micro-organisms and their secondary metabolites with potential to tackle pathogens, improving beer quality by profiling flavour-active ester compounds in beer under different fermentation and nutritional conditions, and the study of diesel degradation mechanisms by several isolates using real time PCR and proteomic techniques. Screening is performed to isolate micro-organisms with potential for

biotechnological applications.

CHEMISTRY: Research areas include organic synthesis, asymmetric catalysis, peptide drug design and computational chemistry. Collaborative research is conducted around the testing of tuberculosis and anti-fungal drugs, the identification and diagnosis of tuberculosis and radio-labelled imaging agents.

MEDICAL BIOCHEMISTRY: A mini drug discovery platform setup facilitates the conducting of assays for various natural and synthetic compounds to test for cytotoxicity. An evaluation of immunotoxicity using apoptosis assays is also conducted.

HIV AND AIDS AND TB: A collaborative link with Virology at Inkosi Albert Luthuli Hospital has been established to screen compounds for anti-HIV activity. Currently, the research focus is on using micro RNA species to type serum in patients infected with TB. This has therapeutic potential in infected patients.

CANCER: Novel drug development and screening.



Energy and Technology for Sustainable Development

The Energy and Technology for Sustainable Development focus area is providing leading research for the needs of South Africa, in keeping with the mission of UKZN as the Premier University of African Scholarship.

Research that is currently undertaken at UKZN in the area of technologies for sustainable development is finely woven into the research being undertaken in the energy sector. The development of technologies for renewable energy, which include fuel production from renewable sources, is a perfect example of this.

Research in sustainable technologies also includes environmental sustainability studies which aim to ensure that current industrial processes lead to minimal damage to the environment. In the National System of Innovation, energy security has been identified as one of the 'grand challenges'. Research in the energy sector is not limited to production and distribution of electricity, but also to efficient energy usage, as well as the limitation of the negative environmental effects which are caused by the production and use of energy sources. In this regard there has been a rapidly-growing research interest in improving and developing new technologies for the reduction of carbon dioxide and other greenhouse, and flue gases emitted from coal power plants and fuel burning plants.

The University has a number of Institutes and Centres in this focus area which are conducting research in various aspects of energy production and utilisation as well as technology application for sustainable development. Research work on renewable and alternative energy systems and technologies such as solar and wind as well as biofuels and conversion of municipal waste to natural gas for electricity production is being conducted by multi-disciplinary teams in the College of Agriculture, Engineering and Science.



Gender, Race and Identity Studies

The focus area draws on multiple disciplines within the University to examine the ways in which identities are constructed, created and consolidated. These disciplines draw on several frameworks for engaging with issues of race, and gender, among other social categories – such as age, sexualities and class.

In the context of health inequalities, AIDS, gender and sexual violence, the focus areas of Gender, Race and Identity provide important conceptual tools to address how social structures that arise in history are reproduced but are also open to change.

The focus area locates itself by initiating serious and difficult debate, and by researching alternative routes to creating a society that is non-racial and that is simultaneously and measurably moving towards greater equality than that which is currently experienced by all South Africans.

The focus area is home to the Centre for Critical Research on Race and Identity (ccrri) which is dedicated to facilitating the study of race thinking and changing identities so as to improve understanding of, and stimulate public dialogue about, the epistemological, moral, cultural and other bases for perceptions of human diversity and difference.

Many of the initiatives in this focus area are housed in the College of Humanities. The following are some of the key programmes:

Postgraduate and Research Programme in Gender and Education

Making schools safer, more peaceful and more egalitarian, the Gender and Education programme examines how educators and learners interact, how they construct their gender identities and how schools operate. This postgraduate programme has trained many Masters and PhD students to address ongoing challenges (including violence in Schools), and approaches to achieving gender equity (in e.g. the curriculum).

Postgraduate and Research Programme in Gender and Religion

South Africa, like many other parts of Africa, claims to be 85% religious, but yet patriarchy and sexism still persists within a web of other oppressions such as racism and poverty. These oppressions often

find overt and covert justification from within religion and culture. At the same time, it is acknowledged that religion and culture can also provide plausible structures as a means with which to overcome oppression. This seemingly dialectic tension is explored through research and the sharing of knowledge from such research within the Gender and Religion programme which has not only produced many Masters and PhD graduates but has also produced research that has gained national and international prominence as the only formalised programme in Gender and Religion offered in Africa.



HIV and AIDS, Tuberculosis and Health Promotion

As the pre-eminent academic institution at the epicentre of the HIV epidemic in South Africa, UKZN has taken up the challenge of providing leadership in response to HIV and AIDS and Tuberculosis, and is undertaking ongoing research to enhance scientific capacity in these critical areas and strengthen the biomedical and broader societal response to the epidemic.

UKZN's focus on HIV and AIDS, Tuberculosis and Health Promotion is a multi-faceted and multi-disciplinary initiative, involving a number of established research groups and projects which recognise the importance of rigorous scientific inquiry aimed at, for example, an understanding, of the pathogenesis, virology, immunology and epidemiology as it relates to HIV and AIDS, or the role of breastfeeding in mother-to-child HIV transmission and the facilitation of clinical trials for the treatment of HIV and TB in both children and adults. The focus area is home to an A-Rated NRF Researcher and SARCHI Chairs in Indigenous Health Care Systems, and Systems Biology of HIV and AIDS.

UKZN continues to attract international recognition for its groundbreaking research in both HIV and TB prevention and treatment. At a global level, UKZN strives to nurture international institutional partnerships such as its long-standing relationship with the universities of Columbia and Harvard, both in the United States. In recognition of its standing as a world-class research centre in HIV and AIDS and Tuberculosis, the University has successfully attracted significant funding from influential international organisations such as the Howard Hughes Medical Institute (HHMI), the Wellcome Trust, the US National Institutes for Health (NIH), the US Agency for International Development (USAID), and the European Union (EU).

Major research centres and institutes include: The Africa Centre for Health and Population Studies; the Centre for the AIDS Programme of Research in South Africa (CAPRISA); the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH); the Enhancing Care Initiative; HIVAN, the HIV Pathogenesis Programme (HPP) and the Health Economics and HIV/AIDS Division (HEARD). CAPRISA is a designated

UNAIDS collaborating centre for HIV prevention research.

Through the Columbia University-Southern African Fogarty AIDS Training and Research Programme, the institution is committed to building scientific capacity in HIV and AIDS and tuberculosis research in several countries in Southern Africa to enhance continuing efforts to counter the HIV and AIDS and TB epidemics. Over the years the programme has trained many of South Africa's young AIDS and TB researchers.

The broad socio-economic impacts of AIDS are examined through the Health Economics and HIV and AIDS Research Division (HEARD), and the research around the role of indigenous health care systems in addressing the epidemic is conducted under the leadership of a Chair in Indigenous Health Care Systems.





Maritime Studies

The primary research areas are in the fields of Marine Science and Coastal Engineering in the context of climate change and anthropogenic impacts.

The overall aim is to achieve significant scientific advances in the analysis and modelling of human impacts on productive aquatic ecosystems, including threatened coastal wetland systems, rocky or sandy shorelines, and offshore reefs. Research groups within this area develop new insights into the structure, functioning and sustainable management of critical marine hydro-ecosystems. The work involves multi-disciplinary teams using an integrated approach to understand and model physical and biological aspects of these systems.

Marine Science and Coastal Engineering

UKZN research in Coastal Engineering is led by the eThekweni Sponsored Chair in the School of Engineering in collaboration with the Durban Metro and Technical University of Delft in Holland. Marine Science research is mostly based in the School of Life Sciences and School of Agricultural, Earth and Environmental Sciences.

Social Development and Economic Studies

The primary objective of this area of research is to strengthen and enhance applied and policy-relevant research in the fields of Economic Development, Finance, Sociology, Development Studies, Economic History, Agri-Business, Cultural and Heritage Tourism, and Health Economics.

Some of the leading research undertaken in this focus area delves into urban-rural economic and livelihood inequalities in South Africa and continues to ask what the relationship is between the growth and spatial distribution of the public and private economic sectors. It also explores the interface between households and labour markets in South Africa, advancing knowledge across a range of socio-economic areas, including those relating to marriage, migration, child care, household survival strategies and resource sharing, and labour force participation and employment.

The research encompasses the formal and informal economy, the nature of poverty, the characteristics of the poor, areas and socio-economic empowerment. This research is integral to evaluating

the experiences of economic development among individual South Africans and to assessing economic and social policy that seeks to reduce poverty and increase well-being.

The focus area is a home to SARCHI Chairs in Economic Development, and Applied Poverty Reduction Assessment. The Centre for Civil Society (CCS) deals with issues falling into this focus area. Its main objective is to advance socio-economic and environmental justice by developing critical knowledge about, for and in dialogue with civil society through teaching, research and publishing.

The research focus area covers social issues on education and it houses the J.L. Dube Chair in Rural Education.



Water, Environment and Biodiversity

UKZN's strength in the area of water, environment and biodiversity is based on innovative and cutting-edge disciplinary science and is evident in its internationally recognised researchers with active research programmes and postgraduate students in related fields, and several ongoing research projects supported by local and international funders.

The activities in this area form the focus of a multi-disciplinary team of engineers, biologists, political scientists and community medical professionals, and have included participation in international research projects. In addition to large research groups in this area, there are several other multi-disciplinary initiatives, notably working on wetlands, soil erosion, community interactions and sanitation, estuary-related research, and water and public health, working closely with other stakeholders, including local communities.

UKZN has wide and varied expertise and experience in water-related teaching, research and outreach activities throughout South Africa and in many parts of Africa and beyond. The research focus area draws in a range of academics and students from all the University's Colleges and most of its Schools.

UKZN's strength in the field of water is evident in its nationally and internationally recognised researchers with active research programmes and postgraduate students in water-related fields, and several ongoing research projects supported by local and international funders. These projects and the contribution of the University's graduates have resulted in UKZN being recognised as one of the leading institutions in water-related research and training in South Africa and internationally.

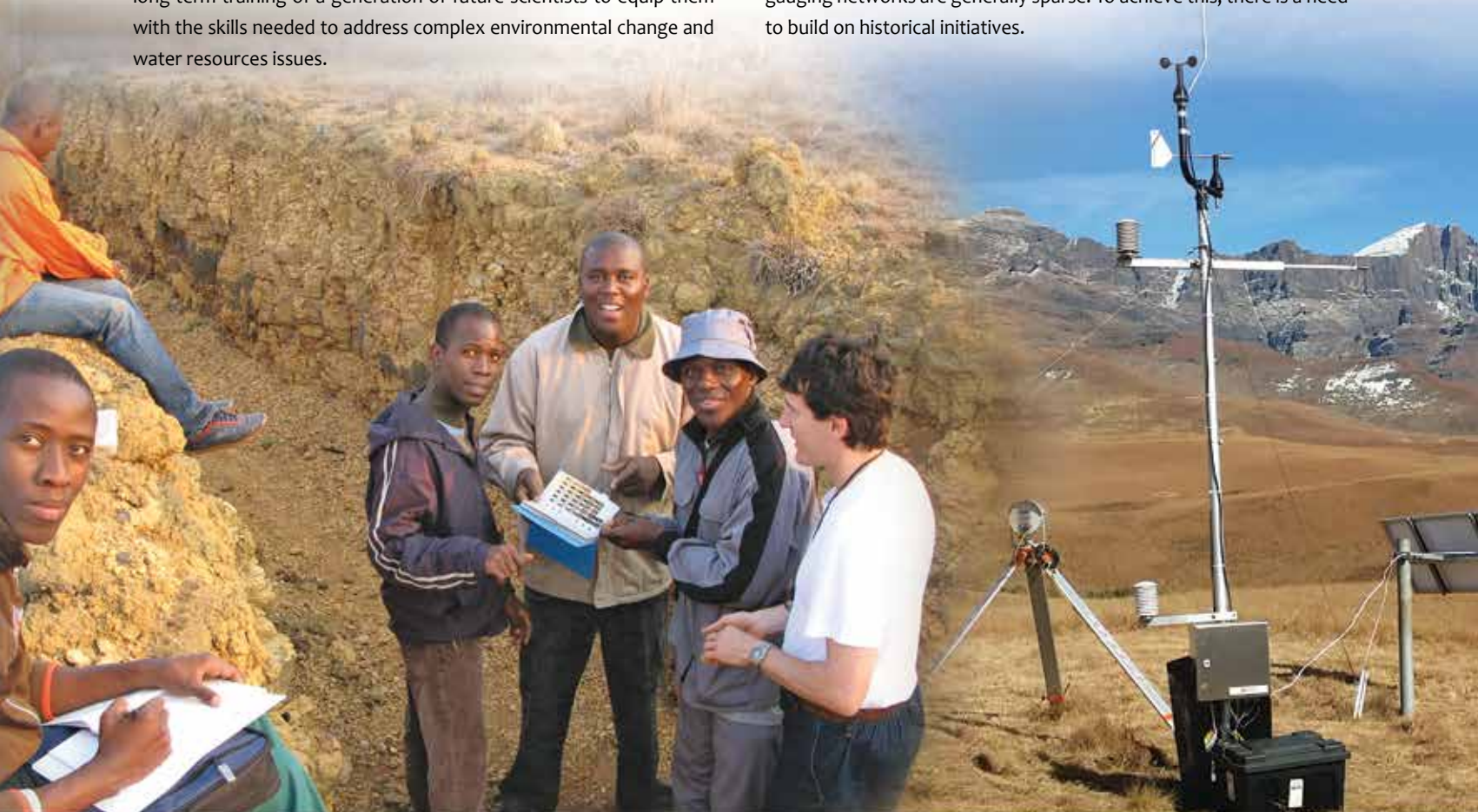


Long-term Monitoring of Cathedral Peak Catchments

The Centre for Water Resources Research (CWRR) has focused some of its recent research in the Cathedral Peak catchments with a view to establishing the catchments as a living laboratory. Key catchments in the area, which has played a pivotal role in the hydrological history of South Africa, have been selected by the group to be re-established for long term monitoring, forming the core of a South African Environmental Observation Network (SAEON) sentinel site.

Research activities in the Cathedral Peak catchments have focused in 2013 on compiling a database of relevant historic data collected over the past 50 years from the research catchments, together with the tacit knowledge gathered from the researchers who had key roles in the catchments over the years. Research has also concentrated on developing the catchments into a living laboratory with an advanced monitoring network designed to be comparable with the historical network and relevant for monitoring changes and thresholds or tipping points in system behaviour into the future. With this advanced network and an extensive experimental history, the catchments provide an environment which is suitable for long term training of a generation of future scientists to equip them with the skills needed to address complex environmental change and water resources issues.

The imperatives behind this kind of research are the ongoing changes in land cover and climate which have and will continue to impact on hydrological responses with implications for water resources management and planning. However, there is a significant degree of uncertainty surrounding environmental change and its related impacts on hydrological elements, particularly at regional scales in sensitive areas such as high altitude catchments. Given this uncertainty, there is an imperative to improve our understanding of hydrological processes, of water distribution and movement within catchments, and the effect of changes in the drivers of the hydrological system, particularly in high altitude catchments that are key water generating areas where gauging networks are generally sparse. To achieve this, there is a need to build on historical initiatives.



LEADING RESEARCH CENTRES



The Astrophysics and Cosmology Research Unit

The Astrophysics and Cosmology Research Unit (ACRU) at the University of KwaZulu-Natal is a key driver of astronomy and cosmology research with an international reputation.

ACRU's goals include contributing to the knowledge economy of South Africa by producing high-impact research in astrophysics and cosmology, and building local skills and capacity by training high calibre PhD graduates. A key objective is to create a greater awareness of astronomy in South Africa through public talks, school visits, participation in science exhibitions and the use of social media.

ACRU has been influential in shaping national astronomy policy, and has played a significant role in the recent decadal strategy for South African astronomy, and its researchers are strongly involved in national astronomy committees and panels. ACRU identifies with the recognition of astronomy as a focus area for scientific research in South Africa.

ACRU achieves these goals through a strong research and teaching programme centred on academic staff, postdoctoral researchers, postgraduate students, affiliated researchers and visitors. ACRU staff are leading researchers in cosmology and relativistic astrophysics, participating in several high-profile international astronomy projects across the multi-wavelength spectrum, from radio to microwave, infrared, optical and X-rays, using cutting-edge ground and space-based telescopes. ACRU researchers actively use the SALT, C-BASS, PAPER and KAT-7 telescopes that are based in South Africa, and a host of international facilities including the XMM satellite and the Hubble Space Telescope. Through involvement in international cosmic microwave background experiments such as ACT, SPT, Spider and Planck, ground-breaking research findings have been published that make international headlines and produced a number of scientific awards.

A key ingredient of ACRU's research programme is the training of postgraduate students in research. Currently there are more than 10 MSc students and more than 15 PhD students within ACRU – a number of these students are supported by the South African SKA postgraduate bursary programme.

Several of these students have won awards or had their work highlighted in the press. A unique feature of ACRU's research engagement is its research internship programme for Astronomy undergraduate students. More than a dozen students are supported by prestigious SKA undergraduate bursaries.

These factors, together with the new astronomy major being introduced at UKZN, will ensure that ACRU plays a major role in training the next generation of South African astronomers.



The African Centre for Crop Improvement

The African Centre for Crop Improvement (ACCI) was established in 2001 to train African plant breeders in Africa in the area of African food security crops. Its vision: African scientists solving Africa's food problems.

Initially funded by the Rockefeller Foundation, the ACCI is now supported by the Bill & Melinda Gates Foundation which came on board through a consortium known as the Alliance for a Green Revolution in Africa (AGRA). In 2012, the ACCI won the AGRA award for outstanding contributions to food security in Africa.

Since 2002 the ACCI has recruited 101 students from 14 African countries and has graduated 54 with PhD degrees in plant breeding so far. It has achieved exceptionally rapid throughput of graduates – 72% of its students have graduated on time.

The ACCI students undertake academic studies for one year in Pietermaritzburg before returning to their home countries to conduct three years of field research breeding African food security crops, primarily using conventional plant breeding methods in the environments in which the new crop cultivars will be grown by small-scale farmers.

The focus of the PhD theses is on the applied breeding of key food crops such as sorghum, cassava and cowpeas for increased disease and drought tolerance, and improved yields and quality, with the aim of improving food security in some 14 African countries, including Ethiopia, Kenya, Mozambique, Zambia and Malawi.

All the ACCI graduates have stayed in Africa, mostly to work on food crops in their home country. In most cases, this has been with ongoing funding from AGRA, which has allowed them to continue their PhD breeding programmes to the point of release of 130 new crop varieties, lines and hybrids so far.

The ACCI staff and students have published more than 120 scientific articles in international ISI-accredited journals. All academic staff of the ACCI have their own breeding programmes working on both food and biofuel crops and constitute one of the strongest groupings of active plant breeders in Africa.

The ACCI is a unit within the School of Agricultural, Earth and Environmental Sciences. It is headed by Professor Mark Laing whose research interests include plant breeding, biological control agents and the use of silicon in agriculture.

The ACCI falls under the UKZN research focus area of Agriculture and Food Security. Research in this area is aimed at eradicating food insecurity and enhancing sustainable livelihoods in Africa.



The Centre for Civil Society

The Centre for Civil Society (CCS), established in 2001 in an effort to make the study of civil society legitimate in the production of knowledge, is located in the School of Built Environment and Development Studies in the College of Humanities.

Led by Professor Patrick Bond, the Centre aims to heighten the understanding about knowledge produced about society and the forces working in public policy. A related goal is to develop partnerships within civil society aimed at capacity-building, knowledge sharing, and generating reflection and debate.

The Centre's staff and associates include academics, Dennis Brutus Community Scholars, postgraduate students, visiting scholars and administrators. It focuses on economical justice, environmental justice, global and African integration, social movements and social giving.

'Our mandate is to give credence to the idea that civil society is a subject worth studying,' said Bond. 'It's part of the production of knowledge. We are very interested in what happens between civil society on one hand and the state or capital on the other hand.'

'We have the highest inequality in the world; we have the most number of protests per person in the world that we know of. We have a working class that the World Economic Forum (WEF) calls the most militant in the world and we have a corporate community that has been found to be the most corrupt in the world. It really bears fruit when you see, after extraordinary conflict, communities who

are oppressed and stigmatised, deciding to organise; and seeing HIV positive people make a huge breakthrough, making it possible for millions of people to live.'

According to Bond, the Centre is not just about participatory action research but also conflict-seeking research 'because in these debates there's lots of heat, but in the heat, there's also lots of light.'

'We also feel that by making challenging argumentation and questioning injustices, we can drive knowledge forward.'

Dennis Brutus Community Scholar, Mr China Ngubane, believes the CCS is relevant today as it is the hub of knowledge.

'It helps us because we have all this material to read from,' said Ngubane. 'It provides workshops and seminars for us to exchange information so we know what's happening on the continent and on the street. By sharing emails and through social media, we share that information. It shapes how we decide on the way forward. The opportunity we have to share with the different communities helps us work together and it empowers us.'

www.facebook.com/TheCenterForACivilSociety

<http://www.twitter.com/bricsfrombelow>

In one of CCS's 'BRICS from below' projects, research and video support are provided to the South Durban Community Environmental Alliance campaign against the R250 billion expansion of the port-petrochemical complex promoted in the National Development Plan. By filing Environmental Impact Assessment objections and asking tough questions about the beneficiaries and losers of this mega-project, CCS researchers and the Dennis Brutus Community Scholars help society address South Africa's persistent and interlocking crises of inequality, poverty, unemployment, segregation, pollution and climate change.



The Catalysis and Peptide Research Unit

The Catalysis and Peptide Research Unit based at the Westville campus was established in January 2007 and hosts an array of projects from each of the following Principal Investigators:

- **Thavi Govender** - Asymmetric catalysis, peptide chemistry and mass spectrometry
- **Gert Kruger** - Polycyclic cage chemistry, NMR structure elucidation and computational chemistry
- **Glenn Maguire** - Cavitand chemistry and crystallography
- **Fernando Albericio** - Peptide chemistry and molecular pharmacology
- **Per Arvidsson** - Chemical biology and asymmetric synthesis
- **Tricia Naicker** - Asymmetric catalysis and NMR spectroscopy

Their interests as a research group span the disciplines of organic synthesis, asymmetric catalysis, peptide drug design and computational chemistry.

Current projects at the Unit include the synthesis and evaluation of inhibitors targeting HIV and TB, synthesis of classes of chiral ligands and catalysts, experimental and theoretical research about the fundamental aspects of peptide folding, and various computational projects into mechanistic effects of their synthetic projects.

HEARD

Established in 1998, HEARD - the Health Economics and HIV and AIDS Research Division - has a global reputation as a leading applied research centre that brings together interdisciplinary teams to solve complex health problems as well as train the next generation of African health leaders.

H EARD is a self-funded organisation based at the University of KwaZulu-Natal that conducts research on the socio-economic aspects of public health, especially the African HIV and AIDS pandemic. The organisation has an Africa-wide mandate with research applicable across the region that impacts on regional policies and programmes. HEARD has been a designated UNAIDS collaborative centre since 2004.

HEARD catalyses, conducts and disseminates innovative trans-disciplinary research to influence public health policy and practice in Africa via research programmes and established systems for engaging decision-makers. HEARD's vision is to achieve health equity across the continent by meeting Africa's current and future health challenges. Its mission is to be the leading institution in trans-interdisciplinary health research and education in Africa, in order to influence the policies and practices that address Africa's health challenges effectively. The centre intends to accomplish this through high quality, interdisciplinary research and health education, global health knowledge transfer and exchange and an international network of partners. HEARD's work is underpinned by a rights-based approach.







SOUTH AFRICAN RESEARCH CHAIRS INITIATIVE (SARChI)

The University has the following 10 South African Research Chairs, an initiative of the Department of Science and Technology and the National Research Foundation.

- Evolutionary Biology
- Gravitating Systems
- Fluorine Process Engineering and Separation Technology
- Economic Development
- Systems Biology of HIV and AIDS
- Quantum Information Processing and Communication
- Indigenous Health Care Systems Research
- Land Use Planning and Management
- Rural Agronomy and Development
- Applied Poverty Reduction Assessment

Land Use Planning and Management

Professor Mathieu Rouget

The Research Chair in Land Use Planning and Management falls under UKZN's Water, Environment and Biodiversity Research Focus Area.

Professor Mathieu Rouget was appointed as the SARCHI Chair in Land Use Planning and Management in 2013. Rouget is an Ecologist and an internationally recognised expert in conservation planning. His research work focuses on the interaction between biodiversity conservation and human activities in the areas of conservation planning, alien plant invasions, climate change and ecosystem services.

Identified focus areas of research for this Chair are:

- The protection and enhancement of environmental assets and natural resources;

- The development of a systems and transdisciplinary approach to land use planning and management; and
- The integration of research into policy and management processes.

The Chair fits into the land use planning, land management and sustainable development strategic thrust which draws the agricultural, earth, environmental and life sciences disciplines together in a new way that will unlock a step-change in research and human capital development capacity. The Chair also forms a hub for interaction across private and public research institutions.

Major achievements so far include the establishment of a joint research partnership between UKZN and eThekweni to co-develop research and decision-making products in the field of biodiversity science, conservation planning and restoration ecology in the face of climate change. The Chair currently supports two researchers, three postdoctoral fellows and six PhD and nine MSc students.



Rural Agronomy and Development (vacant)

The Research Chair in Rural Agronomy and Development – in the Energy and Technology for Sustainable Development Research Focus Area – enjoys high priority in terms of the strategic planning of the College of Agriculture, Engineering and Science.

The focus and thematic areas are aligned with the key strategic areas and thrusts of the SA National Agriculture and Development Strategy (DoA 2008), particularly human capital development; innovation and transfer of technology and collaboration and partnerships.

