CONTENTS

Research Report 2010

3 Message from the Vice-Chancellor and Principal
5 Message of the Deputy Vice-Chancellor (Research) and the University Dean of Research
8 Research Focus Areas
32 Leading Research Centres
42 South African Research Chairs Initiative (SARChI)
48 NRF-Rated Researchers
58 Fellows of the University
62 Prolific Researchers
72 Vice-Chancellor’s Research Award
74 Top Published Researchers
80 Emerging Researchers
84 Doctoral Graduates
94 Research Grants and Contracts
100 Statutory and External Income
102 Department of Higher Education and Training (DoHET) Accredited Publications
210 Books Published by UKZN Press
In 2010, UKZN maintained its upward trend in research output and there were a number of significant research achievements which demonstrated its increasing stature as a research-led institution in line with its mission and vision.

The proportion of publishing staff increased to 84% from 73% in 2009. In 2010, the research output per academic staff was, for the first time, evaluated in terms of the newly introduced Senate norms of 120, 90 and 60 Productivity Units (PUs) for professors, senior lecturers and lecturers respectively. On the average, the professoriate produced at 92% of their norm, senior lecturers at 53% and lecturers at 29%. Comparative figures for 2009 were 88%, 51% and 27% respectively. About 71% of the professoriate produced at or above the norm, compared to 23% of the senior lecturers and 19% of the lecturers.

According to the Academic Ranking of World Universities (ARWU), UKZN has for the 9th year running, maintained its position in the top 500 listing of Universities, and was also ranked third nationally and regionally (in Africa). Nationally, there was improved performance based on the research output benchmarks set by the Department of Higher Education and Training. Since 2007, the research publications output has increased on the average of about 12.5% per year and UKZN has maintained its position as the third highest producer of doctoral graduates in the country.

In 2010, the number of researchers occupying the top 30 positions was 42 which is an increase of 24% from 2009. In 2010, about 95% of the top publishing researchers had PhDs. The number of African researchers in this category, increased to 4 (10%) from 2 (5%) in 2009. The proportion of female researchers was 17% compared to 18% in 2009. The number of NRF rated researchers increased by 76% from 2009. The majority of the top publishers were in the 40-50 year age group. In 2010, they constituted about 45% compared to 47% in 2009. From 2008 to 2010, the number of researchers producing an equivalent of at least three journal articles per year, increased by 21%. The Top Publishing faculty was Science and Agriculture with a share of 45% (2010) and 53% (2009). The second highest publishing faculty was Humanities, Development and Social Sciences with corresponding shares of 20% (2010), 26% (2009).

The CAPRISA 004 study results on tenofovir gel as a potential effective method of prevention against HIV/AIDS for women, received both national and international acclaim. Science considered it to be one of the Top Ten Scientific Breakthroughs in 2010. In Nature it was one of the top science news stories for the year. The Lancet readers voted the publication the second best most likely to influence practice and research.

In July 2010, the Centre for Quantum Technology (CQT) installed and operated a secure network using quantum-based encryption technology, to link the Moses Mabhida Stadium and the Durban Joint Operations Centre, during the 2010 FIFA World Cup. This was the first public global event to successfully use the encryption solution.

In 2010, the number of researchers with NRF rating increased from 179 (2009) to 204 (2010). About 25 percent of NRF rated researchers were female.

A total of R312 million was received for research grants and contracts in 2010 compared to R266 million in 2009. In addition, UKZN received R11.3 million in 2010, compared to R12.2 million in 2009, through the NRF Research Infrastructure Support Programme. The increasing research funding is a clear demonstration of the competence and competitiveness of our researchers in attracting funding in both international and national arenas.

In 2010 the UKZN Press published 22 titles, a number of which received national literary awards.

It is indeed pleasing to see how both the institutional research productivity and base of publishing researchers are increasing consistently, keeping us on course to achieve the objectives Goal Three in our Strategic Plan. I would like to thank all the researchers for their contribution to our achievements.

Professor Malegapuru W Makgoba
Vice-Chancellor and Principal
In 2010, the University of KwaZulu-Natal not only maintained its upward trajectory in research output but also had a number of significant research achievements which demonstrated its increasing stature of UKZN as a research-led institution in line with its mission and vision.

The proportion of publishing staff increased to 84% from 73% in 2009. Overall, the per capita research output increased from 55 Productivity Units (PUs) (2009) to 58 PUs. An analysis of the per capita output in terms of the Senate norms of 120, 90 and 60 PUs for the professoriate, senior lecturers and lecturers, respectively, shows that: The professoriate generated 92% of their expected PUs, compared to 88% in 2009. Corresponding figures for senior lecturers were 53% (2010) and 51% (2009). For lecturers it was 29% (2009) and 28% (2010). In 2010, about 71% of the professors produced at or above the expected norm, compared to 23% of the senior lecturers and 19% of the lecturers.

In 2010 the number of researchers in the top 30 published positions was 42, which was an increase of 24% from 2009. About 95% of the top publishing researchers had PhDs. The number of African researchers has increased to 4 (10%) from 2 (6%) in 2009. The proportion of female researchers in this category was 17% in 2010, compared to 18% in 2009. The number of NRF-rated researchers increased by 76% from 2009.

The majority of the researchers in the top 30 published positions are in the 40-50 year age group. In 2010, 45% of the researchers were in this age group, compared to 47% in 2009 and the top publishing Faculty was Science and Agriculture with a share of 45% in 2010 compared to 53% in 2009. The second highest publishing faculty was Humanities, Development and Social Sciences with corresponding shares of 25% (2010) and 26% (2009).

The number of researchers producing an equivalent of at least 3 articles increased from 61 in 2008 to 74 (2010). The proportion of Africans in this category has increased from 5% (2008) to 14% in 2010. However, the proportion of females has decreased from 25% (2008) to 19% (2010). In 2010, about 41% of the researchers in this category were from Faculty of Science and Agriculture and 28% from the Faculty of Humanities, Development and Social Sciences.

UKZN has maintained its position as the third highest producer of research publications and doctoral graduates at the national level. According to the Academic Ranking of World Universities (ARWU), UKZN maintained its presence and gradually improving its position in the top 500 listing of Universities, and was also ranked third nationally and regionally (i.e. in Africa).
The CAPPSA 034 study results on tenovin gel as a potential effective method of prevention against HIV/AIDS for women, received both national and international acclaim. Science considered it to be one of the Top Ten Scientific Breakthroughs in 2010. In Nature it was one of the top science news stories for the year. The Lancet readers voted the publication the second best most likely to influence practice and research. In July 2010, the Centre for Quantum Technology (CQT) installed and operated a secure network using quantum-based encryption technology, to link the Moses Mabhida Stadium and the Durban Joint Operations Centre, during the 2010 FIFA World Cup. This was the first public global event to successfully use the encryption solution.

The number of researchers with NRF rating increased from 179 (2009) to 204 (2010). Over the past two years about 27 per cent of NRF-rated researchers are female. Programmes of workshops and one on one consultations have been put in place by the Research Office to improve the institutional participation in the NRF rating system as well as increase the number of Female and Black rated researchers.

In 2010, a number of our staff received prestigious appointments and awards. Professor Bill Bishai was appointed the first substantive Director of the KwaZulu-Natal Research Institute for TB and HIV/AIDS (K-RITH). Professor Derysh Ramugqathwa received the 2010 Vice-Chancellor’s Research Award in recognition of his contributions to research. He was also the recipient of the National Science and Technology Forum (NSTF) Award in the category for Eskom Research Capacity Developers for his substantial contribution in the development of research capacity in the field of thermodynamics. Professors Jashmid Moori, David Ward and Ruth Teen-Tomasetti were awarded the University Fellowship in recognition of their distinguished contribution to research.

In 2010, 13 Thuthuka projects were funded to the tune of R 4.177 million from the NRF and R2.111 million from the University. About 74% of the funded researchers were Female and 82% Black, compared to 73% and 79% respectively; in 2009 all the projects were from the Faculty of Science and Agriculture. The NRF also funded more projects through the Technology Human Resources Development (TRHD) and Innovation (TRID) schemes.

Following a comprehensive analysis of institutional research profile and extensive consultations with the researchers the following were identified as UKZN research focus areas, based on proven strengths and strategic objectives:

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

Implementation of research initiative in these areas will ensure UKZN’s effective contribution to the National System of Innovation and global research agendas.

The Intellectual Property and Technology Transfer Office, registered in the name of UKZN, a patent for the method of estimating the dry-out point of steam generating evaporator, developed by Professor Edward Boje, and a design for a surgical hand support device developed by the late Professor Edward Bowen-Jones, Professor Mahindra Dyer and Professor Glen Bright.

The UKZN institutional repository, ResearchSpace, has been operational since October 2009. Initially, only current theses were loaded onto the database but in 2010 a project to scan and upload older print copies of Masters and Doctoral theses of the University was begun. The cost of the project is estimated at nearly R1 million, approximately half of which has been made available from various Library endowment funds. In order to start the project a high resolution scanner was purchased and the services of DISA (Digital Imaging South Africa,) which has an office in the E G Malherbe Library, were engaged to carry out the scanning. By 31st December, 1,795 theses had been scanned, of which 794 had been uploaded to ResearchSpace, bringing the total number of theses in ResearchSpace to 2,472.

The most popular databases used in 2010 were once again Science Direct and EbscoHost, with Science Direct topping the popularity poll this year (last year it was EbscoHost) and ProQuest. The Web of Knowledge was also well used. New databases activated for 2010 include the ACM Digital Library, ScienceDirect, EbscoHost, the ACM Digital Library, Nature, theguardian.com, theguardian.com and theguardian.com

UKZN Research Report 2010
The University of KwaZulu-Natal (UKZN) has identified a number of research focus areas which it believes are critical to supporting its 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.

Through sustained research involving multi-disciplinary and cross-border 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.

Thus our areas of research focus are globally relevant, yet locally responsive and include: HIV/AIDS, Tuberculosis and Health Promotion; Biotechnology; Water, Environment and Biodiversity; Social Development and Economic Studies; Agriculture and Food Security; Energy and Technology for Sustainable Development; Gender, Race and Identity Studies; Indigenous African Knowledge Systems; and Maritime Studies.

In addition, the full spectrum of research – from curiosity-driven to application-based and participatory action research – is undertaken at UKZN, where there is a strong emphasis on team work. Senior academics take pride in the mentorship they provide to postgraduate students, postdoctoral scholars and other emerging researchers.
The African Centre for Crop Improvement

The African Centre for Crop Improvement (ACCI), located within the Faculty of Science and Agriculture, 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.

The ACCI was initially funded solely by the Rockefeller Foundation but in 2007 the Bill and 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.

The ACCI students undertake academic studies for two years 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, to be grown by small-scale farmers.

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.

The staff of the ACCI each has their own plant breeding projects including mutagenesis of sorghum and wheat, development of low phytic and maize using molecular markers, breeding for high beta-carotene maize and the development of biofuel crops.

The African Centre for Food Security

Aware of the growing food security crisis in Africa, the School of Agricultural Sciences and Agribusiness established the African Centre for Food Security (ACFS) in 2006 to contribute to building and sustaining the critical mass of African expertise required to alleviate hunger on the continent.

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. Its achievements have been remarkable and include: endorsement by the New Partnership for Africa’s Development (NEPAD) as the lead agency in the food security activities of the Comprehensive African Agricultural Development Programme (CAADP) and formal recognition as the Southern African Development Community (SADC) Regional Centre of Excellence for Vulnerability Assessment and Analysis (VAA), including VAA training and co-ordination. It is one of the few established Food Security Centres in the world to offer transdisciplinary training, and through UKZN, named degrees in food security. Through its representatives, the Centre played a leading role in the development of the Framework for Agricultural Food Security (FAPS).

The FAPS continues to be a reference food security document for NEPAD. The ACFS has also continued to play key roles in CAADP processes, including in the review of the agricultural investment plan and strategy for various African countries. The CAADP asserts that country-driven planning and programming is crucial for ensuring food security in Africa through agriculture-driven economic development.

The CAADP seeks to shift the development agenda away from donor-driven projects to comprehensive growth strategies that replace structural adjustment projects with a new way of doing business in Africa and through a radical African-owned initiative which broadens and improves sector-wide approaches and poverty reduction strategies.

In 2008 the Centre saw the graduation of its first PhD students.
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.

The adoption of the National Biotechnology Strategy in 2001 created the impetus for rapid growth in the field of biotechnology in South Africa. The challenges identified in that strategy have informed a number of research groups at UKZN which are involved in the various sectors of biotechnology.

The School of Biochemistry, Genetics, and Microbiology leads the biotechnology initiative at UKZN by providing 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 and an examination of the microbial response to climate changes in soils, and the implications on carbon-cycle feedbacks.

Specific Research Disciplines within the field include:

- **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. Researchers have access to an extensive collection of modern instrumentation – among the best on the African continent – which includes four NMR spectrometers (including 600 MHz with solids probe), a wide range of chromatographic equipment (including GC-MS, LC-MS and MALDI TOF).

- **Medical Biochemistry:** A mini drug discovery platform set-up 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/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 also targets cancer.

- **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.

- **Sleeping Sickness:** Research is conducted into Trypanosomiasis which looks at poultry pathogens and trypanosomes of importance in South Africa and the rest of Africa in order to develop diagnostic assays, therapeutic strategies and, ultimately, vaccines against the diseases caused by these infectious agents. The research focuses on the molecules involved in the binding of the pathogens to their host tissues, antigenic differences between different strains of pathogens and between those of field strains and vaccine strains. Techniques in protein purification and characterisation, immunochrometry and molecular biology 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.
RESEARCH FOCUS AREAS

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. Among the studies currently under way are the following:

- **Biofuels:** Research in this area focuses on the impact of microbial population dynamics on the stability and performance of biotechnological processes employed to generate bio-gas or bio-hydrogen and an assessment of the potential of organic waste materials for microbiological energy generation. It also includes bio-mining for novel, thermophilic enzymes for lignocelluloses metabolism, cloning in heterologous hosts and enzyme characterisation, construction of lignocelluloses-metabolising and ethanol fermenting strains, construction of consortia for lignocelluloses bioconversion to ethanol, and the application of crude enzyme extracts in conjunction with recombinant yeast strains expressing cellulose and xylanase-degrading enzymes in order to develop enzyme cocktails to be used in biorefinery production from lignocellulosic biomass in consolidated bio-processing fermentations.

- **Biopulping:** An assessment of seasonal microflora variation and their physical and chemical effects on wood chips for the pulping industry is under way. The aim is the development of strategies to manage chip piles in order to avoid chip deterioration which leads to reduced pulp yields or inferior pulp quality.

- **Water-related studies:** Studies are taking place which examine the biochemical and molecular characterisation of bacteria isolated from wastewater treatment plant for chlorophenol degradation. Research focuses on the genomic evolution and adaptation of phenol-degrading bacteria to lethal phenol concentrations. Phenol-degrading isolate increased the phenol tolerance level from 400 mg/L to 800 mg/L and 2.5 fold in degradation rate within a 10-day adaptation period. Studies in a virus evaluation programme of the Umgeni River in Durban showed varying viral abundance along the Umgeni River and many enteropathogenic viruses have been detected. Other studies demonstrate that bio-competitive exclusion can be used to slow down metal corrosion by supplementing additional nitrogen sources. Studies into the generation and on-site treatment of synthetic grey water for non-potable application are also carried out by the Discipline.

- **Other water-related studies include:**
  - The impact of irrigation water quality on the safety of fresh fruits and vegetables, a six-year collaborative research project with the University of Pretoria.
  - Bioremediation of water co-contaminated with chlorinated organic compound and heavy metals and profiling the microbial population and diversity involved in the degradation processes. In order to gain insight into the metabolic functioning of the microbial population the total DNA (metagenome) isolated from the contaminated site was sequenced by pyrosequencing.
  - The contribution of heterotrophic micro-organisms to eliminate metal from groundwater.
  - The study of bacterial diseases associated with aquaculture and the ability of the pathogenic bacteria to form biofilms, identifying their antimicrobial resistance phenotypes, identifying alternative strategies to eliminate these micro-organisms, including the use of phytochemicals, identifying the role of quorum sensing in biofilm formation and attempting to inhibit quorum sensing and thus the associated pathogenicity. Additionally, genotyping of these bacterial pathogens is being undertaken, as is a study on the genes associated with antimicrobial resistance which hamper effective therapy.
  - Aerobic catabolism of aromatic priority pollutants by freshwater and marine micro-organisms.
The Energy and Technology for Sustainable Development focus area is providing leading research for the needs of South Africa and is in keeping with the mission of UKZN as the Premier University of African Scholarship. The energy sector is by far the largest contributor to global GDP and is the engine that drives the world’s economy. Humankind’s insatiable appetite for energy has meant that this sector influences all aspects of the economy and has direct and indirect bearing on the socio-economic development of a country and its people.

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 the minimisation of 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.

There are a number of definitions of sustainable development, but one of the simplest argues that it is development which uses resources available to meet human needs while still preserving the environment so as not to compromise the needs of future generations. 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.

At UKZN there are a number of Units 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. Some of the Units have been established through close research collaborations with major industries such as ESKOM and SASOL. The partnership with ESKOM has resulted in massive investment in research and the establishment of state-of-the-art facilities such as the High Voltage Direct Current (HVDC) Centre and the Vibrational Research and Test Centre (VRTC). The facilities are for research on improved equipment and system performance of electricity transmission and distribution networks. Sustainable manufacturing and chemical production is an area of strength in the Faculty of Engineering with large research groupings in the Schools of Mechanical and Chemical Engineering respectively. The Thermodynamics Research Unit which resides in the School of Chemical Engineering is a SASOL Centre of Excellence in Chemical Thermodynamics and undertakes research into the improvement and optimisation of chemical and separation processes for SASOL. Partnerships also exist with major players in the telecommunications industry with a centre of excellence in this area in partnership with Telkom and Alcatel Lucent in the School of Electrical, Electronic and Computer Engineering.

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. One of the pillars of this initiative is the Integrated Renewal Energy Advancement Programme (IREAP) which is a partnership between UKZN, engineering company Karebo Systems, the Department of Trade and Industry, the Industrial Development Corporation of South Africa (IDC), the Technology and Human Resources for Industry Programme (THRIP), and other relevant partners for the development of a strategy for fundamental research into renewal energy.

This research focus area is also the home base for two South African Research Chairs Initiative (SARChI) – Chairs which are technology based, namely, the Quantum Information Processing and Communication Chair, which is at the frontier of applying quantum mechanics to develop new technologies in the areas of quantum cryptography and quantum computing, and the Fluorine Process Engineering and Separation Technology Chair, which supports the South African Fluorochemical Expansion Initiative (FEI) and will aid in the development of a substantial fluorochemical industry in the country.
The focus of Gender, Race and Identity Studies draws on multiple disciplines within the University, to examine the ways in which identities are constructed, created and consolidated.

Disciplines across UKZN draw on several frameworks for engaging with issues of race, and gender, among other social categories – like age, sexualities and class. In the context of health inequalities, for example, 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.

Strongly influenced by contemporary critical theories which question the framing of power inequalities, Gender, Race and Identity focus on the dynamism and intersections of social inequalities and the vulnerabilities and anxieties of those belonging to groups usually constructed as powerful, as well the agency of those belonging to groups usually seen as lacking power.

Through the Centre for Critical Research on Race and Identity (ccrri), the University has engaged specifically with the issue of “racial classification”. This theme is broad and demands interdisciplinary approaches to formulating and executing projects and analysing data. It also requires that a range of discrete initiatives speak to each other – those that address thinking race and gender in everyday life and public discourse, that search for and challenge “race” requirements in legislation, that raise questions about institutional location and purpose of race classification and research that express how the “agents” of classification fulfill their tasks and the effects on those classified.

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.
A s 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 is undertaking ongoing research to enhance and strengthen the biomedical and broader societal responses to the epidemic. UKZN continues to attract international recognition for its groundbreaking research in both HIV prevention and treatment.

In the field of HIV/AIDS research, well-established partnerships exist which facilitate networking and collaboration with researchers within UKZN, other South African academic institutions, and around the world.

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/AIDS and TB, the University has successfully attracted 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).

Through the Columbia University-Southern African Fogarty AIDS Training and Research Programme, the institution is committed to building scientific capacity in HIV/AIDS and tuberculosis research in several countries in Southern Africa to enhance continuing efforts to counter the HIV/AIDS and TB epidemics. Now in its 16th year, the programme has trained many of South Africa’s young AIDS and TB researchers.

UKZN’s focus on HIV/AIDS, TB 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/AIDS, or the role of breastfeeding in mother-to-child HIV transmission and the facilitation of clinical trials for treatment of HIV and TB in both children and adults.

At the same time, however, this research cluster does not neglect the socio-economic implications and impact of diseases such as HIV/AIDS and TB. Thus, there is significant emphasis on research into the ethics, law and human rights issues as they relate to the administration of AIDS vaccines through the EUJ (Ethics, Law, Human Rights) programme, and the HIV/AIDS Vaccine Ethics Group (HAVEG). The broad socio-economic impacts of AIDS are examined through the Health, Economics and HIV/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.

Working in partnership is critical, given the complexity of the virus, and the extent of its impact on our population.

RESEARCH FOCUS AREAS

HIV/AIDS, TB and Health Promotion

The Africa Centre for Health and Population Studies

The Africa Centre for Health and Population Studies, one of UKZN’s Research Centres which conducts community-based research on HIV epidemiology, prevention and treatment, partners with the local Department of Health in the rural area of Hlabisa in northern KwaZulu-Natal to provide AIDS treatment to thousands of patients at each of the 17 primary health care clinics in the district.

With core funding from the Wellcome Trust, the Centre hosts a large demographic and health surveillance system with annual household and individual surveillance of 90,000 people in 11,000 households. Another major area of research is the role of breastfeeding in mother-to-child transmission of HIV.

Using the data from its demographic surveillance system, the Africa Centre has demonstrated the relative importance of the lifetime number of partners (as opposed to concurrent partners) as the main risk factor for HIV infection. It has also investigated trends in adult mortality before and after the introduction of the HIV treatment programme, showing a significant decline in overall population mortality and HIV-related adult mortality following ART roll-out, in a high HIV prevalence community.

Subsequently, research at the Centre has also shown a decline in early (0-2 years) childhood mortality and it was estimated that the decline was partly due to the roll-out of the Prevention of Mother-to-Child Transmission (PMTCT) programme and reduction in the number of HIV-infected children.

Another multi-institutional team works under the banner of the Centre for the AIDS Programme of Research in South Africa (CAPRISA) and undertakes cutting-edge research on HIV epidemiology, pathogenesis, prevention and treatment and examines the links between tuberculosis and AIDS care.

Established in 2002 under the NIH-funded Comprehensive International Programme of Research on AIDS (CIPRA) by five partner institutions – the Universities of KwaZulu-Natal, Cape Town, and the Western Cape; the National Institute for Communicable Diseases, and Columbia University in New York – CAPRISA is a designated UNAIDS Collaborating Centre for HIV Prevention Research.

Since its inception, the CAPRISA research programme has delivered a number of significant findings which are making a tangible impact on the way in which the epidemic is currently being managed and treated at home and beyond.

Studies at the rural Vulindila Research Centre near Howick, for example, have provided a detailed understanding of the epidemiology, risk factors and vulnerability to high rates of HIV infection in young women in South Africa; the CAPRISA 004 trial of the Tenofovir gel microbicide provided the proof-of-concept evidence that antiretrovirals can prevent HIV infection in women; the 002 Acute HIV infection study has generated new data on how viral and host factors impact on the risk of HIV and its natural progression as a key contribution to vaccine development and testing; and the 003 SAPiT trial provided critical evidence for World Health Organization guidelines on how to treat patients with HIV and TB co-infection.

In addition, the Enhancing Care Initiative, part of the NIH-funded network, which conducts clinical trials of therapeutics for HIV infection and subsequent complications in children and adults, played an important role in uncovering the epidemic of extensively drug-resistant tuberculosis (XDR-TB) at the Church of Scotland hospital in the rural area of Tugela Ferry.

The HIV Pathogenesis Programme which conducts research into HIV immunology, virology and pathogenesis also contributed towards the discovery of the various HLA (human leukocyte antigen) genotypes that are associated with lower viral load.

The HIV/AIDS, TB and Health Promotion initiative is a highly dynamic focus area which is constantly evolving and expanding to meet needs and respond to exigencies on the ground. To this end, four areas of intensive research into tuberculosis and HIV/AIDS – which are likely to yield significant breakthroughs within a few years in the diagnosis, prevention and treatment of the diseases – are underway, thanks to a multi-million rand grant from the Howard Hughes Medical Institute (HHMI) in the United States.

The grant, the biggest ever for medical research in South Africa, will establish the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH), to construct a new building for the Institute at the University’s Nelson R Mandela School of Medicine and fund TB and HIV research at UKZN for the next 10 years.

The Institute, which will be one of the most sophisticated of its kind in the world, will offer state-of-the-art facilities for researchers and students from across Southern Africa.
UKZN research in Coastal Engineering is led by Professor Derek Stretch, who is the eThekwini Municipality Chair in Civil Engineering and Professor of Hydraulics and Environmental Fluid Mechanics at the School of Civil Engineering.

The Metro, UKZN and TU Delft (TUD) in Holland, one of the top 20 universities in the world, recently agreed to collaborate on research in Coastal Engineering.

TUD are partners in Professor Stretch’s SANPAD-funded research projects at St Lucia estuarine lake and a group of 10 Dutch post-graduate students visited UKZN recently to take part in the ongoing work.

One of the most significant aspects of Professor Stretch’s research, and that of his postgraduate students, is his unique and innovative collaboration with Biological and Conservation Sciences. This partnership sees engineers working hand-in-hand with biologists on the ecosystem functioning of Lake St Lucia, one of the world’s critically important estuarine systems which is part of the iSimangaliso world heritage site.

Since 2004, Stretch has been working with Professor Renzo Penissinotto from the School of Biological and Conservation Sciences on developing an integrated biophysical model for the entire estuarine system. Recent funding from SANPAD, WWF and the NRF will ensure that this work continues for at least another three years.

Overall the group’s research suggests that the artificial separation of the St Lucia and Mfolozi inlets is by far the most significant anthropogenic impact on the functioning of the lake and that its reversal is key to sustainability of the system. Ongoing research aims to guide future management strategies to best achieve this.

The primary research focus aims to achieve significant scientific advances in the analysis and modelling of human impacts on productive aquatic ecosystems, including threatened estuarine systems – addressing issues of sustainability, increasing pollution, flow reductions, and widespread degeneration of the functioning of these critical ecosystems. The main innovation targeted in the research is the effective integration of physical dynamics with ecosystem responses in a way that is appropriate for encapsulating understanding of their functioning into predictive models for application to sustainable management.

Overall, the scientific importance of the activities of the research group is embedded in its focus on developing new insights and understanding of the structure, functioning and sustainable management of critical productive hydro-ecosystems.

Secondary research focus areas are:

- Climate change - prediction models, adaption strategies
- Air quality analysis and modelling in urban areas
- Analysis and design of renewable energy systems – wave, wind, currents
- Analysis and mitigation of natural hazards – floods, droughts, dispersion of toxic gases
- Catchment management – erosion/sediment yield, soil moisture mapping, remote sensing, modelling
- Management of urban water reticulation networks and storm water systems

The group uses theoretical, computational and field-based research techniques to develop insight and understanding of flows in the natural environment. They work as a multidisciplinary team using an integrated approach to understanding and modelling physical and biological systems.

Professor Stretch said their Coastal Engineering collaboration with the eThekwini Municipality was developing rapidly. He currently has three PhD students working on the project in addition to several MSc students at the metro conducting research on aspects of water infrastructure.

Maritime Initiative

The Maritime Initiative has been identified as a potential Research Focus Area for UKZN, based on historical activities in this area as well as the University’s geographic position on the South African East Coast.

There are existing Masters level qualifications as well as undergraduate and Honours qualifications in Science and Agriculture (Biological Sciences) with a range of modules offered across the various Faculties.

Clear opportunities for closer collaboration, and especially for interdisciplinary PhD study and the Maritime Initiative in this area has been identified.
Indigenous African Knowledge Systems

An independent review by a team of external national experts established that UKZN has a number of researchers who publish work in the field of indigenous knowledge or African scholarship. The University subsequently identified Indigenous African Knowledge Systems as a strategic focus area for research, teaching and learning. A number of developments have since taken place demonstrating growth in this area.

The Indigenous Knowledge Systems Expo and the Traditional Medicine Conference, Co-hosted by UKZN with the Department of Science and Technology. UKZN Chancellor and Premier of KwaZulu-Natal, Dr Zweli Mkhize, the events were a tremendous success, attracting researchers and knowledge holders from all over the world. The results of the first phase of a clinical trial on *Sutherlandia frutescens* and early HIV infection were released at the conference by a team of researchers in which UKZN was represented by Dr Douglas Wilson and Professor Nceba Gqaleni.

**Ethnobotany and Ethnopharmacology**

Understanding the traditional uses of plants for medicinal purposes (ethnobotany) and the medicinal value and efficacy of indigenous plant species (ethnopharmacy) are critical areas of study if South Africa is to achieve its vision of becoming a leader in the global pharmaceutical industry – from which many pharmaceuticals are derived. The University has an active research programme in this field, which has produced a number of publications and made significant findings.

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

Other areas of research include: the study of medicinal plants traditionally used for the treatment of stomach ailments; the isolation of the antibacterial compounds from *Erythrina caffra*; the study of medicinal plants used by the Venda communities to treat venereal disease and plants used to treat diarrhoea; the efficacy, safety and pharmacological properties of commercial herbal mixtures which are an increasingly popular form of African traditional medicine.

Studies are also being undertaken to compare the antimicrobial activity of bulb versus leaf extracts of certain plants so as to reduce the threat to species that comes with the increasing harvesting of bulbs.

Work has also started on the phytochemical makeup of *Cytanthus contractus*, a member of the family Amaryllidaceae, from which the commercial Alzheimer drug Galanthamine has been produced.

**The National African Traditional Medicines consortium**, chaired by UKZN’s Professor Nceba Gqaleni, has received R11 million in funding from the Department of Science and Technology for indigenous knowledge system bioprospecting and product development. The consortium is conducting research and development of products for conditions such as HIV/AIDS, TB and diabetes. They have developed a research and development agreement with knowledge holders, a first of its kind in South Africa.

**UKZN is participating in the National Cosmeceuticals Consortium** also funded by the Department of Science and Technology. The work by Dr Ncoza Dlova, a specialist in Dermatology at the Nelson R Mandela School of Medicine, on the use of plant extracts for treatment of hyperpigmentation was chosen as the “Best Work and Presentation for further Research and Development” by UKZN’s Intellectual Property and Technology Transfer which is considering a process for developing a patent.
Integral to UKZN’s mission is a strategic thrust towards research and knowledge production that expresses itself in practical interventions for the upliftment of the wider South African society.

Economic development is a national priority and the University makes full and innovative use of its existing capacity in this regard.

The main focus of the Economic Development Strategic Initiative (EDSRI) is to strengthen and enhance applied and policy-relevant research in the field of economic development.


In its structure, the EDSRI aims to cover the interests of UKZN academic members across all the University’s campuses in the area of economic development. The role of each steering committee member has been to ensure that progress within the EDSRI is reported to academics across as large a number of Schools as possible, to engage a broad interest and stake in the EDSRI, and to provide feedback as to how to move the research initiative forward.

The EDSRI has convened a number of workshops on development-related issues. Workshops have been held on subjects such as “Making data work for development”, while the EDSRI sponsored a Strata training course - a statistical programme for data analysis for staff and students. The course aimed to improve researchers’ familiarity with the software necessary to access and process data.

The EDSRI focuses on racial, gender, 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. The research encompasses the formal and informal economy, the nature of poverty, the characteristics of the poor, areas and socio-economic empowerment.

The overall research objective of the Research Chair in Economic Development, held by economist Professor Dori Posel, is to explore 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 is integral to evaluating the experiences of economic development among individual South Africans and to assessing economic and social policy that seek to reduce poverty and increase well-being.
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 Faculties.

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.

**Hydrology**

Research is centered on improving our understanding of the functioning of the hydrological cycle, its sensitivity to human influences and the development of tools through which this knowledge can be applied for effective water resources management and planning.

Within this context, hydrology research is conducted within the following areas:

- Agricultural water use and innovation in irrigation practices.
- Water related aspects of land use change.
- Hydrology process studies.
- Hydrological aspects of climate change and forecasting.
- Hydrological model and database design and development.

Development of tools and practices to assist in the implementation of South Africa’s National Water Act and the management of the country’s water resources is an outcome of these studies, but the Research Group is also active in regional, continental and global initiatives. One of the more notable outputs from this group is the Agricultural Catchments Research Unit’s Agro-hydrological Modelling System, a software system that is being used as a research and management tool for water resources planning and operations in South Africa and provides a foundation for several ongoing research projects.

Projects completed recently include a revised agrohydrological atlas for South Africa, and tools to estimate the water use of commercial afforestation in South Africa, both of which are now used by the Department of Water Affairs and Forestry in water licensing and regulation.

**Waste, Water and Sanitation Management**

As a result of a Memorandum of Agreement signed between the eThekwini Municipality’s Water and Sanitation Department and UKZN, the University’s Pollution Research Group (PRG) has expanded its activities into municipal water and wastewater management. These activities form the focus of a multi-disciplinary team of engineers, biologists, political scientists and community medical professionals, and have included participation in two European Union research projects related to membrane bioreactors and the identification and dissemination of best practice of water and sanitation supply to unserved communities.

Sanitation projects are being undertaken on pit latrines and urine diversion toilets. Collaborative research on the anaerobic baffled reactor process includes internationally recognised projects being undertaken by the non-governmental organisation Borda, which is working in South-East Asia and Africa.

Research for the Water Research Commission and SASOL is ongoing. The Pollution Research Group recently received a R 2.8 million grant from the Bill & Melinda Gates Foundation to fund its toilet technology and sanitation research, the aim of which is to design a toilet system that will lead to the safe disposal of waste water in poor communities. UKZN was one of eight institutions – and the only one in Africa – chosen out of 22 to take part in the “Reinvent the Toilet” challenge.

**Micrometeorology and Agrometeorology**

Investigations are conducted into the energy and water balances between the soil, plants and atmosphere through the Soil-Plant-Atmosphere Continuum Research Unit (SACRU) which specialises in micrometeorology and agrometeorology. This internationally-recognised Research Unit has a major research thrust in the investigation of energy and water balances and emphasises the use of and development of methods for the measurement of evaporation, sensible heat and, more recently, carbon dioxide fluxes above land surfaces. Most of this research is funded by the Water Research Commission.
RESEARCH FOCUS AREAS

Hydrological Engineering

The way in which engineering interacts with the natural environment and can be used to promote sustainable practices is consolidated in research conducted by the Centre for Research in Environmental, Coastal, and Hydrological Engineering (CRECHE). Projects include the management of landfill emissions, the dispersion of pollutants in the atmosphere and coastal waters, spatial rainfall modelling and estuary bio-hydrodynamics. The Centre also conducts leading national research into radar-rainfall relationships and flood forecasting through its Satellite Applications and Hydrology Group (SAHG).

Limnology

Biological limnology research, with particular focus on man-made lakes and integrated catchment management, is concentrated in the School of Biological and Conservation Studies. Members of the Grassland Science Group collaborate with communities in the Upper-Thukela on a pilot “Payment for Environmental Services” project funded by the Department of Water Affairs and Forestry. Here, indicators for the payment of water services are developed and tested.

Applied research into and management of water resources, decision support tools for estuaries, fresh water management and water conservation is conducted by the Institute of Natural Resources, an associate institute of UKZN.

In addition to these larger water research groups there are several other initiatives, notably working on wetlands, soil erosion, community interactions and sanitation, estuary-related research, and water and public health.

Thanks to a major investment by the Water Research Commission, research grants in the field of water total about R20 million a year from international funders, including the Ford Foundation, the European Union and Dutch and Swedish Development Agencies.

The Smallholder System Innovations (SSI) Research Project

This flagship research project cuts across and involves all UKZN groups. An applied and development-oriented research programme, it aims at advancing knowledge on how to balance water for food and the environment with a particular focus on upgrading smallholder rain-fed agriculture in water-stressed catchments. The multi-disciplinary research programme encompasses biophysical and social research themes. Grassland Science and the University’s Farmers’ Support Group, with the researchers working closely with other stakeholders, including local communities at two pilot catchments (Potshini and Makanya) in two river basins (Thukela and Pangan) in South Africa and Tanzania respectively.

The project is being implemented jointly by five research institutions: Sokoine University of Agriculture (Tanzania); Stockholm University (Sweden); the UNESCO-IHE Institute for Water Education (Netherlands); the University of KwaZulu-Natal; and the International Water Management Institute. Funded by the Dutch and Swedish governments, the programme—withstanding its development orientation—is based on innovative and cutting-edge disciplinary science and has supported two UKZN PhD students and four MSc students as part of a group of more than 20 postgraduates across the partner institutions.
The Africa Centre for Health and Population Studies was established in 1997 as an initiative of the former University of Natal and University of Durban-Westville in association with the South African Medical Research Council with funding provided by the Wellcome Trust, a medical charity in the United Kingdom.

The Centre is based in Sornkhele in the south-western part of the Umkhanyakude district of northern KwaZulu-Natal, with access to laboratories and offices at the Doris Duke Medical Research Institute building in Umbilo. The Centre is located within the College of Health Sciences at the University.

Community-based research on HIV epidemiology, prevention and treatment is conducted by the Centre which flourishes under the leadership of Professor Marie-Louise Newell.

Major areas of research are demographic surveillance and the role of breastfeeding in mother-to-child transmission of HIV. The Centre, with core funding from the Wellcome Trust, hosts a large demographic and health surveillance system with annual household and individual surveillance of around 90,000 members of 11,000 households.

The Africa Centre partners with the local Department of Health in the Hlabisa HIV Treatment and Care Programme – since 2004 thousands of people have been initiated on treatment at each of the 17 primary health care clinics.

Comprehensive antiretroviral therapy (ART) coverage aims to reverse the substantial increase in HIV-related deaths in populations with a high prevalence of the disease. Using the data from its demographic surveillance system, the Centre has investigated trends in adult mortality before and after the introduction of the HIV treatment programme. The investigation showed a significant decline in overall population mortality and HIV-related adult mortality following ART roll-out, in a high HIV prevalence community.

Subsequently, research has also shown a decline in early (0-2 years) childhood mortality and it was estimated that the decline was partly due to the roll-out of the PMTCT programme and the reduction in the number of HIV-infected children, but mostly due to the ART programme.

The key objectives of the Centre’s current research initiatives (2007-2012) are:

- To further improve understanding of HIV dynamics and the impact of antiretroviral treatment (ART) roll-out at individual, household, clinic and community levels.
- To identify approaches to and target groups for interventions.
- To evaluate interventions at individual, household and community levels.
- To implement and further evaluate HIV treatment and prevention programmes.

Research at the Centre is multi-disciplinary using demography, epidemiology, social sciences, clinical, virological, immunological, bio-informatics and data based expertise to build a comprehensive and exciting research portfolio aiming at further understanding the HIV dynamics in the rural area in which it operates.

The resources which sustain all ongoing research include: the Africa Centre Demographic Information System (ACDIS) based on the socio-demographic household and the HIV behavioural surveillance, the Bio-informatics Unit, the Africa Centre Virology Laboratory at the Nelson R Mandela School of Medicine in Durban and the Habisa HIV Treatment and Care Programme. The social science research aims to fill the gaps in understanding behaviour relevant to acquiring or transmitting HIV, and to inform the development, and participate in the evaluation of, supportive interventions.

The clinical research takes full advantage of the Centre’s presence in, and involvement with, the HIV Treatment and Care Programme delivery, while the population research charts the changing HIV epidemic in the area’s rural population, including the impact of the treatment programme.
The African Centre for Crop Improvement (ACCI) was established in 2001 to train African plant breeders – in Africa – on African food security crops. It set out to train five cohorts of eight plant breeders, starting with the first cohort in 2002, with a vision of African scientists solving Africa’s food problems.

The ACCI was initially funded solely by the Rockefeller Foundation but in 2007 the Bill and Melinda Gates Foundation came on board as well 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 ACCI students. This brings to more than 80 the number of PhDs in plant breeding that the ACCI aims to train.

The ACCI students undertake academic studies for two years 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 12 African countries including Ethiopia, Kenya, Mozambique, Zambia and Malawi.

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.

The ACCI is a unit within the Faculty of Science and Agriculture based in Pietermaritzburg. It is headed by Professor Mark Laing whose research interests include: plant breeding, biological control agents and the use of silicon in agriculture.

The staff of the ACCI each has their own plant breeding projects including mutagenesis of sorghum and wheat, development of low phytic and maize using molecular markers, breeding for high beta-carotene maize and the development of biofuel crops.

The African Vision Research Institute (AVRI) is an African-based institute that links intellectuals, institutions, organisations and other personnel in the pursuit of confronting and dealing with the challenges of Africa’s eye health issues. The organisation is led by Professor Kevin Naidoo, an Associate Professor of the University.

AVRI aims to reduce the burden of blindness in Africa by encouraging research activity among African scientists which is relevant to the control of eye diseases, human resource development and infrastructural capacity enhancement for increased eye care service delivery. The mission of the Institute is to develop research capacity and appropriate skills in an effort to eliminate visual impairment and avoidable blindness in Africa, in support of VISION 2020: The Right to Sight campaign initiated by the WHO and IAPB in 2000. This global campaign draws stakeholders involved in eye care to escalate and coordinate efforts towards eliminating avoidable blindness in the world by the year 2020.

The Institute is affiliated with the University of KwaZulu-Natal (UKZN); both organisations having a commitment to growing vision and eye research on the African continent. In addition to undertaking research, AVRI currently provides training in research methods; offers technical and logistical support on a range of research projects; assists post-graduate research students to become skilled researchers and research writers; assists authors to communicate effectively and scientifically, promote, undertake, and sources resources (journal articles, funding, information, etc); and promotes publication of research findings. Additionally, the Institute intends to disseminate research-related information to interested African researchers through its website, newsletters and publications.

AVRI also provides holistic support to post-graduate research projects, including assistance with writing protocols and proposals; advising on methodologies: designing of surveys/ questionnaires; layout and content of conference abstracts, posters and presentations; sourcing publications and documents for research projects; and data entry and analyses in the form of descriptive reports.

Thus far, the Institute has made in-roads into developing linkages in East and West Africa and is currently pursuing North-South collaborative partnerships to strengthen the delivery of its mandate.

Professor Naidoo is the International Agency for the Prevention of Blindness (IAPB) Chair for Africa and the Global Programmes Director for the International Centre of Eye Care Education (ICEE) in Africa.

The Astrophysics and Cosmology Research Unit is an established centre based at UKZN and headed by Professor Sunil Maharaj.

The broad goals of the Unit are to:

- Promote research in astrophysics and cosmology thereby advancing the understanding of the universe and the diverse range of structures it contains.
- Increase awareness of astrophysics and cosmology by informing the public of the latest developments in these fields.

The Unit aims to achieve these goals by:

- A strong research programme centered on academic staff, post-doctoral researchers, post-graduate students, affiliated researchers and visitors.
- Regular colloquia, technical seminars and journal club meetings as well as the organisation of larger workshops and conferences.
- Stronger links with local institutions and collaborations with leading international research groups. The Unit identifies strongly with the recognition of astronomy as a focus area in South Africa.
- The South African Government has recently jointly funded the construction of the South African Large Telescope (http://www.salt.ac.za/GALT) and is strongly backing the South African bid to host the Square Kilometre Array (http://www.ska.ac.za/SKAg).
- The Unit is making scientific contributions to various projects associated with these facilities as well as the national endeavour to advance astronomy.
The Centre for the AIDS Programme of Research in South Africa (CAPRISA) is a world-class research centre that focuses its scientific contributions on HIV epidemiology, pathogenesis, prevention and treatment. The multi-institutional team, led by Professor Salim S Abdool Karim, was established in 2002 under the NIH-funded Comprehensive International Programme of Research on AIDS (CIPRA) by five partner institutions – the University of KwaZulu-Natal, University of Cape Town, University of the Western Cape, the National Institute for Communicable Diseases, and Columbia University in New York. CAPRISA is a designated UNAIDS Collaborating Centre for HIV Prevention Research. It is an official research institute of the University of KwaZulu-Natal.

CAPRISA’s main goal is to undertake globally relevant and locally responsive research which contributes to understanding HIV epidemiology, pathogenesis, vaccines, microbicides as well as the links between tuberculosis and AIDS care.

To achieve this goal, CAPRISA conducts research in four main scientific programmes, each with a focused set of projects and at least one pivotal study:

- **Prevention and Epidemiology:** HIV prevalence and incidence studies at the rural Vulindlela Research Centre near Howick have made important contributions to a better understanding of epidemiology, risk factors and vulnerability to high rates of HIV infection in young women. These data laid the basis for the CAPRISA 004 tenofovir gel trial as well as the CAPRISA 007 trial of an innovative conditional cash transfer strategy to prevent HIV in school-going adolescents.

- **Microbicides:** The CAPRISA 004 tenofovir gel microbicide trial provided the proof-of-concept that antiretrovirals can prevent sexually transmitted HIV infection in women. This study, which radically changed the global HIV prevention landscape, was ranked among the Top 10 Scientific Breakthroughs of 2010 by the journal, Science. The follow-up CAPRISA 008 study is assessing the impact of real-world implementation of tenofovir gel in family planning clinics while the CAPRISA 006 study is now focused on understanding how tenofovir gel works to prevent HIV in vivo in order to design an improved gel with substantially higher efficacy.

- **HIV Pathogenesis and Vaccines:** The Acute HIV infection (CAPRISA 002) study has generated new knowledge on how viral and host factors impact on the risk of HIV and its natural progression as a key contribution to vaccine development and testing. The long-term follow-up after acute HIV infection has led to new insights into the factors impacting the development of broadly neutralizing antibodies. These studies have shed light on the viral genetic bottleneck, the relationship between T-cell immunity and disease progression and the potential role of genital inflammation as a risk factor for HIV acquisition in women.

- **HIV and TB Treatment:** The CAPRISA 003 SAPiT (Starting ART at three Points in TB) trial, which aimed to determine the optimal time for initiation of antiretroviral therapy (ART) in HIV-tuberculosis co-infected patients, redefined the international guidelines on the treatment of TB-HIV co-infection. The findings of the SAPiT trial have already been implemented in several countries, including South Africa. The follow-on study (CAPRISA 005) is now focused on determining the extent of and reasons for relapse and re-infection in incident cases of tuberculosis in HIV-infected patients on ART.

In addition to its research programme, CAPRISA has a well-established training programme which offers both pre-doctoral as well as post-doctoral fellowships to gain mentored research experience at CAPRISA.

The Centre for Critical Research and Identity (ccrri) is primarily a research unit. It was created and is primarily a research unit. It was created and functions to initiate and facilitate research and to collaborate with others in the execution of research projects and related activities. The Centre focuses in the first instance on South Africa, but not as a unique site for the issues it confronts. The problems and opportunities that present themselves here demand local research, theorizing and recommendations but also benefit from other insights and comparative research and can contribute to initiatives elsewhere.

Based on successes during the establishment phase of the Centre, 2010 saw the expansion of the Centre’s networks through research, hosting of events or preparing for future events and through issues covered in discussions held at the Centre. The ccrri organised the highly successful Symposium on Classification and its Consequences with national and international participants, developed links with the Paris-based International Social Science Council and participated in the UNESCO-initiated African Coalition of Cities against Racism and Discrimination through policy research and serving on the Scientific Committee of Coalition’s Africa section.

It proved appropriate in 2010 to continue with projects – or at least the majority of them – under the umbrella theme of “classification”. This theme is broad enough to demand inter- or even intra-disciplinary approaches to formulating and executing projects and analysing data as well as allowing a range of apparently discrete initiatives to speak to each other. These initiatives include those that address race thinking in everyday life and public discourse, that search for and challenge a “race” requirement in legislation, that raise questions about the institutional location and process of race classification, and research that explores how the “agents” of classification fulfill their tasks and the effects on those classified.

Based on this research and that undertaken by associates of the Centre, strong opinions expressed in public comment by analysts and the motivation for and work presented at two workshops attended by staff (in one case co-hosted by the Centre), the ccrri expressed its own strong concern at the effects of continuing race classification in South Africa. Not only is there very little evidence that such an approach is serving its purpose – namely of achieving greater equality than the legacy bequeathed by apartheid – but its intended or unintended consequence is to reproduce the discredited notion of identifiable races.

The Centre, therefore, unambiguously locates itself in terms of initiating serious and difficult debate on alternative routes towards creating a society that is truly non-racial; a society that has simultaneously to be one that is measurably moving towards greater equality than is experienced on a daily basis by all South Africans, the large majority at the lower end of the divide.
The Centre for Quantum Technology (CQT)

The Centre for Quantum Technology (CQT), a Research Group in the School of Physics at the University of Kwazulu-Natal, began its operations in 2006 with an ambitious plan to foster research and development in the field of Quantum Information Processing and Communication (QIPC). The vision was to attract students to an exciting inter-disciplinary field of research and technology, to train them in a world-class research and development institute and facilitate the establishment of a sustainable quantum technology industry. This would provide opportunities for skilled individuals to engage their expertise and transform local knowledge pools into focused, innovative solutions.

The year 2010 marked the beginning of the fruition of this vision with the formalisation of QZN Technology (Pty) Ltd, a commercial vehicle for the research and development output at the CQT, and preliminary developments with a national, intra-disciplinary research facility in applied QIPC. Together with the CQT, these two structures will provide a sustainable capacity in quantum innovation for South Africa to leverage the upcoming opportunities in the information technology industry of the 21st century.