The work of the Chair will involve contributing to community development through research, agricultural innovation and agricultural extension. The work will be done in partnership with public institutions and other agriculture-supporting bodies. It is aligned with the Government's priorities of employment creation, food security, support for smallholder farmers and sustainable livelihoods, rural wealth creation and skills development.

The Chair will contribute to the development of new technology to support smallholder farmers in agriculture, and the agricultural industry in general. It will also contribute towards human capital development through training of postgraduate students at MSc and PhD levels.

The Chair will have strong links with the existing centres of excellence such as the African Centre for Crop Improvement and African Centre for Food Security at UKZN.



Quantum Information Processing and Communication

Professor Francesco Petruccione

Francesco Petruccione, Professor of Theoretical Physics at the University of KwaZulu-Natal, was granted the South African Research Chair for Quantum Information Processing and Communication (QPIC) in 2007, after having set up a Centre for Quantum Technology (CQT) in 2005. This Research Chair, which was renewed for a further five years in 2012, is intended to promote an emerging area of research which has the potential to revolutionise several areas of science and technology.

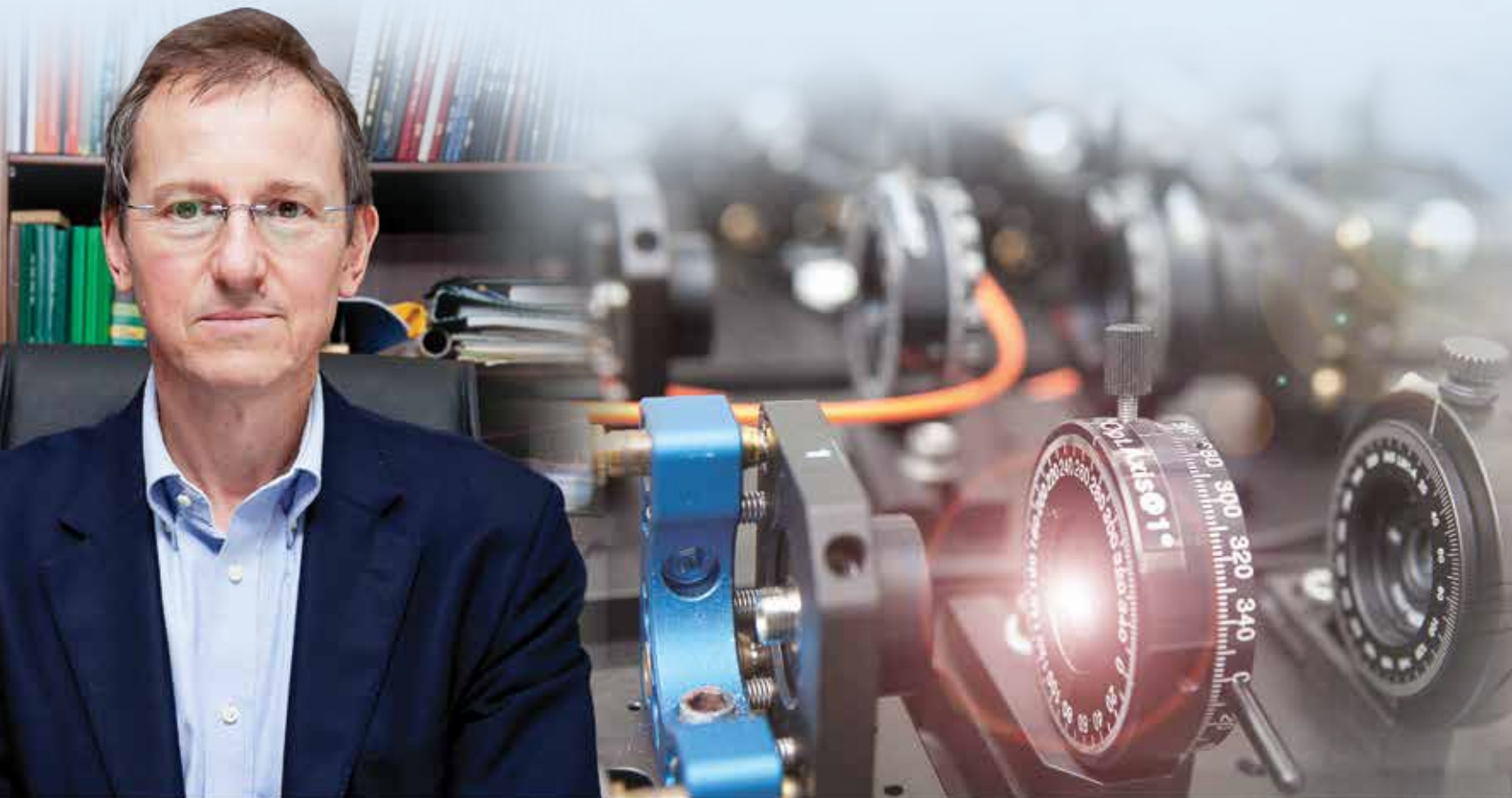
Quantum technology includes quantum computing, quantum communications (quantum cryptography and teleportation), quantum information science (quantum control, quantum simulations and quantum metrology), as well as quantum biology, all of which are pursued at the Centre as research areas.

A Theoretical Physicist, Petruccione is working on the theory of open quantum systems, which is the basis of many recent quantum technological applications that were unthinkable within classical physics. The miniaturisation of technological devices necessitates manipulation of objects at the nanoscale level at which coherent quantum mechanical processes start to dominate the physical properties. Quantum computing promises immense computing power, while Quantum Key Distribution guarantees completely secure

communication.

More recently, Petruccione has started to apply the theoretical methods of open quantum systems and quantum information processing to quantum biology. According to Petruccione, quantum biology is the application of quantum mechanics to the biological sciences. It is an emerging research area aimed at trying to establish whether the quantum inanimate phenomena of the microscopic world could play a role in macroscopic living systems.

In the next five to ten years the worldwide market for quantum products is expected to exceed \$70 billion per annum, with quantum-related services also likely to grow. As the only significant quantum information research group in Africa, the CQT is in a sound position to lead this technological revolution.



Fluorine Process Engineering and Separation Technology

Professor Deresh Ramjugernath

As Chair of Fluorine Process Engineering and Separation Technology and Director of the Thermodynamics Research Unit at UKZN, Professor Deresh Ramjugernath leads a large team of productive researchers and postgraduate students – arguably one of the leading research groups in its field globally.

This team conducts research geared towards chemical process development and optimisation. Research also covers the areas of chemical thermodynamics and separation technology and in this regard the Unit has one of the best equipped laboratories in the southern hemisphere and is one of the largest groups working in this field.

The team has a prolific publication record, publishing more than 75 peer-reviewed journal articles in 2013. Ramjugernath himself is one of the most highly cited chemical engineering researchers on the African continent.

The group actively contributes to the South African government's Fluorochemical Expansion Initiative (FEI) by researching and developing South Africa's fluorinated products. The group's activities

are integral to the development of a fluorochemicals industry in the country and are directly linked to the South African Nuclear Energy Corporation (NECSA) and Sasol.

Although South Africa possesses the world's second largest reserves of fluorspar (starting material for all fluorochemicals), it currently imports almost all of its fluorinated products. Thus the activities under the Chair are intended to develop technology and human capacity to drive development and expansion of a fluorochemical cluster.

Ramjugernath is passionate about human capacity development and is a strong believer in a collaborative approach to research capacity development. In this regard he has had a number of research bi-lateral agreements for the exchange and training of students and researchers with research groups based in countries around the world.

Ramjugernath's Chair contributes towards UKZN's research focus area of Energy and Technology for Sustainable Development.



Evolutionary Biology

Professor Steven Johnson

Prominent academic and researcher Professor Steven Johnson of the School of Life Sciences holds the Research Chair in Evolutionary Biology. This Research Chair is intended to strengthen a field of study pivotal for understanding and conserving South Africa's rich biodiversity. The Chair is in line with UKZN's research focus area of water, environment and diversity.

Johnson's research in the field of evolutionary biology focuses on plant pollinator interactions. The interactions between flowers and their pollinators are not only important for seed production of wild plants and crops but have also been instrumental in the evolution of the spectacular diversity of the world's flowering plants. Johnson has a strong interest in the role of floral volatiles in mediating specialised plant-pollinator interactions, and has established a state-of-the-art laboratory for the study of chemical clues used by plants to attract insect pollinators.

Johnson has contributed significantly to the understanding of the evolutionary diversification of plants in southern Africa and also the ecological requirements that plants have for their reproduction.

He has published more than 250 peer-reviewed scientific papers, co-authored two books, and has also written many popular science articles.

Johnson received the National Research Foundation (NRF) President's Award in 1999 and currently holds an A-2 rating from the NRF.



Gravitating Systems

Professor Sunil Maharaj

Professor Sunil Maharaj is the holder of the prestigious South African Research Chair in Gravitating Systems. He was made a Fellow of the Royal Society of South Africa in 2012 for his research contributions.

Maharaj is Director of the Astrophysics and Cosmology Research Unit in the School of Mathematics, Statistics and Computer Science. His primary research focuses on the modelling of astrophysical processes in relativistic stars and the mathematics related to strong gravity.

Models of gravitating systems are necessary for the description of phenomena that arise in astrophysical and cosmological scenarios. Principal applications include gravitational collapse and black holes; the formation of singularities; physical processes such as accretion in the evolution of relativistic stars; the thermodynamics of matter under strong gravitational fields; super-dense relativistic stars with high core densities, and radiating

relativistic stars.

His contribution, in collaboration with many MSc and PhD students, and postdoctoral fellows, to science and technology is manifest in his work on gravitational forces within the context provided by Einstein's theory of General Relativity and modified gravity theories.

Maharaj and his team have found several new solutions to the Einstein equations in this context by using a variety of advanced mathematical techniques including Lie algebras and contact transformations. These new models will help to obtain a deeper insight into the behaviour of gravity and the underlying geometry of space-time.



Economic Development

Professor Dorrit Posel

Professor Dorrit (Dori) Posel is an Economist who specialises in the analysis of South African micro-data. Dori holds an NRF/DST Research Chair (SARCHI) in Economic Development and is a B-rated NRF researcher.



She has published widely on research relating to labour migration and remittance behaviour, changes in labour force participation and employment, the determinants of earnings, measures of well-being, and the economics of gender.

One of her key projects as a SARCHI Chair has been to investigate marriage markets in South Africa in the context of ilobolo, using a combination of quantitative and qualitative research.

Her research on marriage has been published in a number of journals, including *Applied Economics*, *Economic Development and Cultural Change*, *African Studies Review*, the *Journal of Asian and African Studies*, and the *Journal of Contemporary African Studies*.

Posel received a PhD in Economics from the University of Massachusetts (Amherst) in 1999, and was a post-doctoral fellow at Princeton University in 2000. In 2005, she received the Vice-Chancellor's Research Award. In 2007, after being awarded the SARCHI Chair, she moved from the School of Economics to Development Studies at UKZN.

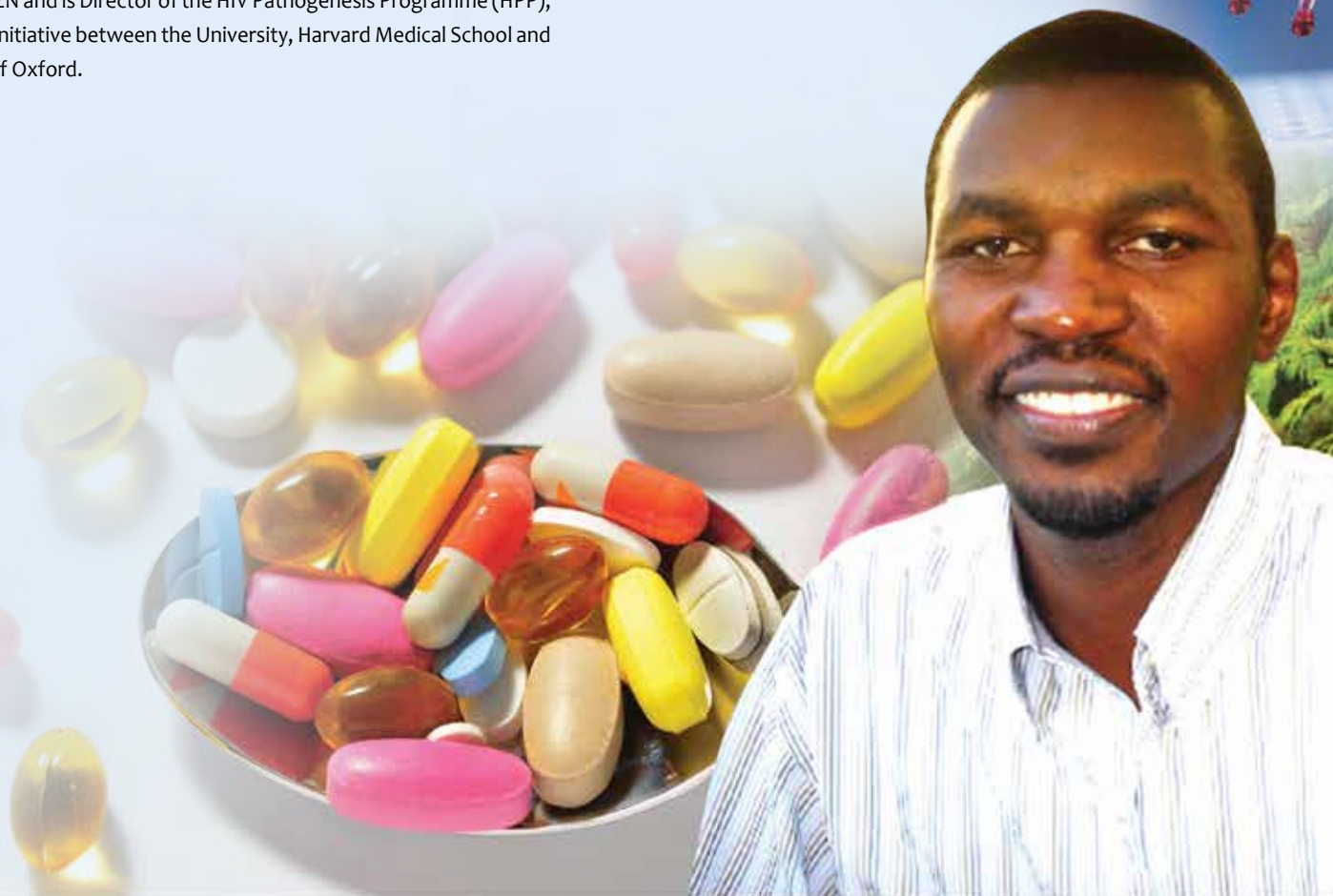
Systems Biology of HIV and AIDS

Professor Thumbi Ndung'u

Professor Thumbi Ndung'u is a Molecular Virologist whose particular research interests lie in host-virus interactions underlying HIV/AIDS pathogenesis and antiviral immune responses.

The goals under the auspices of this Chair are to understand virus interactions with the host immune system and ultimately to inform or develop an HIV-1 vaccine. The laboratory studies HIV-1 exposed or infected people who show heterogeneity in their clinical outcomes to understand the complex interplay between the host genetic system, immune responses and the virus. Part of the effort is also devoted to improving the effectiveness of currently available antiretroviral treatments. Ndung'u has special interest in the training of globally competitive African scientists. His group focuses on both HIV and TB immunopathogenesis research.

Ndung'u is an Investigator and Max Planck Institute for Infection Biology Research Group Leader at the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH), Professor and Victor Daitz Chair in HIV/TB Research at UKZN and is Director of the HIV Pathogenesis Programme (HPP), a collaborative initiative between the University, Harvard Medical School and the University of Oxford.



Applied Poverty Reduction Assessment

Professor Sarah Bracking

Professor Sarah Bracking currently holds the University of KwaZulu-Natal SARCHI Chair in Applied Poverty Reduction Assessment, under which a programme of research is being implemented in order to help reduce the scale and scope of poverty in South Africa by designing better means to assess policy intervention and implementation. This programme begins from the concept of poverty as multi-dimensional and multi-causal, such that research covers the economic, political and environmental domains, focusing on how we can ensure poverty reduction at both the micro and macro scales.

Bracking graduated from York University in the UK (BA Hons Politics), then Leeds University (MA, International Resources and Development; PhD on Structural Adjustment, Business and the State in Zimbabwe 1991-7). She worked as a Research Fellow at the Centre for Democratisation Studies at Leeds University, principally on the International IDEA State of Democracy Project. She then moved to the University of Manchester where she was a member of the Chronic Poverty Research Centre (2001-2006) and Global Poverty Research Group (2001 – 2007), held a number of research grants, was promoted to Professor in International Development in the School of Environment and Development, and is the Research Director of the Leverhulme Centre for the Study of Value at www.thestudyofvalue.org.

Her most recent work has focused specifically on the developmental co-benefits of climate finance designated for adaptation projects, moving from a 20-year career of research in development finance generically. Research on this is ongoing in the Leverhulme Centre for the Study of Value, funded from a major programme grant award from the Leverhulme Trust (RP2012-V-041). This research is critically exploring the social articulation of valuation in the

development, environment and conservation domains. Bracking also has ongoing theoretical and field research on private sector development and corruption in the extractive industries and infrastructural build projects in South Africa, funded by the Michelsen Institute.

From 2009-2012, Bracking worked as Principle Investigator on a number of research grants: on reform of European development finance institutions (DFIs) and their use of tax havens, funded by the Ministry of Foreign Affairs in Norway (2010); on development and environmental impact assessment in development finance institutions funded by Norwegian Church Aid (2011), and on a community based system for the treatment of HIV, funded by the European Union and ACP (2008-). She was invited as an Expert Witness to the UK Parliamentary Committee on International Development (December 2010) because of her research work on the CDC Group, the UK's development finance institution. She has also worked with ZIMCODD on debt write-off (2008); Counter Balance on Reform of the European Investment Bank (2009); and Advocates for International Development (A4ID) as a trainer (2006). Bracking is editor of *Corruption and Development* (Palgrave, 2007) and author of *Money and Power* (Pluto, 2009), and is currently completing a book on *The Financialisation of Power in Africa* (Routledge, forthcoming). She is also a Columnist at *The Africa Report*.



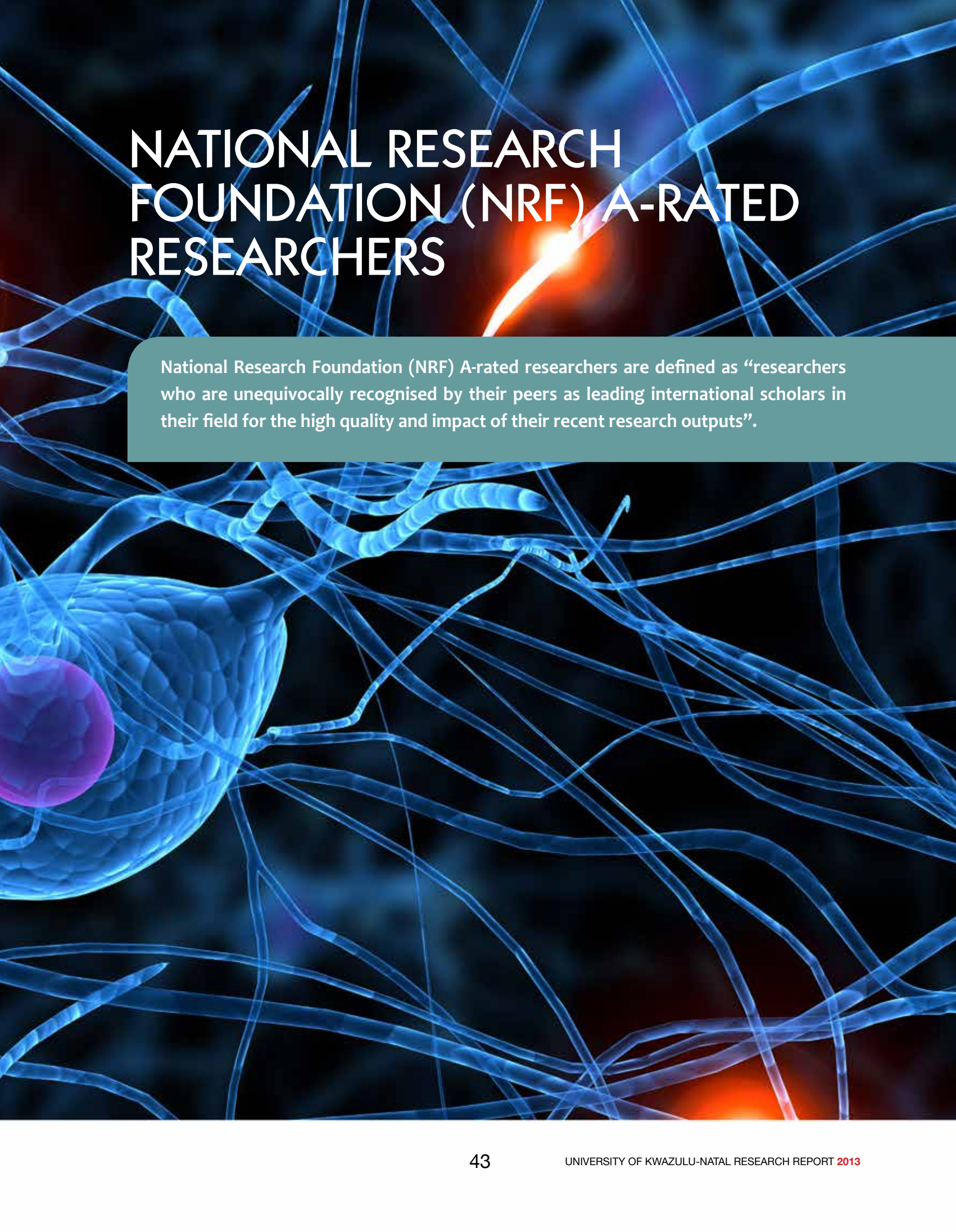
Indigenous Health Care Systems (vacant)

The major aim of the Chair is to provide a platform for research and development in the field of traditional medicine, providing an essential academic link between national policy and implementation.

Through research, the Chair will contribute to developing scientifically proven African traditional medicines and also to the institutionalisation of the African traditional health care system. Projects undertaken at the University have included the United States government-funded Biomedical and Traditional Healing Collaboration on HIV and AIDS; the NIH/NCCAM-funded traditional medicine clinical trial at Edendale Hospital in Pietermaritzburg, and the Department of Science and Technology IKS Bioprospecting Programme.

Importantly, the Indigenous Health Care Systems Research Chair will enhance scientific knowledge on traditional medicine and attract young scientists to this field.





NATIONAL RESEARCH FOUNDATION (NRF) A-RATED RESEARCHERS

National Research Foundation (NRF) A-rated researchers are defined as “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”.

Professor Fernando Albericio

NRF A-rated academic, Professor Fernando Albericio, was appointed as a Fractional Research Professor in the School of Chemistry and Physics in 2012.

Albericio is Full Professor at the University of Barcelona, where he received his PhD in Chemistry in 1981. Principal Investigator at the Institute for Research in Biomedicine-Barcelona, he founded several biotech companies and sits on the Board of Directors of several foundations and companies.

‘I consider myself as a representative of the New University, which allows me to combine teaching and research with a strong vocation for the transfer of knowledge from such research to society. I think I perform basic research, but with a goal to become transformative,’ he said.

Albericio is a member of the Steering Committee of UKZN’s Science and Technology Innovation Park (STIP) and also holds the position as international co-ordinator of two networks: RedEmprendia and AfricaEmprende, both aimed at extending the academic entrepreneurship to Iberoamerica and Africa.

The main focus of Albericio’s ongoing research projects is to identify compounds, mainly natural products or analogues, with

therapeutic activity (drug discovery), to facilitate these modified products to reach the target (drug delivery systems), and/or to identify the disease (diagnostics).

In collaboration with UKZN Health Sciences academics, Professor Sabiha Essack, Professor Thavi Govender, and Professor Gert Kruger, he is developing a new family of peptides with antimicrobial and anti-tuberculosis properties.

Speaking of the future, Albericio said: ‘My wish is to consolidate my presence at UKZN. My medium-term scientific professional plan is to move all my academic activities to UKZN. I think that UKZN is a perfect place to carry out an interdisciplinary research, due to the quality of students, researchers, and technological instrumentation. During all these years, first collaborating, and then being part of the team, my experiences at UKZN have been extremely positive.

‘My goal is to work even harder towards contributing to increase of the quality of research at UKZN; trying always to educate the next generations of South African scientists who will contribute to the scientific and economic development of South Africa.’

Albericio has published over 750 papers, filed more than 50 patents, and has co-authored four books. He is also editor of several scientific journals and acted in the editorial board of several others.



Professor Patricia Berjak

Since A-rated seed scientist Professor Patricia Berjak published her groundbreaking research on “flash-drying” in 1989 – a discovery which for the first time made possible the long-term preservation of the germplasm from recalcitrant (wet) seeds – the significance of her work continues to grow, particularly in the face of global concerns about climate change and food security.

Berjak first received an NRF A-rating in 2000 and has had this reinstated twice – an indication that she has put South Africa on the global map in the areas of understanding the biology of desiccation-sensitive, recalcitrant seeds, storage of the germplasm and conservation of recalcitrant-seeded species.

As a global expert in recalcitrant seed biology and cryopreservation, Berjak was commissioned in 2011-12 by the United Nations Food and Agricultural Organisation (FAO) to contribute towards its Genebank Standards for Plant Genetic Resources for Food and Agriculture document, which aims to facilitate germplasm conservation on an international level. This important document, in which the contribution made by her and her major research collaborator, Professor Norman Pammenter, was warmly acknowledged, was published in 2013 and is being translated into all the official United Nations’s languages.