Undoubtedly the highlight of 2010 for the CQT was the deployment of quantum-secured communication solutions at the Moses Mabhida Stadium during the 2010 FIFA World Cup TM. This project has catapulted South Africa into the global race of QPIC.

The development of the Quantum Stadium project from the proof-of-concept experiments in a laboratory environment to the fruition of the technology during the 2010 FIFA World Cup TM has demonstrated the ability of the Centre to engineer solutions from inception and support them throughout the innovation cycle. The establishment of a Centre of Competence will further enhance the capacity of the quantum technology industry to further develop such solutions.

The European Commission’s Roadmap for Quantum Information Processing and Communication and the European Telecommunications Standards Institute have recognised this project as a major milestone towards the market readiness of quantum information processing solutions.

In 2006 the Centre for Quantum Technology hosted a very successful international conference on Quantum Technology in Durban. This was motivation to repeat the conference in 2010. From 20 to 23 September, 2010 the Centre for Quantum Technology organised the international conference on Recent Progress in Theoretical and Experimental Foundations of Quantum Technology. The Conference also started a new cycle of Conferences: The Quantum Africa series of conferences which is planned to take place consecutively in several African countries.

The motivation for this conference was to provide a knowledge base for research in quantum technology in South Africa, with emphasis on quantum cryptography. On the basis of the list of invited and confirmed international speakers, the conference was of great interest to colleagues from around the world. The conference featured many internationally renowned speakers and experts in quantum information processing, quantum cryptography, quantum optics, ultra-cold atoms, open quantum systems, quantum biology, and other relevant areas of quantum technologies.

During the year 2010 the Centre organised and hosted a workshop at UKZN on Quantum Field Theory on Curved Spacetime: From the Algebraic Approach to Local Covariance between 23 and 27, August. In December the Centre hosted a workshop on the topical issue of Non-Markovian unravellings for Open Quantum Systems.

The project attracted the interest of local and international media as well as the global QPC research community. The National, Provincial and Local Government demonstrated their interest in this development by participating in the official launch of the Quantum Stadium Project on 21 May 2010.

Health Economics and HIV/AIDS Research Division (HEARD)

Health Economics and HIV/AIDS Research Division (HEARD) conducts applied research to support development interventions aimed at mobilising evidence for impact in health and HIV in the Southern African Development Community (SADC) and East Africa region.

Established in 1998, the Division – led by Professor Alan Whiteside – collaborates with a range of international institutional and individual partners.

HEARD supports UNAIDS, the SADC Secretariat and Parliamentary Forum and the South African and African leadership in responding to issues of health, development and HIV.

Its objectives are to:

- Improve private and public sector understanding of the socio-economic impacts of HIV and AIDS through an applied research focus.
- Promote multi-sectoral responses to the impact of HIV and AIDS.
- Develop the practice of health economics and social/behavioural science.
- Train business and community leaders, professionals and government officials in the strategic planning for the management of HIV and AIDS and other health issues.

Its general principles are:

- Effective interventions through sound socio-economic, social and behavioural analysis and interdisciplinary research.
- The transfer of skills.
- The sharing of knowledge.
- Capacity building.
- Research utilisation.

HEARD currently focuses its research in three strategic areas: prevention and social mobilisation; health systems and health and care access; and Health and HIV in the urban context.

In a context of multiple stressors and rapid environmental and social change, HEARD conducts research that contributes to an understanding of the key driving forces behind the many epidemics which constitute HIV in Africa and its impact on health, effective and sustainable responses to health and HIV challenges, and sustainable interventions aimed at wellness and vulnerability.

Through its activities HEARD ensures the uptake of research that will leverage evidence-based action through the design and management of projects that are utilisation-driven collaboration, with scholars and stakeholders, to ensure research meets the needs of decision-makers building the capacity of researchers to translate research into policy and practice.

With reference to its research capacity building programme in Africa, the Division creates opportunities and provides support through an internship programme for young Masters graduates, support to increase the number of PhD qualified researchers in the region and building internal research staff capacity.

Its Gender Equality and HIV Prevention Programme combines research with policy and programmatic interventions to advance gender equality and roll back HIV, with a particular focus on the following areas:

- Research – generating knowledge on interventions which support gender equality and HIV prevention with a focus on structural and community level interventions in order to support knowledge about “what works”.
- Policy and Programmes – strengthening HIV programmes and policies in Southern and Eastern Africa to create an enabling environment for gender equality.
- Capacity Building – building a body of researchers in Southern and Eastern Africa with the capacity to undertake work on gender inequality and HIV prevention.
Four areas of intensive research into tuberculosis (TB) and HIV/AIDS – which could yield significant breakthroughs within a few years in the diagnosis, prevention and treatment of the killer diseases – are underway at UKZN thanks to a multi-million rand grant from the Howard Hughes Medical Institute (HHMI) in the United States.

The grant, the biggest ever for medical research in South Africa, is being used to:

- Establish the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH).
- Construct a R308-million building for the institute on the grounds of the Nelson R Mandela School of Medicine in Durban.
- Fund TB and HIV research at UKZN for the next 10 years.

The HHMI has committed R219 million towards the construction of the K-RITH building with the balance being made up by the research body, Lifelab, and UKZN. The American institute will provide another R10 million a year to fund ongoing research into TB and HIV at K-RITH.

The Institute, described as the most sophisticated of its kind in the world, will offer state-of-the-art facilities for researchers and students from across Southern Africa.

Although current research will concentrate on TB and HIV, if circumstances and demands change in the future, the facilities can be easily adapted to meet new requirements and challenges.

Research is being led by the Director of K-RITH, Professor William Bishai, in co-operation with local and United States researchers.

The Pollution Research Group (PRG), led by Professor Chris Buckley, was established in 1973 as a self-funded contract research group within the Department of Chemical Engineering at the then University of Natal to investigate problems around industrial water management in South Africa. The Group has expanded its activities into municipal water and wastewater management as a result of a Memorandum of Agreement between the eThekwini Municipality’s Water and Sanitation Department and UKZN. An agreement has been signed whereby the Municipality provides financial support – R1 million a year for five years – for providing scientific support to the Water and Sanitation Department.

These activities form the focus of attention of a multi-disciplinary team of engineers, biologists, political scientists and community medical professionals and have included participation in two European Union research projects related to membrane bioreactors and in identifying and disseminating best practice of water and sanitation supply to unserved communities. Sanitation projects are being undertaken on pit latrines and urine diversion toilets. Collaborative research on the anaerobic baffled reactor process includes internationally recognised projects being undertaken by the NGO BORDA in South-East Asia and Africa (BORDA has been announced as the International Water Association’s 2011 research award winner).

In 2008/9 a United Nations Environment Programme (UNEP) project on the water efficiency in African breweries was successfully completed. A new project to provide background information for the permitting of industrial wastewaters flowing into domestic sewage works was initiated. Research for the Water Research Commission and Sasol is continuing.

The PRG recently received a R2.8 million grant from the Bill and Melinda Gates Foundation to fund its toilet technology and sanitation research, the aim of which is to design a toilet system that will lead to the safe disposal of waste water in poor communities. UKZN was one of eight institutions – and the only one in Africa – chosen out of 22 to take part in the Reinvent the Toilet Challenge. The team includes 10 academics in the School of Chemical Engineering each contributing their specialised skills.

From left: Dr John Adamson; Analytical Chemist; Peter McCaffrey, Medical Student; and Professor William R Bishai, Director, K-RITH assessing sample quality before loading a patient’s blood specimen into a mass spectrometer. This device will help researchers measure the levels of tuberculosis and HIV medication in the bloodstream as they try to design better treatment protocols.
Professor Julian May is the NRF-funded South African Research Chair in Applied Poverty Reduction Assessment to which he was appointed in 2009. The aims of the Chair are in three interrelated areas of applied poverty reduction assessment: the on-going improvement of the indicators that are used to reflect change; the analysis of the impact of poverty reducing interventions; and investigating wider dynamics that offset or contribute towards desired policy goals.

Professor May is the first person in a developing country to be appointed to the Technical Advisory Group of the International Comparisons Project (ICP) based in Washington DC, USA, which guides the collection of data for the calculation of Purchasing Power Parity (PPP) used to standardise the measurement of Gross Domestic Product and poverty indicators.

Working with four telecentres in poor communities in KwaZulu-Natal, Community-based Learning, ICT and Quality-of-Life (CLiQ) trained 150 participants in the use of computers and the internet. The impact of this training and their use of ICT have been monitored using participatory research methods.

In Uganda, Tanzania, Rwanda and Kenya a project using panel data from 1,600 households interviewed in 2008 and again in 2010 has developed new methods of depicting multi-dimensional poverty and has estimated the causal association between ICT access and poverty reduction. This was presented to the international ICT4D2010 conference held in London in 2010.

The third assessment is an impact assessment of the KwaZulu-Natal Gijima programme for Local Economic Development (LED) which involves targeted grants to promote poverty reduction through enterprise. A multi-disciplinary team of economists, planners and impact specialists is working on this project.

Finally using a competitive grant awarded by the European Union (EU) via the Programme to Support Pro-Poor Policy Development (PSPPD), a collaborative project with the London School of Hygiene and Tropical Medicine and the University of Cape Town is examining factors influencing inequities in child outcomes.
**Economic Development**

Professor Dori Posel

Professor Dori Posel obtained her PhD in Economics from the University of Massachusetts in the United States in 1999. She has been the recipient of numerous awards for her research and has published widely on questions of migration, marriage and labour markets. Her recent published research investigates specific characteristics of the post-apartheid period in South Africa, including: the temporary nature of labour migration; the returns to English language proficiency in the South African labour market; marriage in the context of bridewealth payments; and the determinants of subjective well-being or happiness.

The overall research objective of the Research Chair in Economic Development is to explore 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, labour force participation and employment.

The 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.

Professor Posel is also using the opportunities afforded by the Research Chair to foster and strengthen quantitative research skills in the analysis of South African micro datasets.

**Evolutionary Biology**

Professor Steve Johnson

Prominent academic and researcher Professor Steve Johnson of the School of Biological and Conservation Sciences was awarded the Research Chair in Evolutionary Biology – valued at R7.5 million – for a five-year period.

His 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.

Professor 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.

**Fluorine Process Engineering and Separation Technology**

Professor Deresh Ramjugernath

Professor Deresh Ramjugernath is the South African Research Chair in Fluorine Process Engineering and Separation Technology and Director of the Thermodynamics Research Unit.

Professor Ramjugernath and his team of co-workers are contributing to the South African Government’s Fluorochemical Expansion Initiative (FEI) by researching and developing fluorinated products, including pharmaceuticals and agro-chemicals.

Although South Africa possesses the second largest reserves of fluor spar (the starting material for all fluorocarbons), it currently imports almost all of its fluorinated products. There is very little beneficiation of the fluor spar reserves in the country and the activities under the Chair would assist in addressing this problem by developing technology and human capacity to drive the development and expansion of a fluorocarbon cluster.

The research activities under the Chair are not limited to fluorocarbons but also cover the areas of chemical thermodynamics and separation technology. In this regard the Research Unit has one of the best equipped laboratories in the Southern Hemisphere and is one of the largest groups working in this field.

The activities under the Chair are very strongly linked to industry with collaboration in the application of research and development with two major South African companies - the South African Nuclear Energy Corporation (NECSA) and SASOL.

**Quantum Information Processing and Communication**

Professor Francesco Petruccione

Francesco Petruccione, Professor of Theoretical Physics, was awarded an Innovation Fund grant in 2005 to set up a Centre for Quantum Technology and in 2007 was granted the South African Research Chair for Quantum Information Processing and Communication.

Professor Petruccione has been working on the theory of open quantum systems, which is at the basis of many recent quantum technological applications. The miniaturization of technological devices necessitates manipulation of objects at the nanoscale level at which coherent quantum mechanical processes start to dominate the physical properties.

The unavoidable interaction of these systems with their environment gives rise to dissipative mechanisms and a strong loss of quantum coherence, i.e. decoherence. Since perfect isolation of quantum systems is not possible, it is of central importance to incorporate the methods and tools of the theory of quantum systems in the exploration of quantum technologies. Among the basic tools of the new quantum technologies are quantum metrology, quantum control, quantum, communication and quantum computation.
The Chair will – through research – contribute to developing scientifically proven African traditional medicines and also to the institutionalisation of the African traditional health care system. Various projects currently exist and include the United States government-funded Biomedical and Traditional Healing Collaboration on HIV/AIDS, the NIH/NCCAM-funded traditional medicine clinical trial at Edendale Hospital in Pietermaritzburg, and the Department of Science and Technology IKS Bioprospecting Programme.

This platform promotes bidirectional referrals between traditional healthcare practitioners (THPs) and public health centres, and documents ethnomedical evidence, bioprospecting and other mechanisms to evaluate plant-based and herbal mixtures for biological activity with therapeutic efficacy in the areas of cancer, TB, and HIV/AIDS. It also conducts clinical trials and equips THPs to conduct their own clinical research on traditional medicine.

Above all, the indigenous health care systems research enhances scientific knowledge on traditional medicine and attracts young scientists to this field.

Professor Gqaleni obtained his PhD in Bioscience and Biotechnology from the University of Strathclyde in Scotland. He is a former Deputy Dean at the Nelson R Mandela School of Medicine and was also Operations Director at the Doris Duke Medical Research Institute at the University.

Professor Gqaleni is a member of the International Association of Physicians in AIDS Care; Chair of the IKS Bioprospecting and Product Development Platform of the Department of Science and Technology and has served on the Presidential Task Team on Traditional Medicines and the World Health Organisation (African region) Expert Committee on Traditional Medicines.

Professor Ndung’u’s previous significant accomplishments include the development of the first full-length infectious clone of HIV-1C from Africa, an important reagent for detailed genetic studies of this strain. This genetic tool allows for various studies on drug sensitivity and vaccine design to be conducted. He is also credited with the generation of the subtype C simian human immunodeficiency virus (SHIV), a genetic chimera between HIV and SIV vaccine tests. Recently, his group has contributed to the understanding of adaptive and innate immune mechanisms against HIV-1 and SIV vaccines. His group has also contributed to the development of new vaccines or therapies against HIV and AIDS.

Professor Ndung’u’s main research interests are in the host-virus interactions underlying HIV and AIDS pathogenesis and antiviral immune responses. He is also interested in the development of biomedical interventions that can be used in resource-limited settings to stop the spread of HIV and AIDS. He has a special interest in the training and development of young scientists.

He was until October 2010 Co-Chair of the Young and Early Career Investigators Committee (YECIC) of the Global HIV Vaccine Enterprise and played a key role in the development of the Enterprise’s 2010 Scientific Strategic Plan.
NRF-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 Patricia Berjak
berjak@ukzn.ac.za

Professor Patricia Berjak, an ‘A’ rated scientist, is recognised internationally for her pioneering fundamental studies on seed recalcitrance. Her early achievements are exemplified in the publication in the international literature of five papers from her doctoral thesis, the findings of which contributed a major chapter, demonstrating the importance of membrane deterioration in viability loss, in the definitive book *Seed Viability* by EH Roberts.

Professor Berjak rapidly attained a position of international eminence for her fundamental studies on recalcitrant seeds and their conservation. She has also demonstrated the importance of seedborne fungi in the loss of storage viability.

Since 1978 Professor Berjak has supervised to graduation 410 MSc students and 176 PhD students, many of whom have gone on to establish successful scientific careers of their own, both in South Africa and abroad.

Professor Berjak teaches seed biology at the senior undergraduate level, and is a leader of two Honours modules, focusing on desiccation sensitivity and desiccation tolerance, and cryobiology. She also consistently inducts interns at senior undergraduate level into research.

Professor Berjak, who holds the positions of Emeritus Professorship and Senior Research Associate, has established a world-class research group in the School of Biological and Conservation Sciences. The activities of her group include fundamental and applied recalcitrant seed research, cryostorage and the provision of postgraduate level training in cryobiology. The high esteem in which international colleagues hold Professor Berjak is attested by her invitations to work in laboratories abroad and to attend numerous international conferences as a keynote speaker.

She has published 17 367 peer reviewed papers in international literature and 60 book chapters and full length peer reviewed conference proceedings. In 2006, the Darwin Initiative of the United Kingdom Government, awarded her a major competitive grant in collaboration with the Millennium Seed Bank, Royal Botanic Gardens, Kew, in England.

She is the recipient of a number of prestigious awards, some of which include the Gold Medal of the South African Association of Botanists in 2006, the National Order of Mapungubwe from the State President of South Africa (also 2006), the National Research Foundation’s Lifetime Achiever Award in 2008, and the eThekwini Living Legend Award in 2010.

Since 1993 Professor Berjak has been actively involved in the conservation of threatened species and conserving biodiversity through her international collaborative work with institutions in Europe, particularly in the United Kingdom, and Africa.
Professor Michael Chapman


Professor Chapman edited the collection of essays, Postcolonialism: South African Perspectives (2008) and, together with colleague Emeritus Professor Margaret Lenta, compiled a major collection of essays by 15 leading academics, entitled SA Lit: Beyond 2000 (2011). He is the Editor-in-Chief of the accredited journal, Current Writing, and was recently awarded an NRF “blue skies” grant to research the uses of literature in contemporary South African society.

A member of the advisory board of the Ferguson Centre for African and Asian Studies (Open University, United Kingdom), and the intercultural committee of the International Comparative African and Asian Studies (Open University, United Kingdom), Professor Chapman was awarded the Gold Medal of the English Association of Southern Africa in recognition of his services to English education.

Professor Rob Gous

Professor Rob Gous of the School of Agricultural Sciences and Agribusiness continues to contribute to knowledge in the field of southern African and post colonial literature.

Professor Gous has been a founder member of the KwaZulu-Natal Poultry Institute, whose purpose is to train prospective poultry managers by providing them with the skills needed to manage people, finances, poultry operations and even themselves. The Institute has impressive training facilities, including accommodation, lecture rooms, computers and a wide range of on-going poultry operations, and these are housed on the University’s research and training farm, Ukulinga. This Institute has been, and continues to be, highly successful in training students and preparing them for life.

His research over the past 20 years 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 initially provided answers to ‘what-if’ scenarios, but he and his team have moved on from there and they now optimise the way in which broilers and pigs should be fed to maximise any one of a number of objective functions, such as margin over feed cost or feed conversion efficiency. He has been given many opportunities to travel to distant places to present these models to poultry scientists and producers who use these models around the world.

Together with Dr Peter Lewis, a researcher from the United Kingdom, Professor Gous has published extensively on the research they have conducted over the past ten years on the lighting of broiler breeders. The lighting management of these birds was previously based on what is done to commercial laying hens or pullets, and their research has shown that such practices are inappropriate for broiler breeders. This has resulted in a paradigm shift in the way that these birds are managed throughout the world.

As part of his engagement with community, Professor Gous is a founder member of the KwaZulu-Natal Poultry Institute, whose purpose is to train prospective poultry managers by providing them with the skills needed to manage people, finances, poultry operations and even themselves. The Institute has impressive training facilities, including accommodation, lecture rooms, computers and a wide range of on-going poultry operations, and these are housed on the University’s research and training farm, Ukulinga. This Institute has been, and continues to be, highly successful in training students and preparing them for life.

Professor Steve Johnson

Professor Steve Johnson holds the South African Research Chair in Evolutionary Biology and is a Professor in the School of Biological and Conservation Sciences on UKZN’s Pietermaritzburg campus.

His PhD on the pollination of plants in the Cape flora was obtained from the University of Cape Town in 1994 and he has since become a leading specialist in the field of plant pollination biology.

Professor Johnson’s research is aimed at understanding the evolutionary diversification of plants, particularly in southern Africa, the conservation of plant-pollinator mutualisms, and the reproductive biology of invasive species. He has recently developed a strong interest in the role of floral volatiles in mediating specialized plant-pollinator interactions, and has established a state-of-the-art laboratory for the study of chemical cues used by plants to attract insect pollinators.

Professor Johnson has published more than 190 peer-reviewed scientific papers, co-authored a book on the Natural History of Table Mountain and has also written many popular science articles. He is currently on the editorial boards of two international journals, Oecologia and Arthropod-Plant Interactions. He received the NRF President’s Award in 1999 and currently holds an A2-rating from the NRF.

Professor Steve Johnson's research is aimed at understanding the evolutionary diversification of plants, particularly in southern Africa, the conservation of plant-pollinator mutualisms, and the reproductive biology of invasive species. He has recently developed a strong interest in the role of floral volatiles in mediating specialized plant-pollinator interactions, and has established a state-of-the-art laboratory for the study of chemical cues used by plants to attract insect pollinators.

Professor Johnson has published more than 190 peer-reviewed scientific papers, co-authored a book on the Natural History of Table Mountain and has also written many popular science articles. He is currently on the editorial boards of two international journals, Oecologia and Arthropod-Plant Interactions. He received the NRF President’s Award in 1999 and currently holds an A2-rating from the NRF.
### COLLEGE OF LAW AND MANAGEMENT STUDIES

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidd M</td>
<td>Professor</td>
<td>Law</td>
</tr>
<tr>
<td>McQuoid-Mason DJ</td>
<td>Professor</td>
<td>Law</td>
</tr>
<tr>
<td>Mubangizi JC</td>
<td>Professor</td>
<td>Law</td>
</tr>
</tbody>
</table>

#### FACULTY OF MANAGEMENT STUDIES

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris GT</td>
<td>Professor</td>
<td>Economics and Finance</td>
</tr>
<tr>
<td>Reddy PS</td>
<td>Professor</td>
<td>Public Administration and Development Management</td>
</tr>
<tr>
<td>Sibanda L</td>
<td>Professor</td>
<td>Management Studies</td>
</tr>
<tr>
<td>Harris G</td>
<td>Professor</td>
<td>Management Studies</td>
</tr>
</tbody>
</table>

### COLLEGE OF HUMANITIES

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armstrong J</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Ayee J</td>
<td>Professor</td>
<td>DVC Humanities</td>
</tr>
<tr>
<td>Ballantine C</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Ballard RJ</td>
<td>Dr</td>
<td>Development Studies</td>
</tr>
<tr>
<td>Bland RM</td>
<td>Dr</td>
<td>Africa Centre</td>
</tr>
<tr>
<td>Bond P</td>
<td>Professor</td>
<td>Centre for Civil Society</td>
</tr>
<tr>
<td>Calder IMS</td>
<td>Professor</td>
<td>Centre for Visual Arts</td>
</tr>
<tr>
<td>Collier JD</td>
<td>Professor</td>
<td>Philosophy and Ethics</td>
</tr>
<tr>
<td>Collings SJ</td>
<td>Professor</td>
<td>Psychology and Centre for Social Work</td>
</tr>
<tr>
<td>Coullie JE</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>De Meyer BAMS</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Denis PMBR</td>
<td>Professor</td>
<td>Theology and Religion</td>
</tr>
<tr>
<td>Dimitriu I</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Draper JA</td>
<td>Professor</td>
<td>Theology and Religion</td>
</tr>
<tr>
<td>Dunheim K</td>
<td>Professor</td>
<td>Psychology</td>
</tr>
<tr>
<td>Ekbrim AFM</td>
<td>Professor</td>
<td>Theology and Religion</td>
</tr>
<tr>
<td>Green JM</td>
<td>Professor</td>
<td>Africa Centre for Food Security</td>
</tr>
<tr>
<td>Green MM</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Hensel SP</td>
<td>Professor</td>
<td>Psychology</td>
</tr>
<tr>
<td>Hilton JL</td>
<td>Professor</td>
<td>Classics</td>
</tr>
<tr>
<td>Koopman A</td>
<td>Professor</td>
<td>Language, Literacies and Media Education</td>
</tr>
<tr>
<td>Kumar P</td>
<td>Dr</td>
<td>Religion and Theology</td>
</tr>
</tbody>
</table>