In 2010 she received the eThekweni Living Legend Award which recognises exceptional individuals and in 2006 she received the most prestigious National Order of Mapungubwe (Silver) bestowed by the President of South Africa.

Other significant accolades include a major competitive grant from the Darwin Initiative of the United Kingdom government in collaboration with the Millennium Seed Bank of the Royal Botanic Gardens in Kew, England in 2005. She was named 2004’s Distinguished Woman Scientist by the South African Department of Science and Technology. She is also the recipient of the Silver and Gold Medals of the South African Association of Botanists and was President of the International Society for Seed Science from 2008 to 2011.

Berjak is a Fellow of the Third World Academy of Sciences and in an academic career spanning some 40 years has published 180 peer-reviewed papers in international literature and 61 book chapters and full-length peer-reviewed conference proceedings. Since 1978 she has supervised 44 MSc students and 19 PhD students.

She is currently a Professor Emeritus and Senior Research

Associate at the University of KwaZulu-Natal (Westville campus) where she teaches seed biology and leads a large and productive group of postgraduate students. She continues to pursue an active research programme, which is making continuous improvements to the cryostorage process and in our understanding of recalcitrant seed behaviour.



Professor Michael Chapman

Michael Chapman, Professor Emeritus and Fellow, University of KwaZulu-Natal, and Fellow, Stellenbosch Institute for Advanced Study, confirmed his continuing stature as a world-recognised scholar in southern African literature when he achieved his third successive NRF A-rating in 2013.

Since his previous NRF rating, Chapman has explored a major project on the value of literature in un-literary times.

‘We live in times in which we neglect the human dimension for the pragmatic outcome,’ said Chapman. ‘We have witnessed amazing advances in technology (digital communication) and medical science (pioneering work in AIDS research). People still struggle, however, to enrich their imaginative and spiritual lives. The Internet gives us information by the overload, but doesn’t encourage thought, interpretation, or ethical discrimination. Literature ties risk-taking

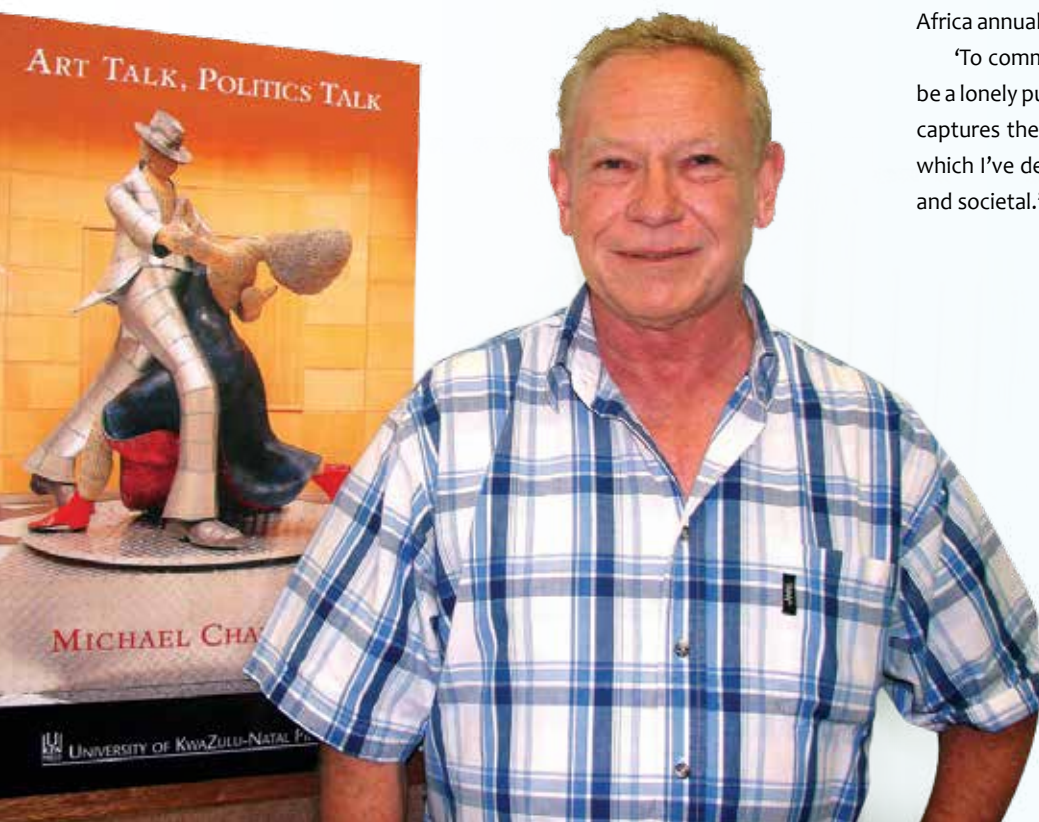
thought to the subjective, experiential lives of individual human beings.’

The project on literature in un-literary times has led Chapman over recent years to publish work on a range of South African figures including the writer Lewis Nkosi – exiled by the apartheid regime – and Nelson Mandela, who contributed not only to political life, but also to the literature of his country.

Chapman’s project has seen his participation in conferences in South Africa and, under the auspices of the European Association of Commonwealth Literature and Languages, in Istanbul (2011) and Pecs (Hungary) in 2012. At both of these conferences, Chapman linked the South African Nobel literature laureate, J.M. Coetzee, to the concept and reality of living in a ‘postcolony’ (South Africa) within a post-apartheid, post-cold war, global culture.

The local/global reach of literature in un-literary times was the theme of Professor Chapman’s English Academy of Southern Africa annual lecture in 2012 titled, ‘Lewis Nkosi, the Exile at Home’.

‘To commit oneself to the study and research of literature can be a lonely pursuit. The cast of soap operas, not the literary scholar, captures the public eye. But, I wouldn’t change the profession to which I’ve devoted my working life. It has its value, both personal and societal.’



Professor Rob Gous

Honorary Professor Emeritus in the Discipline of Animal Science, Rob Gous, has become well-known in the academic community for his research in poultry and innovation in the field of simulation modelling.

Gous, who holds an A-rating from the NRF for his research and is a member of the Academy of Science of South Africa, is one of a handful of poultry simulation modellers in the world. He is a life member of the South African Poultry Association and serves on the board of the World's Poultry Science Association (WPSA) as one of five Vice-Presidents and Chairman of the South African branch.

Gous's 2013 research activity includes work on the response of piglets to Bromelain in an attempt to prevent diarrhoea in the newly-weaned animals. His poultry research over the course of the year involved examining the responses of laying hens and broiler breeder hens to a range of balanced protein levels in their feed.

Gous is currently also looking into the use of Bromelain in improving energy and amino acid digestibility of feed ingredients for poultry. He is also examining the effects of the level and source of vitamin D supplementation on the skeletal integrity, performance and vitamin D status of broiler hens.

These projects have been carried out at the University's Ukulinga Research Farm, where Gous continues to be a familiar face, despite retiring officially in 2007.

Gous's simulation models, being applied in more recent research to other animals such as turkeys and ostriches, are being used increasingly around the world as a basis for research and nutrition. These models enable prediction of food intake and growth of animals, thereby optimising the process of producing broilers for human consumption and improving the health conditions of the animals.

Gous' models have been adopted by universities in the United States and Sydney, as well as Brazil, where Gous has co-supervised students for eight years. In his 40-year plus career, Gous has published over 164 scientific papers in accredited journals, presented over 99 papers at international conferences and 90 papers at local conferences. He has supervised 48 MSc Agric students and 14 PhDs, as well as developing ten

software programmes and a curriculum for training poultry management students at the KwaZulu-Natal Poultry Institute.

Gous has received numerous awards and recognition for his ground-breaking work over the years: in 1988 he received the South African Society for Animal Production Silver Medal for Research and in 1992 received a Diploma of Excellence from the WPSA on presentation of a scientific paper at the XIX World's Poultry Congress in Amsterdam. In 2010 Gous was named national Agriculturalist of the Year for 2010 by Agricultural Writers SA and in 2003 received the South African Society for Animal Production Gold Medal for Research. He was also nominated for the National Science and Technology Forum (NSTF) Science and Technology Award for 2005.



Professor Steven Johnson

Evolutionary Biologist Professor Steven Johnson in UKZN's School of Life Sciences, one of the University's most prolific researchers, has focused his research on understanding the evolutionary diversification of plants, particularly in southern Africa, the conservation of plant-pollinator mutualisms, and the reproductive biology of invasive species.

Johnson is the South African Research (SARChI) Chair on Evolutionary Biology and is also a member of the DST-NRF Centre of Excellence for Invasion Biology. He holds an A2-rating from the NRF for the quality of his research.

Johnson completed his PhD on the pollination of plants in the Cape flora at the University of Cape Town in 1994 and is a leading specialist in the field of plant pollination biology. Johnson also established a state-of-the-art laboratory for the study of chemical cues used by plants to attract insect pollinators.

Most recently, Johnson chaired the organising team for the annual meeting of the South African Association of Botanists (SAAB), which was held at the Drakensville resort in January 2013. The conference theme was 'Green is Gold' in recognition of the economic and scientific value of plants.

Johnson also organised a special symposium on pollinator-driven-speciation which was held immediately after the SAAB Congress and which attracted many international speakers.

Other research highlights from Johnson's group in 2013 included the publication of the first global analysis of chemical convergence in plants that mimic insect oviposition sites; a study showing that nectar production has evolved repeatedly in plants; a study showing that the statistical likelihood of an under-population (Allee) effect in plants depends on the type of pollinator, and a major review of floral colour and volatile signals.

Johnson has been widely published, writing more than 230 peer-reviewed scientific papers as well as a number of popular science articles and co-authoring the books *Table Mountain: A Natural History* (which earned the University of Cape Town Merit Book Award and the University of Natal Book Prize in 2002) and *The Cape Orchids* a regional monograph of the orchids of the Cape Floristic Region. Johnson is also on the editorial boards of two international journals, namely *Oecologia* and *Arthropod-Plant Interactions*.

In 1999, he received the NRF President's Award; in 2003, he was awarded the Botanical Society of South Africa's Percy Sergeant Medal; in 2010 the UKZN's Deputy Vice-Chancellor's Research Award and in 2013 received the NRF-DST Research Chair Grant. Johnson has successfully supervised or co-supervised 11 PhDs, six of whom completed their degrees in 2012.



Professor Linda Richter

A distinguished research Fellow at the Human Sciences Research Council and Honorary Professor in Psychology and an elected Fellow of the University of KwaZulu-Natal, Professor Linda Richter received her A-rating from the NRF in 2012.

Richter's areas of research interest are in early origins of health and development; child and adolescent health and development; parenting, families, fathers, and communities; the impact of poverty and HIV and AIDS on children, youth and families, and interventions and policies to address child and family adversity.

In 2012 she led the team commissioned by the Department of Performance Monitoring and Evaluation in the Presidency to conduct the Early Child Development Diagnostic Review, and in 2013 she was at the helm of the team commissioned by the Department of Social Development and UNICEF to develop the National Early Child Development Policy and the National Early Child Development Programme.

Richter is the founding researcher of the Birth to Twenty Plus longitudinal birth cohort study – started in 1990 – which is now the largest and longest running study of children's health and development in Africa, and one of only five such studies in low and middle income countries.

Richter has published more than 350 papers and chapters in the fields of child, adolescent and family development, infant and child assessment, protein energy malnutrition, street and working children, and the effects of HIV and AIDS on children and families, including HIV prevention among young people. Her papers have appeared in, among others, *Science*, *The Lancet*, and the *Journal of the American Medical Association*. She is the author of several books and monographs.

Richter is an Honorary Professor in the Department of Paediatrics and Child Health at the University of the Witwatersrand. From 2003-2006, she was a Visiting Researcher at the University of Melbourne, from 2007-2010 a Visiting Scholar at Harvard University, and from 2007-2011 a Research Associate in the Department of Psychiatry at the University of Oxford. From 2010-2012 she was on a contract from the Human Sciences Research Council to the Global Fund to Fight AIDS,

Tuberculosis and Malaria in Geneva, and was also a Senior Specialist for Vulnerable Children.

Richter was a member of and chaired the Technical Steering Committee of the Department of Child and Adolescent Health at the World Health Organisation in Geneva for three years. She also chaired Future Think, a roundtable to anticipate threats to children's wellbeing in preparation for the United Nations General Assembly Special Session on Children in 2001.

She is currently the ECD Advisor to the World Health Organisation and is a member of the Academy of Science of South Africa.



NRF-RATED RESEARCHERS

College of Agriculture, Engineering and Science			
Title	Surname	Initial	School/Research Unit
Professor	Gebreyohannis	AB	African Centre for Food Security
Professor	Bob	U	Agricultural, Earth and Environmental Sciences
Professor	Chimonyo	M	Agricultural, Earth and Environmental Sciences
Professor	Derera	J	Agricultural, Earth and Environmental Sciences
Professor	Elburg	MA	Agricultural, Earth and Environmental Sciences
Professor	Green	JM	Agricultural, Earth and Environmental Sciences
Professor	Hill	T	Agricultural, Earth and Environmental Sciences
Professor	Hughes	JC	Agricultural, Earth and Environmental Sciences
Professor	Laing	MD	Agricultural, Earth and Environmental Sciences
Professor	Maharaj	B	Agricultural, Earth and Environmental Sciences
Dr	Misra	SK	Agricultural, Earth and Environmental Sciences
Professor	Modi	AT	Agricultural, Earth and Environmental Sciences
Professor	Muchaonyerwa	P	Agricultural, Earth and Environmental Sciences
Professor	Mutanga	O	Agricultural, Earth and Environmental Sciences
Professor	Nsahlai	IV	Agricultural, Earth and Environmental Sciences
Professor	Ortmann	GF	Agricultural, Earth and Environmental Sciences
Dr	Ovechkina	MN	Agricultural, Earth and Environmental Sciences
Professor	Proches	S	Agricultural, Earth and Environmental Sciences
Professor	Rouget	MJF	Agricultural, Earth and Environmental Sciences
Professor	Savage	MJ	Agricultural, Earth and Environmental Sciences
Dr	Zegeye	EW	Agricultural, Earth and Environmental Sciences
Professor	Bharuth-Ram	K	Chemistry and Physics
Professor	Coombes	PH	Chemistry and Physics
Professor	Ford	TA	Chemistry and Physics
Professor	Friedrich	HB	Chemistry and Physics
Professor	Hellberg	MA	Chemistry and Physics
Professor	Hey	JD	Chemistry and Physics
Professor	Jaganyi	D	Chemistry and Physics
Professor	Jonnalagadda	SB	Chemistry and Physics
Professor	Konrad	T	Chemistry and Physics
Professor	Mace	RL	Chemistry and Physics
Professor	Mola	GT	Chemistry and Physics
Dr	Moyo	T	Chemistry and Physics
Professor	Munro	OQ	Chemistry and Physics
Dr	Nyamori	VO	Chemistry and Physics
Dr	Ojwach	O	Chemistry and Physics
Dr	Owaga	BO	Chemistry and Physics

College of Agriculture, Engineering and Science

Title	Surname	Initial	School/Research Unit
Dr	Pellicane	G	Chemistry and Physics
Professor	Petrucione	F	Chemistry and Physics
Dr	Pruessner	K	Chemistry and Physics
Professor	Robinson	RS	Chemistry and Physics
Dr	Sergi	A	Chemistry and Physics
Dr	Sinayskiy	I	Chemistry and Physics
Professor	van Heerden	FR	Chemistry and Physics
Professor	Venkataraman	S	Chemistry and Physics
Dr	Yacoob	S	Chemistry and Physics
Dr	Zloschastiev	K	Chemistry and Physics
Dr	Zunckel	CL	Chemistry and Physics
Professor	Adali	S	Engineering
Professor	Afullo	TJO	Engineering
Professor	Bezuidenhout	CN	Engineering
Professor	Bright	G	Engineering
Professor	Carsky	M	Engineering
Professor	Jewitt	GPW	Engineering
Professor	Meikap	BC	Engineering
Dr	Mwithiga	G	Engineering
Professor	Pegram	GGs	Engineering
Professor	Ramjugernath	D	Engineering
Professor	Smithers	JC	Engineering
Dr	Stopforth	R	Engineering
Professor	Stretch	DD	Engineering
Professor	Tapamo	JR	Engineering
Professor	Trois	C	Engineering
Professor	Workneh	TS	Engineering
Professor	Xu	H	Engineering
Professor	Ariatti	M	Life Sciences
Professor	Beckett	RP	Life Sciences
Dr	Brown	M	Life Sciences
Professor	Bytebier	BLG	Life Sciences
Dr	Chenia	HY	Life Sciences
Professor	Downs	CT	Life Sciences
Dr	Glassom	D	Life Sciences
Professor	Goldring	JPD	Life Sciences
Dr	Griffiths	ME	Life Sciences
Dr	Gueguim Kana	GKEB	Life Sciences
Professor	Hart	RC	Life Sciences
Dr	Islam	MS	Life Sciences
Dr	Juergens	A	Life Sciences

College of Agriculture, Engineering and Science

Title	Surname	Initial	School/Research Unit
Dr	Light	ME	Life Sciences
Professor	Lin	J	Life Sciences
Professor	Lovegrove	BG	Life Sciences
Professor	Mukaratirwa	S	Life Sciences
Professor	Naidoo	G	Life Sciences
Dr	Niesler	CU	Life Sciences
Dr	Olaniran	AO	Life Sciences
Professor	Pammenter	NW	Life Sciences
Professor	Perissinotto	R	Life Sciences
Professor	Perrin	MR	Life Sciences
Professor	Pillay	B	Life Sciences
Dr	Scharler	UM	Life Sciences
Professor	Schmidt	S	Life Sciences
Dr	Shrader	AM	Life Sciences
Dr	Shuttleworth	A	Life Sciences
Dr	Singh	M	Life Sciences
Dr	Singh	N	Life Sciences
Professor	Slotow	RH	Life Sciences
Dr	Smit	AJ	Life Sciences
Dr	Stirk	WA	Life Sciences
Professor	Thandar	AS	Life Sciences
Professor	van Staden	J	Life Sciences
Professor	Ward	DM	Life Sciences
Professor	Watt	MP	Life Sciences
Professor	Baboolal	D	Mathematics, Statistics and Computer Science
Professor	Banasiak	J	Mathematics, Statistics and Computer Science
Dr	Bansilal	S	Mathematics, Statistics and Computer Science
Professor	Govinder	KS	Mathematics, Statistics and Computer Science
Dr	Hilton	MJ	Mathematics, Statistics and Computer Science
Dr	Keet	CM	Mathematics, Statistics and Computer Science
Professor	Leach	PGL	Mathematics, Statistics and Computer Science
Professor	Maharaj	SD	Mathematics, Statistics and Computer Science
Professor	McKenzie	JF	Mathematics, Statistics and Computer Science
Professor	Moodley	K	Mathematics, Statistics and Computer Science
Professor	Motsa	SS	Mathematics, Statistics and Computer Science
Professor	Mukwembi	S	Mathematics, Statistics and Computer Science
Professor	Ray	S	Mathematics, Statistics and Computer Science
Professor	Rodrigues	BG	Mathematics, Statistics and Computer Science
Professor	Sibanda	P	Mathematics, Statistics and Computer Science
Dr	Tong-Viet	HP	Mathematics, Statistics and Computer Science
Dr	Varzinczak	IJ	Mathematics, Statistics and Computer Science

College of Health Sciences			
Title	Surname	Initial	School/Research Unit
Professor	Newell	ML	Africa Centre
Professor	Singh	JA	CAPRISA
Professor	Bhimma	R	Clinical Medicine
Professor	Biccard	BM	Clinical Medicine
Professor	Coutsoudis	A	Clinical Medicine
Professor	Madiba	TE	Clinical Medicine
Professor	Moodley	D	Clinical Medicine
Professor	Moodley	J	Clinical Medicine
Professor	Mosam	A	Clinical Medicine
Professor	Naidoo	DP	Clinical Medicine
Professor	Naidoo	N	Clinical Medicine
Professor	Satyapal	KS	Clinical Medicine
Professor	Abdool Karim	Q	Health Sciences
Professor	Essack	SY	Health Sciences
Professor	Govender	T	Health Sciences
Professor	Govender	T	Health Sciences
Professor	Kruger	HG	Health Sciences
Professor	Mackraj	I	Health Sciences
Professor	McKune	AJ	Health Sciences
Professor	Oduntan	OA	Health Sciences
Professor	Suleman	F	Health Sciences
Professor	Burns	JK	Laboratory Medicine and Medical Sciences
Professor	Daniels	WMU	Laboratory Medicine and Medical Sciences
Professor	Das	GD	Laboratory Medicine and Medical Sciences
Dr	Mabandla	MV	Laboratory Medicine and Medical Sciences
Professor	Maharaj	P	Laboratory Medicine and Medical Sciences
Dr	Mann	JK	Laboratory Medicine and Medical Sciences
Professor	Musabayane	CT	Laboratory Medicine and Medical Sciences
Professor	Naicker	T	Laboratory Medicine and Medical Sciences
Professor	Naidoo	S	Laboratory Medicine and Medical Sciences
Professor	Ndung'u	PT	Laboratory Medicine and Medical Sciences
Professor	Pillay	M	Laboratory Medicine and Medical Sciences
Dr	Thobakgale	CF	Laboratory Medicine and Medical Sciences
Dr	Bland	RM	Nursing and Public Health
Professor	Brysiewicz	P	Nursing and Public Health
Dr	Herbst	AJ	Nursing and Public Health
Dr	Kvalsvig	JD	Nursing and Public Health
Dr	Rochat	TJ	Nursing and Public Health
Professor	Tanser	FC	Nursing and Public Health
Professor	Taylor	M	Nursing and Public Health

College of Humanities

Title	Surname	Initial	School/Research Unit
Dr	Akintola	O	Applied Human Sciences
Professor	Bhana	A	Applied Human Sciences
Professor	Collings	SJ	Applied Human Sciences
Professor	Durrheim	K	Applied Human Sciences
Professor	McCracken	DP	Applied Human Sciences
Professor	Potgieter	CA	Applied Human Sciences
Dr	Steyn	J	Applied Human Sciences
Professor	Teer-Tomaselli	RE	Applied Human Sciences
Professor	Tomaselli	KG	Applied Human Sciences
Professor	Ballantine	CJ	Arts
Professor	Coullie	JE	Arts
Professor	De Meyer	BAMS	Arts
Professor	Dimitriu	I	Arts
Professor	Green	MM	Arts
Professor	Leeb-Du Toit	JC	Arts
Professor	Stiebel	EA	Arts
Professor	Stobie	C	Arts
Professor	Turner	NS	Arts
Dr	Wessels	MA	Arts
Professor	Wildsmith-Cromarty	R	Arts
Professor	Ballard	RJ	Built Environment and Development Studies
Professor	Bond	P	Built Environment and Development Studies
Dr	Casale	DM	Built Environment and Development Studies
Professor	Freund	WM	Built Environment and Development Studies
Professor	Posel	D	Built Environment and Development Studies
Professor	Scott	DM	Built Environment and Development Studies
Professor	Valodia	IAK	Built Environment and Development Studies
Professor	Xaba	T	Built Environment and Development Studies
Professor	Bhana	D	Education
Professor	Buthlezi	MT	Education
Professor	Chikoko	V	Education
Professor	de Villiers	MD	Education
Professor	Deacon	RA	Education
Professor	Maistry	SM	Education
Professor	Moletsane	R	Education
Professor	Muthukrishna	A	Education
Dr	Pillay	G	Education
Dr	Pithouse-Morgan	KJ	Education
Professor	Preece	J	Education
Professor	Ramathan	P	Education

College of Humanities

Title	Surname	Initial	School/Research Unit
Dr	van Laren	L	Education
Professor	Christiansen	IM	Religion, Philosophy and Classics
Professor	Collier	JD	Religion, Philosophy and Classics
Professor	Denis	PMBR	Religion, Philosophy and Classics
Professor	Draper	JA	Religion, Philosophy and Classics
Professor	Ebrahim	AFM	Religion, Philosophy and Classics
Dr	Efthimiadis-Keith	H	Religion, Philosophy and Classics
Professor	Hilton	JL	Religion, Philosophy and Classics
Professor	Lenta	PJP	Religion, Philosophy and Classics
Dr	Murove	M	Religion, Philosophy and Classics
Professor	Nadar	S	Religion, Philosophy and Classics
Professor	Penumala	PK	Religion, Philosophy and Classics
Professor	Spurrett	DJ	Religion, Philosophy and Classics
Professor	West	GO	Religion, Philosophy and Classics
Dr	Hollmann	JC	Social Sciences
Professor	Khan	S	Social Sciences
Professor	Mare	PG	Social Sciences
Professor	Marschall	S	Social Sciences
Professor	Mutula	SM	Social Sciences
Professor	Singh	S	Social Sciences
Professor	Sooryamoorthy	R	Social Sciences
Professor	Stilwell	C	Social Sciences
Professor	Vahed	GH	Social Sciences

College of Law and Management Studies

Title	Surname	Initial	School/Research Unit
Dr	Hanass-Hancock	J	Accounting, Economics and Finance
Professor	Harris	GT	Accounting, Economics and Finance
Professor	Stainbank	LJ	Accounting, Economics and Finance
Professor	Whiteside	AW	Accounting, Economics and Finance
Professor	Couzens	EWf	Law
Professor	Kidd	MA	Law
Professor	McQuoid-Mason	DJ	Law
Professor	Mubangizi	JC	Law
Professor	Brijball Parumasur	S	Management, IT and Governance
Professor	Reddy	PS	Management, IT and Governance
Dr	Ruggunan	SD	Management, IT and Governance

FELLOWS OF THE UNIVERSITY IN 2013



Professor Leana Uys

The late Professor Leana Uys was Deputy Vice-Chancellor and Head of the College of Health Sciences from 2001 to 2010.