### FACULTY OF HUMANITIES, DEVELOPMENT AND SOCIAL SCIENCES

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leeb-Du Toit JC</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Lentin P</td>
<td>Professor</td>
<td>Philosophy and Ethics</td>
</tr>
<tr>
<td>Malher P</td>
<td>Dr</td>
<td>Development Studies</td>
</tr>
<tr>
<td>Mole P</td>
<td>Professor</td>
<td>Centre for Critical Research on Race</td>
</tr>
<tr>
<td>Marks M</td>
<td>Professor</td>
<td>Sociology and Social Studies</td>
</tr>
<tr>
<td>Marshall S</td>
<td>Professor</td>
<td>Cultural and Heritage Tourism</td>
</tr>
<tr>
<td>Msy J</td>
<td>Professor</td>
<td>Development Studies</td>
</tr>
<tr>
<td>McCracken D</td>
<td>Professor</td>
<td>Anthropology, Gender and Historical Studies</td>
</tr>
<tr>
<td>Murove M</td>
<td>Dr</td>
<td>Philosophy and Ethics</td>
</tr>
<tr>
<td>Nadar S</td>
<td>Dr</td>
<td>Religion and Theology</td>
</tr>
<tr>
<td>Patman R W</td>
<td>Professor</td>
<td>Sociology and Social Studies</td>
</tr>
<tr>
<td>Peters WH</td>
<td>Professor</td>
<td>Architecture, Planning and Housing</td>
</tr>
<tr>
<td>Phin JA</td>
<td>Professor</td>
<td>Religion and Theology</td>
</tr>
<tr>
<td>Potgieter CA</td>
<td>Professor</td>
<td>Psychology</td>
</tr>
<tr>
<td>Ruggunan S</td>
<td>Dr</td>
<td>Industrial, Organisational and Labour Studies</td>
</tr>
<tr>
<td>Scoryamomthoy R</td>
<td>Professor</td>
<td>Sociology and Social Studies</td>
</tr>
<tr>
<td>Spurrett DJ</td>
<td>Professor</td>
<td>Philosophy and Ethics</td>
</tr>
<tr>
<td>Steibel EA</td>
<td>Professor</td>
<td>Language, Literacies and Media Education</td>
</tr>
<tr>
<td>Stilwell C</td>
<td>Professor</td>
<td>Sociology and Social Studies</td>
</tr>
<tr>
<td>Stoebe C</td>
<td>Professor</td>
<td>Language, Literacies and Media Education</td>
</tr>
<tr>
<td>Teer-Tomaselli RE</td>
<td>Professor</td>
<td>Language, Literacies and Media Education</td>
</tr>
<tr>
<td>Tomaselli KG</td>
<td>Professor</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>Turner N</td>
<td>Professor</td>
<td>IsuZulu</td>
</tr>
<tr>
<td>Vahed G</td>
<td>Professor</td>
<td>Anthropology, Gender and Historical Studies</td>
</tr>
<tr>
<td>Wessels MA</td>
<td>Dr</td>
<td>Literary Studies, Media and Creative Arts</td>
</tr>
<tr>
<td>West GO</td>
<td>Professor</td>
<td>Religion and Theology</td>
</tr>
<tr>
<td>Whiteside AW</td>
<td>Professor</td>
<td>HEARD</td>
</tr>
</tbody>
</table>

### FACULTY OF EDUCATION

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhana D</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>Buthelezi MT</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>de Villiers M</td>
<td>Dr</td>
<td>Education</td>
</tr>
<tr>
<td>Deacon PA</td>
<td>Dr</td>
<td>Education</td>
</tr>
<tr>
<td>Francis DA</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>Mncube VS</td>
<td>Dr</td>
<td>Education</td>
</tr>
<tr>
<td>Morell RG</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>Mulukutshana A</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>Ramrathan P</td>
<td>Professor</td>
<td>Education</td>
</tr>
<tr>
<td>NAME</td>
<td>TITLE</td>
<td>SCHOOL</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Brysiwicz P</td>
<td>Dr</td>
<td>Nursing</td>
</tr>
<tr>
<td>Daniels WMU</td>
<td>Professor</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>Essack SY</td>
<td>Professor</td>
<td>Pharmacy and Pharmacology</td>
</tr>
<tr>
<td>Govender T</td>
<td>Dr</td>
<td>Pharmacy and Pharmacology</td>
</tr>
<tr>
<td>Govender T</td>
<td>Professor</td>
<td>Pharmacy and Pharmacology</td>
</tr>
<tr>
<td>McKune AJ</td>
<td>Professor</td>
<td>Sports Science</td>
</tr>
<tr>
<td>Musabayane CT</td>
<td>Professor</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>Ncama BP</td>
<td>Dr</td>
<td>Nursing</td>
</tr>
<tr>
<td>Newell ML</td>
<td>Professor</td>
<td>College of Health Sciences</td>
</tr>
<tr>
<td>Oduntan OA</td>
<td>Professor</td>
<td>Optometry</td>
</tr>
<tr>
<td>Peters-Futre EM</td>
<td>Professor</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>Puckree T</td>
<td>Honorary Professor</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>Satyapal KS</td>
<td>Professor</td>
<td>Clinical Anatomy</td>
</tr>
<tr>
<td>Suleman F</td>
<td>Dr</td>
<td>Pharmacy and Pharmacology</td>
</tr>
<tr>
<td>Uys LR</td>
<td>Professor</td>
<td>Nursing</td>
</tr>
<tr>
<td>Ariatti M</td>
<td>Professor</td>
<td>Maternal, Child and Women's Health</td>
</tr>
<tr>
<td>Coutssoudis A</td>
<td>Professor</td>
<td>Paediatrics and Child Health</td>
</tr>
<tr>
<td>Galetti N</td>
<td>Professor</td>
<td>Occupational and Environmental Health</td>
</tr>
<tr>
<td>Kovaliv JD</td>
<td>Dr</td>
<td>Family and Public Health</td>
</tr>
<tr>
<td>Moodley J</td>
<td>Professor</td>
<td>Women's Health and HIV Research Unit</td>
</tr>
<tr>
<td>Mosam A</td>
<td>Dr</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Naicker T</td>
<td>Professor</td>
<td>Optics and Imaging</td>
</tr>
<tr>
<td>Naidoo DP</td>
<td>Professor</td>
<td>Cardiology</td>
</tr>
<tr>
<td>Naidoo N</td>
<td>Professor</td>
<td>Occupational and Environmental Health</td>
</tr>
<tr>
<td>Naidoo R</td>
<td>Professor</td>
<td>Medical Microbiology</td>
</tr>
<tr>
<td>Naidoo S</td>
<td>Dr</td>
<td>Family and Public Health</td>
</tr>
<tr>
<td>Ndung'u PT</td>
<td>Professor</td>
<td>Molecular Virology</td>
</tr>
<tr>
<td>Pilay M</td>
<td>Dr</td>
<td>Pathology and Laboratory Medicine</td>
</tr>
<tr>
<td>Singh JA</td>
<td>Dr</td>
<td>CAPRISA</td>
</tr>
<tr>
<td>Taylor M</td>
<td>Professor</td>
<td>Community Health</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansari M</td>
<td>Professor</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Baboolal D</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Bala MD</td>
<td>Dr</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Baraissak J</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Beckett RP</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Bhath-Parm K</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Bobi U</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Burnett WA</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Bytebeier B</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Cacciariello M</td>
<td>Dr</td>
<td>Agricultural Sciences and Agribusiness</td>
</tr>
<tr>
<td>Coomber PH</td>
<td>Dr</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Danielmann PA</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>De Lange OL</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Derani J</td>
<td>Dr</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Doree CT</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Ewerin DJ</td>
<td>Dr</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Ford TA</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Friedrich HB</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Ghosh PP</td>
<td>Dr</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Glassom D</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Goldring JPD</td>
<td>Professor</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Govender KS</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Guten VG</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Hart RC</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Hellberg MA</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Hendrik SL</td>
<td>Professor</td>
<td>Agricultural Sciences and Agribusiness</td>
</tr>
<tr>
<td>Hey JD</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Hofmann A</td>
<td>Professor</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>Hughes ARW</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Hughes JC</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Ihsan MS</td>
<td>Dr</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Jagannathy D</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Jonnalagadda SB</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Juergens A</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Konrad T</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Kruger HG</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Leach PGL</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
</tbody>
</table>
### OTHER NRF-RATED RESEARCHERS - 2010

**FACULTY OF SCIENCE AND AGRICULTURE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light ME</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Lin J</td>
<td>Professor</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Lovegrove BG</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Mace RL</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Maharaj B</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Maharaj RD</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Martinough BS</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>McCourt S</td>
<td>Professor</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>McKenzie JF</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Modi AT</td>
<td>Professor</td>
<td>Agricultural Sciences and Agribusiness</td>
</tr>
<tr>
<td>Moodley K</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Moodley M</td>
<td>Dr</td>
<td>Physics</td>
</tr>
<tr>
<td>Mooi J</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Moto Y</td>
<td>Dr</td>
<td>Physics</td>
</tr>
<tr>
<td>Mukaratwe S</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Mukwezembe</td>
<td>Dr</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Munro QQ</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Mutanga O</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Mutshiga G</td>
<td>Dr</td>
<td>Bioreources Engineering</td>
</tr>
<tr>
<td>Naidoo G</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Ngila JC</td>
<td>Dr</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Niester C</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Nazihai LV</td>
<td>Professor</td>
<td>Agricultural Sciences and Agribusiness</td>
</tr>
<tr>
<td>Nyamiong HO</td>
<td>Dr</td>
<td>Chemistry</td>
</tr>
<tr>
<td>O’Hora JG</td>
<td>Professor</td>
<td>Statistics and Actuarial Sciences</td>
</tr>
<tr>
<td>Olaniran AO</td>
<td>Dr</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Ovechkin MN</td>
<td>Dr</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>Paramenter NW</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Perissinotto R</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Perin MR</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Petruccione F</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Pilay B</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Proches JM</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Rafferty JG</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Ray S</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Robinson RS</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Rodrigues BG</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
</tbody>
</table>

### OTHER NRF-RATED RESEARCHERS - 2010

**FACULTY OF SCIENCE AND AGRICULTURE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savage M</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Schaler LM</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Schmidt S</td>
<td>Professor</td>
<td>Biochemistry, Genetics and Microbiology</td>
</tr>
<tr>
<td>Scott DM</td>
<td>Professor</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>Sergi A</td>
<td>Dr</td>
<td>Physics</td>
</tr>
<tr>
<td>Shinoun SK</td>
<td>Dr</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Shrdiner AM</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Sikazani P</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Skloow RH</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Smit AJ</td>
<td>Dr</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Thandar AS</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Uken R</td>
<td>Dr</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>Van den Berg J</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Van Heerden FR</td>
<td>Professor</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Van Staden J</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Walker ADM</td>
<td>Professor</td>
<td>Physics</td>
</tr>
<tr>
<td>Ward DM</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Watt MP</td>
<td>Professor</td>
<td>Biological and Conservation Sciences</td>
</tr>
<tr>
<td>Xu H</td>
<td>Professor</td>
<td>Mathematics</td>
</tr>
</tbody>
</table>

**FACULTY OF ENGINEERING**

<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bezuiderhout CN</td>
<td>Professor</td>
<td>Bioreources Engineering and Environmental Hydrology</td>
</tr>
<tr>
<td>Boje ES</td>
<td>Professor</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Bright G</td>
<td>Professor</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Carly M</td>
<td>Professor</td>
<td>Chemical Engineering</td>
</tr>
<tr>
<td>Jewitt GPW</td>
<td>Professor</td>
<td>Bioreources Engineering and Environmental Hydrology</td>
</tr>
<tr>
<td>Klokap B</td>
<td>Dr</td>
<td>Chemical Engineering</td>
</tr>
<tr>
<td>Lemmang GF</td>
<td>Professor</td>
<td>Bioreources Engineering and Environmental Hydrology</td>
</tr>
<tr>
<td>Pegram GGS</td>
<td>Professor</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>Rameshnanath D</td>
<td>Professor</td>
<td>Chemical Engineering</td>
</tr>
<tr>
<td>Smithers J C</td>
<td>Professor</td>
<td>Bioreources Engineering and Environmental Hydrology</td>
</tr>
<tr>
<td>Asali S</td>
<td>Professor</td>
<td>Mechanical Engineering</td>
</tr>
</tbody>
</table>
Emeritus Professor Jamshid Moori, acknowledged as a UKZN Fellow for his contribution as an outstanding scholar of Mathematics, has served the University with distinction for more than 20 years.

Professor Moori, who retired from UKZN at the end of last year, is now a senior research professor in Mathematics at the North-West University (NWU) and also holds an honorary senior research fellowship at the School of Mathematics at the University of Birmingham in England.

He joined UKZN as a full professor in July 1989 and was promoted to Senior Professor (Level 7) of Mathematics in 1997.

Professor Moori – B-rated by the NRF – does research in the areas of Finite Simple Groups, Computational Group Theory, Representation Theory of Finite Groups and Applications of Finite Groups to Combinatorial Designs and Geometries. He has produced more than 110 original papers over the past 35 years and during this period has supervised various Honours projects and produced 11 post-graduate students.


Professor Moori’s research projects at UKZN and the NWU, which have been recognised and supported by the NRF, have attracted national and international students, and several visiting mathematicians. His collaborative research has been very productive in recent years – currently 20 papers are in the pipeline. His recent work on the interplay between finite groups and combinatorial structures has attracted the attention of international researchers and led to him being invited to address a variety of international conferences and workshops.

Professor Jamshid Moori
moori@ukzn.ac.za
A dedicated scholar of international standing, Professor Ruth Teer-Tomaselli was honoured as a Fellow of UKZN in 2010.

Professor Teer-Tomaselli is an NRF B-rated research scholar and has held the UNESCO Chair in Communications for Southern Africa from 2002 to the present.

She is Vice-President of the International Association for Media and Communication Research (IAMCR), the foremost international association for media scholars, and is heading the Local Organising Committee hosting the association’s 2012 annual conference in Durban – the first time the IAMCR’s congress has been held in Africa with the exception of Egypt in 2005. About 1 000 delegates are expected from all over the world.

Professor Teer-Tomaselli obtained a doctorate from the former University of Natal for her thesis exploring the South African Broadcasting Corporation’s (SABC’s) television news coverage of the State of Emergency in the second half of the 1980s. Since then she has researched broadcasting across both radio and television, using a predominantly political-economy approach.

Professor Teer-Tomaselli is an editorial member of six international journals, including *Critical Arts*, *Feminist Media Review*, *Global Media Journal*, and the *European Journal of Cultural Studies*. She has been a board member and Chair of the new committee of the SABC as well as serving on the boards of East Coast Radio and the Durban Youth Radio.

Professor David Ward, Professor of Botany at the School of Biological and Conservation Sciences, was recognised as a Fellow of the University of KwaZulu-Natal in 2010 for being a leader in his field and an internationally known and respected ecologist.

Before his current appointment at UKZN in 2004, Professor Ward was Chair of the Department of Conservation Ecology at the University of Stellenbosch from 2002 to 2004 and previous to that Director of the Ramon Science Centre, Jacob Blaustein Institute for Desert Research at Ben Gurion University in Israel from 1989 to 2000. In Israel he was awarded the Paula and David Ben Gurion prize for outstanding contributions to desert research and combating desertification.

Professor Ward has worked in several fields in ecology and physiology but focuses his research on the ecology of Acacia trees. A major field of his research is on factors causing bush encroachment. He is also interested in the chemical and physical defences of plants.

A prolific researcher, he has published more than 160 peer-reviewed articles and 15 chapters in books. His book entitled *The Biology of Deserts*, was published by Oxford University Press in 2009. The book offers a concise but comprehensive introduction to desert ecology and adopts a strong evolutionary focus.

Professor Ward obtained his PhD from the former University of Natal in 1987 for his thesis: “The biology and systematic relationships of Crowned, Blackwinged and Lesser Blackwinged Plovers”.
PhD Candidate Audrey Delsink under Professor Rob Slotow’s School of Biological and Conservation Sciences with an immobilized Kruger elephant cow fitted with a GSM Telemetry Collar. (Photo: Dr Peter Buss SANParks).
PROLIFIC RESEARCHERS - 2010

Professor Soliar Lingham-Sollar
Science & Agriculture

Professor Jason Londt
Science & Agriculture

Ms Lilane Jennifer Loots
Humanities, Development & Social Sciences

Professor Thandinkosi Enos Madiba
Nelson R Mandela School of Medicine

Dr Glenn Eamonn Mitchel Maguire
Science & Agriculture

Professor Sunil Dutt Maharaj
Science & Agriculture

Dr Suriamurthee Moonsam Maistry
Education

Professor Maurice Mars
Nelson R Mandela School of Medicine

Professor Sabine Marshall
Humanities, Development & Social Sciences

Professor David Jan Mcquoid-Mason
Law

PROLIFIC RESEARCHERS - 2010

Professor Bhim Charan Meikap
Engineering

Dr Vusumuzi Sithembiso Mncube
Education

Professor Albert Thembinkosi Modi
Science & Agriculture

Professor John Stephen Moolakkattu
Humanities, Development & Social Sciences

Professor Samson Mukaratirwa
Science & Agriculture

Dr Onisimo Mutanga
Science & Agriculture

Dr Sarojini Nadar
Humanities, Development & Social Sciences

Ms Uma Mahesavari Naidu
Humanities, Development & Social Sciences

Professor Marie-Louise Newell
College of Health Sciences

Professor Klaus Bilfried Nurnberger
Humanities, Development & Social Sciences
Dr Thokozani Ian Nzimakwe
Management Studies

Professor Michael Richard Perrin
Science & Agriculture

Professor Francesca Petruccione
Science & Agriculture

Professor Isabel Apawo Phiri
Humanities, Development & Social Sciences

Professor Anthony Lingum Pillay
Nelson R Mandela School of Medicine

Professor Cheryl-Ann Potgieter
Humanities, Development & Social Sciences

Professor Deresh Ramjugernath
Engineering

Dr Reitze Nils Rodseth
Nelson R Mandela School of Medicine

Professor Michael John Savage
Science & Agriculture

Professor Renzo Perissinotto
Science & Agriculture

Professor Precious Sibanda
Science & Agriculture

Professor Robert Hugh Slotow
Science & Agriculture

Professor Radhamany Sooryamoorthy
Humanities, Development & Social Sciences

Professor David Jon Spurett
Humanities, Development & Social Sciences

Professor Christine Stilwell
Humanities, Development & Social Sciences

Professor Cheryl Stobie
Humanities, Development & Social Sciences

Professor Keyan Gray Tomaselli
Humanities, Development & Social Sciences

Professor Johannes van Staden
Science & Agriculture

Professor David Mercer Ward
Science & Agriculture

Dr Peter Vadasz
Engineering

Professor Deresh Ramjugernath
Engineering
PROLIFIC RESEARCHERS - 2010

Professor Gerald Oakley West

Humanities, Development & Social Sciences

Mr Michael Cameron Wood-Bodley

Law

Professor John Britten Wright

Humanities, Development & Social Sciences

Professor Frederick Noel Zaal

Law
The Vice-Chancellor’s Research Award recognises exceptional research and research-related scholarly activities in young staff members and is awarded annually by the University Council on the recommendation of the Fellowships Selection and Awards Committee.

The most recent recipient of the prestigious award, Professor of Chemical Engineering Deresh Ramjugernath, is credited with providing the leadership and support necessary to build a large and effective research team in a short space of time. The team consists of a number of MSc and PhD students, post-doctoral fellows and international collaborators. Approximately 40 post-graduate students have joined the group since 2007 and nearly 20 have graduated.

Through his personal efforts and foresight, Professor Ramjugernath has given expression to the University’s commitment to nurture young black scientists: most of the research team students come from previously disadvantaged groups, and the number of female students in the team is also growing.

The group has undertaken fundamental and applied research in chemical thermodynamics, reactor technology and organic synthesis. The results of the research have been published in high impact-factor journals. An impressive total of 37 journal articles have been published in the past four years, with at least 20 additional manuscripts in preparation and under review.

Professor Ramjugernath – who is also the South African Research Chair in Fluorine Process Engineering and Separation Technology and Director of the Thermodynamics Research Unit at UKZN – received a National Science and Technology Forum (NSTF) award for excellence in research capacity development this year.

He has, over the last three years, also served as the Chairman of the Faculty of Engineering Research Committee and has led by example in terms of demonstrating and influencing a culture of research. He has given research advice to a number of junior and senior academics and has successfully mentored at least four members of staff to completion of their doctoral degrees.
Professor Johannes van Staden achieved his BSc and MSc in Botany from the University of Stellenbosch in the Western Cape, where he also lectured. After joining the former University of Natal, he received a PhD in Botany in 1970. He worked his way up the academic ladder, being promoted to Professor of Botany and appointed Head of Department in 1987. In 1999 he became Director of his own postgraduate research centre – the Research Centre for Plant Growth and Development.

Professor van Staden has been a Research Fellow at the University College of Wales, the University of California, the National Australian University, 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. In his career he has worked in many areas of Plant Sciences/Botany, but specifically in the fields of plant hormones, seed germination, senescence, stress physiology, post-harvest physiology, biotechnology and plant tissue culture, ethnobotany, secondary products and ethnomedicine.

Professor van Staden has supervised 79 MSc students and 90 PhD students many of whom are now working in research laboratories all over the world. He has also supervised 51 Postdoctoral Researchers. He is the author and co-author of 1,078 papers which have been published in ISI-rated journals and since 2002 he fell within the top 0.5 percent of the internationally most cited authors.

Professor van Staden, who is the recipient of numerous awards and prizes in his field, is the Editor-in-Chief for the South African Journal of Botany and Plant Growth Regulation and an Associate Editor of the Journal of Ethnopharmacology. He serves on the Editorial Board of six other journals.
Research by Professor Colleen Downs of the School of Biological and Conservation Sciences on the Pietermaritzburg campus has made an important contribution to understanding the relationships between the physiology, behaviour and ecology of southern African terrestrial vertebrates, especially Leopard Tortoises, Nile Crocodiles, various bird species and small mammals. Some of this relates to understanding the evolution of endothermy and also the phenotypic flexibility that the species have in terms of climate change scenarios.

Professor Downs has an interdisciplinary approach to her research and her outputs reflect this. In terms of ecology and conservation, she and her students have made contributions to the understanding of and conservation of several endangered species as well as contributed to the management of several species and of protected areas.

Some of their findings have been novel and include folivory in mousebirds, heterothermy in passerines, no crop in sunbirds, use of airbags in hornbill nestlings and the body temperature of leopard tortoises, tree-rats and Nile Crocodiles. Others were more practical such as pelican, oribi and parrot conservation.

Of her 132 published papers up to 2010, about 27 percent relate to vertebrate dietary aspects including water and energy turnover – especially frugivory and nectarivory; about 26% to aspects of vertebrate thermal biology including those that relate to thermoregulation and behaviour; about 43% to vertebrate conservation and ecology and about 7% to science education.

Another major contribution by Professor Downs has been in the development of research capacity, particularly at both undergraduate and graduate levels. She has supervised more than 60 postgraduate students, reviewed numerous papers for a broad range of international journals and examined theses for both UKZN and other universities. Her fostering of human capacity development continues with her sourcing monies for undergraduate vacation apprenticeship.

She is on the editorial boards and committees of various scientific bodies and has participated in review panels. Professor Downs presented a plenary at the 2010 Frugivory and Seed Dispersal Symposium in France and is convening the 2015 conference in South Africa.