Her previous positions included Director: World Health Organisation Collaborating Centre for Nursing and Midwifery Development; Professor of Nursing and Director of Post-Graduate Programmes, School of Nursing at the former University of Natal, and Professor and Head of School of Nursing from 1986 to 2001.

The holder of a D.Soc.Sc. (Nursing), Uys supervised 28 Masters and 14 PhD candidates who have completed their studies.

In 2012, she retired from the University of KwaZulu-Natal and in April 2014, passed away after a lengthy battle with cancer.



Professor Marie-Louise Newell

Professor Marie-Louise Newell has a background in Medicine, Demography and Epidemiology; focusing on maternal and child health. At the University College London Institute of Child Health, she led a European cohort of HIV-infected pregnant women and their children, and was involved in research in developing countries, particularly in sub-Saharan Africa.

From 2005 to 2013, she was the Director of UKZN's Wellcome Trust-funded Africa Centre for Health and Population Studies, where she initiated a broad innovative programme of research addressing the impact of HIV infection at population, community, household and individual levels.

Newell is a member of international expert review bodies and was appointed a Fellow of the UK Academy of Medical Sciences.



Professor Jacek Banasiak

Professor Jacek Banasiak, a Mathematics Professor in the College of Agriculture, Engineering and Science, has over the course of two decades at UKZN, risen to become one of the University's most respected and prolific researchers.

Banasiak joined the Department of Mathematics and Applied Mathematics at the former University of Natal in 1992, moving through the ranks to become a Senior Professor in 2008 and research Professor in 2011. He was the Head of the School of Mathematical Sciences between 2005 and 2007.

Banasiak's research interests are in non-local, integro-differential

models of applied sciences, including kinetic theory, mathematical biology and fragmentation-coagulation theory and also asymptotic analysis of multiple scales problems – for which he received the habilitation (DSc) from the University of Warsaw in 1999; the state title of Professor conferred by the President of the Republic of Poland in 2007, and the Silver Cross of Merit in 2013.

Banasiak has been a National Research Foundation B1 scientist since 2008, and in 2012 received the South African Mathematical Society Award for Research Distinction.



Professor Gerald West

Professor Gerald West specialises in the interface between academic biblical studies and the ways in which the Bible is used in local African communities. He has published extensively in this area, and his research has been recognised nationally and internationally.

In 2012 he received the Deputy Vice-Chancellor's Award for Research Excellence in the College of Humanities, and in 2013 was made a Fellow of the University of KwaZulu-Natal.

The primary institutional site for his work has been the Ujamaa Centre for Community Development and Research, which was established in 1989.

West has been working with the Ujamaa Centre since its establishment. The Centre, funded by the National Research Foundation and a range of external funders from Europe, the United States, and Scandinavia, enables socially engaged academics and organic intellectuals to collaborate around a range of contextually important issues, including unemployment, gender violence, HIV and AIDS, disability, sexuality, citizenship, the environment as well as the role of religion in the public realm in post-apartheid South Africa.



DST WOMEN IN SCIENCE - 2013

Six UKZN women scientists received national awards in various categories at the prestigious Department of Science and Technology's Women in Science Awards (WISA). The awards were made to the women by the Minister of Science and Technology, Mr Derek Hanekom, for their outstanding scientific contributions to advance science and build the knowledge base in their respective disciplines.

The awards are made annually during National Women's Month in August to acknowledge the achievements of South African women scientists who serve as role models for younger scientists and researchers.

Awards were made to:

- **Professor Vishantie Sewpaul** (Distinguished Women: Humanities and Social Sciences: 1st runner up)
- **Dr Christina Thobakgale** (Distinguished Young Researcher: Life Sciences: 2nd runner up)
- **Professor Deevia Bhana** (The role of science in combating violence against women: Distinguished Researcher: 1st runner up)
- **Dr Maheshvari Naidu** (The role of science in combating violence against women: Emerging Researcher: winner)

Special mention of fellowship and scholarship winners:

- **Ms Philile Mlotshwa** (DST Fellowship Masters)
- **Ms Nontobeko Mvubu** (TATA Africa Scholarships for Women in Science, Engineering and Technology: Masters)





Professor Vishantie Sewpaul



Dr Christina Thobakgale



Professor Deevia Bhana



Dr Maheshvari Naidu



Ms Philile Mlotshwa



Ms Nontobeko Mvubu

2013 L’Oreal-UNESCO Science Fellowships

Two PhD students at UKZN were awarded 2013 L’Oreal-UNESCO fellowships for women in sub-Saharan Africa who have excelled in Science.

Ms Adriana Marais and Ms Aline Saraiva Okello each received 15 000 Euros (R195 000) to put towards their PhD studies. A total of ten inspiring women scientists in the region were honoured for their work in the scientific field.

The scientific research areas covered by this year’s fellows were varied, and included studies in the fields of nanotechnology, materials science, computer science, hydrology, human physiology, chemistry and natural products chemistry, genetics and the relatively new and emerging scientific field of quantum biology.

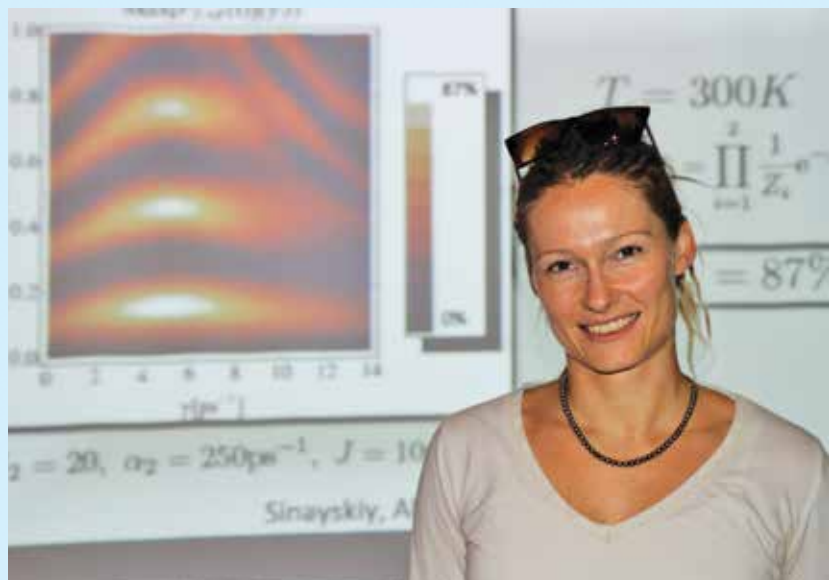
Marais is currently studying towards her PhD in the Quantum Research Group at UKZN. Her research, titled: ‘Quantum Effects in Photosynthesis’ is an investigation of the early stages of photosynthesis.

The impact of the research extends from shedding light on the intriguing question as to whether living organisms use quantum mechanics to optimise their functioning to the development of highly efficient biologically-inspired solar cells with the potential to contribute to green energy technology.

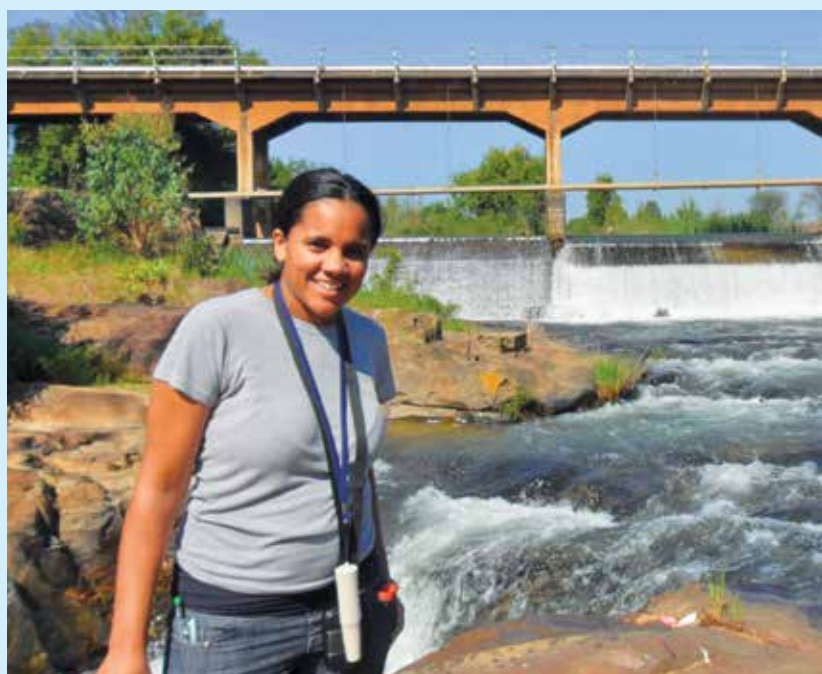
‘So far, my research has focused on the theoretical modelling of energy and charge transfer in photosynthesis, both processes where quantum effects have been shown to play a role. We have proposed open quantum systems models showing how certain features of an environment can assist energy transfer within parameter regimes relevant for photosynthesis,’ said Marais.

Marais said she was honoured to have been awarded a FWIS fellowship.

Okello, meanwhile, completed her BSc in Civil Engineering at ISUTC – an engineering institute in her hometown Maputo in Mozambique. Following this, she worked as a lecturer until 2008 and it was during this time she felt the need to do more scientific research in an effort to help people improve their livelihoods. This resulted in her being named a Ford Foundation Scholar and being awarded a scholarship to study for her Master’s degree in Hydrology at UNESCO-IHE in Delft in The Netherlands. She successfully graduated in 2010 with a distinction.



Ms Adriana Marais.



Ms Aline Saraiva Okello.

Okello is currently pursuing a PhD degree in hydrology at the UNESCO-IHE. Her research study focuses on hydrology and water resources management and is being conducted in collaboration with the Centre for Water Resources Research at UKZN.

'I'm using tracers, remote sensing and hydrological modelling to better understand hydrological processes in the Inkomati River Basin, particularly those related with runoff generation processes, to inform and support improved operational water management in the basin,' said Okello. 'This will improve water management and governance, and ultimately contribute to reducing the vulnerability of several stakeholders who depend on water for their food security and the ecosystem services of the river for their livelihoods.'

Her work is being undertaken as part of the RISKOMAN (Risk-based Operational Water Management for the Inkomati River Basin) project, which aims to improve water management in the transboundary Inkomati River Basin in southern Africa. It's anticipated the project will help reduce water disputes, strengthen collaboration between riparian countries and mitigate the impact on the environment through joint, dynamic risk management of the river basin.

Okello believes the FWIS fellowship highlights the value of her research and is a positive platform through which to encourage other women to pursue their science and research dreams.

** The L'Oréal-UNESCO Regional Fellowships for Women in Science in sub-Saharan Africa is open to all women scientists up to the age of 40 across sub-Saharan Africa who are working towards their PhD in all fields of science. It was first piloted in 2010, when five female scientists were awarded fellowships to help them complete their PhD research projects.*



PROLIFIC RESEARCHERS

These are researchers at the University of KwaZulu-Natal who have obtained three or more author units in DHET accredited, peer-reviewed journals.

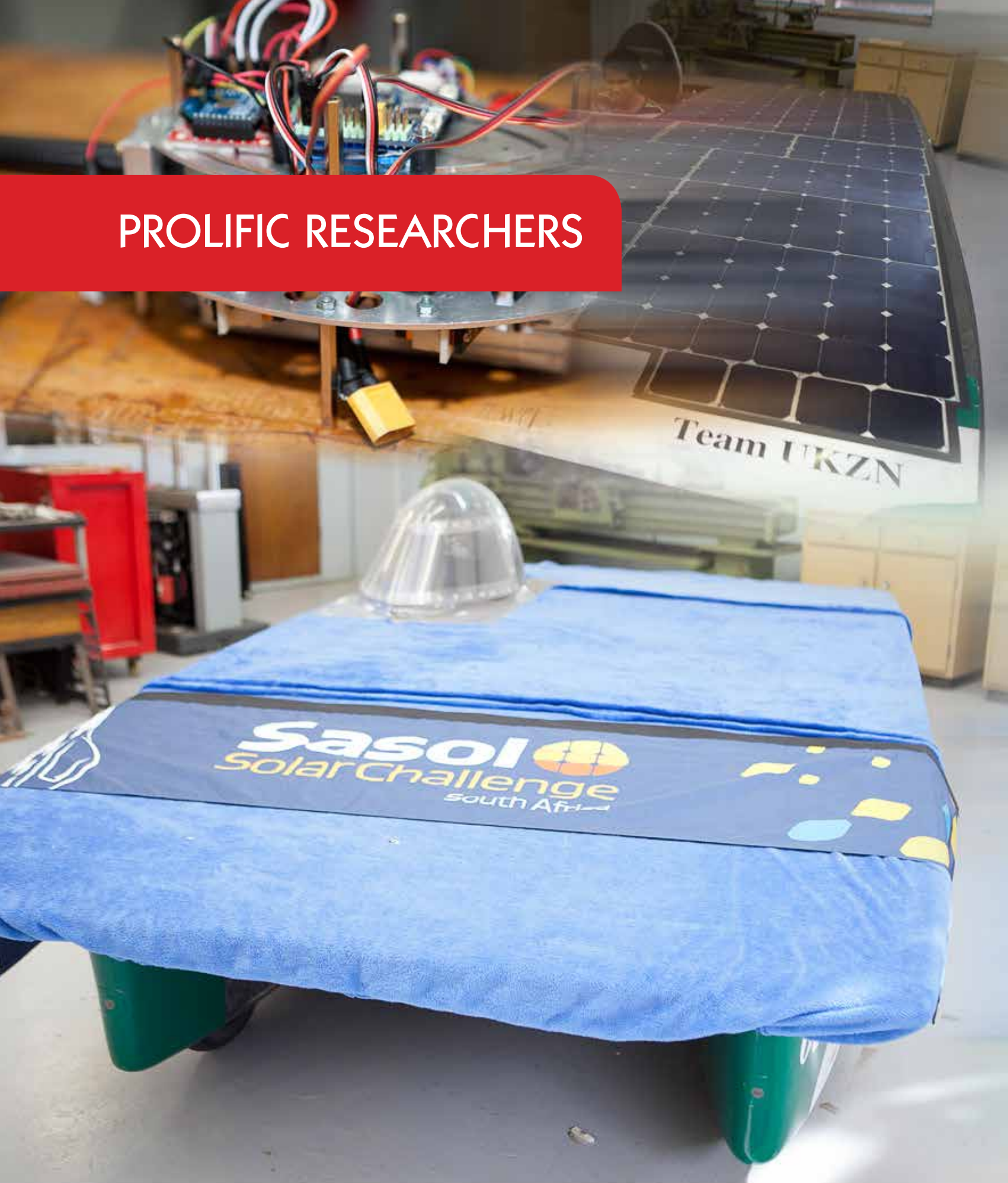
College of Agriculture, Engineering and Science			
Title	Surname	First Name	School
Dr	Bertling	Isa	Agricultural, Earth and Environmental Sciences
Professor	Chimonyo	Michael	Agricultural, Earth and Environmental Sciences
Professor	Derera	John	Agricultural, Earth and Environmental Sciences
Professor	Everson	Colin Stuart	Agricultural, Earth and Environmental Sciences
Professor	Gous	Robert Mervyn	Agricultural, Earth and Environmental Sciences
Dr	Green	Andrew Noel	Agricultural, Earth and Environmental Sciences
Professor	Laing	Mark Delmege	Agricultural, Earth and Environmental Sciences
Professor	Modi	Albert Thembinkosi	Agricultural, Earth and Environmental Sciences
Professor	Mutanga	Onesimo	Agricultural, Earth and Environmental Sciences
Professor	Shimelis	Hussein	Agricultural, Earth and Environmental Sciences
Dr	Zegeye	Wale Edilegnaw	Agricultural, Earth and Environmental Sciences
Professor	Albericio	Fernando	Chemistry and Physics
Dr	Booyesen	Irvin Noel	Chemistry and Physics
Dr	Chetty	Naven	Chemistry and Physics
Dr	Crouch	Neil Robert	Chemistry and Physics
Professor	Forbes	Andrew	Chemistry and Physics
Professor	Friedrich	Holger Bernhard	Chemistry and Physics
Professor	Jaganyi	Deogratius	Chemistry and Physics
Professor	Jonnalagadda	Sreekantha Babu	Chemistry and Physics
Professor	Konrad	Thomas	Chemistry and Physics
Professor	Koorbanally	Neil Anthony	Chemistry and Physics
Dr	Maguire	Glenn Eamonn Mitchel	Chemistry and Physics
Professor	Martincigh	Bice Susan	Chemistry and Physics
Dr	Moyo	Thomas	Chemistry and Physics
Professor	Petruccione	Francesco	Chemistry and Physics
Dr	Sergi	Alessandro	Chemistry and Physics

College of Agriculture, Engineering and Science			
Title	Surname	First Name	School
Professor	Adali	Sarp	Engineering
Professor	Afullo	Thomas	Engineering
Professor	Bezuidenhout	Carel Nicolaas	Engineering
Professor	Mnenedy	Stanley Henry	Engineering
Professor	Mohammadi	Amir Hossein	Engineering
Dr	Naidoo	Paramespri	Engineering
Professor	Ramjugernath	Deresh	Engineering
Professor	Richon	Dominique Jean Francois	Engineering
Professor	Workneh	Tilahun Seyoum	Engineering
Professor	Xu	Hongjun	Engineering
Dr	Chenia	Hafizah Yousuf	Life Sciences
Professor	Downs	Colleen Thelma	Life Sciences
Professor	Goldblatt	Peter	Life Sciences
Dr	Govender	Patrick	Life Sciences
Dr	Islam	Shahidul	Life Sciences
Professor	Johnson	Steven Dene	Life Sciences
Professor	Lin	Johnson	Life Sciences
Dr	Londt	Jason Gilbert Hayden	Life Sciences
Dr	Manning	John Charles	Life Sciences
Dr	Olckers	Terence	Life Sciences
Professor	Perissinotto	Renzo	Life Sciences
Professor	Pillay	Balakrishna	Life Sciences
Dr	Singh	Moganavelli	Life Sciences
Professor	Slotow	Robert Hugh	Life Sciences
Professor	van Staden	Johannes	Life Sciences
Dr	Adewumi	Aderemi Oluyinka	Mathematics, Statistics and Computer Science
Professor	Govinder	Keshlan Sathasiva	Mathematics, Statistics and Computer Science
Professor	Maharaj	Sunil Dutt	Mathematics, Statistics and Computer Science
Professor	Motsa	Sandile Sydney	Mathematics, Statistics and Computer Science
Professor	Mukwembi	Simon	Mathematics, Statistics and Computer Science
Professor	Mwambi	Henry Godwell	Mathematics, Statistics and Computer Science
Professor	Sibanda	Precious	Mathematics, Statistics and Computer Science
Dr	Tong-Viet	Hung	Mathematics, Statistics and Computer Science

College of Health Sciences			
Title	Surname	First Name	School
Professor	Moodley	Jagidesa	Clinical Medicine
Professor	Abdool Karim	Quarraisha	Health Sciences
Dr	Clarke	Damian Luiz	Health Sciences
Professor	Govender	Thavendran	Health Sciences
Professor	Kruger	Hendrik Gerhardus	Health Sciences
Dr	Soliman	Mahmoud Elsayed Soliman	Health Sciences
Professor	Chuturgoon	Anil Amichund	Laboratory Medicine and Medical Sciences
Dr	Barnighausen	Till Winfried	Nursing and Public Health
Professor	Mars	Maurice	Nursing and Public Health
Professor	Newell	Marie-Louise	Nursing and Public Health
Dr	Ross	Andrew John	Nursing and Public Health
Professor	Singh	Jerome Amir	Nursing and Public Health
College of Humanities			
Title	Surname	First Name	School
Dr	Gopal	Nirmala Devi	Applied Human Sciences
Professor	Kasiram	Madhubala Ishver	Applied Human Sciences
Professor	Potgieter	Cheryl-Ann	Applied Human Sciences
Professor	Singh	Shanta	Applied Human Sciences
Professor	Tomaselli	Keyan Gray	Applied Human Sciences
Professor	Ballantine	Christopher John	Arts
Professor	De Meyer	Bernard Albert Marcel Sylvain	Arts
Professor	Bond	Patrick Martin	Built Environment and Development Studies
Professor	Freund	William Mark	Built Environment and Development Studies
Professor	Maharaj	Pranitha	Built Environment and Development Studies
Professor	Posel	Dorrit Ruth	Built Environment and Development Studies
Mr	Tshishonga	Ndwakhulu Stephen	Built Environment and Development Studies
Professor	Bansilal	Sarah	Education
Professor	Bhana	Deevia	Education
Professor	Morojele	Pholoho Justice	Education
Dr	Msibi	Thabo Perceviarence	Education
Professor	Preece	Julia	Education
Professor	Wassermann	Johannes Michiel	Education
Professor	Balcomb	Anthony Oswald	Religion, Philosophy and Classics
Professor	Denis	Philippe Marie Berthe Raoul	Religion, Philosophy and Classics
Professor	Haddad	Beverley Gail	Religion, Philosophy and Classics

College of Humanities			
Title	Surname	First Name	School
Professor	Kumalo	Simanga Raymond	Religion, Philosophy and Classics
Dr	Matolino	Bernard	Religion, Philosophy and Classics
Professor	Nadar	Sarojini	Religion, Philosophy and Classics
Dr	Oyowe	Oritsegbubemi Anthony	Religion, Philosophy and Classics
Professor	Penumala	Pratap Kumar	Religion, Philosophy and Classics
Professor	Phiri	Isabel Apawo	Religion, Philosophy and Classics
Professor	Rakoczy	Susan Francis	Religion, Philosophy and Classics
Professor	West	Gerald Oakley	Religion, Philosophy and Classics
Professor	Hiralal	Kalpana	Social Sciences
Professor	Hoskins	Ruth Geraldine Melonie	Social Sciences
Professor	Khan	Sultan	Social Sciences
Professor	Marschall	Sabine	Social Sciences
Dr	Muthuki	Janet Muthoni	Social Sciences
Professor	Mutula	Stephen	Social Sciences
Dr	Naidu	Maheshvari	Social Sciences
Professor	Ojong	Vivian Besem	Social Sciences
Professor	Singh	Anand	Social Sciences
Professor	Sooryamoorthy	Radhamany	Social Sciences
Professor	Stilwell	Christine	Social Sciences
Professor	Vahed	Goolam Hoosen Mohamed	Social Sciences
College of Law and Management Studies			
Title	Surname	First Name	School
Dr	Bodhanya	Shamim Ahmed	Graduate School of Business and Leadership
Mr	Hoque	Muhammad Ehsanul	Graduate School of Business and Leadership
Professor	Gow	Jeff	Accounting, Economics and Finance
Ms	Bosch	Shannon Joy	Law
Ms	Couzens	Meda Mihaela	Law
Professor	Hector	Shannon Vaughn	Law
Mr	Holness	David Roy	Law
Professor	Mcquoid-Mason	David Jan	Law
Mr	Subramanien	Darren Cavell	Law
Ms	Whitear-Nel	Nicola Jane	Law
Professor	Zaal	Frederick Noel	Law
Professor	Brijball Parumasur	Sanjana	Management, IT and Governance
Professor	Govender	Krishna Kistan	Management, IT and Governance
Dr	Govender	Pathmavathie	Management, IT and Governance
Professor	Maharaj	Manoj Sewak	Management, IT and Governance
Professor	Mubangizi	Betty Claire	Management, IT and Governance
Dr	Ruggunan	Shaun Denvor	Management, IT and Governance

PROLIFIC RESEARCHERS



Professor Steven Collings

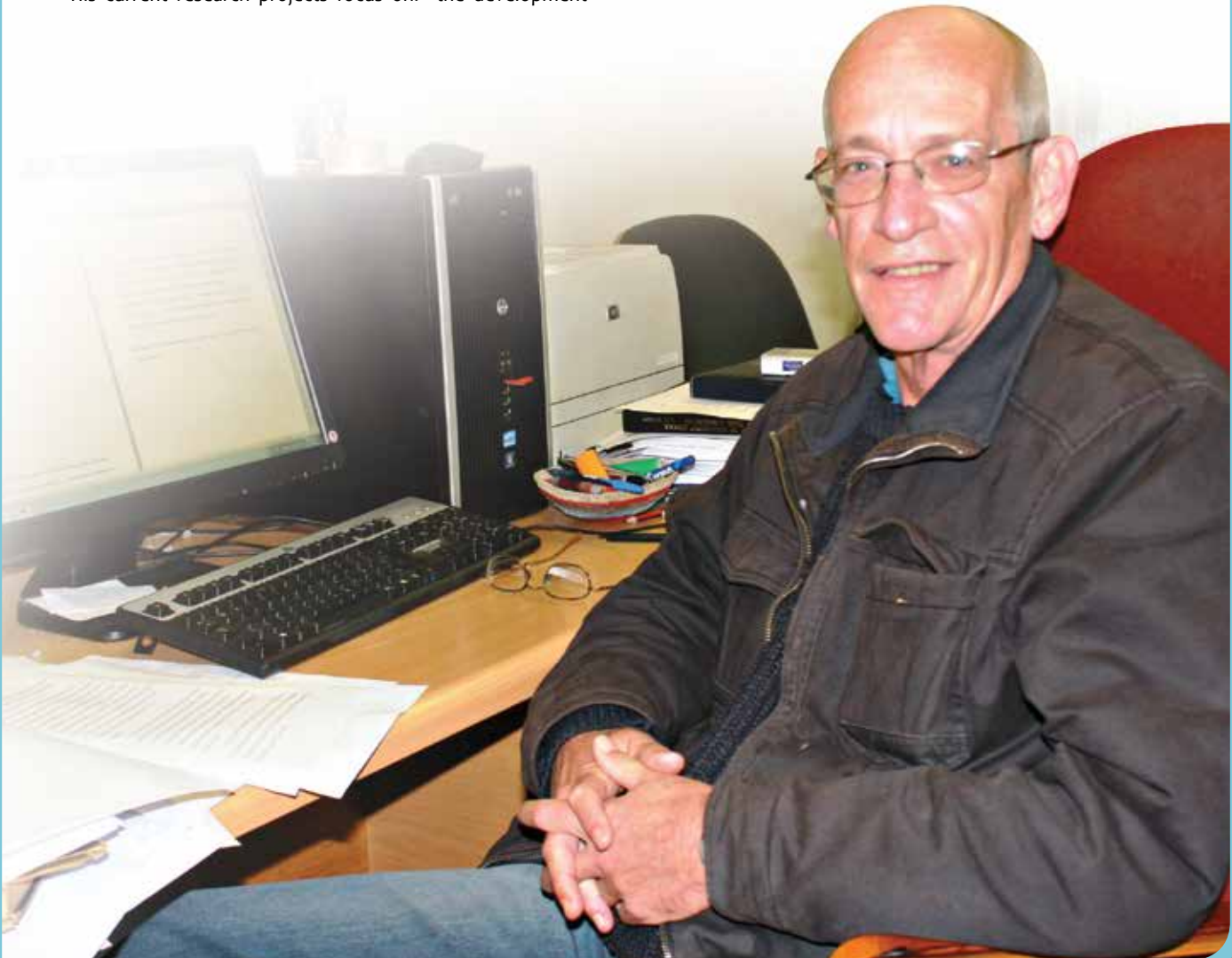
Research by Professor Steven Collings of the College of Humanities focuses on the epidemiology and psychological effects of inter-personal violence, with specific reference to chronic developmental trauma disorders.