Professor Downs has organised the annual national Cape Parrot Counting Day for the past 13 years. This has involved liaising with public volunteers nationally (about 300 people), producing reports, magazine articles, and making public presentations. She is currently the Chairperson of the Cape Parrot Working Group based at UKZN.
### TOP PUBLISHED POSITIONS 2010

<table>
<thead>
<tr>
<th>NO</th>
<th>TITLE</th>
<th>INITIALS</th>
<th>FIRST NAME</th>
<th>SURNAME</th>
<th>FACULTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professor</td>
<td>J</td>
<td>Johannes</td>
<td>Van Staden</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>2</td>
<td>Professor</td>
<td>SD</td>
<td>Steven</td>
<td>Dene Johnson</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>3</td>
<td>Professor</td>
<td>CJ</td>
<td>Christopher</td>
<td>John Ballantine</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>4</td>
<td>Professor</td>
<td>CT</td>
<td>Colleen</td>
<td>Therma Downs</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>5</td>
<td>Professor</td>
<td>U</td>
<td>Urmi</td>
<td>Bob</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>6</td>
<td>Professor</td>
<td>IA</td>
<td>Isabel</td>
<td>Apawo Phiri</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>7</td>
<td>Professor</td>
<td>KG</td>
<td>Keyari</td>
<td>Tomaselli</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>8</td>
<td>Dr</td>
<td>T</td>
<td>Thavendran</td>
<td>Govender</td>
<td>Health Sciences</td>
</tr>
<tr>
<td>9</td>
<td>Dr</td>
<td>GEM</td>
<td>Glenn</td>
<td>Eamonn Mitchell Maguire</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>10</td>
<td>Professor</td>
<td>GO</td>
<td>Gerald</td>
<td>Oakley West</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>11</td>
<td>Dr</td>
<td>HG</td>
<td>Hendrik</td>
<td>Gerhardus Kruger</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>12</td>
<td>Mr</td>
<td>BC</td>
<td>Bhim</td>
<td>Charan Meikap</td>
<td>Academic Support</td>
</tr>
<tr>
<td>13</td>
<td>Professor</td>
<td>P</td>
<td>Precious</td>
<td>Sibanda</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>14</td>
<td>Professor</td>
<td>F</td>
<td>Francesco</td>
<td>Petruccione</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>15</td>
<td>Professor</td>
<td>D</td>
<td>Deevia</td>
<td>Bhana</td>
<td>Education</td>
</tr>
<tr>
<td>16</td>
<td>Professor</td>
<td>NR</td>
<td>Neil</td>
<td>Crouch</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>17</td>
<td>Professor</td>
<td>D</td>
<td>Deresh</td>
<td>Ramjugernath</td>
<td>Engineering</td>
</tr>
<tr>
<td>18</td>
<td>Professor</td>
<td>S</td>
<td>Sabine</td>
<td>Marschall</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>18</td>
<td>Professor</td>
<td>PMBR</td>
<td>Philippe Marie Berth Denis</td>
<td>Humans</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Professor</td>
<td>DJ</td>
<td>David Jan</td>
<td>McQuoid-Mason</td>
<td>Law</td>
</tr>
<tr>
<td>18</td>
<td>Professor</td>
<td>DJ</td>
<td>David Jon</td>
<td>Spurrett</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
</tbody>
</table>

### TOP PUBLISHED RESEARCHERS

<table>
<thead>
<tr>
<th>NO</th>
<th>TITLE</th>
<th>INITIALS</th>
<th>FIRST NAME</th>
<th>SURNAME</th>
<th>FACULTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Mr</td>
<td>M</td>
<td>Maximillian</td>
<td>Du Plessis</td>
<td>Law</td>
</tr>
<tr>
<td>19</td>
<td>Dr</td>
<td>FB</td>
<td>Fathel-Rahman Babike Ahmed</td>
<td>Science &amp; Agriculture</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Professor</td>
<td>MJ</td>
<td>Michael</td>
<td>John Savage</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>20</td>
<td>Professor</td>
<td>ML</td>
<td>Marie</td>
<td>Louise Newell</td>
<td>Health Sciences</td>
</tr>
<tr>
<td>21</td>
<td>Professor</td>
<td>DM</td>
<td>David</td>
<td>Mercer Ward</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>22</td>
<td>Professor</td>
<td>FN</td>
<td>Frederick</td>
<td>Noel</td>
<td>Zaal</td>
</tr>
<tr>
<td>22</td>
<td>Professor</td>
<td>VG</td>
<td>Valentin Goutev</td>
<td>Gutev</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>22</td>
<td>Professor</td>
<td>R</td>
<td>Radhamany</td>
<td>Sooryamoorthy</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>23</td>
<td>Professor</td>
<td>R</td>
<td>Renzo</td>
<td>Perissinotto</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>24</td>
<td>Professor</td>
<td>RM</td>
<td>Robert</td>
<td>Mervyn Gous</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>25</td>
<td>Professor</td>
<td>S</td>
<td>Solar</td>
<td>Lingham-Solar</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>26</td>
<td>Professor</td>
<td>M</td>
<td>Maurice</td>
<td>Mars</td>
<td>Nelson R Mandela School of Medicine</td>
</tr>
<tr>
<td>26</td>
<td>Dr</td>
<td>P</td>
<td>Peter</td>
<td>Vadasz</td>
<td>Engineering</td>
</tr>
<tr>
<td>27</td>
<td>Professor</td>
<td>MR</td>
<td>Michael Richard</td>
<td>Perrin</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>28</td>
<td>Professor</td>
<td>TE</td>
<td>Thandinkosi Enos Madiba</td>
<td>Nelson R Mandela School of Medicine</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Mr</td>
<td>MC</td>
<td>Michael Cameron</td>
<td>Wood-Bodley</td>
<td>Law</td>
</tr>
<tr>
<td>29</td>
<td>Professor</td>
<td>SV</td>
<td>Shannon</td>
<td>Voigt</td>
<td>Hector</td>
</tr>
<tr>
<td>29</td>
<td>Dr</td>
<td>S</td>
<td>Sarojini</td>
<td>Nadar</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>29</td>
<td>Professor</td>
<td>PM</td>
<td>Patrick Martin</td>
<td>Bond</td>
<td>Humanities, Development &amp; Social Sciences</td>
</tr>
<tr>
<td>30</td>
<td>Professor</td>
<td>SB</td>
<td>Sreekantha Babu</td>
<td>Jonnalagadda</td>
<td>Science &amp; Agriculture</td>
</tr>
<tr>
<td>SURNAME</td>
<td>INITIALS</td>
<td>QUALIFICATION</td>
<td>THESIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>---------------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reid</td>
<td>SJ</td>
<td>Doctor of Philosophy (Education)</td>
<td>Education for rural medical practice.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forde</td>
<td>RD</td>
<td>Doctor of Philosophy (Education)</td>
<td>Minds and hearts: Exploring the teacher’s role as a leader of pupils in a class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ram</td>
<td>A</td>
<td>Doctor of Philosophy (Education)</td>
<td>Speaking hands and silent voices: Exploring the identities of deaf teachers through narratives in motion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maharajh</td>
<td>LR</td>
<td>Doctor of Philosophy (Education)</td>
<td>The Bhagavath Gita for values education in Life Orientation: Perception and possibilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motalingane-Khau</td>
<td>CSM</td>
<td>Doctor of Philosophy (Education)</td>
<td>Women teachers talk sex: A gendered analysis of women teachers’ experiences of teaching sexuality education in rural schools in the age of HIV and AIDS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nkosi</td>
<td>ZP</td>
<td>Doctor of Philosophy (Education)</td>
<td>Ucwaningo IsukuHlela ukufundiswa okukufunda okulhawhe emabangi eyaphansi esZulu ulimi kusekhoeya ezikoleni zaseMazi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habineza</td>
<td>F</td>
<td>Doctor of Philosophy (Education)</td>
<td>Developing first year Mathematics student teachers’ understanding of the concepts of the definite and the indefinite integrals and their link through the fundamental theorem of calculus: An action research project in Rwanda.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naidoo</td>
<td>J</td>
<td>Doctor of Philosophy (Education)</td>
<td>Exploring master teachers’ use of visuals as tools in mathematics classrooms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singh-Pillay</td>
<td>A</td>
<td>Doctor of Philosophy (Education)</td>
<td>An exploration of the interface between schools and industry in respect of the development of skill, knowledge, attitudes and values (SKAVs) in the context of biotechnology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbeek</td>
<td>DC</td>
<td>Doctor of Philosophy (Education)</td>
<td>Teaching reading for meaning? A case study of the initial teaching of reading in a mainstream South African school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powell</td>
<td>PA</td>
<td>Doctor of Philosophy (Education)</td>
<td>A critical investigation into curriculum development discourses of academic staff at a South African University of Technology.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACULTY OF HUMANITIES, DEVELOPMENT AND SOCIAL SCIENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diang’a</td>
</tr>
</tbody>
</table>
### DOCTORAL GRADUATES - 2010

#### FACULTY OF HUMANITIES, DEVELOPMENT AND SOCIAL SCIENCES

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govender</td>
<td>GB</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>An evaluation of housing strategy in South Africa for the creation of sustainable human settlements: A case study of the eThekwini region.</td>
</tr>
<tr>
<td>Desai</td>
<td>SA</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Stakeholder perceptions of ecotourism impacts and management issues in relation to private game parks: Case studies of the Ekwini Private Park and Tala Private Park in KwaZulu-Natal, South Africa.</td>
</tr>
<tr>
<td>Ntsele</td>
<td>SG</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>A gendered perspective on women and SMME development in the eThekwini Municipality region.</td>
</tr>
<tr>
<td>Houghton</td>
<td>JA</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Understanding the relationship between neoliberalism and the negotiation of urban development imperatives within public-private partnerships in Durban.</td>
</tr>
<tr>
<td>Ademola-Adeoye</td>
<td>FF</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>A cross-linguistic analysis of finite raising constructions.</td>
</tr>
<tr>
<td>Altman</td>
<td>ME</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Traditional views on embodiment: A cognitive semantic analysis of terminology in indigenous medical systems.</td>
</tr>
<tr>
<td>Ngcobo</td>
<td>S</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>An investigation of first-year students’ attitudes towards bilingual education and impact of a dual-medium vocabulary course into home language attitudes and English acquisition at Mangosuthu Technical.</td>
</tr>
<tr>
<td>Kirby-Hirst</td>
<td>MA</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Simulacrum, Paragon, Holy Man: Fundamentalist Perspectives in the Writings of Rainbow Phalatsethe.</td>
</tr>
<tr>
<td>Moolman</td>
<td>JP</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Autobiography of Bone: An original cycle of dramatic poems researching the problematics of a reconstitualisation of the formal boundaries between the genres of poetry and drama.</td>
</tr>
<tr>
<td>Robinson</td>
<td>JE</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Dawnsphising the music of education.</td>
</tr>
<tr>
<td>Delis</td>
<td>AM</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>The behaviour and development of infants with iron deficiency anaemia: Systematic observation of nine-month-old Pemban caregiver-infant dyads.</td>
</tr>
<tr>
<td>Lamprecht</td>
<td>NC</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Representasies van Nederlands-kontakte met Kusbeeswers van Afrika, 1475-1652.</td>
</tr>
</tbody>
</table>

#### DOCTORAL GRADUATES - 2010

#### FACULTY OF HUMANITIES, DEVELOPMENT AND SOCIAL SCIENCES

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mlombe</td>
<td>MG</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>The Indigenous Knowledge Systems based on religion and healing as encapsulated in OEH-M Nkunlu and LBZ Buthelezi’s poetry.</td>
</tr>
<tr>
<td>Okyere-Manu</td>
<td>BD</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Shattering the Glass Ceiling: A critical feminist investigation of the ethical challenges faced by women in Black Economic Empowerment (BEE).</td>
</tr>
<tr>
<td>Hardy</td>
<td>RM</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>A phenomenological investigation into the lived experiences of South African primary caregivers attending to family members with traumatic brain injuries.</td>
</tr>
<tr>
<td>Ndebele</td>
<td>PM</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>A study of trial participants’ understanding and attitudes towards randomisation, double-blinding and placebo use, and a pilot intervention in a microbiotide trial in Malawi.</td>
</tr>
<tr>
<td>Quayle</td>
<td>MF</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>An investigation of stereotype activation and stereotype activation effects from the perspective of the social identity tradition.</td>
</tr>
<tr>
<td>Dikole</td>
<td>CN</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>A quest for a literacy learning ethos: A case study of the Women’s Associations in the United Congregational Church of Southern Africa.</td>
</tr>
<tr>
<td>Moore</td>
<td>JT</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Theological Education in the Lesotho Evangelical Church: A descriptive analysis.</td>
</tr>
<tr>
<td>Mwankhi</td>
<td>LM</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>God’s image or man’s glory?: A Kenyan postcolonial feminist reading of 1 Corinthians 11:1-16.</td>
</tr>
<tr>
<td>Nyirumana</td>
<td>E</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>The tribal dimension in the division of the Kingdom of Israel: A contextual study of 1 Kings 12:1-24 from the perspective of the struggle for National Unity in Rwanda.</td>
</tr>
<tr>
<td>Ógulve</td>
<td>KA</td>
<td>Doctor of Philosophy (Human Sciences)</td>
<td>Breaking words: Towards a Malayse oral theology of homiletics.</td>
</tr>
</tbody>
</table>
## DOCTORAL GRADUATES - 2010

### FACULTY OF MANAGEMENT STUDIES

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul</td>
<td>L</td>
<td>Doctor of Administration</td>
<td>The level of and relationship between job insecurity and locus of control in an environment undergoing major restructuring</td>
</tr>
<tr>
<td>Dayaram</td>
<td>V</td>
<td>Doctor of Administration (Public Administration and Development Management)</td>
<td>Organisational Culture and Values in the South African Social Security Agency (SASSA): A Batho Pele Perspective</td>
</tr>
<tr>
<td>van der Watt</td>
<td>PG</td>
<td>Doctor of Administration (Public Administration and Development Management)</td>
<td>Implementation of the Integrated Quality Management System Policy in Public Schools in the UGU District</td>
</tr>
<tr>
<td>Maharaj</td>
<td>D</td>
<td>Doctor of Administration (Public Administration and Development Management)</td>
<td>Factors Impacting on Good Governance: A Case Study of Service Delivery in Child Abuse within the Ethekwini Municipal District of KwaZulu-Natal</td>
</tr>
<tr>
<td>Malarieva</td>
<td>MM</td>
<td>Doctor of Administration (Public Administration and Development Management)</td>
<td>Policy Considerations for the Management of Informal Businesses in a Fast Growing City: A Case Study of Pokotlane Municipality</td>
</tr>
<tr>
<td>Singh</td>
<td>D</td>
<td>Doctor of Administration (Public Administration and Development Management)</td>
<td>Performance Management System for Senior Managers in the Public Service: A Case Study of the KwaZulu-Natal Department of Education</td>
</tr>
<tr>
<td>Mphohe</td>
<td>Z</td>
<td>Doctor of Administration</td>
<td>Multipurpose Community Centres as the Primary Vehicle in Service Delivery: Trends and Challenges</td>
</tr>
<tr>
<td>Behantial</td>
<td>R</td>
<td>Doctor of Business Administration</td>
<td>The Perceived Strategic Value of Electronic Commerce among SMME’s in South Africa: A Strategic Management Perspective</td>
</tr>
<tr>
<td>Naong</td>
<td>MN</td>
<td>Doctor of Business Administration</td>
<td>The impact of skills development training on employee motivation, perceptions of organisational climate and individual performance.</td>
</tr>
<tr>
<td>Carrasco</td>
<td>NK</td>
<td>Doctor of Philosophy (Science)</td>
<td>Zooplankton Dynamics and Ecophysiology in the St Lucia Estuary, with Emphasis on the Dominant Mysid of Mesopodopsis africana</td>
</tr>
<tr>
<td>Floros</td>
<td>C</td>
<td>Doctor of Philosophy (Science)</td>
<td>An Evaluation of Coral Reef Fish Communities in South African Marine Protected Areas</td>
</tr>
<tr>
<td>MacDonald</td>
<td>AHH</td>
<td>Doctor of Philosophy (Science)</td>
<td>Connectivity of Two Scleractinian Corals in the South West Indian Ocean</td>
</tr>
<tr>
<td>Morgan</td>
<td>SR</td>
<td>Doctor of Philosophy (Science)</td>
<td>Black Rhinoceros (Diceros bicornis) Habitat Selection and Movement Analysis</td>
</tr>
<tr>
<td>Naidoo</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>Quantifying and Modelling the Effects of Environmental Factors on Wood Eucalyptus Grandis in South Africa</td>
</tr>
<tr>
<td>Naidoo</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>Germplasm conservation of species producing recalcitrant seeds</td>
</tr>
<tr>
<td>Shawk</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>In Vitro Studies and Phytochemical Analysis in Lessertia Frutescens (Fabaceae)</td>
</tr>
<tr>
<td>Bux</td>
<td>M</td>
<td>Doctor of Philosophy (Science)</td>
<td>Oxidative Deterioration of n-Octane using Vanadium Based Hydrotalcite-Like Compounds</td>
</tr>
<tr>
<td>Chalkia</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>Synthesis of Polyhydroxyproline (THQ) Ligands and their Applications in Asymmetric Catalysis</td>
</tr>
</tbody>
</table>

### FACULTY OF SCIENCE AND AGRICULTURE

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ekhardtla</td>
<td>EA</td>
<td>Doctor of Philosophy (Science)</td>
<td>On the Activation of n-Octane using Vanadium-Magnesium Oxide Catalysts</td>
</tr>
<tr>
<td>Jali</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>The Effect of Mo(CO)6 as a Cocatalyst in the Carbonylation of Methanol to Methyl Formate Catalyzed by Potassium Methoxide under CO2, Syngas and H2 Atmospheres</td>
</tr>
<tr>
<td>Nadugali</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>Studies on the hypochlorite generation from seawater, and its application in effluent treatment.</td>
</tr>
<tr>
<td>Naicker</td>
<td>T</td>
<td>Doctor of Philosophy (Science)</td>
<td>Activation of n-Hexane using Vanadium Exchanged Zeolites</td>
</tr>
<tr>
<td>Onapile</td>
<td>OK</td>
<td>Doctor of Philosophy (Science)</td>
<td>Design, Synthesis and Pharmaceutical Application of Novel Polymeric Cage Diarnines</td>
</tr>
<tr>
<td>Pillay</td>
<td>L</td>
<td>Doctor of Philosophy (Science)</td>
<td>Distribution and Speciation of Metals in the Isipingo Estuarine System, South Africa</td>
</tr>
<tr>
<td>Van Rynveld</td>
<td>E</td>
<td>Doctor of Philosophy (Science)</td>
<td>Hydrogenolysis of Glycol to Lower Alcohols</td>
</tr>
<tr>
<td>Vreni</td>
<td>S</td>
<td>Doctor of Philosophy (Science)</td>
<td>Bi-Modal Biometrics Authentication Based on Iris and Signature</td>
</tr>
<tr>
<td>Scott</td>
<td>GM</td>
<td>Doctor of Philosophy (Science)</td>
<td>Development of a Methodology for the Delineation of Air Quality Management Areas in South Africa</td>
</tr>
<tr>
<td>Thambiran</td>
<td>T</td>
<td>Doctor of Philosophy (Science)</td>
<td>The Integration of Climate Change Considerations into Local Air Quality Management Plans in South Africa</td>
</tr>
<tr>
<td>Clarke</td>
<td>BM</td>
<td>Doctor of Philosophy (Science)</td>
<td>Detemination of the Contact Aureole and Marginal Bushveld Complex Rocks in the Seepoint Area</td>
</tr>
<tr>
<td>Vcrente</td>
<td>EM</td>
<td>Doctor of Philosophy (Science)</td>
<td>Aspects of the Engineering Geology of Maputo City, Mozambique</td>
</tr>
<tr>
<td>Goverinder</td>
<td>G</td>
<td>Doctor of Philosophy (Science)</td>
<td>Relativistic Radiating Stars with Generalised Atmospheres</td>
</tr>
<tr>
<td>Mataldi</td>
<td>M</td>
<td>Doctor of Philosophy (Science)</td>
<td>Singularity and Symmetry Analyses for HIV-TB Coinfection</td>
</tr>
<tr>
<td>Kweyama</td>
<td>MC</td>
<td>Doctor of Philosophy (Science)</td>
<td>Analysis of Shear-Free Spherically Symmetric Charged Relativistic Fluids</td>
</tr>
<tr>
<td>Moser</td>
<td>AM</td>
<td>Doctor of Philosophy (Science)</td>
<td>Application of Lie Symmetries to Gravitating Fluids</td>
</tr>
<tr>
<td>Warne</td>
<td>RR</td>
<td>Doctor of Philosophy (Science)</td>
<td>The Thermal Sunyaev-Zel’dovich Effect: A Probe of Cluster Physics and Cosmology</td>
</tr>
<tr>
<td>Baluku</td>
<td>TK</td>
<td>Doctor of Philosophy (Science)</td>
<td>Studies of Linear and Nonlinear Acoustic Waves in Space Plasmas</td>
</tr>
<tr>
<td>Ndikheani</td>
<td>DC</td>
<td>Doctor of Philosophy (Science)</td>
<td>Ultra Low Frequency (ULF) Waves Observed at Mid to Low Latitudes During Daytime Using Low Earth Orbit (LEO) Satellite and Ground-Based Data</td>
</tr>
<tr>
<td>Caister</td>
<td>NC</td>
<td>Doctor of Philosophy (Science)</td>
<td>Group Analysis of Financial Derivatives</td>
</tr>
<tr>
<td>Mutenje</td>
<td>MJ</td>
<td>Doctor of Philosophy (Science)</td>
<td>Rural livelihoods in South-Eastern Zimbabwe: The impact of HIV/AIDS on the use and management of non-timber forestry products</td>
</tr>
<tr>
<td>Dugmore</td>
<td>TJ</td>
<td>Doctor of Philosophy (Science)</td>
<td>The Effect of Nitrogen Fertilisation and Stage of Regrowth on the Nutritional Value of Kikuyu in the Midlands of KwaZulu-Natal</td>
</tr>
</tbody>
</table>
## DOCTORAL GRADUATES - 2010

### FACULTY OF SCIENCE AND AGRICULTURE

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION (SCIENCE)</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyler</td>
<td>NC</td>
<td>Doctor of Philosophy</td>
<td>The Photoperiodic Response of Male Breeder Breeding</td>
</tr>
<tr>
<td>Donaldson</td>
<td>RA</td>
<td>Doctor of Philosophy</td>
<td>Seasonal effects on the potential biomass and sucrose accumulation of some commercial cultivars of sugarcane</td>
</tr>
<tr>
<td>Mare</td>
<td>RM</td>
<td>Doctor of Philosophy</td>
<td>Taro (Colocasia esculenta L. Schott) yield and quality in response to planting date and organic fertilization</td>
</tr>
<tr>
<td>Sesepe</td>
<td>BM</td>
<td>Doctor of Philosophy</td>
<td>The impact of home gardens on dietary diversity, nutrient intake and nutritional status of pre-school children in the Vaal Triangle, Johannesburg, South Africa</td>
</tr>
<tr>
<td>Blakeny</td>
<td>RJ</td>
<td>Doctor of Philosophy</td>
<td>Management of Avocado Postharvest Physiology</td>
</tr>
<tr>
<td>Chulele</td>
<td>RM</td>
<td>Doctor of Philosophy</td>
<td>Breeding Cowpea (Vigna unguiculata) for Improved Drought Tolerance in Mozambique</td>
</tr>
<tr>
<td>Fato</td>
<td>P</td>
<td>Doctor of Philosophy</td>
<td>Investigation of Heterotic Patterns and Genetic Analysis of Downy Mildew Resistance in Mozambican Lowland Maize Germplasm</td>
</tr>
<tr>
<td>Kasheenge-Kilengo</td>
<td>SSK</td>
<td>Doctor of Philosophy</td>
<td>Breeding Investigations for salt tolerance in rice incorporating characterisation of salt affected soils and farmers’ perceptions and preferences for tolerant cultivars in North-Eastern Tanzania</td>
</tr>
<tr>
<td>Kimani</td>
<td>JM</td>
<td>Doctor of Philosophy</td>
<td>Pigeon Peas</td>
</tr>
<tr>
<td>Naidoo</td>
<td>R</td>
<td>Doctor of Philosophy</td>
<td>Identification of molecular markers linked to maize streak virus, quality protein maize and low phytic acid in maize</td>
</tr>
<tr>
<td>Ojwang</td>
<td>PP</td>
<td>Doctor of Philosophy</td>
<td>Genetic Studies on Host-plant Resistance to Bean Fly (Ophomyia spp) and seed yield in Common Bean (Phaseolus Vulgaris) under Semi-Arid Conditions</td>
</tr>
<tr>
<td>Tignere</td>
<td>JB</td>
<td>Doctor of Philosophy</td>
<td>Genetic Study of Cowpea (Vigna unguiculata (L. Walp.) Resistance to Stiga geniculata (wild.) Vathe in Bunkina Faso</td>
</tr>
<tr>
<td>Pilley</td>
<td>D</td>
<td>Doctor of Philosophy</td>
<td>The identification and characterisation of novel pathogenic factors of Trypanosoma congolense</td>
</tr>
<tr>
<td>Ramsuran</td>
<td>V</td>
<td>Doctor of Philosophy</td>
<td>Genetic/epigenetic determinants in chemokines and chemokine receptor genes that influence HIV susceptibility in a cohort of high-risk women from South Africa</td>
</tr>
<tr>
<td>Okudoh</td>
<td>VI</td>
<td>Doctor of Philosophy</td>
<td>Isolation and characterisation of antibiotic(s) produced by bacteria from KwaZulu-Natal soils</td>
</tr>
<tr>
<td>Brown</td>
<td>M</td>
<td>Doctor of Philosophy</td>
<td>Nectar preferences of specialist and occasional avian nectarivores, and their role in the evolution of floral traits</td>
</tr>
<tr>
<td>Mwabu</td>
<td>T</td>
<td>Doctor of Philosophy</td>
<td>Revision of the taxonomy and distribution of the African Milipede Genus Bicoides, Spirostreptus, Plagiostreptus and Archispirostreptus (Diplipodopila, Spirostreptida, Spirostreptidae)</td>
</tr>
<tr>
<td>Nangammbi</td>
<td>TC</td>
<td>Doctor of Philosophy</td>
<td>Systematics of the Phasianellidae in southern Africa (Mollusca: Gastropoda: Vetigastropoda)</td>
</tr>
<tr>
<td>Wilson</td>
<td>A</td>
<td>Doctor of Philosophy</td>
<td>Aspects of the thermal physiology and fruit digestion of Kynana (Tauraco corythina) and Purple-crested (Gallinex priapus priapus) Turacos</td>
</tr>
<tr>
<td>Ghebrehiwet</td>
<td>HM</td>
<td>Doctor of Philosophy</td>
<td>The role of fire and fire-related factors on seed germination and growth of grassland species</td>
</tr>
</tbody>
</table>

### DOCTORAL GRADUATES - 2010

### FACULTY OF SCIENCE AND AGRICULTURE

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION (SCIENCE)</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kambatuku</td>
<td>JR</td>
<td>Doctor of Philosophy</td>
<td>Ecophysiological impacts of competition on bush-enroaching Acacia mellifera trees</td>
</tr>
<tr>
<td>Abdillahi</td>
<td>HS</td>
<td>Doctor of Philosophy</td>
<td>The ethnobotany and pharmacological screening of South African Podocarpus species</td>
</tr>
<tr>
<td>Shuttleworth</td>
<td>A</td>
<td>Doctor of Philosophy</td>
<td>Ecology and evolution of the specialised Hemipepsis wasp (Hymenoptera: Pompilidae) pollination guild in southern Africa</td>
</tr>
<tr>
<td>Matchett</td>
<td>KJ</td>
<td>Doctor of Philosophy</td>
<td>Recovery, resilience and stability of piosphere systems in the Kruger National Park</td>
</tr>
<tr>
<td>Riddell</td>
<td>ES</td>
<td>Doctor of Philosophy</td>
<td>Characterisation of the hydrological processes and responses to rehabilitation of a headwater wetland of the Sand River, South Africa</td>
</tr>
<tr>
<td>Akerman</td>
<td>MP</td>
<td>Doctor of Philosophy</td>
<td>Structural, Physical and Biological Studies of Gold(I)I1 Bio(Pyrrolide-Imin) Schiff Base Complexes: Potential Chemotherapeutic Agents</td>
</tr>
<tr>
<td>Litlue</td>
<td>EM</td>
<td>Doctor of Philosophy</td>
<td>Progress towards the stereoselective synthesis of cycleneine</td>
</tr>
<tr>
<td>Khumalo</td>
<td>BJ</td>
<td>Doctor of Philosophy</td>
<td>The Relationship between Agency and Empowerment: A case study of the ilikheo Craft Group</td>
</tr>
<tr>
<td>Adam</td>
<td>EMI</td>
<td>Doctor of Philosophy</td>
<td>The remote sensing of Papyrus vegetation (Cyperus papyrus L) in swamp wetlands of South Africa</td>
</tr>
<tr>
<td>Escott</td>
<td>BJ</td>
<td>Doctor of Philosophy</td>
<td>An investigation, using synchrotron radiation and other techniques, of the composition of San rock art paints and excavated pigments from Maqonqo Shelter, and comparative paint data from three other sites in KwaZulu-Natal, South Africa</td>
</tr>
<tr>
<td>Tchoukouegno Ngnotchouayi</td>
<td>JM</td>
<td>Doctor of Philosophy</td>
<td>Conservation Laws Models in Networks and Multiscale Flow Optimisation</td>
</tr>
<tr>
<td>Maqutu</td>
<td>DM</td>
<td>Doctor of Philosophy</td>
<td>Statistical methods for longitudinal binary data structure with applications to antiretroviral medication adherence</td>
</tr>
</tbody>
</table>

### FACULTY OF ENGINEERING

<table>
<thead>
<tr>
<th>SURNAME</th>
<th>INITIALS</th>
<th>QUALIFICATION (ENGINEERING)</th>
<th>THESIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rathal</td>
<td>S</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Modelling of a vibration plate extraction column</td>
</tr>
<tr>
<td>Olechinski</td>
<td>PK</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Clear-air radiometric modelling for terrestrial line-of-sight links for Southern Africa</td>
</tr>
<tr>
<td>Olechinski</td>
<td>MO</td>
<td>Doctor of Philosophy in Engineering</td>
<td>A semi-empirical formulation for determination of rain attenuation on terrestrial radio links</td>
</tr>
<tr>
<td>Owolawi</td>
<td>PA</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Characteristics of rain at microwave and millimetric bands for terrestrial and satellite links attenuation in South Africa and surrounding islands</td>
</tr>
<tr>
<td>Oyemide</td>
<td>OO</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Channel estimation for SSO and MIMO-OFDM communication systems</td>
</tr>
<tr>
<td>Van Der Merwe</td>
<td>J</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Security mechanisms for distributed communications systems</td>
</tr>
<tr>
<td>Stoforth</td>
<td>R</td>
<td>Doctor of Philosophy in Engineering</td>
<td>Contraband arms elevating search and rescue (CAESAR) robot - improvements and modifications for urban search and rescue (USAR) robots</td>
</tr>
</tbody>
</table>

### UKZN Research Report 2010
### Research Grants & Contracts - 2010
(Exceeding R100 000)

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigby, Bruce Spencer</td>
<td>Real Time Tests of Transformer and Distance Protection Relays, A Real Time Model Development of Dynamic Controllers.</td>
<td>Eskom</td>
<td>R 125,000</td>
</tr>
<tr>
<td>Smithers, Jeffrey Colin</td>
<td>Refinement and Implementation of Improvement Processes to the Integrated Sugarcane Supply and Processing System.</td>
<td>South African Sugarcane Research Institute</td>
<td>R 1,074,282</td>
</tr>
<tr>
<td>Smithers, Jeffrey Colin</td>
<td>Integrated Modelling for Water Resource Planning and Operational Management.</td>
<td>Water Research Commission</td>
<td>R 2,300,000</td>
</tr>
<tr>
<td>Ghaffari, Mohammad</td>
<td>Research Work for Electrical Power and Energy.</td>
<td>Eskom</td>
<td>R 1,205,000</td>
</tr>
<tr>
<td>Schulze, Roland Edgar</td>
<td>Hydrological Modelling in the Waterberg Catchment Area; Climate Change impacts on Water Resources in the Waterberg.</td>
<td>Eskom</td>
<td>R 500,000</td>
</tr>
<tr>
<td>Buckley, Christopher Andrew</td>
<td>Co-digestion of Sewage Sludge and Industrial Concentrates.</td>
<td>Water Research Commission</td>
<td>R 1,050,000</td>
</tr>
<tr>
<td>Buckley, Christopher Andrew</td>
<td>Evaluation of the Dwats Process for Decentralised Wastewater Treatment.</td>
<td>Water Research Commission</td>
<td>R 300,000</td>
</tr>
<tr>
<td>Lumsden, Trevor Graeme</td>
<td>Projected Impacts of Climate Change on Water Quantity and Quality in the Mgeni Catchment.</td>
<td>Water Research Commission</td>
<td>R 1,492,000</td>
</tr>
<tr>
<td>Jewitt, Graham Paul Wyndham</td>
<td>A real-time web application pilot project to assess the Water Use Efficiency of Grape Growers in the Western Cape.</td>
<td>Department of Agriculture - Western Cape</td>
<td>R 764,500</td>
</tr>
<tr>
<td>Jewitt, Graham Paul Wyndham</td>
<td>Evapotranspiration from the Nkazana Swamp.</td>
<td>Council for Scientific and Industrial Research</td>
<td>R 280,000</td>
</tr>
<tr>
<td>Jewitt, Graham Paul Wyndham</td>
<td>Guidelines for Irrigation Management in Pasture Production.</td>
<td>Council for Scientific and Industrial Research</td>
<td>R 350,000</td>
</tr>
<tr>
<td>Jewitt, Graham Paul Wyndham</td>
<td>The Effect of Agroforestry Species on Soil Moisture.</td>
<td>Council for Scientific and Industrial Research</td>
<td>R 120,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>R 12,790,782</td>
</tr>
</tbody>
</table>
**RESEARCH GRANTS & CONTRACTS - 2010**

**FACULTY OF SCIENCE AND AGRICULTURE**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongsona, Pongranyi</td>
<td>Development of Base Germplasm of Grain Sorghums for Improved Productivity in Agricultural Systems in Africa</td>
<td>Alliance for a Green Revolution in Africa</td>
<td>R 1,134,975</td>
</tr>
<tr>
<td>Friedrich, Holger Bernhard</td>
<td>FRIEDRICH H - RESEARCH ORDER 1 – Fadalle Mohammed, Cwele Thandarani</td>
<td>Mintek</td>
<td>R 640,000</td>
</tr>
<tr>
<td>Kirkman, Kevin Peter</td>
<td>Convergence and Contingencies in Savanna Grasslands.</td>
<td>Colorado State University</td>
<td>R 175,350</td>
</tr>
<tr>
<td>Munro, Orde Quentin</td>
<td>MUNRO MINTEK RESEARCH ORDER 10 – Santham Govender, Roseanne C. Saimond, Matthew Akerman, Malcolm Bartlett.</td>
<td>Mintek</td>
<td>R 531,300</td>
</tr>
<tr>
<td>Pillay, Balakrishna</td>
<td>An Investigation into the Link between Water Quality and Microbiological Safety of Fruit and Vegetables from the Farming to the Processing Stages of Production and Marketing - WRC K5/1875.</td>
<td>University of Pretoria</td>
<td>R 172,625</td>
</tr>
<tr>
<td>Mucchana, Maxwell</td>
<td>Farmer Support Group:</td>
<td>Oceania Australia</td>
<td>R 309,700</td>
</tr>
<tr>
<td>Rigby, Bruce Spencer</td>
<td>Research Report 8004.13 for Project Title: Real-Time Simulations of the Transmission Network using the RTDS simulator for protection relay mal-operation as well as protection settings.</td>
<td>Eskom</td>
<td>R 208,380</td>
</tr>
<tr>
<td>Scharler, Ursula Michaela</td>
<td>River Influenced Bays and Bights (RIBBS) Project PhD Supervision and Support.</td>
<td>Council for Scientific and Industrial Research</td>
<td>R 136,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>R 4,076,751</td>
</tr>
</tbody>
</table>

**COLLEGE OF HUMANITIES**

**FACULTY OF HUMANITIES, DEVELOPMENT & SOCIAL SCIENCES**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>May, Julian Douglas</td>
<td>A Socio-Economic Impact Assessment of the Local Competitiveness Fund’s Implementation Projects Under the Gijima KZN LED Support Programme.</td>
<td>KZN Department of Economic Development &amp; Tourism</td>
<td>R 2,886,000</td>
</tr>
<tr>
<td>Sutherland, Catherine Grace</td>
<td>Promoting a Green Economy.</td>
<td>Department of Economic Development</td>
<td>R 949,223</td>
</tr>
<tr>
<td>Valodisa, Inman Abdul Kader</td>
<td>Rapid Qualitative Assessment to Inform the WDR on Gender Equality and Development (WDR 2012).</td>
<td>The World Bank Group</td>
<td>R 276,791</td>
</tr>
<tr>
<td>Bonne, Deborah Rosemary</td>
<td>The Study on Mapping Exercise of Policies and Programmes on HIV/AIDS in the City of Durban, South Africa.</td>
<td>UNESCO International Institute for Capacity Building in Africa</td>
<td>R 47,376</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>R 4,449,070</td>
</tr>
</tbody>
</table>

**FACULTY OF SOCIAL SCIENCES**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 366,095</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 245,492</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 2,400,390</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>R 9,260,284</td>
</tr>
</tbody>
</table>

**FACULTY OF EDUCATION**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wedekind, Volker Ralf</td>
<td>Project on FET Colleges and the Implementation of the National Curriculum (Vocational).</td>
<td>South African Qualifications Authority</td>
<td>R 1,460,000</td>
</tr>
<tr>
<td>Madaly, Vimalan</td>
<td>Enhancing Secondary Mathematics Teacher Education: Collaborative partnership with SUNY-Buffalo.</td>
<td>State University of New York</td>
<td>R 844,200</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>R 2,304,200</td>
</tr>
</tbody>
</table>

**COLLEGE OF HEALTH SCIENCES**

**FACULTY OF MEDICINE**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maguila, Nombuleto Princess</td>
<td>Metabolic Complication of HAART in a South African Black Population.</td>
<td>Medical Research Council</td>
<td>R 130,000</td>
</tr>
<tr>
<td>Bhimma, Rajendra</td>
<td>The role of MYH9 mutations in the development of focal segmental Glomerulosclerosis in South Africa.</td>
<td>Medical Research Council</td>
<td>R 130,000</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Infect Host Genetic Determinants that Restrict Mother to Child HIV-1 Clade C Transmission.</td>
<td>Massachusetts General Hospital</td>
<td>R 366,095</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 245,492</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 2,400,390</td>
</tr>
</tbody>
</table>

**NELSON R MANDELA SCHOOL OF MEDICINE**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maguila, Nombuleto Princess</td>
<td>Metabolic Complication of HAART in a South African Black Population.</td>
<td>Medical Research Council</td>
<td>R 130,000</td>
</tr>
<tr>
<td>Bhimma, Rajendra</td>
<td>The role of MYH9 mutations in the development of focal segmental Glomerulosclerosis in South Africa.</td>
<td>Medical Research Council</td>
<td>R 130,000</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Infect Host Genetic Determinants that Restrict Mother to Child HIV-1 Clade C Transmission.</td>
<td>Massachusetts General Hospital</td>
<td>R 366,095</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 245,492</td>
</tr>
<tr>
<td>Ndungu, Peter Thumbi</td>
<td>Pathogenesis of Clade C HIV Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 2,400,390</td>
</tr>
</tbody>
</table>

**UKZN Research Report 2010**
<table>
<thead>
<tr>
<th>INVESTIGATOR</th>
<th>PROJECT TITLE</th>
<th>FUNDER NAME</th>
<th>AMOUNT AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swart, Johanna Christina Ma</td>
<td>International Training Program in Epidemiology of AIDS – (Year 5 Additional Funding) – 3 Traineeships.</td>
<td>Columbia University</td>
<td>R 490,215</td>
</tr>
<tr>
<td>Padayatchi, Nesri</td>
<td>Tuberculosis Trials Consortium.</td>
<td>Columbia University</td>
<td>R 3,908,523</td>
</tr>
<tr>
<td>Abdool Karim, Salim Safurdeen</td>
<td>CAPRISA 004 – Phase IIb Trial to Assess the Safety and Effectiveness of the Vaginal Microbicidal 1% Tenofvir Gel for the Prevention of HIV Infection in Women in South Africa.</td>
<td>Family Health International</td>
<td>R 12,499,570</td>
</tr>
<tr>
<td>Ndung’u, Peter Thumbi</td>
<td>Co-funding for Targeting HIV Integration Co-factors, Targeting Cellular Proteins During Nuclear Import or Integration of HIV – THINC.</td>
<td>Department of Science and Technology</td>
<td>R 550,000</td>
</tr>
<tr>
<td>Padayatchi, Nesri</td>
<td>CAPRISA AIDS Treatment Programme - TB Recurrence Upon Treatment with HAART (TRUTH).</td>
<td>Columbia University</td>
<td>R 605,890</td>
</tr>
<tr>
<td>Abdool Karim, Salim Safurdeen</td>
<td>CAPRISA AIDS Treatment Programme - TB Recurrence Upon Treatment with HAART (TRUTH).</td>
<td>Centers for Disease Control and Prevention</td>
<td>R 3,684,625</td>
</tr>
<tr>
<td>Ndung’u, Peter Thumbi</td>
<td>In innate Immunity in HIV-1 infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 427,509</td>
</tr>
<tr>
<td>Newell, Marie-Louise</td>
<td>Sub-Funding provided by PACT, Inc to Africa Centre to implement its HIV/AIDS programme in South Africa.</td>
<td>PACT South Africa</td>
<td>R 8,507,785</td>
</tr>
<tr>
<td>Ndung’u, Peter Thumbi</td>
<td>NK Cell Function in HIV-1 Infection.</td>
<td>Massachusetts General Hospital</td>
<td>R 328,320</td>
</tr>
<tr>
<td>Gqaleni, Nceba</td>
<td>The Generic Product Prototype Development for Treating Diabetes Mellitus by the African Traditional Medicines (ATM) Flagship of the IKS Bioprospecting Platform.</td>
<td>Department of Science and Technology</td>
<td>R 500,000</td>
</tr>
<tr>
<td>Newell, Marie-Louise</td>
<td>Sub-Funding provided by PACT, Inc to Africa Centre to implement its HIV/AIDS programme in South Africa.</td>
<td>PACT South Africa</td>
<td>R 2,190,000</td>
</tr>
<tr>
<td>Newell, Marie-Louise</td>
<td>Sub-Funding provided by PACT, Inc to Africa Centre to implement its HIV/AIDS programme in South Africa.</td>
<td>PACT South Africa</td>
<td>R 8,507,785</td>
</tr>
</tbody>
</table>
## STATUTORY INCOME FROM THE NATIONAL RESEARCH FOUNDATION (NRF) 2010

<table>
<thead>
<tr>
<th>Faculty</th>
<th>ACEP</th>
<th>Adhoc Grants - Icd</th>
<th>AOPPG</th>
<th>BSRP</th>
<th>CPRR</th>
<th>Focus Area</th>
<th>HCDMA</th>
<th>IFRR</th>
<th>KFD</th>
<th>OFRR</th>
<th>Post Doctoral Fellowships</th>
<th>RISP</th>
<th>SARCHI</th>
<th>THRIP</th>
<th>Thuthuka</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20,000</td>
<td></td>
<td>253,884</td>
<td>182,050</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>396,500</td>
</tr>
<tr>
<td>Engineering</td>
<td>129,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,373,378.99</td>
<td>23,000</td>
<td></td>
<td>4,245,440</td>
<td>12,396,084</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12,118,832.99</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>964,300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,289,164.48</td>
<td>67,050</td>
<td>750,000</td>
<td>125,000</td>
<td>843,338</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>766,000</td>
</tr>
<tr>
<td>Humanities, Development &amp; Social Sciences</td>
<td>567,698</td>
<td>1,050,412.87</td>
<td></td>
<td></td>
<td></td>
<td>2,699,828.36</td>
<td>200,000</td>
<td>300,000</td>
<td>450,000</td>
<td>8,604,029</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>934,500</td>
</tr>
<tr>
<td>Law</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120,000</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>160,000</td>
<td>15,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60,000</td>
</tr>
<tr>
<td>Nelson R Mandela School of Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>125,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>125,000</td>
</tr>
<tr>
<td>Science and Agriculture</td>
<td>173,553</td>
<td>25,000</td>
<td>108,000</td>
<td>419,999</td>
<td>1,696,265</td>
<td>5,738,298.29</td>
<td>1,040,320</td>
<td>7,253,314.56</td>
<td>436,740</td>
<td>1,200,000</td>
<td>1,327,222.4</td>
<td>10,611,346</td>
<td>7,629,848</td>
<td>1,695,280</td>
<td>1,609,851</td>
<td>41,165,037.25</td>
</tr>
<tr>
<td>Grand Total</td>
<td>173,553</td>
<td>45,000</td>
<td>108,000</td>
<td>419,999</td>
<td>3,228,253</td>
<td>6,917,711.16</td>
<td>1,040,320</td>
<td>16,149,570.39</td>
<td>923,840</td>
<td>2,250,000</td>
<td>2,027,222.4</td>
<td>11,454,684</td>
<td>24,690,509</td>
<td>14,291,344</td>
<td>4,066,851</td>
<td>87,786,866.95</td>
</tr>
</tbody>
</table>

### ABBREVIATIONS

- **ACEP**: African Coelacanth Ecosystem Programme
- **AOPPG**: African Origin Programme
- **BSRP**: Building for Sport and Recreation Project
- **CPRR**: Competitive Programme for Rated Researchers
- **IFRR**: Incentive Funding for Rated Researchers
- **KFD**: Knowledge Fields Development
- **RISP**: Research Infrastructure Support Programme
- **SARCHI**: South African Research Chairs Initiative
- **THRIP**: Technology and Human Resources for Industry Programme

---

**UKZN Research Report 2010**

Statutory Income from the NRF 2010
JOURNAL ARTICLES, 2010
Faculty of Education

Bhana, D. 2010. Agenda, “Here in the rural areas they don’t say that men and women are equal!” Contesting gender inequalities in the early years, 84

Anderson, BM. 2010. Agenda, “You’re not a man if you hit a girl”: Coloured high-school boys articulating more peaceable expressions of heterosexual masculinity, 83

Harrison, E, McKenna, S, Searle, RL. 2010. Acta Academica, I won’t be squeezed into someone else’s frame: Stories of supervisor selection


Alant, BP. 2010. Perspectives in Education, We cross night: Some reflections on the role of the ESKOM Expo for Young Scientists as a means of accommodating disadvantaged learners into the field of Science and Technology, 28(4)


Govender, DW. 2010. Africa Education Review, Attitudes of students towards the use of a Learning Management system (LMS) in a face-to-face learning mode of instruction, 17(2)


Nkosi, PM. 2010. Agenda, Bride abduction in KwaZulu-Natal schools and its effects on education, 1(80)


Bhana, D. 2010. Agenda, Deevia Bhana interviews Mbuyiselo Botha, 83

Mncube, VS. 2010. Journal of Educational Studies, Editorial, 9(1)


Moropole, P.J. 2010. Agenda. Feminism matters in the primary school: A case from Lesotho, 83
Muthukrishna, A. 2010. Gender & Behaviour. Gender Differences in Mathematics Achievement: An Experiential study in a primary school in KwaZulu-Natal, 8(2)
Bhana, D, Nzimakwe, Tl. 2010. International Journal of Educational Development, Gender in the early years: Boys and girls in an African working class primary school
Mackay, JR, Parkinson, J. 2010. Gender and Education, Gender, self-efficacy and achievement among South African Technology teacher trainees, 22(1)
Bansal, S. 2010. Education as Change, How much freedom does a teacher have in designing a learning event when adhering to assessment prescription?, 14(1)
Berkhout, S, Heystek, J, Mncube, VS. 2010. Africa Education Review. Imagining the shape of the reflective deliberative education leaders but finding the devil is in the detail, 7(1)
Brijall, D. 2010. Learning and Teaching Mathematics, Individualised Teacher Support Intervention-a Case Study, 8(1)
Mashiyi, JN. 2010. Alternation: International Journal for the Study of Southern African Literature and Languages, Mother Tongue Teaching at the University of KwaZulu-Natal: Opportunities and threats, 17(1)
Bhana, D. 2010. Agenda. No to bullying stomachs: Male principals talk about teenage pregnancy at schools in Imizamo, Durban, 83
Mncube, VS. 2010. Education as Change, Parental involvement in school activities in South Africa to the mutual benefits of the school and the community, 14(3)
Ebrahim, HB, Killian, BJ, Rule, PN. 2010. Early Child Development and Care, Practices of Early Childhood Development Practitioners for poor and vulnerable children from birth to four years in South Africa, DOI: 10.1080/030044309013392652
James, AA. 2010. Problems of Education in the 21st Century, Pre-service Student Teacher Professional Development: Research and Service-Learning, 26
Mncube, VS, Naicker, I, Nzimakwe, TI. 2010. Journal of Educational Studies, Professional development of school principals in South Africa: Their needs and aspirations, 9(1)
Mibatha, TA. 2010. Alternation: International Journal for the Study of Southern African Literature and Languages, Putting the End Point at the Beginning: Teachers’ understanding of using Dual Medium approach for Teaching Literacy in Foundation Phase classrooms, 17(1)
Samuel, MA. 2010. Perspectives in Education, Searching for a “Pedagogy of Hope”: Teacher Education and the Social Sciences, 14(1)
Mncube, VS. 2010. Journal of Educational Studies, Speaking ELAA in forked tongues: dialoguing principals responsibilities and governors experiences, 9(1)
Bansilal, S. 2010. Pythagoras. The Use of Real Life Contexts in the CTA. Some unintended Consequences, 69
Mudaly, V. 2010. Pythagoras. Thinking With Diagrams Whilst Writing With Words(71)
Brijlall, D, Maharaj, A. 2010. Pythagoras, Using an Indicative Approach for Definition Making: Monotonicity and Boundeness of Sequences, 70

Maistry, SM. 2010. Perspectives in Education, Using cultural capital as a resource for negotiating participation in a community of practice: a case study, 28(3)

De Villiers, MD. 2010. South African Journal for Science and Technology, Vanaf die Fermat-punte na die De Villiers-punte van ’n driehoek, 29(3)

Bhana, D, Pattman, RW. 2010. Ethnics, White South African school girls and their accounts of black girls at school and cross-racial heterosocial relations outside school, 10(2)


Stuart, DJ. 2010. Agenda, Youth as knowledge producers: Towards changing gendered patterns in rural schools with participatory arts-based approaches to HIV and AIDS(84)


Krishna, V, Sriripiyu, R, Kumar, V, Chakraborty, S, Meikap, BC. 2010. Chemical Engineering and Processing, Identification and prediction of air core diameter in a hydrocyclone by a Novel Online Sensor based on digital signal processing technique, 49(5)


Deenadayalu, N, Gwala, N, Ramjugernath, D. 2010. Journal of Chemical Thermodynamics, Activity coefficients at infinite dilution for solutes in the Tricholymethyllammonium bis(trifluormethylsulfonyl) imide Ionic Liquid using Gas-Liquid Chromatography. 42(2)


Davrajh, S, Bright, G. 2010. Assembly-Automation, An Automated Apparatus for Dynamic Inspection of Mass-Produced Custom Parts, 30(1)


Beuzenhouht, CN. 2010. International Sugar Journal, Beneficial loading configurations to increase sugarcane haulage vehicle performance, 112(342)


Warburton, ML, Schulze, RE, Jewitt, WP. 2010. Hydrology and Earth System Sciences, Confirmation of ACRU model results for applications in land use and climate change studies, 14


Sithole, BB, Abbayd, P. 2010. TAPPI Journal, Determination of aluminium soaps in pitch deposits by gas chromatography, October 2010


Aftullo, T. 2010. Radio Science, Determination of rain attenuation from electromagnetic scattering by spherical raindrops: Theory and experiment, 45(RS1003)

Beuzenhouht, CN, Lagrange, LF, Lyn, PWL. 2010. International Sugar Journal, Development of a sugar cane transport route planning application in a geographical information system, 112(1335)


Chaplot, V, Lorentz, SA, Podwojewski, P, Jewitt, GPW. 2010. Geodema, Digital mapping of A-horizon thickness using the correlation between various soil properties and soil apparent electrical resistivity, 157(10)


Stuart-Hill, SI, Schulze, RE. 2010. Climate and Development, Does South Africa’s water law and policy allow for climate change adaptation?, 2


Naidoo, P, Raal, JD, Ramjugernath, D. 2010. *Journal of Chemical and Engineering Data*. High Pressure Vapor-Liquid Equilibrium Data for (Carbon Dioxide + Cyclopentanol) and (Propene + Cyclopentanol), 55(1).