He is an NRF-rated researcher who has served on the editorial boards of a number of local and international journals, including *Child Abuse & Neglect*.

He has published more than 80 articles in local and international peer-reviewed journals and presented his research findings at over 60 local and international conferences.

His current research projects focus on: the development

and preliminary validation of an assessment instrument for interpersonal developmental trauma among South African adolescents; an exploration of re-experiencing phenomena among adults with histories of complex developmental trauma, and the development and validation of a measure of Type II trauma appropriate for the South African context.



Professor Thirumala Govender

Thirumala Govender is a Professor of Pharmacy in the Discipline of Pharmaceutical Sciences and heads the Drug Delivery Research Proto-Unit. She was awarded a Commonwealth Scholarship and completed a Doctor of Philosophy degree in Pharmacy at University of Nottingham (UK). Her masters degree, awarded with distinction, focused on microparticulate systems for sustained drug release while her PhD research in nanotechnology identified technologies for enhancing drug incorporation into various polymeric nanosystems for targeted drug delivery.

Govender's research is currently in the broad fields of nanotechnology and alternate routes of delivery for ARV drugs. She has extensive experience in the formulation and physicochemical/mechanical and mechanistic evaluation of various novel drug delivery systems e.g. sustained release pellets, nanoparticles, nanomicelles, nanofibres and buccal patches/films/tablets/microspheres/wafers.

Govender is a South African National Research Foundation rated scientist (C2) in recognition of the local and international quality of her research outputs and has an h-index of 15. She has won several national awards from the Academy of Pharmaceutical Sciences of South Africa for excellence in both research and teaching. These have included the Johnson and Johnson Distinguished Teacher Award and the Roche Achievement as well as Adcock Ingram Awards for Best Research Publication in Pharmaceutics. She has also been the recipient of the UKZN Faculty of Health Sciences Award for Most Productive Researcher in the Associate Professor category at UKZN.



Professor Shannon Vaughn Hctor

Professor Shannon Vaughn Hctor obtained the degrees BA, LLB and LLM at the University of Cape Town. After a temporary teaching post at UCT he commenced doctoral studies at the University of Leiden in the Netherlands. After two years in Leiden, he took up a contract teaching post at the University of Port Elizabeth at the beginning of 1996. He was appointed to a senior lectureship at UPE, teaching criminal law and jurisprudence, and was awarded the degree DJuris in June 1997. After being promoted to Associate Professor at UPE, he took up a Chair at the Law Faculty in Pietermaritzburg in July 2002.

He teaches substantive criminal law at undergraduate and postgraduate level, along with courses in access to justice and sentencing. He also served as Deputy Dean of the School of Law in 2010 and 2011.

Hctor has published numerous articles in law journals, along with several chapters in books, and has authored books in criminal law, statutory offences and road traffic law, along with three edited works. Apart from criminal law, his research interests are in legal history, in respect of which he recently obtained a Postgraduate Diploma in Latin at the University of Wales Trinity Saint David. He has served as Editor-in-Chief of the *South African Journal of Criminal Justice* since 2010, and Assistant Editor of *Obiter* since 2002.



Dr Shahidul Islam

Senior Lecturer in Biochemistry, Dr Shahidul Islam, is an NRF Y-rated researcher from the School of Life Sciences (Westville campus).



Islam's current research focuses on the development of novel, non-genetic animal models of type 2 diabetes (T2D), as well as anti-diabetic and toxicological intervention trails of various functional and medicinal foods, medicinal plant extracts, sugar alcohols and commercially available artificial sweeteners and their mechanism of actions in these newly developed animal models of T2D. From 2015, the molecular, cellular and stem cell biology techniques will be applied to his diabetes research.

Islam has published three book chapters and about 50 full-length research articles, including four reviews and one guest editorial in international peer-reviewed journals. He has also presented his research results at a number of national and international scientific conferences.

He has received several scholarships, fellowships, travel awards and research grants from different national and international research and scientific organisations, including the Japanese and Korean Governments, the Japan Diabetes Society, the International Diabetes Federation, the Japanese Society for Surgical Metabolism and Nutrition, the Pacific Science Association, the National Research Foundation, the South African Sugar Association and UKZN.

Currently, Islam is working as a regular reviewer of 17 international journals and is a member of the Editorial Board of four international journals – *Frontiers in Experimental Pharmacology and Drug Discovery* (Switzerland); *World Journal of Diabetes* (China); *Journal of Biochemical and Pharmacological Research* (USA), and the *Journal of Internal and Translational Medicine* (Netherlands). He has also served as a Lead Guest Editor of the *Journal of Diabetes* (USA).

Since 2009, Islam has supervised the research projects of two Postdoctoral Fellows, one PhD, five MScs and nine Honours students; and is currently supervising 2 PhDs and 1 MSc student as a primary supervisor.

Professor Sanjana Brijball Parumasur

Sanjana Brijball Parumasur, a Professor in the School of Management, Information Technology and Governance, is a registered Industrial Psychologist with the Health Professions Council of South Africa. Her research and publications have predominantly been in the areas of consumer behaviour, human resource management, change management and organisational development.

She has authored texts in consumer behaviour and has contributions in texts on organisational development and organisational behaviour. She has engaged in organisational diagnosis, and has assessed the critical ingredients for managerial and organisational effectiveness. She has extensively assessed the potential for planning a cultural shift through managerial roles and effectiveness.

She has supervised an extensive array of masters and doctoral students in the field of human resource management/development, consumer and industrial psychology. She reviews manuscripts for several South African and international journals.



Professor Manoj Maharaj

Professor Manoj Maharaj has a PhD in Applied Mathematics and is currently Associate Professor at UKZN, where he teaches information systems, specialising in information systems strategy and information security.

He has consulted widely in the IT industry and presented many successful workshops on topics including IT Auditing, IT strategy, Information Security and Risk Management. He currently serves on the Board of the Moses Kotane Institute where he chairs the Audit and Risk Committee.

Maharaj's early research was in General Relativity, specialising in Numerical Relativity. He was part of the National Science Foundation Grand Challenge on Gravitational wave research. His current research interests include ICT4D, information security, strategic information management and enterprise risk management.

Maharaj has supervised nine PhD graduates, and is currently supervising a further five. He has also successfully supervised 12 Masters students – with three more expected to graduate in 2015 – and 21 MBA students.

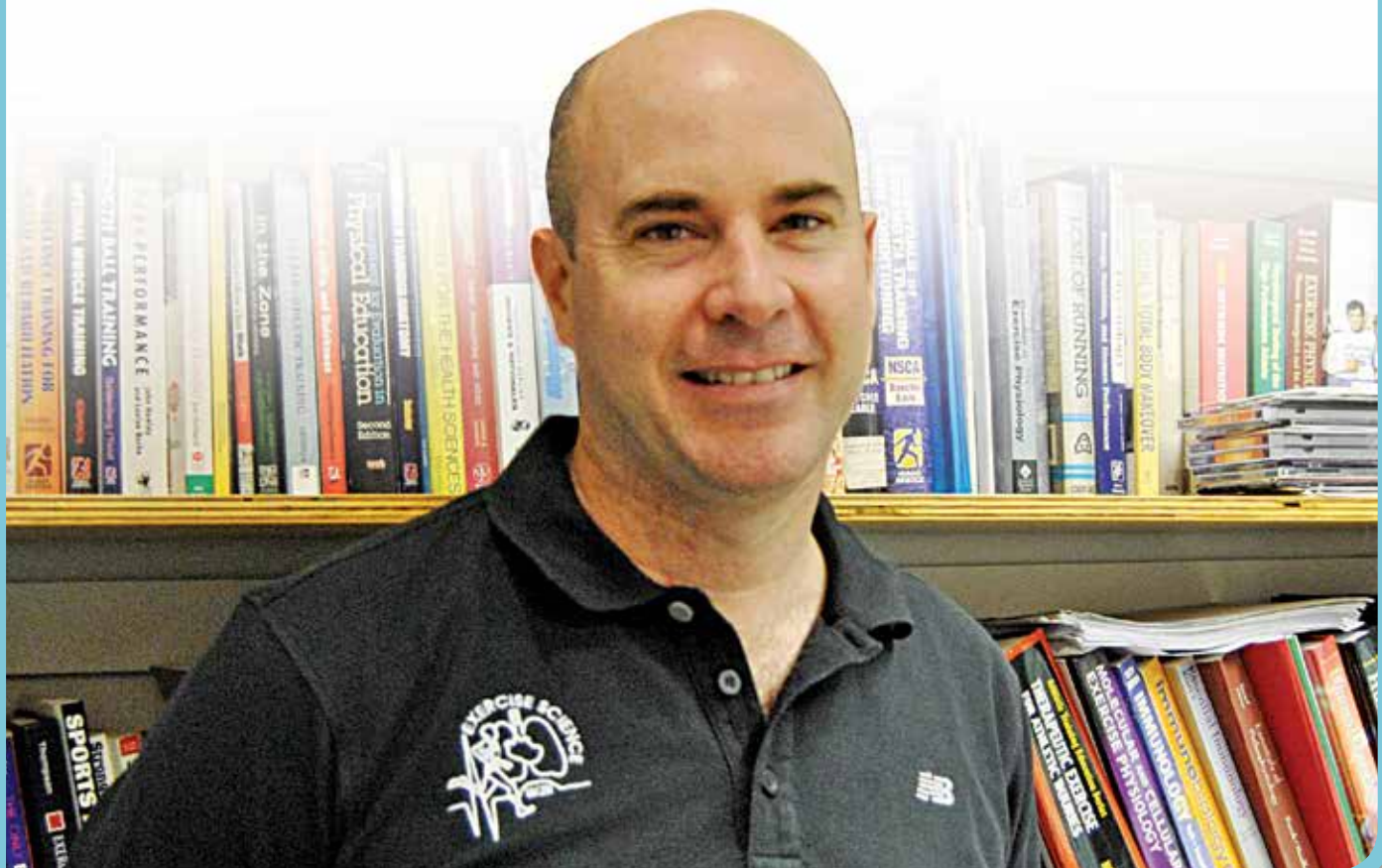


Professor Andrew McKune

Andrew McKune is an Associate Professor of Exercise Science in the Discipline of Biokinetics, Exercise and Leisure Sciences at the University of KwaZulu-Natal. He teaches exercise physiology, exercise science and exercise biochemistry and co-ordinates the Postgraduate Research Programme.

McKune is an NRF-rated researcher and is a past co-leader of the NRF Research Niche Area examining the effect of exercise on immune and inflammatory responses. In 2003 and 2004 he was a recipient of an NRF Thuthuka Research Grant for Young Scientists and in 2007 was the Tshwane University of Technology Junior Researcher of the Year. From 2006-2007, McKune was the Thomas W. River's Visiting Professor (Rivers Chair) in the Department of Kinesiology, East Carolina University, in the United States.

He has 40 original, peer-reviewed research publications and his research is currently funded by South African NRF and Medical Research Council Competitive Research Grants. His research interests include immune and inflammatory responses to exercise as well as applications of saliva biomarker measures in exercise and sport science. McKune is a Certified Strength and Conditioning Specialist (NSCA) and is an Advanced Speed, Agility and Quickness trainer (SAQ International).



Professor Onesimo Mutanga

Onesimo Mutanga is a full Professor and Academic Leader (Research) in the School of Agricultural, Earth and Environmental Science. He completed his PhD on Hyperspectral Remote Sensing of Tropical grass quality and quantity at Wageningen University-ITC (Netherlands) in 2004.

Mutanga's expertise lies in Ecological Remote Sensing, with particular emphasis on vegetation pattern analysis and monitoring, agricultural landuse mapping as well as wildlife habitat evaluation. His focus in recent years has been on the development of remote sensing techniques for mapping tropical vegetation quality and quantity to understand wildlife feeding patterns and distribution. His emerging niche areas include mapping vegetation species, disease infestation on plantation forests and agricultural crops as well as quantification of forest degradation and its impact on

biodiversity and ecosystem condition.

Mutanga has graduated eight PhDs and 17 Masters Students and is currently supervising more than 15 post graduate students. He has published more than 50 articles in ISI journals and has several conference proceedings and book chapters. He holds a C1 NRF rating, is an Associate Editor of *ISPRS Photogrammetry Engineering and Remote Sensing* and an Editor of the *Journal of Spatial Science*. He has been in the Top 30 UKZN publishers in 2013 and 2014.



Dr Mahmoud Soliman

Dr Mahmoud Soliman (B. Pharm., M. Pharm., PhD) is a Senior Lecturer at the Discipline of Pharmaceutical Sciences within the School of Health Sciences, which he joined in 2011.

Soliman completed his postgraduate studies, MPhil/PhD, at the University of Bath in the United Kingdom in the field of Molecular Modeling, computational chemistry and drug design. He is the Editor-in-Chief of the Journal of Organic and Biomolecular Simulations (JOBS), published by Science Publisher, in the United States. He is also the Chair of the South African Molecular Modeling and Drug Design Society (SAMMDDS), which is fully sponsored by the Centre of High Performance Computing (CHPC), Cape Town (www.chpc.ac.za). Soliman is also academic visitor at the University of Bath, in England, collaborating with the laboratory of Professor Ian Williams.

Soliman owns UKZN's Molecular Modeling and Drug Design Laboratory which covers a wide range of computational and

molecular modeling research areas with its main focus on biological systems and drug design approaches.

The Laboratory's main interest is related to design and study of biologically and therapeutically oriented targets by employing the applications of computational methods to the study of problems of chemical and biochemical reactivity, with particular focus upon the transition state, environmental effects on mechanisms, the origins of catalysis, and the interpretation of kinetic isotope effects. This includes mechanistic pathways and transition states for reactions in enzyme and solutions; design of enzyme inhibitors and exploring the binding and catalytic theme of the designed targets, and adopting sophisticated computational approaches to understand protein structures and functions.



Professor Cheryl Potgieter

UKZN's Deputy Vice-Chancellor (DVC) and Head of the College of Humanities, Professor Cheryl Potgieter, has made a firm commitment to herself and the University to continue to publish and supervise research.

‘I believe in leading by example and am really happy to have achieved the status of a prolific researcher while at the same time heading the largest College at UKZN. Eight Deans report to me and they too are required to publish results of their research’.

Potgieter joined UKZN at the end of 2008 in the position of Dean of Research and was appointed into her current position in January 2013.

Her research interests are in the areas of forensic psychology, sexualities, gender, and transformation of the academy and society.

‘In my current position, publications I am working on focus on issues related to the role of humanities and knowledge production.’

Potgieter is also guest editing a special edition of a journal focusing on social cohesion.

She is particularly concerned with how conservative global agendas are cloaked in a ‘feminist and human rights discourse’ and entrenched via the media, schools, religious organisations and families. ‘I am working on, among other things, a proposal with colleagues from various countries to investigate the impact and consequences of those agendas.’



TOP PUBLISHED RESEARCHERS

Professor Johannes van Staden

Top Published Researcher 2013

Professor Johannes van Staden is Director of the Research Centre for Plant Growth and Development at the University of KwaZulu-Natal.

While van Staden's initial research interests lay in plant hormones and biotechnology, he has conducted research, in a career spanning over 50 years, on a broad range of subjects and is a global authority on many of them.

He is internationally acknowledged for his expertise in plant tissue culture, and he conducted pioneering research on smoke-stimulated seed germination, research which has commercial application. He is widely published on topics related to proteas, algal biotechnology, plant biotechnology, molecular biology and ethnobotany and ethno pharmacology.

In 2013, van Staden was in the top position on the Thomson Reuters world list of highly cited researchers in the fields of pharmacology and toxicology. New York-based Thomson Reuters is one of the world's leading sources of reliable information for businesses and professionals and regularly publishes lists of leading researchers in a variety of spheres.

Van Staden has received many accolades and awards throughout his career. In 1988 he was awarded the Senior Captain Scott Memorial Medal by the South African Biological Society. In 1990 he was elected a Fellow of the Royal Society of South Africa and in 1992 was awarded the Havenga Prize for outstanding research in Biological Sciences as well the Silver Medal from the South African Association of Botanists (SAAB). In 1994 he was elected Founder Member of the Academy of Science of South Africa as well as receiving the SAAB Gold Medal, the highest award given by the Association for Excellence in Botany.

In 2000 van Staden was awarded an Honorary Doctorate from the University of West Hungary and elected an Honorary Member of the Hungarian Academy of Sciences in 2004. In 2007 he was awarded the Gold Medal for Technological Innovation of the Suid-Afrikaanse Akademie vir Wetenskap en Kuns.

In 2010 he received two prestigious awards: the Gold Medal of the Southern African Association for the Advancement of Science; and the MT Steyn Medal by the Suid Afrikaanse Akademie vir Wetenskap en Kuns.

In late 2012 it was announced that van Staden was the recipient of the Herschel Medal Award for 2013 from the Royal Society of SA. The medal is awarded to researchers who are outstanding in either a field of research that straddles disciplines or in more than one closely related field.



Van Staden has been a Research Fellow at the University College of Wales, the University of California, the Hebrew University of Jerusalem, Broom's Barn Experimental Station in the United Kingdom, and the University of West-Hungary, where he was awarded an Honorary DSc. He was also a visiting lecturer at the National Australian University in Canberra.

He is the author and co-author of 1 226 (2012) papers which have been published in ISI-rated journals. Thomson Reuters indicated that his published works have been cited 11 940 times since 1995, placing him in the list of top cited (0.05%) scientists in the world. Van Staden is the Editor-in-Chief of the *South African Journal of Botany* and an Associate Editor of the *Journal of Ethnopharmacology*; *Plant Cell, Tissue and Organ Culture* and *Acta Physiologia Plantarum*. He serves on the Editorial Board of six other journals.

Dr Maheshvari Naidu

Top Published Female Researcher 2013

Dr Maheshvari Naidu is an Anthropologist whose work is positioned within a critical feminist perspective. Her doctoral work was in the contested field of African Feminisms, where she applied a Foucauldian lens to inscriptive practices over female 'bodies'. Dr Naidu was the first person in Humanities at UKZN, to obtain her 'PhD by Publication'. She has over 50 articles in national and international peer-reviewed journals and is currently collaborating on two edited books.

The journals she publishes in cut across disciplines, reaching both a gender, as well as a social science readership. This prolific research profile has been recognised at University level where she was given the UKZN Humanities Excellence Award for Emerging Researcher in 2012. She has consistently been in the UKZN ranking of Top 30 Researchers over the last four years, being one of the few women researchers from Humanities and Social Sciences, to continuously hold this ranking.

She has acted as guest editor for national and international journals such as *AlterNation* and *International Journal of Human Ecology*, *Journal for Study of Religion* and *The Anthropologist*. As a feminist Anthropologist, her work is qualitative and ethnographic, and deals with women's lived phenomenological experiences, attempting to carve a critical space and voice for women, in both theory and practice.

Naidu won a large research grant in 2012 and headed a project that looked at violence, sexualities and women's empowerment, especially within the context of HIV and AIDS and women's health. This grant allowed her to mentor and take two of her doctoral students to a Social Science conference in Italy. Allied to her critical passion in women's health, has been her published research around the subtle structural violence perpetrated by medical practices in terms of patient interaction, especially with terminally ill cancer patients.

One of her studies here culminated in her being invited to a Nursing Conference in Jordan, where she presented a paper detailing the systemic violence in patient health care models. She has been invited to deliver a keynote address at a national religion conference later this year as well as a preconference seminar in Turkey next year.

As part of her work to fast track a critical mass of women with PhDs, she is a facilitator in the Humanities and Social sciences PhD Cohort Supervision Programme. Her NRF grants have also allowed her to mentor MA and PHD students. She is currently supervising several MA and PhD students around issues in Gender and Medical Anthropology as well as her postdoctoral student and research around



Women, Violence and Sexualities. Naidu credits her non-conformist upbringing and her parents for where she is today.

She believes she is honouring the immense grace her parents showed her with an upbringing that broke gender stereotypes through their unconditional love and support of her education and travel, over that of more traditional roles of the time. She wishes to honour them by affording opportunities to other women.



TOP 30 PUBLISHED RESEARCHERS

These are the Top Published Researchers in DHET accredited, peer-reviewed journals. Researchers who have accumulated the most amounts of author units are ranked from highest to lowest to establish the top 30 published researchers.

Position	Title	Surname	First Name	College
1	Professor	van Staden	Johannes	Agriculture, Engineering & Science
2	Professor	Ramjugernath	Deresh	Agriculture, Engineering & Science
3	Dr	Naidu	Maheshvari	Humanities
4	Professor	Sibanda	Precious	Agriculture, Engineering & Science
5	Professor	Bond	Patrick Martin	Humanities
6	Professor	Mohammadi	Amir Hossein	Agriculture, Engineering & Science
7	Professor	Bhana	Deevia	Humanities
8	Professor	Mutanga	Onisimo	Agriculture, Engineering & Science
9	Professor	Manning	John Charles	Agriculture, Engineering & Science
10	Professor	Downs	Colleen Thelma	Agriculture, Engineering & Science
11	Professor	Johnson	Steven Dene	Agriculture, Engineering & Science
12	Professor	Denis	Philippe Marie Berthe Raoul	Humanities
13	Professor	Vahed	Goolam Hoosen Mohamed	Humanities
14	Professor	Jonnalagadda	Sreekantha Babu	Agriculture, Engineering & Science
15	Professor	Perissinotto	Renzo	Agriculture, Engineering & Science
16	Professor	Albericio	Fernando	Agriculture, Engineering & Science
17	Professor	Hector	Shannon Vaughn	Law & Management Studies
18	Professor	Laing	Mark Delmege	Agriculture, Engineering & Science
19	Dr	Sergi	Alessandro	Agriculture, Engineering & Science
20	Professor	Hiralal	Kalpana	Humanities
20	Professor	Brijball Parumasur	Sanjana	Law & Management Studies
21	Professor	Slotow	Robert Hugh	Agriculture, Engineering & Science
22	Professor	Goldblatt	Peter	Agriculture, Engineering & Science
23	Professor	Maharaj	Sunil Dutt	Agriculture, Engineering & Science
24	Professor	Mukwembi	Simon	Agriculture, Engineering & Science
25	Professor	Petruccione	Francesco	Agriculture, Engineering & Science
26	Professor	Richon	Dominique Jean Francois	Agriculture, Engineering & Science
27	Professor	Motsa	Sandile Sydney	Agriculture, Engineering & Science
28	Professor	Workneh	Tilahun Seyoum	Agriculture, Engineering & Science
29	Dr	Olckers	Terence	Agriculture, Engineering & Science
30	Professor	Khan	Sultan	Humanities

EMERGING RESEARCHERS

These are researchers at the University of KwaZulu-Natal who are below the Professorial level, and are beginning to make a significant contribution in their field and who have the potential to become prolific researchers. They are 40 years and younger and have accumulated one or more author units in DHET accredited, peer-reviewed journals.