UKZN Research Report 2010


Mohanty, C., Meikap, B.C. 2010. Chemical Engineering and Processing, Pressure drop characteristics of a multi-stage counter-current fluidized bed reactor for control of gaseous pollutants, 48(1)


Domanska, U., Zolek-Tryznowska, Z., Ramjugernath, D., Letcher, T.M. 2010. Journal of Chemical and Engineering Data, Separation of an Alcohol and a Tetrahydrofuran, Methyl tert-Butyl Ether, or Ethyl tert-Butyl Ether by Solvent Extraction with a Hyperbranched Polymer at T = 298.15 K. 55(8)


Singh, S., Jonnalagadda, S.B. 2010. Synthetic Communications, Solvent-Free KnoevenagelCondensation over Cobalt Hydroxypatite, 40(24)
Muthuki, J. M. 2010. *International Journal of Social Sciences and Humanities*. Gender dynamics in qualitative research: A personal reflection, 4(1)


Zungu, PJ. 2010. *Language Matters*, High school learners’ attitudes towards isiZulu in the Greater Durban Area, 41(1)


Khumalo, V. 2010. *Journal of Natal and Zulu History*, History and heritage: a special issue on former American board mission stations in southern KwaZulu-Natal, 26(10)


DoHET ACCREDITED PUBLICATIONS - 2010

UKZN Research Report 2010


Gouws, AS. 2010. South African Journal of Philosophy, Setting the scientific cat among the humanist pigeons, 29(1)


Ojong, VBA. 2010. IAMWA International Journal of Social Sciences and Humanities, Steering the wagon: foreign African academics at the forefront of knowledge production at the University of KwaZulu-Natal, 4(1)


Coullie, JL. 2010. Biography, Telling the Life Story, Anxiously: The Memoirs of Teresa and Anna Campbell, 33(2)


Marschall, S. 2010. Saichdi, The Memory of Trauma and Resistance: Public Memorialization and Democracy in Post-apartheid South Africa and Beyond, 11(4)


Quayle, MIF. 2010. Men and Masculinities, The Perils of Being a Nice Guy: Contextual Variation in Five Young Women’s Constructions of Acceptable Hegemonic and Alternative Masculinities, 13(2)


Ruggunan, SD. 2010. Politeia, The role of state institutions in shaping the labour market for seatanners: The cases of South Africa and the Philippines, 29(2)

Isike, CA, Okeke-Uzodike, NI. 2010. Africa, 36(1)


**DoHET ACCREDITED PUBLICATIONS - 2010**


Green, JM, Reddy, PS. 2010. Africa Insight, Traditional Leadership and Governance in Africa, 40(2)

Stobie, ML, Slack, CM. 2010. Developing World Bioethics, Treatment needs in HIV prevention trials: Using beneficience to clarify sponsor-investigator responsibilities, 10(3)


Naidu, UM. 2010. Agenda, Wrestling with Standpoint Theory Some Thoughtful Standpoint and African Feminism, 83


Kunda, JL. 2010. Critical Arts: A Journal of South North Cultural and Media Studies, Zulu identities and contemporary Zuluness, 23(2)

**Health Sciences**


Govender, T, Kruger, HG, Maguire, GEM. 2010. Acta Crystallographica Section E-Structure Reports Online, (1R,3S)-Methyl 6,7-dimethoxy-1-(4-methoxyphenyl)-1,2,3,4-tetrahydroisoquinoline-3-carboxylate, E66

Mckay, MG, Govender, T, Kruger, HG, Maguire, GEM. 2010. Acta Crystallographica Section E-Structure Reports Online, (1R,3S)-2-benzyl-6,7-dimethoxy-1-phenyl-1,2,3,4-tetrahydroisoquinoline-3-carboxylate, E66

Govender, T, Kruger, HG, Maguire, GEM. 2010. Acta Crystallographica Section E-Structure Reports Online, (1R,3S)-2-benzyl-6,7-dimethoxy-1-phenyl-1,2,3,4-tetrahydroisoquinolinin-3-yl), diphenylmethanone, 66
DoHET ACCREDITED PUBLICATIONS - 2010


Ncama, BP. 2010. International Journal of Nursing Practice, Enhancing our clinical links and credibility: Nurse lecturers in clinical settings, 16


Brzy Kiewicz, P. 2010. Southern African Journal of Critical Care, Evaluation of a protocol to control methicillin-resistant staphylococcus aureus (MRSA) in a surgical cardiac intensive care unit, 26(1)


Joubert, RWE. 2010. South African Journal of Occupational Therapy, Exploring the history of occupational therapies development in south africa to reveal the flaws in our knowledge base, 40(3)

Mcllimentary, P, Suleman, F. 2010. Worldviews on Evidence-Based Nursing. Exploring knowledge, attitudes, and barriers toward the use of evidence-based practice amongst academic health care practitioners in their teaching in a South African university: A pilot study, 72(9)


Sing, Y, Subrayan, S, Mpidi, B, Ramdial, PK, Moodley, MS, Bux, S. 2010. Pathology International, Gastric plasmocytic angiomyoxyd myofibroblastic tumor, 60(9)

Essack, SY, Naido, I, Barnes, GR. 2010. Higher Education Policy, Education Funding as Leverage for Quality Teaching and Learning, 23(3)


Ojevwe, JAO, Adevoe, SO. 2010. Journal of Natural Medicines, Hypoglycaemic effect of mollic acid glucoside, a 1x-hydroxyecdysocorixi sapinor extractive from Comordotra molle R. Br. ex Q. Don (Comordotraeae) leaf, in rodents, 63(2)

Mashighe, KP. 2010. The South African Optometrist, Near vision and glare vision thresholds and recovery time in myopic and hyperopic eyes, 69(3)


Gqaleni, N. 2010. Food Chemistry, Lactic acid fermentation improves the quality of amahewu, a traditional South African maize-based porridge, 122


Steinkirch, B, Cliff, G, Kriwet, J. 2010. Molecular Phylogenetics And Evolution, Molecular systematics and global phylogeny of angel sharks (genus Squatinu), 54

Govender, P, Kruger, HG, Govender, T, Maguire, GEM. 2010. Acta Crystallographica Section E-Structure Reports Online, N-[5-(8-endo-11-endo-Dihydroxypentacyclo-[5.4.0.02,6.03,10.05,9]unde-1x-hydroxycycloartenoid saponin extractive from Combretum molle R. Br. ex Q. Don (Combretaceaeae) leaf, in rodents, 63(2)


Mashighe, KP. 2010. The South African Optometrist, Near vision and glare vision thresholds and recovery time in myopic and hyperopic eyes, 69(3)

Gqaleni, N. 2010. Food Chemistry, Lactic acid fermentation improves the quality of amahewu, a traditional South African maize-based porridge, 122


Mashighe, KP. 2010. The South African Optometrist, Near vision and glare vision thresholds and recovery time in myopic and hyperopic eyes, 69(3)
Nelson R Mandela School of Medicine

Cassim, B. 2010. Journal for Endocrinology, Metabolism and diabetes of South Africa (JEMDSA), 14th NOFSA Congress 2010, 15(1)

Venter, C, Hardcastle, TC. 2010. Emergency Services South Africa / Occupational Risk, A breath of fresh air, 1(11)

Mars, M. 2010. Global Telemedicine and eHealth Updates: Knowledge Resources, A New Model For eHealth Capacity Development In Africa, 3(1)

Butler, L, Niemand, T, Mosam, A, Mzolo, S, Martin, J. 2010. Tropical Medicine & International Health, A population-based study of how children are exposed to saliva in KwaZulu-Natal Province, South Africa: implications for the spread of saliva-borne pathogens to children, 15(4)


Coovadia, YM, Singh, R. 2010. Pediatric Infectious Disease Journal, Acinetobacter baumanii and group B streptococcus co-infection causing neonatal meningitis, 5


Madiba, TE, Haffjevee, MR. 2010. Clinical Anatomy, Anatomical variations in the level of origin of the Sigmoid Colon from the descending Colon and the attachment of the Sigmoid Mesocolon, 23

Barker, P, Mphantswe, TWP, Rollins, NC. 2010. JADO - Journal Of Acquired Immune Deficiency Syndromes, Antiretroviral drugs in the cupboard are not enough: The impact of Health Systems’ performance on Mother-to Child Transmission of HIV, 00(00)

Winkler, C, Werner, L, Mlisana, KP, Abdool Karim, SS, Ndung’u, PT. 2010. AIDS, APOBEC3G expression is dysregulated in primary HIV-1 infection and polymorphic variants influence CD4+ T-cell counts and plasma viral load, 24(2)


Mars, M. 2010. Latin American Journal of TeleHealth, Are The Obstacles Too Great For Telemedicine In sub-Saharan Africa?, 2(1)

Govender, PS. 2010. World Journal of Surgical Oncology, Atypical presentation of angiosarcoma of the scalp in the setting of Human Immunodeficiency Virus (HIV), 7(99)


Assounga, AGH. 2010. Experimental and Clinical Transplantation, Conversion of cyclosporine to sirolimus before 12 months is associated with marked improvement in renal function and low proteinuria in a South African renal transplant population, 8(1)


Biccard, BM. 2010. Southern African Journal of Anesthesia and Analgesia, Breastfeeding, HIV status and mortality experience in a developing country, 26(1)

Hadley, GP, Hadley, GP. 2010. Journal of Psychology in Africa, Career development for psychology students through an inpatient mental health volunteer programme, 25(3)


Chaghan, M, Van den Broeck, J, Lubaey, K, Mpontshane, N, Tomkins, A, Bennish, M. 2010. BMC Public Health. Effects on longitudinal growth and anemia of zinc or multiple micronutrients added to vitamin A: a randomized controlled trial in children aged 6-24 months, 10(140)

Mars, M. 2010. Healthcare IT Management. eHealth in sub-Saharan Africa. Beyond the hype, 5(4-4)


Murieth, MW, Chang, J, Lipson, J, Ndung’u, PT, Altfeld, M. 2010. AIDS. Exposure to HIV-1-encoded Toll-like receptor 8 ligands enhances monocyte response to microbial encoded Toll-like receptor 4 ligands. 24


Sturm, AW. 2010. Anaerobe. Expression of the naphthoquinone synthase gene in Mycobacterium tuberculosis in a self-generated oxygen depleted liquid culture system. 16(6)


Biccard, BM. 2010. Cardiovascular Journal of Africa. Factors associated with mortality when chronic beta-blocker therapy is withdrawn in the peri-operative period in vascular surgical patients: A matched case-control study, 21(2)


Sing, Y, Subrayan, S, Mqadli, B, Ramdial, PK, Moodley, MS, Bux, S. 2010. Pathology: International. Gastric polymorphism in mycobacterial tumor, 60(9)


Mars, M, Scott, R. 2010. Health Affairs, Global eHealth policy: A work in progress, 29(2)


Ramphal, SR, Moodley, j, Rajaruthman, D. 2010. Tropical Doctor, Hepatic pregnancy managed conservatively, 40(2)


Archary, D, Gordon, ML, Green, T, Coovadia, HM, Goulder, PJR, Ndung’u, PT. 2010. Retrovirology. HIV-1 Subtype C-envelope characteristics associated with divergent rates of chronic disease progression, 7(20)


Gqaleni, H. 2010. Food Chemistry. Lactic acid fermentation improves the quality of amahewu, a traditional South African maize-based porridge, 122

Assoungu, AGH, Naicker, S. 2010. Clinical Nephrology. Lanthanum carbonate treatment for up to 6 years is not associated with adverse effects on liver in patients with chronic kidney disease stage 5 receiving hemodialysis


Hardcastle, TC. 2010. Emergency Services South Africa / Occupational Risk. Less is more: Modern approaches to the management of chest trauma, 1(7)


Burns, JK. 2010. SAU South African Medical Journal. Mental health services funding and development in KwaZulu-Natal: A tale of inequity and neglect, 100(10)

Clarke, DL. 2010. South African Journal of Bioethics and Law. Moral principism alone is insufficient, and traditional moral theories remain important for practical ethics, 2(9)


DoHET ACCREDITED PUBLICATIONS - 2010

Pietermaritzburg Campus

UKZN Research Report 2010


Groves, A, Maman, S, Msmoi, S, Mkhanya, N, Moodley, D. 2010. AIDS Care. The complexity of consent: Women’s experiences testing for HIV at an antenatal clinic in Durban, South Africa, 22(5)


Hardcastle, TC. 2010. Emergency Services South Africa / Trauma. The heart of carbon monoxide poisoning, 1(11)

Naidoo, DF, Shein, UK. 2010. SA Heart. The implications of HIV infection on the management of valvular heart disease in southern Africa., 6(2)


Isacca, G, Singh, B 2010. SAU Afrika South African Medical Journal. The muticulating umbilicus, 100(1)


Biccard, B M, Rodseth, RN. 2010. Anesthesia. The pathophysiology of perioperative myocardial infarction in vascular surgical patients, 65(7)


Rodseth, RN. 2010. SAMU South African Medical Journal. The progression of a J wave during induction of hypothermia, 100(12)


Kritzinger, AM, Pillay, AL. 2010. Psychological Reports. Undergraduate psychology students experiences of volunteering at a chronic mental health facility, 107(3)

Kharsany, ABM, Abdool Karim, Q. Abdool Karim, SS. 2010. AIDS Care: Uptake of provider-initiated HIV testing and counseling among women attending an urban Sexually Transmitted Disease Clinic in South Africa - missed opportunities for early diagnosis of HIV infection, 22(5)


Haddow, LJ, Moosa, MYS, Easterbrook, P. 2010. AIDS, Validation of a published case definition fortuberculosis-associated immune reconstitutioninflammatory syndrome, 24(1)

Raveenthiran, V, Madiba, TE, Atamanalp, S, De, U. 2010. Colorectal Disease, Volvulus of the sigmoid colon, 12(7)


Rodseth, RN. 2010. Continuing Medical Education, What now in pediatric trauma resuscitation?, 28(3)

Hardcastle, TC. 2010. Emergency Services South Africa / Occupational Risk, When hot is not: Heat exhaustion and heat stroke, 1(9)


Van Wyk, JM, Naidoo, SS, Estherhuisen, TM. 2010. South African Family Practice, Will graduating medical students prefer to practice in rural communities, 52(2)


Naidoo, NR. 2010. The Specialist Forum, Work-related asthma, 10(3)


Management Studies

Casale, MAJ, Drimie, S. 2010. Vulnerable Children and Youth Studies, “Key to a good life” or just a bad investment? How do carers of children view and value education in the context of high HIV and AIDS?, 5(2)


Kohler, MRAR, DeHaan, D. 2010. Perspectives of Innovations, Economics & Business, A Motivation For Energy Based Poverty Indicators, 6(3)

Reardon, C, Goyender, K. 2010. Journal of Youth Studies, Shaping up: The relationship between traditional masculinity, conflict resolution and body image among adolescent boys in South Africa, 6(1)


Mitchell, LD. 2010. Tax Planning, Active or passive, 24(4)


Mitchell, LD. 2010. Income tax reporter, Allocation of payments, 49(1)


Mitchell, LD. 2010. Income Tax Reporter, Annuities to Former Employees, Partners and Dependents, 49(6)


Sing, D. 2010. Administraito Publica, Career development in the South African Public Service, 18(3)


Dawid, S, Jobson, G. 2010. Disability and Rehabilitation, Community-based rehabilitation programme as a model for task-shifting, 3(9)

Mitchell, LD. 2010. Income Tax Reporter, Controlled Foreign Companies, 49(9)


Mitchell, LD. 2010. Income Tax Reporter, Court Order Deemed Accrual, 49(4)

Gibbs, AR, Campbell, C, Skovdal, M. 2010. AIDS and Behavior, Creating social spaces to tackle AIDS-related stigma: Reviewing the role of Church groups in sub-Saharan Africa, DOI 10.1.7 s10461-010-9766-0

Mitchell, LD. 2010. Income Tax Reporter, Date for Micro Business Election, 49(3)


Mitchell, LD. 2010. Income Tax Reporter, Deductions, 49(3)

Mitchell, LD. 2010. Income Tax Reporter, Deemed Accruals, 49(3)


Mitchell, LD. 2010. Income Tax Reporter, Definitions, 49(1)

Mitchell, LD. 2010. Income Tax Reporter, Definitions, 49(3)

Mitchell, LD. 2010. Income Tax Reporter, Definitions, 49(3)

Reddy, PS. 2010. Polities, Democratic decentralisation and local democracy in South Africa re-examined: Quo Vadis?, 29(3)


Mitchell, LD. 2010. Income Tax Reporter, Discontinuation of the SITE System, 49(2)


Mitchell, LD. 2010. Income Tax Reporter, Double Taxation Agreements, 49(9)
Mitchell, LD. 2010. Income tax reporter, Duty to Companies to Furnish Returns, 49(1)

Mitchell, LD. 2010. Income Tax Reporter, Duty to Furnish Information or Returns, 49(1)


Mitchell, LD. 2010. Income Tax Reporter, Employees’ Tax, 49(1)

Mitchell, LD. 2010. Income Tax Reporter, Employer’s Annual Reconciliation, 49(5)


Mitchell, LD. 2010. Income Tax Reporter, Environmental Fiscal Reform, 49(2)


Govender, P, Brijball Parumasur, S. 2010. SA Journal of Industrial Psychology, Evaluating the roles and competencies that are critical considerations for management development, 36(1)

Mitchell, LD. 2010. Income Tax Reporter, Exemptions, 49(3)


Mitchell, LD. 2010. Income Tax Reporter, fringe benefits, 49(4)


Mitchell, LD. 2010. Income Tax Reporter, Gambling Taxes, 49(2)

Bhana, D, Nzimakwe, TI. 2010. International Journal of Educational Development, Gender in the early years: Boys and girls in an African working class primary school


Mitchell, LD. 2010. Tax Planning, Hybrid Arrangements, 24(8)


Mitchell, LD. 2010. Income Tax Reporter, Improvements on Leased Land, 49(2)


Mitchell, LD. 2010. Tax Planning, Inclusion-deduction or exemption - no deduction, 24(5)


Nzimakwe, TI, Pillay, P. 2010. Administratio Publica, Information and Communication Technology - Trends and Challenges to enhance service delivery in the public sector, 18(1)


Mitchell, LD. 2010. Income Tax Reporter, Interest on Successful Objections, 49(1)

Nixon, S, Rubincam, C, Casale, MAJ, Flicker, S. 2010. AIDS Care, Is 80% a passing grade? Meanings attached to condom use in an abstinence-plus HIV prevention programme in South Africa, 23(2)

Gqaleni, N. 2010. Food Chemistry, Lactic acid fermentation improves the quality of amahewu, a traditional South African maize-based porridge, 122

Mitchell, LD. 2010. Income Tax Reporter, Limiting Salary-Structuring Opportunities, 49(2)

Mitchell, LD. 2010. Income Tax Reporter, Main Tax Proposals, 49(2)


Nzimakwe, TI. 2010. Journal of Public Administration, Marketing as a tool to promote public service provision, 45(1)


Mitchell, LD. 2010. Tax Planning, Medical Madness, 24(2)


Mitchell, LD. 2010. Income Tax Reporter, Monetary Amounts, 49(8)

Mitchell, LD. 2010. Tax Planning, More on medical-scheme contributions, 24(3)


Mitchell, LD. 2010. Income Tax Reporter, Official Rate of Interest, 49(7)

Mitchell, LD. 2010. Income Tax Reporter, Oil and Gas Activities, 49(4)

Mubangizi, BC. 2010. Administratio Publica, Participatory service delivery processes with reference to the rural-urban divide of South Africa’s municipalities, 18(2)

Mitchell, LD. 2010. Income Tax Reporter, Penalties not yet in Operation, 49(3)

Mitchell, LD. 2010. Income Tax Reporter, Pre-Trade Expenditure, 49(3)

Mitchell, LD. 2010. Income Tax Reporter, Prescribed Rate of Interest, 49(5)

Mncube, VS, Naicker, I, Nzimakwe, TI. 2010. Journal of Educational Studies, Professional development of school principals in South Africa: Their needs and aspirations, 9(1)


Mitchell, LD. 2010. Income Tax Reporter, Provisional Tax, 49(1)

Mitchell, LD. 2010. Income Tax Reporter, Travel Allowance, 49(3)

Gibbs, AR. 2010. AIDS Care: Psychological and Socio-Medical Aspects of AIDS/HIV, Understandings of gender and HIV in the South African media, 22(Supp 2)

Veenstra, NL, Whiteside, AW, Laloo, D, Gibbs, AR. 2010. Globalisation and Health, Unkanned antiretroviral treatment interruptions in southern Africa: how should we be managing these?, 6(4)


Mitchell, LD. 2010. Income Tax Reporter, VAT and Residential Property Developers, 49(2)


Mitchell, LD. 2010. Tax Planning, When the new dividends tax comes into operation it will be supported by another new tax known as the value extraction tax, 24(Bonus)


Mitchell, LD. 2010. Income Tax Reporter, Withdrawal of Practice Notes, 49(3)


Law

Louw, AM, Areias, D. 2010. Obiter, Anyone for a game of Monopoly? A critical evaluation of the ever increasing commercialization of major sporting events Part 1: An overview of the diverse social meanings attached to and its consumption within South African prisons during the colonial and apartheid periods (Part One), 16(2)


Van der linde, K, Luiz, SM. 2010. SA Mercantile Law, Aspects of Cross-Listing of Securities, 21


Luiz, SM. 2010. SA Mercantile Law, Case Comments: Using a Scheme of Arrangement to Eliminate Minority Shareholders, 22


Freedman, DW. 2010. South African Journal of Criminal Justice, Constitutional Law: The rights of a child - The right to testify through an intermediary, 23(2)


Bhamjee, S. 2010. Obiter, Is the Right to Die with Dignity Constitutionally Guaranteed? Baxter v Montana and Other Developments in Patient Autonomy and Physician Assisted Suicide. 3(2)


Bhamjee, S. 2010. Obiter, Is the Right to Die with Dignity Constitutionally Guaranteed? Baxter v Montana and Other Developments in Patient Autonomy and Physician Assisted Suicide. 3(2)


Bhamjee, S. 2010. Obiter, Is the Right to Die with Dignity Constitutionally Guaranteed? Baxter v Montana and Other Developments in Patient Autonomy and Physician Assisted Suicide. 3(2)


Bhamjee, S. 2010. Obiter, Is the Right to Die with Dignity Constitutionally Guaranteed? Baxter v Montana and Other Developments in Patient Autonomy and Physician Assisted Suicide. 3(2)


Mwavu, T, Hamer, ML, Slotow, RH, Barraclough, D. 2010. Zootaxa. A reevaluation of the taxonomy and distribution of Archispirostreptus Silvestri 1895 (Diplopoda, Spirostreptida, Archispirostreptidae), and description of a new spirostreptid genus with three new species. 2567


Hill, TR. 2010. The SA Journal of Accounting Research. An exploratory analysis of stakeholders' expectations and perceptions of corporate social and environmental reporting in South Africa, 24(1)


Drapeau, L, Pedemors, VM. 2010. African Journal of Marine Science, Broad-scale distribution patterns of sardine and their predators in relation to remotely sensed environmental conditions during the KwAGuNt Natal sandine run, 32(2)


Ward, DM, Musli, I, Or, K, Gibson, T, Skutelesky, O. 2010. Zoology in the Middle East, Bacidoi seed nitrogen and development time in three host species of Acacia, 51


Banasia, J, Shindin, S. 2010. Nuovo Cimento della Societa Italiana di Fisica C-Geophysics and Space Physics, Combining the yield ability and secondary traits of selected cassava genotypes in the semi-arid and areas of Eastern Kenya, 27(6)


Johnson, SD, Myburg, A. 2010. New Forests, Comparison of different control-polination techniques for small-flowered eucalyptus, 39


Stephenson, JAE, Walker, ADM. 2010. Annales Geophysicae, Correlation between radar observations of magnetospheric field line resonances and discrete oscillations in the solar wind, 28(1)


Laing, MD, Miller, RM. 2010. International Journal of Pest Management, Combining applications of potassium silicate and Beauveria bassiana to four crops to control two spotted spider mite, Tetranychus urticae Koch, 56(4)

Melis, RJ, Laing, MD, Derera, J, Shanahan, PE, Ngugi, E. 2010. Journal of Plant Breeding and Crop Science, Combining the yield ability and secondary traits of selected cassava genotypes in the semi-arid and areas of Eastern Kenya, 27(7)

Raeb, RE. 2010. Comparaion of different control-polination techniques for small-flowered eucalyptus, 39


Zewotir, T., North, D., Grobler, A.C., Naidoo, K. 2010. AIDS and Behavior. Determinants of optimal adherence over time to antiretroviral therapy amongst HIV positive adults in South Africa: A longitudinal study. DOI: 10.1007/s10461-010-9688-x

Berjak, P., Pammenter, N.W. 2010. Plant Growth Regulation, Development of cycad ovals and seeds. 1. Implications of the ER in primary cellularrization of the megagametophyte in Encephalartos natalensis Dyer and Verdoorn, 62(3).