College of Agriculture, Engineering and Science			
Title	Surname	First Name	School
Dr	Beck-Pay	Sascha Lynn	Agricultural, Earth and Environmental Sciences
Dr	Titshall	Louis William	Agricultural, Earth and Environmental Sciences
Dr	Akerman	Matthew Piers	Chemistry and Physics
Dr	Ndungu	Patrick Gathura	Chemistry and Physics
Dr	Ojwach	Stephen Otieno	Chemistry and Physics
Dr	Sinayskiy	Ilya	Chemistry and Physics
Dr	Coquelet	Christophe Daniel Gerard	Engineering
Dr	Pillay	Narushan	Engineering
Dr	Stopforth	Riaan	Engineering
Dr	Brown	Mark	Life Sciences
Dr	Ismail	Riyad Abdool Hak	Life Sciences
Dr	Macdonald	Angus Hector Harold	Life Sciences
Dr	Mokotedi	Mompe Edward Oscar	Life Sciences
Dr	Vosloo	Dalene	Life Sciences
Mr	Aungamuthu	Yougan	Mathematics, Statistics and Computer Science
College of Health Sciences			
Title	Surname	First Name	School
Dr	Ferreira	Nando	Clinical Medicine
Dr	Marais	Leonard Charles	Clinical Medicine
Dr	Rodseth	Reitze Nils	Clinical Medicine
Dr	Wise	Robert Deon	Clinical Medicine
Ms	Chetty	Verusia	Health Sciences
Dr	Ellapen	Terry Jeremy	Health Sciences
Ms	Naidoo	Pragashnie	Health Sciences

College of Health Sciences			
Title	Surname	First Name	School
Ms	Rampersad	Nishanee	Health Sciences
Dr	Azu	Onyemaechi Okpara	Laboratory Medicine and Medical Sciences
Ms	Lazarus	Lelika	Laboratory Medicine and Medical Sciences
Dr	Samuel	Reshmi	Laboratory Medicine and Medical Sciences
Ms	Baxter	Cheryl	Nursing and Public Health
Dr	De Beer	Jennifer	Nursing and Public Health
Dr	Diab	Paula Nicole	Nursing and Public Health
Dr	Singh	Yashik	Nursing and Public Health
College of Humanities			
Title	Surname	First Name	School
Dr	Young-Jahangeer	Miranda Eleanor	Arts
Mr	Myende	Phumlani Erasmus	Education
Dr	Rudwick	Stephanie Inge	Education
College of Law and Management Studies			
Title	Surname	First Name	School
Dr	Chasomeris	Mihalis Georgiou	Graduate School of Business and Leadership
Ms	Proches	Cecile Naomi	Graduate School of Business and Leadership
Ms	Casale	Marisa Angela Judy	Accounting, Economics and Finance
Ms	Charteris	Ailie Heather	Accounting, Economics and Finance
Mr	George	Gavin Lloyd	Accounting, Economics and Finance
Mr	Gibbs	Andrew Robert	Accounting, Economics and Finance
Ms	Jimmyns	Candice Alexis	Accounting, Economics and Finance
Ms	Mccullough	Kerry-Ann Frances	Accounting, Economics and Finance
Mr	Ziqubu	Mthokozisi Myekeni	Accounting, Economics and Finance
Mr	Buthelezi	Michael Celumusa	Law
Ms	Forere	Malebakeng Agnes	Law
Dr	Goosen	Samantha	Law
Ms	Holness	Willene Audri	Law
Mr	Ramdhin	Avishkaar	Law
Ms	Singh	Priya Pravesh	Law
Mr	Surbun	Vishal	Law
Dr	Swanepoel	Paul Arthur Albertus	Law

DOCTORAL GRADUATES

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Abdu-Raheem	Kamal Adekunle	Doctor of Philosophy (Science)	The Role of Agricultural Extension in Promoting Food Security in the Context of Encouraging Biodiversity Conservation in South Africa: The Case of KwaZulu-Natal
Abebe	Gezahegn Zewdie	Doctor of Philosophy (Science)	Differential Equations for Relativistic Radiating Stars
Adelabu	Samuel Adewale Abiodun	Doctor of Philosophy (Science)	The Remote Sensing of Insect Defoliation in Mopane Woodland
Adetan	Oluwumi	Doctor of Philosophy in Engineering	Modeling of Raindrop Size Distribution and Critical Diameters for Rainfall Attenuation over Microwave Links in Southern Africa
Akerman	Kate Julie	Doctor of Philosophy (Science)	Structural, Physical and Biological Studies of Gold (III) Bis (Pyrrolide-Imine) Schiff Base Macrocyclic and Pseudomacrocyclic Complexes: Targeted Chemotherapeutic Agents
Akhalwaya	Ismail Yunus	Doctor of Philosophy (Science)	Classical Noise in Quantum Systems
Arasomwan	Akugbe Martins	Doctor of Philosophy (Science)	Studies in Particle Swarm Optimisation Technique for Global Optimisation
Ayele	Dawit Getnet	Doctor of Philosophy (Science)	Use of Statistical Modelling and Analyses of Malaria Rapid Diagnostic Test Outcome in Ethiopia
Bakare	Babatunde Femi	Doctor of Philosophy in Engineering	Scientific and Management Support for Ventilated Improved Pit Latrines (VIP) Sludge Content
Bakare	Archibold Garikayi	Doctor of Philosophy (Science)	Effects of Physicochemical Properties of Fibrous Feed on Feeding Behaviour and Gut Health of Growing and Finishing Pigs
Bemont	Clinton Pierre	Doctor of Philosophy in Engineering	TRIP Steels as Smart Sensor Alloys
Calverley	Peter Markham	Doctor of Philosophy (Science)	The Conservation Ecology of the Nile Crocodile (<i>Crocodylus Niloticus</i>) at Ndumo Game Reserve in North Eastern KwaZulu-Natal and the Rio Maputo Floodplain in South Eastern Mozambique
Chanda	Renusha Rabichand	Doctor of Philosophy (Science)	Challenges of Developing an Integrated Food Control System for South Africa: Insights from the Veterinary Drug System
Cheesman	Lee	Doctor of Philosophy (Science)	Micropropagation and Pharmacological Properties of <i>Boophone Disticha</i>

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Chetty	Thashini	Doctor of Philosophy (Science)	Coinage Metals for the Preferential Hydrogenation of Octanal in a Mixture with Octene
Chigeza	Godfree	Doctor of Philosophy (Science)	Genetic Gain, Advanced Cycle Pedigree Breeding and Correlated Response to Selection Under Varying Moisture Conditions in Sunflower
Chikumba	Nation	Doctor of Philosophy (Science)	Indigenous Chicken Responses to Hydric Gradients
Chrystal	Robynne Angela	Doctor of Philosophy in Engineering	Anthropogenic Impacts and Biophysical Interactions in Lake St Lucia
Collins	Obiora Cornelius	Doctor of Philosophy (Science)	Modelling Waterborne Diseases
Fattebert	Julien Michel	Doctor of Philosophy (Science)	Spatial Ecology of a Leopard Population Recovering from Over-harvest
Friedrich	Elena	Doctor of Philosophy in Engineering	An Investigation into the Emission of Greenhouse Gases Associated with the Disposal of Solid Waste in the eThekweni Municipality
Ghayour	Farzad	Doctor of Philosophy in Engineering	Non-Binary Compound Codes Based on Single Parity-Check Codes
Gichuru	Lilian Njeri	Doctor of Philosophy (Science)	Breeding Investigations on Utility of Maize Streak Virus Resistant Germplasm for Hybrid Development in the Tropics
Hamadou Ibrahim	Alpha	Doctor of Philosophy (Science)	The Evolution of Orbital-Angular-Momentum Entanglement of Photons in Turbulent Air
Hamza	Izzeldin Abdullah Abbas	Doctor of Philosophy (Science)	Preparation and Evaluation of a Sugarcane Bagasse Multi-walled Carbon Nanotube Composite for the Adsorption of Heavy Metals from Aqueous Solutions
Harinarain	Nishani	Doctor of Philosophy in Engineering	Effective HIV and AIDS Management: A South African Construction Sector Model
Ibrahim	Hamisu	Doctor of Philosophy (Science)	Imidazolium, Phosphonium and Pyridinium Ionic Liquids with Fluorinated Anions: Synthesis Characterisation and Applications
Ibrahim	Auwal Mohammed	Doctor of Philosophy (Science)	The <i>in vitro</i> and <i>in vivo</i> Anti-oxidative and Anti-diabetic Effects of Some African Medicinal Plants and the Identification of the Bioactive Compounds
Iwarere	Samuel Ayodele	Doctor of Philosophy in Engineering	Synthesis of Hydrocarbons and Fluorocarbons in a Tip-Tip Arc Discharge Reactor at High Pressure
Kasozi	Lwanga Charles	Doctor of Philosophy (Science)	Genetic Analysis and Selection for Maize Weevil Resistance in Maize
Kidane	Tsion Tesfaye	Doctor of Philosophy (Science)	Dimensions of Agricultural Educational Training in Formal Education Centres: In the Case of KwaZulu-Natal, South Africa
Kifle	Medhin Hadish	Doctor of Philosophy (Science)	Evaluation of Diazotrophic Bacteria as Biofertilizers
Kinunda	Grace Ansgar	Doctor of Philosophy (Science)	A Kinetic and Mechanistic Study on the Substitution Behaviour of Mononuclear and Dinuclear Platinum (II) Complexes

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Kivuva	Benjamin Musembi	Doctor of Philosophy (Science)	Breeding Sweetpotato (<i>Ipomoea Batatas</i> [L.] Lam.) for Drought Tolerance in Kenya
Levesque	Danielle Louise	Doctor of Philosophy (Science)	Fast Life in the Slow Lane - Life History and Energetics of a Basal Placental Mammal <i>Setifer Setosus</i> (Schreber, 1778)
Maboko	Martin Makgose	Doctor of Philosophy (Science)	Yield and Quality Parameters of Tomato Cultivars as Affected by Different Soilless Production Systems and Beneficial Micro-Organisms
Mabuza	Majola Lawrence	Doctor of Philosophy (Science)	The Institutional Economics of Cultivated Mushrooms in Swaziland: A Study on Value Chains, Transaction Costs, and Collective Action
Mafa Takisa	Pedro	Doctor of Philosophy (Science)	Exact Models of Compact Stars with Equations of State
Mafu	Mhlambululi	Doctor of Philosophy (Science)	Security of Quantum Key Distribution Protocols
Malinga	Senzo Jerome	Doctor of Philosophy in Engineering	Determination of Millimetric Signal Attenuation Due to Rain using Rain Rate and Raindrop Size Models for Southern Africa
Manyasa	Eric Okuku	Doctor of Philosophy (Science)	A Study of the Diversity, Adaptation and Gene Effects for Blast Resistance and Yield Traits in East African Finger Millet <i>Eleusine Coracana</i> (L.) Gaertn] Landraces
Marufu	Munyaradzi Christopher	Doctor of Philosophy (Science)	Mechanisms of Resistance to <i>Rhipicephalus</i> Ticks in Nguni Cattle Reared in the Semi-arid Areas of South Africa
Masikane	Ntuthuko Fortune	Doctor of Philosophy (Science)	Development of a Sediment Toxicity Test for South African Coastal Environment using an Endemic Amphipod, <i>Grandidierella lignorum</i> Barnard 1935 (Amphipoda: Aoridae)
Mbambo	Zodwa	Doctor of Philosophy (Science)	The Impact of Induced Mutations on Key Nutritional and Agronomic Traits of Sorghum
Mengesha	Wende Abera	Doctor of Philosophy (Science)	Genetic Diversity, Stability and Combining Ability of Maize Genotypes for Grain Yield and Resistance to NCLB in the Mid-Altitude Sub-Humid Agro-Ecologies of Ethiopia
Miller	Stuart Frank	Doctor of Philosophy (Science)	The Application of Organically Modified Heterogeneous Catalysts in Continuous Flow Hydrogenation Reactions
Mohammed	Mohammed Sagir	Doctor of Philosophy (Science)	Pre-Breeding of Bambara Groundnut (<i>Vigna Subterranea</i> [L.] Verdc.)
Mohammed	Mohammed Omar Musa	Doctor of Philosophy (Science)	Statistical Methods for Analysing Complex Survey Data: An Application to HIV/AIDS in Ethiopia
Mokoka	Tsholofelo Abednego	Doctor of Philosophy (Science)	The Discovery and Characterisation of Antiprotozoal Compounds from South African Medicinal Plants by a HPLC-based Activity Profiling Technique
Montoya-Maya	Phanor Hernando	Doctor of Philosophy (Science)	Ecological Genetic Connectivity within Southeast African Marginal Coral Reefs
M'pika Massoukou	Rodrigue Yves	Doctor of Philosophy (Science)	Age Structured Models of Mathematical Epidemiology

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Mthembu	Sibusiso Hector	Doctor of Philosophy (Science)	Studies on Atmospheric Tides and Planetary Waves in the Mesosphere-lower Thermosphere (MLT) Region using SuperDARN HF RADAR's and Meteor RADAR
Mukaro	Raphael	Doctor of Philosophy (Science)	Digital, Statistical and Wavelet Study of Turbulence Flow Structure in Laboratory Plunging Water Waves
Mulangu	Tshikomb Chrispin	Doctor of Philosophy in Engineering	Channel Characterisation for Broadband Power Line Communications
Munishi	Subira Eva	Doctor of Philosophy (Science)	Ground and Satellite-Based Assessment of Hydrological Responses to Land Cover Change in the Kilombero River Basin, Tanzania
Murenga	Mwimali Geoffrey	Doctor of Philosophy (Science)	Genetic Analysis and Response to Selection for Resistance to Two Stem Borers, <i>Busseola Fusca</i> and <i>Chilo Partellus</i> , in Tropical Maize Germplasm
Mushoriwa	Hapson	Doctor of Philosophy (Science)	Breeding Gains, Diversity Analysis and Inheritance Studies of Soybean Germplasm in Zimbabwe
Musundire	Lennin	Doctor of Philosophy (Science)	Genetic and Economic Value of a Shuttle Breeding Program for Enhancing Adaptability of Tropical Maize Germplasm in South Africa
Mwango	Nelly Nwazi Chunda	Doctor of Philosophy (Science)	Perceptions of the Conservancy Concept, Common Pool Resources and the Challenge of Collective Action Across Private Property Boundaries: A Case Study of the Dargle Conservancy, South Africa
Naicker	Kovashnee	Doctor of Philosophy (Science)	Sterically Stabilised Cationic Lipids for Efficient Glycotargeted Gene Delivery to Hepatocytes
Naidoo	Theshnie	Doctor of Philosophy (Science)	Genetic Diversity of the <i>Chaerephon leucogaster/pumilus</i> Complex from Mainland Africa and the Western Indian Ocean
Naidoo	Kubendran Kista	Doctor of Philosophy (Science)	Ecophysiological Studies on the Invasive Weed <i>Chromolaena odorata</i> and its Control in KwaZulu-Natal
Ncube	Bhekumthetho	Doctor of Philosophy (Science)	<i>In Vitro</i> Regeneration and Secondary Metabolites in <i>Cyrtanthus</i> Species
Nel	Holly Astrid	Doctor of Philosophy (Science)	Diversity of Bivalve Molluscs within the St Lucia Estuarine System, with Emphasis on the Ecophysiology of <i>Solen cylindraceus</i> and <i>Brachidontes virgiliae</i>
Ng'ayu-Wanjau	Beatrice Njoki	Doctor of Philosophy (Science)	Breeding for Durable Resistance to Angular Leaf Spot Disease (<i>Pseudocercospora Griseola</i>) in Common Bean (<i>Phaseolus Vulgaris</i>) in Kenya
Nordengen	Paul Anthony	Doctor of Philosophy in Engineering	The Development and Evaluation of a Performance-Based Standards Approach for Regulating the use of Heavy Vehicles in South Africa
Nsengiyumva	Francois	Doctor of Philosophy (Science)	Linear and Nonlinear Waves in Space Plasmas
Nyonyi	Yusuf	Doctor of Philosophy (Science)	Group Theoretic Approach to Heat Conducting Gravitating Systems

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Okoth	Akinyi Dorothy	Doctor of Philosophy (Science)	Phytochemistry and Bioactive Natural Products from <i>Lannea alata</i> , <i>Lannea rivae</i> , <i>Lannea schimperi</i> and <i>Lannea schweinfurthii</i> (Anacardiaceae)
Okubamichael	Desale Yosief	Doctor of Philosophy (Science)	Host Specificity in South African Mistletoes
Ortega Cisneros	Kelly	Doctor of Philosophy (Science)	Ecosystem Function of Selected Estuaries on the East Coast of South Africa
Osman	Khalid	Doctor of Philosophy in Engineering	Carbon Dioxide Removal from Coal Power Plants - A Review of Current Capture Techniques and an Investigation of Carbon Dioxide Absorption using Hybrid Solvents
Owere	Lawrence	Doctor of Philosophy (Science)	Genetic Studies on Head Architecture, Adaptation and Blast Resistance of Finger Millet in Uganda
Pale	Siebou	Doctor of Philosophy (Science)	Quantitative and Qualitative Studies on Grain Sorghum for Traditional Beer (<i>Dolo</i>) Production in Burkina Faso
Payandi Pillay	Kessawa Pillay	Doctor of Philosophy (Science)	Exploring the Cause of the Persisting Productivity Gap of Small Scale Sugar Cane Planters in Mauritius: New Directions for Research & Development and Agricultural Extension
Pedro	José Caluyna	Doctor of Philosophy (Science)	Computational Study of High Order Numerical Schemes for Fluid-Structure Interaction in Gas Dynamics
Perera	Merennage Sandun Jayalal	Doctor of Philosophy (Science)	Patterns of Animal Endemism in the Maputaland-Pondoland-Albany Biodiversity Hotspot
Ramamonjisoa	Fidy Andriamanankasina	Doctor of Philosophy (Science)	Non-Circularity of Beams in the CMB Polarization Power Spectrum Estimation
Rice	Laura Jane	Doctor of Philosophy (Science)	Flower Abscission in Potted <i>Plectranthus</i>
Richards	Leigh Rosanne	Doctor of Philosophy (Science)	Beyond DNA Sequencing: Integrative Approaches to Resolving Selected Higher and Lower Taxonomic Problems in Afrotropical Chiroptera
Seyama	Samuel Bhekizizwe Sikhumbuzo Ndleleni	Doctor of Philosophy (Science)	Environmental Management Issues Associated with Rural Industrialisation in Swaziland: The Case Study of Magindaneni
Shaira	Aishath	Doctor of Philosophy (Science)	Heterometallic Ruthenium(II)-Platinum(II) Complexes - A New Paradigm. A Kinetic, Mechanistic and Computational Investigation into Substitution Behaviour
Siboza	Xolani Irvin	Doctor of Philosophy (Science)	Methyl Jasmonate and Salicylic Acid Enhance Chilling Tolerance in Lemon (<i>Citrus Limon</i>) Fruit
Sithebe	Siphamandla	Doctor of Philosophy (Science)	Synthetic, Photophysical Studies of 2-Alkenyl/Arylbenzo-1,3,2-Diazaborole Compounds and their Palladium-Catalysed Cross-Coupling Reactions
Sseruwu	Godfrey	Doctor of Philosophy (Science)	Breeding of Sweetpotato (<i>Ipomoea Batatas</i> (L.) Lam) for Storage Root Yield and Resistance to Alternaria Leaf Petiole and Stem Blight (<i>Alternaria</i> spp.) in Uganda

College of Agriculture, Engineering and Science			
Surname	First Name	Qualification	Thesis Title
Swain	Tammy-Lyn	Doctor of Philosophy (Science)	Development of an Advanced Generation Breeding Population for <i>Eucalyptus Nitens</i> (Deane & Maiden) Maiden
Taylor	Terri Storm	Doctor of Philosophy (Science)	Some Mineralogical, Physical and Chemical Properties of Volcanically Affected Soils Under Irrigated Sugarcane in Tanzania
Teshome	Rebeka Gebretsadik	Doctor of Philosophy (Science)	Integrating Sorghum (<i>Sorghum Bicolor</i> [L.] Moench) Breeding and Biological Control Using <i>Fusarium Oxysporum</i> Against <i>Striga Hermonthica</i> in Ethiopia
Tumuhimbise	Robooni	Doctor of Philosophy (Science)	Breeding and Evaluation of Cassava for High Storage Root Yield and Early Bulking in Uganda
Uken	Daniel Alexander	Doctor of Philosophy (Science)	Computer Simulation of Nonadiabatic Dynamics by Means of the Quantum-Classical Liouville Equation
Vadigi	Snehalatha	Doctor of Philosophy (Science)	Factors Affecting Savanna Tree Sapling Recruitment
Walker	Anthony John	Doctor of Philosophy in Engineering	Distributed Control Synthesis for Manufacturing Systems Using Customers' Decision Behaviour for Mass Customisation
Waswa	George Wabwile	Doctor of Philosophy in Engineering	Transient Pressure Waves in Hillslopes
Wekesa	Isaac Masika	Doctor of Philosophy (Science)	The Influence of Ligand Moiety on the Substitution Behaviour of Mononuclear Platinum (II) Complexes. A Detailed Kinetic and Mechanistic Study
Welter	Allard	Doctor of Philosophy (Science)	Invariant Multipole Theory of Induced Macroscopic Fields in Homogeneous Dielectrics
White	Sarah Anne	Doctor of Philosophy in Engineering	Maximising the Photobiological Production of Hydrogen using Leachate, While Monitoring Algal Photosynthesis using Pam Fluorometry
Woodenberg	Wynston Ray	Doctor of Philosophy (Science)	Some Aspects of Development and Cell Wall Properties of the Desiccation-Sensitive Embryos of <i>Encephalartos natalensis</i> (Zamiaceae)
Zeka	Douglas Sandile	Doctor of Philosophy (Science)	Land Restitution and Conservation: Social Capital in the Mkambati Community
College of Health Sciences			
Surname	First Name	Qualification	Thesis Title
Anwar	Khawar	Doctor of Philosophy (Health Sciences)	Cellular and biomechanical effects induced by antiretroviral drugs
Ashiru	Olubisi Titilayo	Doctor of Philosophy (Medicine)	Interaction between <i>Mycobacterium tuberculosis</i> and pulmonary epithelium
Bux	Shamin	Doctor of Philosophy (Health Sciences)	Immunohistochemical and ultrastructural evaluation of the pathology and aetiopathogenesis of keloid formation
Choge	Isaac Ang'Ang'A	Doctor of Philosophy (Medicine)	Utilisation of health care services in KwaZulu-Natal by disease profile - Identifying gaps and redefining priorities to enhance public health care delivery

College of Health Sciences			
Surname	First Name	Qualification	Thesis Title
Govender	Romona Devi	Doctor of Philosophy (Medicine)	Identification of suicidal ideation in HIV-infected patients, the development of a suicide risk assessment tool and a suicide intervention plan for HIV- infected patients following voluntary counselling and testing
Hardcastle	Timothy Craig	Doctor of Philosophy (Medicine)	A trauma system for KZN. Local development for local need
Hoffmann	Michael Wolfgang	Doctor of Philosophy (Medicine)	Frontal network syndrome testing : A hierarchical and time orientated approach
Kerr	Jane	Doctor of Philosophy in Nursing	An analysis of nurse managers human resources management in respect of HIV/AIDS and/or Tuberculosis affected nurses in selected hospitals in KwaZulu-Natal - An Ethnographic study
Konkol	Kristen Faith	Doctor of Philosophy (Health Sciences)	Salivary biomarkers of mucosal immunity and sympathetic activation in children: Effects of body composition, cardio-respiratory fitness and exercise
Makume	Mantha Thandiwe	Doctor of Philosophy (Medicine)	Implementing new rapid diagnostic assays for detection and drug susceptibility testing of M tuberculosis in KwaZulu-Natal, South Africa
Mbewe	Edward	Doctor of Philosophy in Nursing	Improving the detection of depression and/or Anxiety Psychiatric Comorbidities in people with Epilepsy in primary health care institutions in Zambia
Mdlalo	Thandeka Shirley	Doctor of Philosophy (Health Sciences)	The use of an English language assessment test on South African English additional language (EAL) speakers from an indigenous language and cultural background: A critical evaluation
Moodley	Anandan Angamuthu	Doctor of Philosophy (Medicine)	A qualitative and quantitative (MR) diffusion study investigating the pathogenesis of cryptococcal induced vision loss
Mukamana	Donatilla	Doctor of Philosophy in Nursing	Management of the long term psychological effects of rape among women survivors of 1994 genocide in Rwanda: Grounded Theory Approach
Naidoo	Kanharuben	Doctor of Philosophy (Medicine)	The ethical dilemmas of critical care physicians encountered in the admission of patients with HIV infection to intensive care
Naranbhai	Vivek	Doctor of Philosophy (Medicine)	The role of natural killer cells in preventing HIV-1 acquisition and controlling disease progression
Ngubane	Nqobile Angel Cebile	Doctor of Philosophy (Medicine)	Functional analysis of M. tuberculosis secreted EsxG:EsxH heterodimer using de novo isolated aptamers
Prakaschandra	Dorcas Rosaley	Doctor of Philosophy (Medicine)	The echocardiographic manifestations of an urban, working class community with a high cardiovascular risk profile
Ramlall	Suvira	Doctor of Philosophy (Medicine)	Screening for and diagnosing dementia in an elderly residential home population
Reddy	Kavidha	Doctor of Philosophy (Medicine)	The role of APOBEC3G in primary and early HIV-1 subtype infection
Sukkh	Melisha	Doctor of Philosophy (Medicine)	Host induced microevolution of ESX secretion systems of M.Tuberculosis

College of Humanities			
Surname	First Name	Qualification	Thesis Title
Adkins	Lorraine Dalmae	Doctor of Philosophy (Human Sciences)	The self in and through the other: A Bakhtinian approach to selected readings from <i>Little Dorrit</i> and <i>Middlemarch</i>
Ankiah-Gangadeen	Aruna	Doctor of Philosophy (Education)	Biographies, experiences and pedagogical practices: teachers of early Childhood Education in Mauritius
Arbuckle	Katherine Elizabeth	Doctor of Philosophy (Education)	A study of pictorial interpretation of health education illustrations by adults with low literacy levels
Asuelime	Lucky Ehimatie	Doctor of Philosophy (Human Sciences)	Drivers of Nuclear Proliferation in the Global South: A Historical Analysis of South Africa
Bengover	Yvonne Jane	Doctor of Philosophy (Education)	Institutional transformation in the post-apartheid era: An ethnography of one high school in KwaZulu-Natal.
Chetty	Magavani	Doctor of Education (Teacher Educ)	Institutional-level support teams: A case study of teachers, understanding of providing educational support through collaboration in the context of inclusive education.
Chetty	Carmel Therese Mary	Doctor of Philosophy (Education)	An ethnographic exploration of the day to day texture of the school life of poor children.
Chirongoma	Sophia	Doctor of Philosophy (Human Sciences)	Navigating indigenous resources that can be utilised in constructing a Karanga theology of health and well-being (<i>Utano</i>): An exploration of health agency in contemporary Zimbabwe
Deouyo	Paul	Doctor of Philosophy (Human Sciences)	The concept of Mang-Djala with reference to church unity in a context of ethnic diversity: The case of the Evangelical Lutheran Church in Cameroon (ELCC)
Dombo	Sylvester	Doctor of Philosophy (Human Sciences)	Daily Struggles: Private Print Media, The State, and Democratic Governance in Zimbabwe in the case of the <i>African Daily News</i> (1956-1964) and the <i>Daily News</i> (1999-2003)
Du Bois	Duncan Leslie	Doctor of Philosophy (Human Sciences)	Sugar and Settlers: The Colonisation of the Natal South Coast 1850-1910
Elia	Emmanuel Frank	Doctor of Philosophy (Human Sciences)	Information dissemination for adaptation to climate change and variability in the agriculture sector: The case of Maluga and Chibelela Villages, central Tanzania
Emser	Monique	Doctor of Philosophy (Human Sciences)	The Politics of Human Trafficking in South Africa: A case study of the KwaZulu-Natal Intersectoral Task Team and South African Counter-Trafficking Governance
Frank	Neil Augustine	Doctor of Philosophy (Human Sciences)	In Defence of Synthetic A Priori Knowledge
Gilbert	Indira	Doctor of Philosophy (Human Sciences)	Narratives on Abortion: Psychosocial, Ethical and Religious Considerations
Govender	Eliza Melissa	Doctor of Philosophy (Human Sciences)	An assessment of students perceptions of abstinence, be faithful and condomise strategy: towards student participation in HIV/AIDS messaging
Haines	Frederick Louis	Doctor of Philosophy (Education)	Parental involvement in Enhancing learner Achievement: Case Studies of Three Rural Primary Schools in KwaZulu-Natal.

College of Humanities			
Surname	First Name	Qualification	Thesis Title
Horne	Fiona Lindsay	Doctor of Philosophy (Human Sciences)	Cultures et representations d'un champ disciplinaire en evolution: le cas de la litterature au sein des etudes francaises a l'universite en Afrique du Sud
Iyakaremye	Innocent	Doctor of Philosophy (Human Sciences)	The Free Methodist Church of Southern Africa and its response to HIV and AIDS in Southern KwaZulu-Natal
Jakawa	Rahila Leng	Doctor of Philosophy (Human Sciences)	Pastoral ministry to single women in the Church of Christ in Nigeria, Giging Regional Church Council, Jos, Nigeria
Jinnah	Zaheera	Doctor of Philosophy (Human Sciences)	Unfinished Journeys: An Exploration of Agency within Somali Women's Lives and Livelihoods in Johannesburg
Kamidza	Richard	Doctor of Philosophy (Human Sciences)	Zimbabwe's Trade Negotiations with the European Union: State Shortcomings and Civil Society Advocacy, 2000-2013
Kasimbazi	Annette Kezaabu	Doctor of Philosophy (Human Sciences)	Exploring the Influence of Participatory Dissemination of Research Results on Perceptions of Care and Support Around HIV and Aids in KwaZulu Natal
Keen	Helen Moira	Doctor of Philosophy (Human Sciences)	An Exploration of the Phenomena of Multiple Addictions and Addiction Interaction Disorder in Durban, South Africa
Keke	Bulelwa	Doctor of Philosophy (Education)	Understanding Life Sciences teachers' engagement with ongoing learning through continuous professional development programmes
Majinge	Rebecca Mgunda	Doctor of Philosophy (Human Sciences)	Library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania
Makusha	Tawanda	Doctor of Philosophy (Education)	Determinant of father involvement: Children, women and men's experiences of support children receive from men in KwaZulu-Natal.
Masinga	Lungile Rejoice	Doctor of Philosophy (Education)	Journeys to self-knowledge: A participatory study of teachers as sexuality educators.
Matiure	Perminus	Doctor of Philosophy (Human Sciences)	Archiving indigenous and contemporary legacies of Shona Mbira Ozavadzimu in the context of Kurova Cuva and Dandaro Practices
Mawowa	Showers	Doctor of Philosophy (Human Sciences)	Political Economy of Crisis, Mining and Accumulation in Zimbabwe: Evidence from Chegutu-Mhondoro Ngezi
Mchunu	Mxolisi Russel	Doctor of Philosophy (Human Sciences)	A history of political violence in KwaShange, Vulindlela district and of its effects on the memories of survivors (1987-2008)
Meda	Lawrence	Doctor of Philosophy (Education)	Refugee learner experiences: A case study of Zimbabwean Refugee children.
Miroro	Obadia Okinda	Doctor of Philosophy (Human Sciences)	A Realist Explanation of Long Run Development Interventions: Contexts, Adaptations and Outcomes of Dairy Improvement in Kenya
Moodley	Thiruvani	Doctor of Education (Teacher Educ)	An exploration of the curriculum in three Early Childhood Centers in the Province of KwaZulu-Natal, South Africa: A case study.
Mthanti	Bawinile Joyce	Doctor of Philosophy (Education)	The dynamics of school violence: A quantitative study of two secondary schools in Umlazi Township, South of Durban.

College of Humanities			
Surname	First Name	Qualification	Thesis Title
Mthiyane	Siphiwe Eric	Doctor of Philosophy (Education)	Dynamics of school-based violence: Exploring school governing bodies in addressing school violence in post-conflict South African schools.
Mulambya-Kabonde	Peggy	Doctor of Philosophy (Human Sciences)	Ordination of women: Partnership, praxis and experience of the United Church of Zambia
Munro	Nicholas	Doctor of Philosophy (Education)	Exceptional academic achievement in South African Higher Education
Naidoo	Lingesperi	Doctor of Philosophy (Education)	An autoethnographic study of the person in the principal's office.
Naidoo	Jaqueline Theresa	Doctor of Philosophy (Education)	A labyrinth of teacher narratives: Subjectivities and emotionality in HIV and AIDS teaching
Ndemuweda	Daniel Shiyukifeni	Doctor of Philosophy (Human Sciences)	Luke 6:12-7:17 as an ethical model for Egalitarian socio-economic praxis in post-Independence Namibia
Ndunyu	Njeri Louisa Catherine	Doctor of Philosophy (Human Sciences)	Women's Experiences of Induced Abortion in Mombasa City and the Kilifi District, Kenya
Nkomazana	Njabulo	Doctor of Philosophy (Human Sciences)	Risky Sexual Behaviours of Young People: A case study of Students at two Universities in Zimbabwe
Nkosi	Promise Makhosazane	Doctor of Philosophy (Human Sciences)	'Ingcwaba Lentombi Lisemzini': A Socio-Cultural and Gendered Construction of Ukuthwala among the Zulu People in selected Rural areas of KwaZulu-Natal
Nuwagaba	Ephraim Lemmy	Doctor of Philosophy (Education)	Ugandan case studies of adult learning practices of persons with disabilities regarding microfinance
Ogunnubi	Olusola Rasheed	Doctor of Philosophy (Human Sciences)	Hegemonic order and regional stability in Sub-Saharan Africa: A comparative study of South Africa and Nigeria
Okafor	Nneka Ifeoma	Doctor of Philosophy (Human Sciences)	Institutionalised violence and discrimination against women in Eastern Nigeria: An ethical approach
Olaopa	Olawale Rafiu	Doctor of Philosophy (Human Sciences)	The Politics of Local Government Financing in Southwestern Nigeria, 1999-2009
Olasina	Gbolahan	Doctor of Philosophy (Human Sciences)	Predictors of legislators' ICT acceptance and use in the performance of legislative functions at the Nigerian National Assembly
Owino	Kennedy Onyango	Doctor of Philosophy (Human Sciences)	'Godly Manhood': Evangelical constructions of masculinities in a South African context - a case study of the Mighty Men's Conference (MMC)
Oyowe	Oritsegbubemi Anthony	Doctor of Philosophy (Human Sciences)	Personhood and Human Rights: A critical study of the African Communitarian and normative conception of the self
Padayachee	Vasanthie	Doctor of Philosophy (Education)	On making sense of Science discourse: The role of Foundation Programme in a South African University.
Pillay	Sarasvathie	Doctor of Philosophy (Education)	What does it entail to be a self-managing school? Evidence from one South African School.

College of Humanities			
Surname	First Name	Qualification	Thesis Title
Pillay	Ansurie	Doctor of Philosophy (Human Sciences)	Enabling Student Teachers of Literature to Become Agents of Change
Pillay	Kathryn	Doctor of Philosophy (Human Sciences)	A Cross-Generational study of the Perception and Construction of South Africans of Indian Descent as Foreigners by Fellow Citizens
Rama	Sharmila	Doctor of Philosophy (Human Sciences)	Child mobility, time use and social exclusion: Reframing the discourse and debates
Samson	Annie-Hélène	Doctor of Philosophy (Education)	Learning to change: A study of continuing teacher development in two contexts of educational reform
Shaik	Naseema	Doctor of Philosophy (Education)	The nature of child participation in Reception Year (Grade R) in the Western Cape.
Shaik	Zurayda	Doctor of Philosophy (Human Sciences)	Psychological Capital, individual antecedents and work related outcomes
Sharpley	Nelly	Doctor of Philosophy (Human Sciences)	Churches and Service Delivery in South Africa: The Black Charismatic Church Ministries (BCCMs), as Agents for Service Delivery in the Eastern Cape
Sibanda	Doras	Doctor of Philosophy (Education)	How teachers construct teaching- learning sequences in chemistry education in the Further Education and Training phase.
Sibeta	Sixtus Gabangani	Doctor of Philosophy (Human Sciences)	Managing policy on Black Broad-Based Economic Empowerment in the Provincial Government of KwaZulu-Natal, South Africa
Simba	Cornelius Asyikiliwe	Doctor of Philosophy (Human Sciences)	School library resource centres in Iringa and Njombe regions of Tanzania: Their status and role in resource-based learning
Singh	Rakesh Issardeo	Doctor of Philosophy (Education)	An exploration into the use of Multiple Representation as an instructional tool in Mathematical Literacy classrooms
Swart	Marinda Elizabeth	Doctor of Philosophy (Education)	On becoming a teacher: Novice Teachers' experiences of Early Professional Learning.
Umururwa	Rose Marie Aurore	Doctor of Philosophy (Human Sciences)	The effectiveness of re-integration of female ex-combatants: Rwanda as a case study
Yavo	Philippe	Doctor of Philosophy (Human Sciences)	Technical Know-How in the Indigenous Knowledge System underlying Batammariba Traditional Architecture in Togo and Benin
Zhou	Tsvakai	Doctor of Philosophy (Human Sciences)	Rehabilitating female ex-prisoners in Zimbabwe: A critical analysis from a feminist pastoral care perspective
College of Law and Management Studies			
Surname	First Name	Qualification	Thesis Title
Bosch	Shannon Joy	Doctor of Philosophy (Law)	The combatant status of non-state actors in international armed conflicts, in light of the notion of direct participation in hostilities.
Boyce	Gerard Denzil	Doctor of Philosophy (Management Studies)	The Relationship between Perceptions of Racial Identity, Hope and Young People's Educational Aspirations in South Africa
Chazema	Jacqueline	Doctor of Philosophy (Management Studies)	Managing Systems Change in the Context of HIV and AIDS in Malawi
Dramani	John Bosco	Doctor of Philosophy (Management Studies)	An Analysis of Electricity Demand and Policy Options for Ghana
Erasmus	Daniel Nicolaas	Doctor of Philosophy (Law)	An analysis of challenging the commissioner's discretionary powers invoked in terms of Sections 74b and 74b of the Income Tax Act 58 of 1962, in light of the constitution of the Republic of South Africa 108 of 1996

College of Law and Management Studies			
Surname	First Name	Qualification	Thesis Title
Gamede	Vangeli Wiseman	Doctor of Philosophy (Management Studies)	The Transfer of Workplace Training to Performance in the South African Manufacturing Industry with specific reference to Hulamini
Green	Paul Edmund	Doctor of Philosophy (Management Studies)	A Systems Approach to the Evaluation of an Academic Department as a Service Provider at a University of Technology.
Lubua	Edison Wazoel	Doctor of Philosophy (Management Studies)	Adoption of e-Transparency in the Public Sector of Tanzania
Mbhele	Thokozani Patmond	Doctor of Philosophy (Management Studies)	Electronic Supply Chain Management Systems in Managing the Bullwhip Effect on Selected Fast Moving Consumer Goods.
Mbonigaba	Josue	Doctor of Philosophy (Management Studies)	The Cost-Effectiveness of HIV/AIDS Interventions in South Africa
Mfusi	Zanele Enough	Doctor of Administration	The Management of Expanded Works Programme in the Department of Public Works: KwaZulu-Natal
Mngomezulu	Thembeke Mary-Pia	Doctor of Administration	Monitoring and Evaluation in Public Governance: A Case Study of KwaZulu-Natal Department of Health
Mulumeoderhwa	Maroyi Willy	Doctor of Philosophy (Management Studies)	Building More Peaceful Gender Relationships in South Kivu Province, Democratic Republic of Congo
Ngwane	Knowledge Siyabonga	Doctor of Administration	Workplace Harassment and its impact on staff performance: A Case study of a South African Higher Education Institution
Ntshakala	Thembekele Elsie	Doctor of Administration	District Governance in South African Local Government: A Case Study of West Rand District Municipality
Nwokeiwu	Johnson	Doctor of Commerce	Training, Development and Performance in a Public Corporation: A Case Study of the Nigerian Railway Corporation
Okeke-Uzodike	Obianuju Ebele	Doctor of Philosophy (Management Studies)	Analysis of Recruitment and Selection Practices in Federal Government Ministries in Abuja, Nigeria
Oyende	Kayode Babatunde	Doctor of Philosophy (Law)	An appraisal of the Law relating to oil Pollution in the Inland, Territorial and Maritime Waters of Nigeria
Pillay	Gnanam	Doctor of Philosophy (Management Studies)	Developing Social Entrepreneurship in the field of IT at FET Colleges in KwaZulu-Natal
Sarumi	Rofiah Ololade	Doctor of Philosophy (Law)	The protection of the rights of children affected by HIV/AIDS in South Africa and Botswana: A Critical analysis of the legal and policy responses
Strode	Ann Elaine	Doctor of Philosophy (Law)	Walking the tightrope-creating an ethical-legal framework for health research with children: Balancing child protection and participation with the facilitation of appropriate health research.
Tandoh	Francis	Doctor of Philosophy (Management Studies)	The Determinants of Housing Demand in Ghana: Evidence from Micro-Data
Vilakazi	Ayanda Menzi	Doctor of Business Administration	Evaluating quality in the South African passenger transportation industry
Visagie	Justin Paul	Doctor of Philosophy (Management Studies)	The Development of the Middle Class in South African since the Transition to Democracy
Williamson	Mervyn Kenneth	Doctor of Philosophy (Management Studies)	Perceptions and Experiences of organisational Misfit: A Grounded Theory Study of South African Employees
Zondi	Wellington Bonginkosi	Doctor of Philosophy (Management Studies)	Employee Performance Management and Development within the Regional Hospitals in the KwaZulu-Natal Department of Health



RESEARCH GRANTS AND CONTRACTS 2013

1 January - 31 December 2013

College of Agriculture, Engineering and Science			
Principal Investigator	Project Title	Funder	Amount Awarded
Maharaj, Bridgemohan	People, Places and Infrastructure: Countering urban violence and promoting justice in Mumbai, Rio and Durban	International Development Research Centre	R 12 422 563
Ramjugernath, Deresh	Fluorochemical Expansion Initiative Research and Development	Pelchem South Africa	R 10 790 000
Buckley, Christopher	Reinvent the Toilet Challenge Round 1 Phase 2: Data acquisition and field support for sanitation projects	Bill & Melinda Gates Foundation	R 8 172 152
Chivenge, Pauline	Upscaling understanding of water movement, land degradation and carbon cycle in support of effective payment for ecosystem services	Water Research Commission	R 2 907 000
Modi, Albert	Determining water use of indigenous grain and legume food crops	Water Research Commission	R 2 750 000
Clark, David	Development and assessment of an integrated water use quantification methodology for South Africa	Water Research Commission	R 2 500 000
Odindo, Alfred	Integrating agriculture in designing low cost sanitation technologies in social housing schemes; a case study of KwaDinabakubo, eThekweni Municipality	Water Research Commission	R 1 880 000
Trois, Cristina	Development of a power line inspection robot, demonstrating the feasibility of using such technology for the inspection of power lines.	Eskom	R 1 690 000
Sithole, Bruce	Agreement regarding the carrying out of tasks by the School of Chemical Engineering of University of KwaZulu-Natal - Natural Resource Optimisation for Pulp and Paper.	Paper Manufacturers Association of South Africa	R 1 300 000

College of Agriculture, Engineering and Science			
Principal Investigator	Project Title	Funder	Amount Awarded
Warburton, Michelle	Establishment of a more robust observation network to improve understanding of global change in the sensitive and critical water supply area of the Drakensberg	Water Research Commission	R 900 000
Rash, Jonathan	South African National Arctic expedition high frequency radar experiment	South African National Space Agency	R 900 000
Buckley, Christopher	Economic evaluation of faecal sludge disposal routes	Bill & Melinda Gates Foundation	R 857 087
Ndung'u, Patrick	Detection and qualification of emerging organic pollutants in Durban waterways, and remediation options integrating nanostructured materials and advanced oxidation processes.	Water Research Commission	R 750 000
Chimonyo, Michael	Revision of Natsurv 4: Water and wastewater management in the dairy industry.	Water Research Commission	R 700 000
Brouckaert, Christopher	Waste Water Treatment Programme modelling to support the Green Drop Programme	Water Research Commission	R 700 000
Buckley, Christopher	Revision of Natsurv 3: Water and wastewater management in the soft drink industry.	Water Research Commission	R 700 000
Jewitt, Graham	Water use of cropping systems adapted to Bio-Climatic regions in South Africa	University of Oxford	R 651 000
Moodley, Deshendran	Health Enterprises Architecture Laboratory	International Development Research Centre	R 643 598
Warburton, Michelle	South African-Integrated Assessment Model: Hydrological modelling component	Council for Scientific and Industrial Research	R 600 000
Everson, Colin	Application of cosmic ray probes for the validation of hydrometeorological and remote sensing models	National Academy of Sciences	R 591 232
Everson, Theresa	Improving the livestock carrying capacity with rainwater harvesting and conservation	University of Venda	R 581 700
Everson, Colin	Rehabilitation of alien invaded riparian zones and catchments using indigenous trees: An assessment of indigenous tree water use.	University of Pretoria	R 550 000
Conlong, Desmond	Tri-trophic interactions of the stalk borer <i>Eldana saccharina</i> and its parasitoids in sugarcane and indigenous host plants	Swedish University of Agricultural Sciences	R 480 600
Kindness, Andrew	South African National Arctic expedition high frequency radar experiment	South African National Space Agency	R 432 000
Thornton-Dibb, Sean	Technology transfer linked Agricultural Catchments Research Unit and Mike Basin models to the Inkomati Catchment Management Agency	Water Research Commission	R 400 000
Buckley, Christopher	Micro-nutrient requirements for anaerobic digestion of industrial effluents: Development of a speciation/precipitation model to optimise micro-nutrient dose for methane production from industrial waste streams.	Water Research Commission	R 400 000

College of Agriculture, Engineering and Science			
Principal Investigator	Project Title	Funder	Amount Awarded
Moodley, Deshendran	Health Enterprise Architecture Laboratory	International Development Research Centre	R 392 713
Brooks, Michael	Research project for solar resource assessment	eThekweni Municipality	R 366 250
Jarmain, Caren	Fruitlook Continuation 2012-13: An operational service to improve water and nitrogen management in grapes and other deciduous fruit trees using satellite technology for the season 2012-13	Western Cape Provincial Department of Agriculture	R 342 000
Petrucione, Francesco	Construction of Bose-Einstein Condensation Experiment - Access to laser facility agreement	Council for Scientific and Industrial Research	R 312 000
Vosloo, Andre	Stress Bio-markers in Finfish and Abalone Aquaculture Systems	Department of Agriculture, Fisheries and Forestry	R 270 000
Rouget, Mathieu	Post-Doctoral Fellowship disbursement agreement	South African Biodiversity Institute	R 250 000
Ramjugernath, Deresh	Measurement of binary and ternary Vapour-Liquid Equilibrium for Ethylene/Hydrogen/Hydrocarbon Systems.	SASOL Technology (Pty) Ltd	R 240 000
Everson, Colin	Groundwater surface water interactions from theory to practice.	University of the Free State through Water Research Council	R 233 300
Petrucione, Francesco	Ultra cold atoms in optical lattices	Council for Scientific and Industrial Research	R 232 000
Foxon, Katherine	Development of a model of the aerobic membrane bioreactor treating Illovo wastewater	Illovo Sugar Limited	R 207 530
Trois, Christina	Nitrate removal from treated leachate using garden refuse compost as a carbon source, and biogas to electricity projects	Durban Solid Waste	R 145 000
Bright, Glen	RoboCup Participation 2010	Council for Scientific and Industrial Research	R 145 000
Jewitt, Graham	To produce knowledge and information on expected water use and yield of conventional and energy type sugarcane for selected quinary catchments in South Africa under a present and future climate	South African Sugarcane Research Institute	R 140 000
Brooks, Michael	Ballast study supporting research into liquid propellant rocket turbopumps and turbomachinery.	Council for Scientific and Industrial Research	R 136 500
Buckley, Christopher	Mechanical properties of faecal sludge	Bill & Melinda Gates Foundation	R 136 313
Ramjugernath, Deresh	Vapour pressure measurements for SASOL Synfuels	SASOL Technology (Pty) Ltd	R 126 000
Laing, Mark	Use of potassium silicate and biocontrol to reduce postharvest disease and chilling injury in citrus fruit	Citrus Research International	R 125 562
Martincigh, Bice	An investigation of the photostability, photochemistry and DNA interactions of sunscreen absorbers and other active ingredients in topical skin preparations	Council for Scientific and Industrial Research	R 115 000

College of Agriculture, Engineering and Science			
Principal Investigator	Project Title	Funder	Amount Awarded
Jewitt, Graham	Using isotopes and hydrologic modelling to improve hydrologic understanding of Inkomati River basin	International Foundation for Science	R 110 065
Buckley, Christopher	Co-digestion of sewage sludge and industrial concentrates	Water Research Commission	R 110 000
Zulu, Peleira	Bursary funding for MSc and PhD students	Council for Scientific and Industrial Research	R 100 000
Stuart-Hill, Sabine	Planning for adaptation: Applying scientific climate change projections to local social realities	Uphilo Wamanzi	R 65 600
Ciacciarello, Mariana	The effects of supplementing CreAMINO® under South African conditions	Evonik Industries AG	R 64 732
Pegram, Geoffrey	ACCESS thematic area sub-programmes in the area of earth systems modeling and biogeochemistry.	Council for Scientific and Industrial Research	R 60 000
Jewitt, Graham	Review of the use of Earth Observation & Remote Sensing in Water Resources Management in South Africa	Council for Scientific and Industrial Research	R 59 500
Laing, Mark	Cultivar trial to establish the potential of established foreign cultivars in South Africa	Protein Research Foundation	R 54 761
Foxon, Katherine	Postdoctoral research by student Mr Daniel Teclu in the field of anaerobic digestion of petrochemical wastes and stripped gas liquor; micro-nutrient dosing and effluent biodegradation studies.	SASOL Technology (Pty) Ltd	R 50 000
Foxon, Katherine	Investigation into Fischer-Tropsch reaction water and stripped gas liquor	SASOL Technology (Pty) Ltd	R 50 000
Loubser, Richard	The effects of fretting marks induced during strand winding on the fatigue performance overhead transmission line conductors	Aberdare Cables Pty Ltd	R 50 000
Mutanga, Onesimo	Understanding estuarine processes in uMfolozi/ uMsunduzi/St Lucia estuary from earth observation data and vegetation composition, distribution and health.	Council for Scientific and Industrial Research	R 50 000
Laing, Mark	Soybean elite cultivar trial 2013/14	Protein Research Foundation	R 49 490
Islam, Shahidul	Effects of artificial sweeteners and possible mechanisms of action in an experimentally-induced type 2 diabetes model of rats.	South African Sugar Association	R 45 000
Stretch, Derek	Hydrological issues of the Lake St. Lucia estuarine system.	Aurecon South Africa Pty Ltd	R 40 000
			R 60 123 247

College of Health Sciences			
Principal Investigator	Project Title	Funder	Amount Awarded
Newell, Marie-Louise	Antiretroviral treatment as prevention: a cluster randomised trial in Hlabisa sub-district of KwaZulu-Natal, South Africa	International Initiative for Impact Evaluation, Inc.	R 63 691 352
Essack, Sabiha	Antimicrobial stewardship and conservancy in Africa	Norwegian Agency for Development Co-operation	R 30 060 640
Chimbari, Moses	Social, environment and climate change impacts on vector borne diseases in arid areas of South Africa	World Health Organisation	R 24 956 624
de Oliveira, Tulio	Phylogenetics networks to address transmission of HIV	Bill & Melinda Gates Foundation	R 9 059 060
Abdool Karim, Salim	International Maternal Pediatric Adolescent AIDS Clinical Trials Group.	Johns Hopkins University	R 4 327 271
Ndung'u, Thumbi	Development of broadly neutralizing antibodies in HIV infection and following immunization	Massachusetts General Hospital	R 3 941 759
de Oliveira, Tulio	Drug resistance surveillance and treatment monitoring network for the public sector HIV antiretroviral treatment program in the Free State province of South Africa	South African Medical Research Council	R 3 917 686
Ndung'u, Thumbi	Establishment of cohorts to support studies of HIV antigens and immune responses required for control of HIV	International AIDS Vaccine Initiative	R 3 720 175
Mahomed, Ozayr	To improve capacities and scale up use of data at provincial/district and facility level to facilitate quality in service delivery and data management for achieving the Elimination of Mother To Child Transmission (EMTCT) goal	United Nations Children's Fund	R 3 366 578
de Oliveira, Tulio	A multi-disciplinary approach to understand the causes and consequences of HIV transmission and drug resistance in a hyper-epidemic setting in rural South Africa	South African Medical Research Council	R 3 181 930
Herbst, Jacobus	Research partnership on demographic change and health	University of Southampton	R 3 157 234
Abdool Karim, Salim	University of KwaZulu-Natal - CAPRISA - HIV/AIDS Clinical Trials Unit Year 07	The Aurum Institute	R 3 094 666
Ndung'u, Thumbi	Pathogenesis of Clade C HIV infection (under NIH Prime Award No. 5R37AI067073)	Massachusetts General Hospital	R 2 998 760
Horwood, Christiane	Support of implementation of re-engineering of Primary Health Care in KwaZulu-Natal with overview to improving maternal and child health/primary health care	United Nations Children's Fund	R 2 757 625
Moodley, Prashini	Surveillance and antimicrobial susceptibility patterns	KwaZulu-Natal Department of Health	R 2 652 305

College of Health Sciences			
Principal Investigator	Project Title	Funder	Amount Awarded
Coutsoudis, Anna	Randomised controlled trial testing the effect of cotrimoxazole prophylaxis on morbidity and mortality outcomes in breastfed HIV-exposed uninfected infants.	Medical Research Council	R 2 497 882
Ndung'u, Thumbi	Development of broadly neutralising antibodies in HIV infection and following immunisation	Massachusetts General Hospital	R 2 423 724
Coutsoudis, Anna	Effect of feeding buddies on adherence to WHO Prevention of Mother to Child Transmission Guidelines in South Africa	Program for Appropriate Technology in Health	R 2 329 065
Moodley, Dhayendre	International Maternal Pediatric Adolescent AIDS Clinical Trials Group: IMPAACT 1077BF Breastfeeding version of the PROMISE (Promoting Maternal and Infant Survival Everywhere) study	Johns Hopkins University	R 2 295 438
Mlisana, Koleka	Impact of HIV, antiretroviral therapy and TB genotype on survival in MDR TB (SHOUT Study)	Emory University	R 2 196 129
Bishai, William	Biomarkers and signaling in Tuberculosis	Johns Hopkins University	R 2 064 602
Moosa, Mahomed Yunus Suleman	Antiretroviral drug resistance in KwaZulu-Natal	Brigham and Women's Hospital, Inc.	R 2 021 024
Herbst, Jacobus	Improved measures of the family environment in longitudinal population studies of child health in sub-Saharan Africa	The University of Southampton	R 1 927 897
Newell, Marie-Louise	Death among HIV infected adults in African populations since the introduction of Antiretroviral Treatment	The London School of Hygiene and Tropical Medicine	R 1 707 492
Ndung'u, Thumbi	Development of broadly neutralising antibodies in HIV infection and following immunisation	Massachusetts General Hospital	R 1 553 612
Ndung'u, Thumbi	Innate Immunity in HIV-1 Infection	Massachusetts General Hospital	R 1 414 594
Coutsoudis, Anna	Effect of feeding buddies on adherence to WHO Prevention of Mother To Child Transmission guidelines in SA	Program for Appropriate Technology in Health	R 1 376 907
Gaede, Bernhard	Supporting primary health care re-engineering through improving primary health care facility management capacity and supporting quality improvement plans based on the six priority areas for quality assurance.	Health Systems Trust	R 1 176 658
Rapiti, Nadine	Transfer Agreement from UKZN Innovation to University of KwaZulu-Natal and Roche Products (Pty) Ltd	Roche Products (Pty) Ltd	R 1 156 175
Abdool Karim, Salim	The University of KwaZulu-Natal - CAPRISA HIV/AIDS Clinical Trials unit	The Trustees of Columbia University	R 1 123 091
Horwood, Christiane	Implementation of an integrated maternal, child and women's health (MCWH) and HIV service in one sub-district in KwaZulu-Natal	The Futures Group	R 1 099 332

College of Health Sciences			
Principal Investigator	Project Title	Funder	Amount Awarded
Kasprowicz, Victoria	Tuberculosis-HIV Co-infection Cohort	Harvard University	R 1 077 392
Naidoo, Nithiseelan	Vaal health project	Council for Scientific and Industrial Research	R 1 069 950
Biccard, Bruce	Management of myocardial injury after non-cardiac surgery	Hamilton Health Sciences Corporation	R 970 891
Moodley, Pravikrishnen	Transmission of HIV-associated XDR TB in South Africa (TRAX)	Emory University	R 967 423
Naidoo, Nithiseelan	Research training on Chronic Lung Disease in Southern Africa	Michigan University	R 908 784
Moodley, Indhrasen	Bioprospecting on traditional medicine	South African Medical Research Council	R 816 406
Paruk, Farhanah	A comparison of the demographic profile, risk factors and health care costs in geriatric patients with or without osteoporotic hip fractures in the public health sector in the eThekweni area.	Servier Laboratories South Africa (Pty) Ltd	R 750 000
Moodley, Indhrasen	Indigenous Knowledge Systems(IKS) bio-prospecting and product development in the area of cosmeceuticals	Department of Science and Technology	R 635 778
Motala, Ayesha	Durban Diabetes Study: A population based cross-sectional study of the epidemiology of diabetes mellitus in urban South Africans of African descent.	Sanofi-Aventis South Africa (Pty) Ltd	R 600 000
Abdool Karim, Salim	eThekweni (University of KwaZulu-Natal) South Africa HIV Vaccine Trials Unit - HVTN 503-S.	Fred Hutchinson Cancer Research Center	R 550 329
Motala, Ayesha	A phase III, multicenter, double-blind, randomised study to evaluate the safety and efficacy of the addition of MK-3102 compared with the addition of Sitagliptin in subjects with Type 2 Diabetes Mellitus with inadequate glycemic control on Metformin. (Protocol: MK-3102-026-1607)	Parexel International (SA) Pty Ltd	R 506 970
Ndirangu, James Nganga	International Epidemiological Databases to Evaluate AIDS Southern Africa Collaboration	University of Bern	R 500 838
Rochat, Tamsen	Amagugu Champions for Children	Canadian International Development Agency	R 500 000
Motala, Ayesha	Durban Diabetes Study: a population based cross sectional study of the epidemiology of Diabetes Mellitus in urban South Africans of African descent.	Wellcome Trust Sanger Institute	R 492 354
Abdool Karim, Salim	Centre for the AIDS Programme of Research in South Africa and AURUM Institute: University of KwaZulu-Natal Centre for the AIDS Programme of Research in South Africa HIV/AIDS Clinical Trials unit	The Centre for the AIDS Programme of Research in South Africa	R 358 434
Essack, Sabiha	Anti-microbial stewardship and conservancy in Africa	Norwegian Agency for Development Cooperation	R 326 393

College of Health Sciences

Principal Investigator	Project Title	Funder	Amount Awarded
Newell, Marie-Louise	Partnerships and sexual behaviour in rural South Africa in the era of HIV and ART	Wellcome Trust	R 325 151
Motala, Ayesha	Cross sectional study of the epidemiology of Diabetes Mellitus in urban South Africans of African descent.	Novo Nordisk (Pty) Ltd	R 300 000
Ndung'u, Thumbi	Prevention and treatment of neonatal HIV infection	The General Hospital Corporation	R 282 771
Goga, Yasmin	An open-label, randomised, adaptive, multicenter, pharmacokinetic/pharmacodynamic, phase 1B study of Oseltamivir (Tamiflu®) in the treatment of influenza in immunocompromised children, between 0-18 years of age, with confirmed influenza infection.	Roche Registration	R 273 157
Newell, Marie-Louise	The impact of environmental modifications in public spaces on tuberculosis disease transmission	KwaZulu-Natal Research Institute for Tuberculosis and HIV	R 226 299
Horwood, Christiane	A study to evaluate the acceptability and feasibility of providing integrated HIV and maternal and child health services through well child services in KwaZulu-Natal, South Africa	The Regents of the University of California, San Francisco	R 215 500
Motala, Ayesha	Glycemic control and quality of life in children, adolescents and young adults with type-1 diabetes mellitus described in a world-wide cross sectional study in 2012: Impact of age, patient-related, treatment-related, behaviours and structure of care-related variables	Sanofi Aventis South Africa	R 215 000
Barninghausen, Till	Risk factors for HIV acquisition and transmission - analyses of socioeconomic, sociodemographic and behavioural risk factors for HIV infection	Harvard University	R 207 189
Newell, Marie-Louise	The art in global health extension	Wellcome Trust	R 166 247
de Oliveira, Tulio	Implementation of cross-sectional surveillance of acquired HIV drug resistance in provincial antiretroviral programs in South Africa	Centres for Disease Control and Prevention	R 140 000
Abdool Karim, Salim	Plugging hair anti-retroviral levels as adherence biomarkers into HIV prevention trials	The Regents of the University of California, San Francisco	R 129 076
Chipps, Jennifer-Anne	Improving education of health workers in disadvantaged areas of South Africa	University of Applied Science and Arts Northwestern Switzerland	R 114 500
Mubaiwa, Lawrence	Open-label, non-controlled, multicentre, long-term study to investigate the safety and efficacy of Xeomin (Incobotulinumtoxin A, NT201) for the treatment of spasticity of the lower limb(s) or of combined spasticity of upper and lower limb in children and adolescents (age 2-17 years) with cerebral palsy.	ICON Clinical Research Limited	R 68 599

College of Health Sciences			
Principal Investigator	Project Title	Funder	Amount Awarded
Mubaiwa, Lawrence	Prospective, multicentre, randomised, double-blind, parallel-group, dose-response study of two doses of Zeomin (Incobotulinumtoxin, NT201) (high versus low) for the treatment of lower limb spasticity in children and adolescents (age 2-17 years) with cerebral palsy.	ICON Clinical Research Limited	R 63 167
Patel, Neeta	A randomised, double-blind, placebo-controlled, multicenter, two-part, dose ranging and confirmatory study with an operationally seamless design, evaluating efficacy and safety of SAR153191 on top of methotrexate (MTX) in patients with active rheumatoid arthritis who are inadequate responders to MTX therapy.	Sanofi-Aventis South Africa (Pty) Ltd	R 62 010
Mngadi, Kathryn Therese	HIV Vaccine Trials Network Scientific Leadership Co-Chairperson for the HVTN 506 study	Fred Hutchinson Cancer Research Centre	R 35 339
Chhagan, Meera	VUKA Family Program: Supporting perinatally HIV-infected youth in South Africa	Human Sciences Research Council	R 33 531
Frolich, Janet	HIV Prevention Trials Network (HPTN) Leadership Group	Family Health International	R 33 040
Biccard, Bruce	Management of myocardial injury after noncardiac surgery	Hamilton Health Sciences Corporation	R 30 909
Horwood, Christiane	CHAT mHealth innovation for HIV-MNCH community health workers in the delivery of home-based HIV and maternal and child health support to caregivers and their children in HIV-affected households in KwaZulu-Natal, South Africa R34MH097583	University of California, San Francisco	R 22 942
			R 207 223 656
College of Humanities			
Principal Investigator	Project Title	Funder	Amount Awarded
Moletsane, Relebohile	Memorandum of Understanding: Networks for change and well-being - Girl-led 'from the ground up' policy-making in addressing sexual violence.	McGill University	R 11 761 230
Mare, Gerhard	Education and Emancipation: a 5-year longitudinal, qualitative study of agency and impediments to success amongst Higher Education students in a sample of South African universities	Human Sciences Research Council	R 5 197 926
Valodia, Imraan	Collaborative Research Study of the manufacturing sector firms in the greater Durban area	eThekweni Municipality	R 3 339 368
Teferra, Damtew	International Higher Education and Related Activities on African Higher Education	Boston College, USA	R 2 997 617
Teer-Tomaselli, Ruth	Building capacity for a changing media environment in Uganda	Uganda Christian University	R 1 658 082

College of Humanities			
Principal Investigator	Project Title	Funder	Amount Awarded
Wedekind, Volker	Labour Market Intelligence Partnership Project	Human Sciences Research Council through National Science Foundation	R 1 100 900
Bonnin, Deborah	Supply chain accounting and employment practices in the rising economies, global commodity chains, cost effectiveness and competitiveness.	University of Sheffield	R 814 622
Sithole, Mpilenhle	Improving social development services - Project "Mkondzo"	Department of Social Development	R 565 200
Quayle, Michael	Responding to HIV/AIDS in Africa: Connecting Public Administration, Policy and Communities.	University of Limerick	R 552 881
Wassenaar, Douglas	Developing ethical data sharing processes: Examining the views of stakeholders in low and middle income countries.	Oxford University	R 314 437
Bond, Patrick	Case study of the tax affairs of "the company", a diamond mining concern with significant South Africa operations	Oxfam GB	R 220 000
Marks, Monique	Building global bridges through community engaged research	Virginia Commonwealth University	R 139 635
Mare, Gerhard	Discrimination, racism and xenophobia literature review: Reorientating teacher education for integration of values, citizenship & human rights: development of an advocacy strategy	United Nations Educational, Scientific and Cultural Organisation	R 55 000
Lindegger, Graham	Social and behavioural research on HIV vaccines	The Governing Council of the University of Toronto	R 30 000
			R 28 746 898
College of Law and Management Studies			
Principal Investigator	Project Title	Funder	Amount Awarded
Whiteside, Alan	Development of options to revise the distribution of funding by disease in the Global Fund's New Funding Model.	The Global Fund to Fight AIDS, Tuberculosis and Malaria	R 566 935
Govender, Kay	Conduct research on inequality and how these impact on selected Oxfam Australia program areas (Health, Food Security and Gender)	Oxfam Australia	R 164 000
			R 730 935

Research Office			
Principal Investigator	Project Title	Funder	Amount Awarded
Kaya, Hassan	Establish a provincial collaborative partnership aimed at contributing towards achieving KwaZulu-Natal Provincial priorities on Indigenous Knowledge Systems.	The Moses Kotane Institute	R 2 170 490
Kaya, Hassan	Consultation process on the draft Bill for the Protection of Indigenous Knowledge Systems	Department of Science and Technology	R 600 000
Buchanan, Nora	Collect and digitise research monographs for compilation in pharmacopoeia format and maintain and manage the curatorial process of the digital pharmacopoeia	Department of Science and Technology	R 440 000
Kaya, Hassan	Establishment of a principle Indigenous Knowledge System documentation centre at the University of KwaZulu-Natal	Department of Science and Technology	R 373 196
Kaya, Hassan	Baseline study of the socio-economic profile of households and indigenous knowledge systems for poverty eradication in KwaZulu-Natal Province	United Nations Population Fund	R 286 810
			R 3 870 496

Summary

College	Amount
Agriculture, Engineering and Science	R 60 123 247
Health Sciences	R 207 223 656
Humanities	R 28 746 898
Law and Management Studies	R 730 935
Research Office	R 3 870 496
Total	R 300 695 231

STATUTORY INCOME FROM THE NATIONAL RESEARCH FOUNDATION 2013

COLLEGE	AOPE	APOR	BS	CEP	CPRR	CSUR	KFD	ERSA	HCDMA	IFRR	IKS	IST	
Agriculture, Engineering and Science	R 148 903	R 1 002 000	R 400 000		R 3 889 300	R 682 400	R 80 000		R 285 000	R 4 900 000		R 1 785 100	
Humanities			R 596 000	R 626 095	R 468 500	R 275 000		R 473 800		R 2 560 000	R 417 290		
Health Sciences					R 410 000					R 1 240 000	R 322 000	R 210 400	
Law and Management Studies										R 300 000			
Other											R 170 000		
GRAND TOTAL	R 148 903	R 1 002 000	R 996 000	R 626 095	R 4 767 800	R 957 400	R 80 000	R 473 800	R 285 000	R 9 000 000	R 909 290	R 1 995 500	

Medical Research Council Statutory Income 2013

COLLEGE	SIR	LPG	SRTF	DG	NHSP	CA	FLG	GRAND TOTAL
Health Sciences	R 1 705 359	R 480 000	R 150 000	R 50 000	R 849 549	R 750 000	R 5 000 000	R 8 984 908
TOTAL	R 1 705 359	R 480 000	R 150 000	R 50 000	R 849 549	R 750 000	R 5 000 000	R 8 984 908

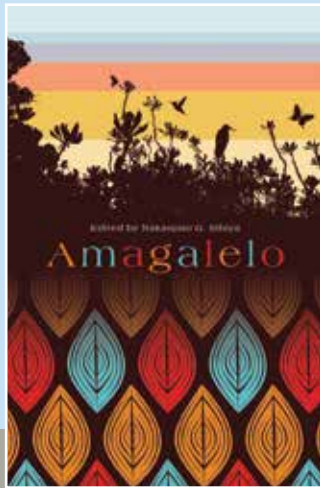
	KIC	SANAP	SGD	SABI	SEACChange	SKA	THRIP	TTK	SARChI	NEP	NNEP	RISP	GRAND TOTAL
	R 328 500	R 180 000	R 100 000	R 93 000	R 312 000	R 800 000	R 2 335 277	R 1 701 450	R 13 394 884	R 3 300 240	R 1 065 000	R 25 200	R 36 808 254
	R 102 400		R 566 639					R 409 400	R 5 177 148				R 11 672 272
	R 15 729		R 100 000				R 39 866	R 537 400	R 3 826 556	R 1 400 000		R 28 700	R 8 130 651
	R 32 000		R 200 000										R 532 000
													R 170 000
	R 478 629	R 180 000	R 966 639	R 93 000	R 312 000	R 800 000	R 2 375 143	R 2 648 250	R 22 398 588	R 4 700 240	R 1 065 000	R 53 900	R 57 313 177

ABBREVIATIONS

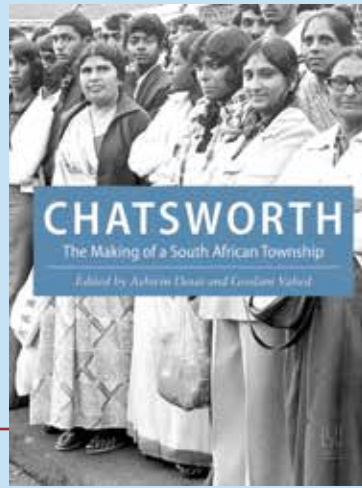
African Origins Platforms - Equipment	AOPE
African Origins Platforms - Research	AOPR
Blue Skies Research Programme	BS
Community Engagement Programme	CEP
Competitive Programme for Rated Researcher	CPRR
Competitive Programme for Unrated Researcher	CSUR
Development Grant	DG
Education Research in South Africa	ERSA
Flagship Grant	FLG
Human Capital Development for Multiwave-length Astronomy	HCDMA
Incentive Funding for Rated Researchers	IFRR
Indigenous Knowledge Systems	IKS
International Science and Technology Agreements	IST
Knowledge Field Development	KFD
Knowledge Interchange and Collaborations	KIC

Local Postgraduate Scholarship	LPG
National Equipment Programme	NEP
National Health Scholarships Programme	NHSP
National Nanotechnology Grant	NNEP
Research Equipment Programme	RISP
SABI-KFD-South African Biosystematics initiative	SABI
South African Antarctic Programme	SANAP
South African Research Chairs Initiatives	SARChI
Society - Ecosystems and Change (SEACChange)	SEACChange
Sabbatical Grant to Complete Doctoral Degrees	SGD
Self-Initiated Research Grant	SIR
South African Square Kilometer Array Project	SKA
Senior Research Training Fellowship	SRTF
Technology and Human Resources for Industry Programme	THRIP
Thuthuka	TTK

TITLES PUBLISHED BY UKZN PRESS



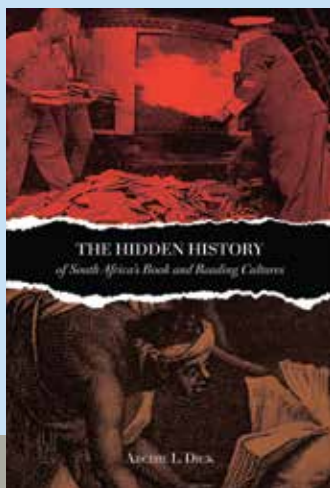
ISBN 978 1 86840 612 8
Amagalelo
Nakanjani Sibiya



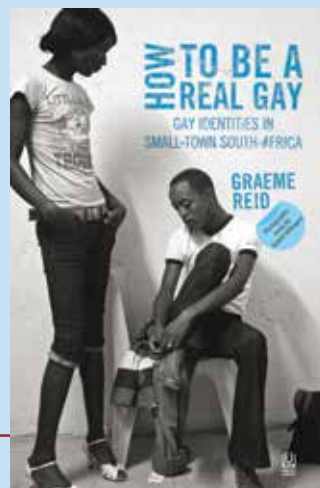
ISBN 978 1 86914 255 1
Chatsworth: The Making of a South African Township
Ashwin Desai & Goolam Vahed (eds)



ISBN 978 1 86914 220 9
Class in Soweto
Peter Alexander, Claire Ceruti, Keke Motseke, Mosa Phadi & Kim Wale



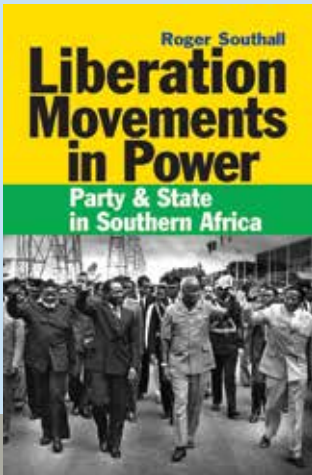
ISBN 978 1 86914 247 6
The Hidden History of South Africa's Book and Reading Cultures
Archie Dick



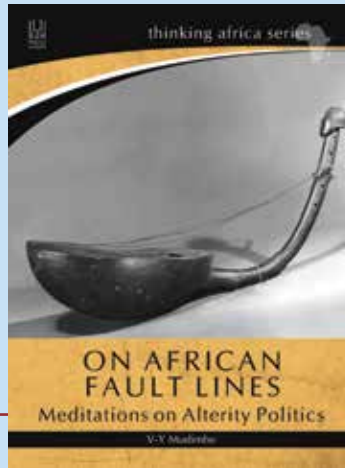
ISBN 978 1 86914 243 8
How to be a Real Gay: Gay Identities in Small Town South Africa
Graeme Reid



ISBN 978 1 86914 226 1
Jozi (Novel)
Perfect Hlongwane



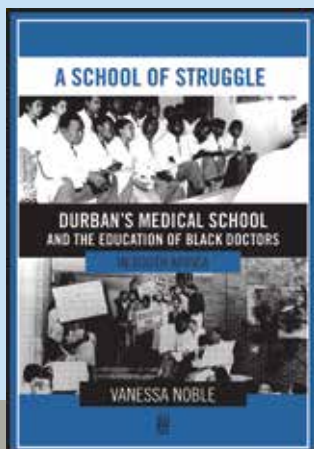
ISBN 978 1 86914 248 3
Liberation Movements in Power: Party and State in Southern Africa
 Roger Southall



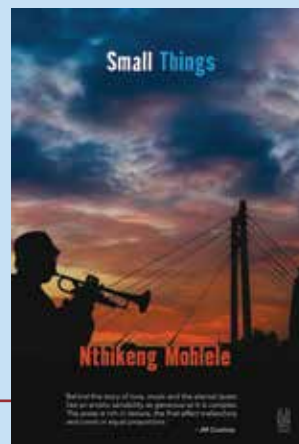
ISBN 978 1 86914 244 5
On African Fault Lines: Meditations on Alterity Politics
 V-Y Mudimbe



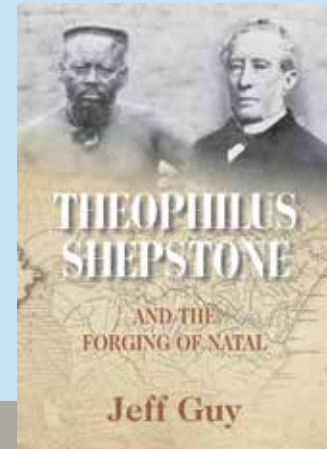
ISBN 978 1 86914 251 3
Rethinking the South African Crisis: Nationalism, Populism, Hegemony
 Gillian Hart



ISBN 978 1 86914 252 0
A School of Struggle: Durban's Medical School and the Education of Black Doctors in South Africa
 Vanessa Noble

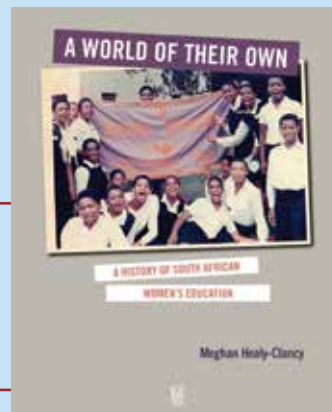


ISBN 978 1 86914 245 2
Small Things (Novel)
 Nthikeng Mohlele



ISBN 978 1 86914 249 0
Theophilus Shepstone and the Forging of Natal: African Autonomy and Settler Colonialism in the Making of Traditional Authority
 Jeff Guy

ISBN 978 1 86914 242 1
A World of Their Own: A History of South African Women's Education
 Meghan Healy-Clancy









www.ukzn.ac.za