Lobban, K.D., Downs, C.T., Brown, M. 2010. EMU. Diet variations in plasma glucose concentration in some South African avian frugivores, 110


Yulianti, L., Baskoro, E. 2010. Discussiones Mathematicae Graph Theory, 30


Yulianti, L., Baskoro, E. 2010. Discussiones Mathematicae. Discussiones Mathematicae Graph Theory, 30

Jourdan, F., Feraud, G., Bertrand, H., Watkeys, MK, Renne, P. 2010. Lithos. Distinct brief major events in the Karoo large igneous provinces clarified by new 40Ar/39Ar ages on the Lesotho basalts, 139


Masomi, J., Moyo, T. 2010. Journal of Physics: Conference Series. Effect of synthesis route on the magnetic properties of (Cd, Cu)0.5Ni0.5Fe2O4 oxides, 200

Laing, MD, Miller, RM. 2010. Experimental and Applied Acarology. Effects of adjuvants and conidial concentrations on the efficiency of Beauveria bassiana for the control of two spotted spider mite, Tetranynchus urticae, 50(3)

Laing, MD, Miller, RM. 2010. Biocontrol. Effects of crop type on persistence and control efficacy of Beauveria bassiana against the two spotted spider mite, 55(6)


Slotow, RH. 2010. Biological Conservation. Do fences create an edge-effect on the movement patterns of a highly mobile mega-herbivore?, 143


Coleman, JC, Downs, CT. 2010. African Zoology. Does home range of the black-tailed tree rat (Tharomyia nigricauda) along an aridity gradient change with season?, 40(2)


Masomi, J., Moyo, T. 2010. Journal of Physics: Conference Series. Effect of synthesis route on the magnetic properties of (Cd, Cu)0.5Ni0.5Fe2O4 oxides, 200

Laing, MD, Miller, RM. 2010. Experimental and Applied Acarology. Effects of adjuvants and conidial concentrations on the efficiency of Beauveria bassiana for the control of two spotted spider mite, Tetranynchus urticae, 50(3)

Laing, MD, Miller, RM. 2010. Biocontrol. Effects of crop type on persistence and control efficacy of Beauveria bassiana against the two spotted spider mite, 55(6)


Mackay, JR, Parkinson, J. 2010. Gender and Education: Gender, self-efficacy and achievement among South African Technology teacher trainees, 22(1)

Derera, J, Tongona, PB. 2010. Euphytica: Gene action and reciprocal effects for ear root resistance in crosses derived from five tropical maize populations, 174


Melis, RJM, sunga, J, Mwangi, GS. 2010. Field Crops Research: Genotypic response of common bean to natural field populations of bean fly (ophiohyma phaseoli) under diverse environmental conditions, 117(1)


Ogden, M, Slotow, RH. 2010. PLoS One: Group Dynamics of zebra and wildebeest in a woodland savanna: Effects of predation risk and habitat density, 5(9)

Msoni, J, Moyo, T, Dolo, J. 2010. Hyperfine Interactions: Heat treatment effects on spinel phase of ZnNi1-xFe2O4 and MnFe2O4 nanoparticles, 197(1-3)

Baboolal, S. 2010. Journal of Computational and Applied Mathematics: High-resolution numerical simulation of 2D nonlinear wave structures in electromagnetic fluids with absorbing boundary conditions, 234


Singh, N, Shaik, S, Nicholas, A. 2010. In Vitro Cellular & Developmental Biology-Plant, Indirect regeneration of the Cancer bush (Sutherlandia frutescens L.), and detection of L-canavanine in in vitro plantlets using NMR, 46


Murousawa, H, van Staden, J, Makunga, N. 2010. Plant Growth Regulation, In vitro seed germination and cultivation of the aromatic medicinal Salvia stenophylla (Burch. ex Benth) provides an alternative source of -bisabolol, 61(3)

Laing, MD, Miller, RM. 2010. Pest Management Science, In vitro tests and bioassays for the compatibility of two selected chemical fungicides with Beauveria bassiana, 66


Kolanusi, U. 2010. Agenda, Is the South African land reform programme gender sensitive to women's food security and livelihood efforts, 86

Laing, MD. 2010. South African Journal of Plant and Soil, Isolation and in vitro screening of potential biocontrol agents against powdery mildew of zucchini caused by Podosphaera xanthi, 27(2)

Laing, MD, Bower, JP. 2010. Biological Control, Isolation and in vitro screening of yeast and Bacillus antagonists for the control of Penicillium digitatum of citrus fruit, 53(1)


Laing, MD, Miller, RM. 2010. African Entomology, Laboratory screening of insecticidal activities of Beauveria bassiana and Paecilomyces lilacinus against larval and adult fly (Musca domestica L.), 18(1)


Kumar, L, Mutanga, O, Skidmore, A. 2010. African Journal of Plant and Soil, Measuring culturable microbial populations and filamentous microbial growth in soil of wheat plots subjected to crop rotation and monoculture, 27(2)


Pilsko, JD. 2010. African invertebrates, Megadriid earthworm taxa introduced to South African soils (Olgiacohae: Anarchochetidae, Euloboscoledae, Lumbricoesidae, Megacheetidae, Omeheleidae), 51(2)

Jaganyi, D. 2010. Journal of Coordination Chemistry, Meridional anchorage of coordinate occupancy by a planar tridentate ligand and its effect on ligand substitution reactions of ruthenium(III) complexes, 63(14-16)


Perissinotto, R, Bate, GC. 2010. Marine Ecology-Progress Series, Microagal biomass in the St Lucia Estuary during the 2004 to 2007 drought period, 405

Shafi, S, Singhi, N, Nicholas, A. 2010. South African Journal of Botany, Micropropagation and bioreactor studies of the medicinally important plant Lessertia (Sutherlandia) frutescens L., 76(2)


Albercio, F, Arvidsson, PI, Govender, P, Knudsen, HG, Kruger, GEM, 2010. Acta Crystallographica Section E-Structure Reports Online, N=N-[6-(3-endo,11-endo-Dihydroxypentacyclo[5.4.0.02,6.03,10.05,9]unde-9,11,11-tetrahydroxypentacyclo[5.4.0.02,6.03,10.05,9]undecan-9-yl)ethyl]benzene, 66(1)


Harder, L, the Johnson, SD. 2010. Ecology. Native pollen thieves reduce the reproductive success of a hermaphroditic plant, Aloe maculata, 91(6)

van Staden, J. 2010. Molecules, Natural antioxidants: Fascinating or mytical biomolecules?, 19(10)

van Staden, J. 2010. Plant Growth Regulation. Natural ventilation effectively reduces hyperhydrosis in shoot cultures of Aloe polyphylla Schrad ex Pl. Harms, 60(2)

Perrett, MR. 2010. Ostreic, Niest niche dynamics of Meyer’s Parrot Pseudepsicus meyeri in the Okavango Delta, Botswana, 61(3)

Hellberg, MA, Veerheest, F. 2010. Europhysics Letters, New light on ion acoustic solitary waves in plasma with two-temperature electrons, 91(1)


Downs, CT. 2010. African Zoology, Nocturnal pectoral tuft display in the malacite sunbird, 45(2)


Moodley, K. 2010. Physical Review D, Real space estimator for the weak lensing convergence from the CMB, 81(12)

Ockers, T. 2010. African Entomology, Reassessment of the biology and host range of Acanthoscelides macrophthalmus (Chrysomelidae: Bruchinae), a seed-feeding beetle released for the biological control of Leucaena leucocephala in South Africa, 182(Suppl 1)


Herbert, DG. 2010. African Invertebrates, Revision of the larger carnivant snails (Natalina s.l.) of southern Africa - Natalina s.s., Afromyrtia and Catapita (Mollusca: Gastropoda: Rhytididae), 51(1)


Downs, CT, Brown, M. 2010. Journal of Ornithology, Seasonal variation in hematocrit levels of Anemphyl Sundbirds (Chalcocorina amethystina) over an altitudinal gradient, 15(14)


Gutev, VG. 2010. Topology and its Applications, Selections, extensions and collectionwise normality, 368


Domanska, U, Zolek-Tryznowska, Z, Ramjugernath, D, Letcher, TM. 2010. Journal of Chemical and Engineering Data, Separation of an Alcohol and a Tetrahydrofuran, Methyl tert-Butyl Ether or Ethyl tert-Butyl Ether by Solvent Extraction with a Hyperbranched Polymer at T = 298.15 K, 56(8)


Manson, A, Lawes, M. 2010. Plant Ecology. Soil nutrients are not responsible for arrested succession in disturbed coastal dune forest, 208

Singh, S, Jonnalagadda, SB. 2010. Synthetic Communications, Solvent-Free Knoevenagel Condensation over Cobalt Hydroxypatite, 40(24)


Hsieh, A. 2010. Reports on Mathematical Logic, Some locally tabular logics with contraction and mingle, 45


Lindsay, P, Sasaki, K, Schmidt, S, Scherer, P. 2010. *Engineering in Life Sciences*. The microcosm of a biogas fermenter: Comparison of moderate hyperthermophilic (60°C) with thermophilic (55°C) conditions. 10(6).


Lindsay, P, Sasaki, K, Schmidt, S, Scherer, P. 2010. *Engineering in Life Sciences*. The microcosm of a biogas fermenter: Comparison of moderate hyperthermophilic (60°C) with thermophilic (55°C) conditions. 10(6).


Lindsay, P, Sasaki, K, Schmidt, S, Scherer, P. 2010. *Engineering in Life Sciences*. The microcosm of a biogas fermenter: Comparison of moderate hyperthermophilic (60°C) with thermophilic (55°C) conditions. 10(6).


Lindsay, P, Sasaki, K, Schmidt, S, Scherer, P. 2010. *Engineering in Life Sciences*. The microcosm of a biogas fermenter: Comparison of moderate hyperthermophilic (60°C) with thermophilic (55°C) conditions. 10(6).

Mutanga, O. 2010. Southern Forests: Variation in foliar water content and hyperspectral reflectance of Pinus patula trees infested by Sirex noctilio. 72(1)


Student Services


Sugar Milling Research Institute


Shimelis, HA, Meshela, P. 2010. Euphytica. Yield response and Stemcorpetia ear rot reaction among selected maize inbred lines and top cross hybrids. 174(2)


Perissinotto, R., Pillay, D. 2010. Marine Ecology Progress Series. Zooplankton of the St Lucia Estuary during the current drought cycle: A comparison between open- and closed-mouth conditions, 399

Simpson, R., Naidoo, Y. 2010. International Sugar Journal. APOBEC3G expression is dysregulated during early infection and polymorphic variants influence the KwaZulu-Natal sardine run for local indigenous communities, 32(2)


Mitchell, PL. 2010. Income Tax Reporter. Record Keeping, 49(1)

DVC: College (Law & Management Studies)


Akhurst, J, Jassat, MB. 2010. Teacher and Learning. Which grazing management practices are most appropriate for maintaining biodiversity in South Africa? 22(3)


Mitchell, PL. 2010. Income Tax Reporter. Record Keeping, 49(1)

Vice-Chancellor’s Office


Winkler, C, Werner, L, Milisana, KP, Abdoell Karim, SS, Nduung’U, PT. 2010. AIDS. APOBEC3G expression is dysregulated in primary HIV-1 infection and polymorphic variants influence CD4+ T cell counts and plasma viral load. 24(2)

UKZN Research Report 2010

DoHET ACCREDITED PUBLICATIONS - 2010

Bundes, J, Pembrey, L, Kuijpers, T, Newell, ML. 2010. AIDS Research and Human Retroviruses. Evidence of impact of maternal HIV infection on immunoglobulin levels in HIV-exposed uninfected children, 26(9)


Wallrauch, CGG, Barnighausen, TW, Newell, ML. 2010. SAMU South African Medical Journal. HIV prevalence and incidence in people 50 years and older in rural South Africa, 100(12)


Archay, D, Gordon, ML, Green, T, Coovadia, HM, Goulder, PJR, Nidung’u, PT. 2010. Retrovirology. HIV-1 Subtype C envelope characteristics associated with divergent rates of chronic disease progression, 7(12)


Singh, JA. 2010. Lancet. Organ transplantation between HIV-infected patients, 375(9713)


DoHET ACCREDITED PUBLICATIONS - 2010

DoHET ACCREDITED PUBLICATIONS - 2010


Zewotir, TT, North, DE, Grobler, AC, Naidoo, K. 2010. AIDs and Behavior. Determinants of optimal adherence over time to antiretroviral therapy amongst HIV-positive adults in South Africa: A longitudinal study. DOI: 10.1007/s10443-010-9688-x


Khararsany, AB, Hancock, N, Frohlich, JA, Humphries, HR, Abdool Karim, SS, Abdool Karim, Q. 2010. HIV Medicine. Screening for window-period acute HIV infection among pregnant women in rural South Africa. 11(10)


(DVC) Research

Potgieter, C, Nair, M, Melo, J. 2010. AIDS Research and Human Retroviruses. A descriptive study of the Modus Operandi of serial rapists in South Africa. 23(5)


Academic Support


Faculty of Education

Chapters in Books


Mkhize, N, Bennett, J, Reddy, V, Moletsane, RT. 2010. The Country We Want to Live in, Cape Town, 1-66


Faculty of Engineering

Chapters in Books


Lorentz, SA, Pretorius, JJ, Ngeleka, KJ. 2010. Definition and Upscaling of Key Hydrological Processes for Application in Models, Pretoria, 1-51


Dawoud, DS, Peplow, RCS. 2010. Digital System Design - Use of Microcontrollers, Aalborg, Denmark, 1-548


Nindo, C, Mwithiga, SG. 2010. Infrared Heating for Food and Agricultural Processing, Boca Raton, FL 33487-2742, 1-300
Books


Sharland, SJ. 2010. Horace in Dialogue: Bakhtinian Readings in the Satires, Bern, Switzerland, 1-347


Sooryamoorthy, R. 2010. NGOs in Kerala: Coherence and Incongruity, Germany, 1-159

Vahed, GHM, Desai, A. 2010. Monty Naicker - Between Reason and Passion, Pietermaritzburg, i-533

Muthuki, JM. 2010. Renegotiation of Gender Identities in Transnational Spaces: The Experiences of Foreign Students of African Origin at the University of Kisumu-Nabol in Durban South Africa, Saarbrucken, 1-222

Nummerker, KB. 2010. Richard Dawkins’ God Delusion: A Repentant Refutation, United Kingdom, 1-218

Krabill, R. 2010. Staring Mandala and Cosby: Media and the End(s) of Apartheid, Chicago/London, 1-199

De Lange, OL. 2010. Sounds of Muziki wa Injili: Temporal and Spatial Aesthetics of Contemporary Church Music in Dar es Salaam, Tanzania, Saarbrucken, Germany, i-229

Mkhize, N, Bennett, J, Reddy, V, Moletsane, RT. 2010. The Country We Want to Live in, Cape Town, i-66

Ojong, VBA. 2010. Transnational Entrepreneurship through Identity: The dynamics of Religion and Culture and Socio-Economic and Remittance Patterns among Ghanaian Women in South Africa, Saarbrucken, 1-238

Xaba, TT. 2010. Witchcraft, Sorcery or Medical Practice?, Saarbrucken, Germany, i-240

Chapter 5 in Books


Tappe, HME. 2010. The Multiple Realities of Multilingualism: Personal Narratives and Researchers’ Perspectives, Berlin, 75-93


Stiebel, EA. 2010. SHE - Explorations into a Romance, Rome, Italy, 139-160

Joseph, RR 2010, Contemporary Social Issues in Africa - Cases in Gabarone, Kampaala, and Durban, Pretoria, South Africa, 65-78

David, DE, Menache, P. 2010. 101 Country Churches of SA, Richmond, Northern Cape, 1-120


McCracken, DP. 2010. European Migrants, Diaspora and Indigenous Ethnic Minorities, Pisa, Italy, 157-177

Ward, ED. 2010. A Theology of HIV and AIDS on Africa’s East Coast, Pietermaritzburg


West, GO. 2010. Genesis: Minneapolis, 175-190

Dimiritu, I. 2010. Translation/Interpreting and Social Activism, Granada, Spain, 48-58

Dimiritu, I. 2010. Translation/Interpreting and Social Activism, Granada, Spain, 254-245


Desai, A, Bond, PM, Maharaj, B. 2010. Zuma’s Own Goal Losing South Africa’s War on Poverty, Africa, 417-432


Zaal, FN, Matthias, CR. 2010. Commentary on the Children’s Act, Claremont, 11-11-31


McCarthy, AE. 2010. An Exploratory Study of non-Kin Models of Care Available to Orphans and Vulnerable Children Affected by HIV/ AIDS in KwaZulu-Natal, South Africa, Germany, 5-127


Petersen, I. 2010. Promoting Mental Health in ScarcE-Resource Contexts. Emerging Evidence and Practice, Cape Town, 3-30


Murove, MF. 2010. Fairness in International Trade, Durham, 47-67

FACULTY OF HUMANITIES, DEVELOPMENT & SOCIAL SCIENCES
Dilemmas in Post-Apartheid South Africa
Shukla, UD. 2010.
Africa: Cases in Gaborone, Kampala and Durban
Mtshali, MNG, Khan, S. 2010.
Countries
Analysis of Direct and Indirect Taxes in Developing and Developed
Oakland
Revolution: Social Struggles in the Transition to a Post-Petrol World,
Bond, PM, Ngwane, TS. 2010.
Traditional, New and Community Media Practices in South Africa

UKZN Research Report 2010
Tomasselli, KG. 2010. The Citizen in Communication: Re-Visiting Traditional, New and Community Media Practices in South Africa, Claremont, South Africa, 75-95
Chellan, N, Bob, U. 2010. Society in Focus: Change, Challenge & Resistance - Reflections from South Africa and Beyond, UK: 70-86
Mapadzimeng, SM. 2010. Contemporary Social Issues in Africa - Cases in Gaborone, Kampala, and Durban, Pretoria, South Africa, 92-106
Kytzler, B. 2010. Classical Tradition, Leiden
Valodia, IAK. 2010. Taxation and Gender Equity: A Comparative Analysis of Direct and Indirect Taxes in Developing and Developed Countries, USA, 290-313
Shukla, UD. 2010. Trends in Indo-African Relations, New Delhi, 245-259
Freund, WM. 2010. Development Dilemmas in Post-Apartheid South Africa, Pietermaritzburg
Kytzler, B. 2010. Europa - Stier und Sternenkranz: Von der Union mit Zeus zum Staatsverband, Goettingen, 117-121
Gopal, ND, Buchanan, J, Wilson, S. 2010. Technology for Facilitating Humanity and Combating Social Deviations: Interdisciplinary Perspectives, USA, 93-112
Kytzler, B. 2010. Antiquity, Leiden
Petersen, I. 2010. Promoting Mental Health in Scarce-Resource Contexts. Emerging Evidence and Practice, Cape Town, 82-96
Budlender, D, Casale, DM, Valodia, IAK. 2010. Taxation and Gender Equity: A Comparative Analysis of Direct and Indirect Taxes in Developing and Developed Countries, USA, 206-232
Haddad, BG. 2010. Religion and Social Development in Post-Apartheid South Africa: Perspectives for Critical Engagement, featherbosch, 121-136
Bond, PM. 2010. Globalisation and Health: Pathways, Evidence and Policy, New York and Abingdon, Oxon, 63-80
Kytzler, B. 2010. Antiquity, Leiden
Kytzler, B. 2010. Ich komme aus dem Staunen nicht heraus - Platon zum Vergnuegen, Stuttgart
Ngwane, TS. 2010. Zuma’s Own Goal Losing South Africa’s War on Poverty, Africa, 381-388
Zami, MS. 2010. Influence of Landscape Design on the Function of University Campus, Berlin, 1-178
Pattman, RW. 2010. Society in Focus: Change, Challenge & Resistance - Reflections from South Africa and Beyond, UK: 272-289
Bond, PM. 2010. Zuma’s Own Goal Losing South Africa’s War on Poverty, Africa, 59-69
Mafema, E, Tsishongha, NS. 2010. Contemporary Social Issues in Africa - Cases in Gaborone, Kampala, and Durban, Pretoria, South Africa, 179-194
Hunter, M. 2010. Love in the time of AIDS: Inequality, Gender, and Rights in South Africa, Pietermaritzburg, 1-303
Gordon, SL. 2010. Contemporary Social Issues in Africa - Cases in Gaborone, Kampala, and Durban, Pretoria, South Africa, 45-64
Oehrle, B, Bartolome, S, Mukuna, K. 2010. Multicultural Perspectives in Music Education, 4501 Fortis Blvd., Suite 200, Lanham, Maryland 20706, 7-44
Kumalo, SR, Dziva, D. 2010. From Our Side: Emerging Perspectives on Development and Ethics, Amsterdam
Cebekhuila, E. 2010. Contemporary Social Issues in Africa - Cases in Gaborone, Kampala, and Durban, Pretoria, South Africa, 31-44


Valodia, I A K, Grown, C. 2010. Taxation and Gender Equity: A Comparative Analysis of Direct and Indirect Taxes in Developing and Developed Countries, USA.


May, J D, Nzimande, N B. 2010. State of the Population of KwaZulu-Natal: Demographic Profile and Development Indicators, Durban, 103-123.


Williams, RC, de Koker, A. 2010. Sîkê on South African Income Tax Volume 7, Durban, 4-1-4-80

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 1 (service issue 41), Durban, 5-1-5-72

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Volume 7, Durban, 5-1-5-51

Williams, RC, Mazansky, E. 2010. Sîkê on International Tax (on-line publication), Durban, 1-6-1

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 1 (service issue 41), Durban, 6-1-6-86

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Volume 1, Durban, 6-1-6-54

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 1 (service issue 41), Durban, 7-1-7-132

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Volume 1, Durban, 7-1-7-51

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 2 (service issue 42), Durban, 8-1-8-303

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 2 (service issue 42), Durban, 8-1-8-130

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 2 (service issue 42), Durban, 9-1-9-58

de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Vol 2 (service issue 42), Durban, 9-1-9-51


Mcquoid-Mason, DJ. 2010. Legal Aid: International Experiences and Promising Practices for Legal Aid Providers, Copenhagen, Denmark, 135-163

Coetze, L, Mofokeng, LL. 2010. Governance, Cape Town, 1-142


Mcquoid-Mason, DJ. 2010. Legal Aid: International Experiences and Promising Practices for Legal Aid Providers, Copenhagen, Denmark, 135-163

Coetze, L, Mofokeng, LL. 2010. Governance, Cape Town, 1-142


Freedman, DW. 2010. The Law of South Africa Volume 20 Part 1, Durban, 429-499


Williams, RC. 2010. Sîkê on Tax Administration (2010 Service 2), Durban, 3-1-3-81


Mcquoid-Mason, DJ, de Koker, A, Williams, RC. 2010. Sîkê on South African Income Tax Volume 7, Durban, 4-1-4-80


Mcquoid-Mason, DJ. 2010. Legal Aid: International Experiences and Promising Practices for Legal Aid Providers, Copenhagen, Denmark, 135-163


Freedman, DW. 2010. The Law of South Africa Volume 21, Durban, 201-345


Lupton, M. 2010. Stella Iuris: Celebrating 100 Years of Teaching Law in Pietermaritzburg, Cape Town, 233-246

Cougens, EWF. 2010. The Law of South Africa Volume 24, Durban, 107-200


Hoctor, SV. 2010. The Law of South Africa Volume 24, Durban, 405-453

Kidd, MA. 2010. Stella Iuris - Celebrating 100 years of teaching law in Pietermaritzburg, Claremont, Cape Town, 79-95

Du Plessis, M. 2010. Stella Iuris - Celebrating 100 Years of Teaching Law in Pietermaritzburg, Claremont, Cape Town, 247-274

Kidd, MA, Hoctor, SV. 2010. Stella Iuris - Celebrating 100 Years of Teaching Law in Pietermaritzburg, Claremont, Cape Town


Kidd, MA, Hoctor, SV. 2010. Stella Iuris: Celebrating 100 Years of Teaching Law in Pietermaritzburg, Claremont, Cape Town, 16-31


Van der Merwe, A, Quinlan, TKC. 2010. Developing Capacity for Health: A Practical Approach, Sandton, Johannesburg, South Africa, 219-227

Hanass-Hancock, J, wall, k. 2010. HIV/AIDS and Disability, London, 169-171

Campbell, C, Gibbs, AR. 2010. International Handbook of Gender and Poverty, UK and USA, 327-332


Chellan, N, Bob, U. 2010. Society in Focus: Change, Challenge & Resistance - Reflections from South Africa and Beyond, UK, 70-86

Uys, LR, De Kadl, E, Bawa, A, Mazibuko, NM. 2010. The Creation of the University of KwaZulu-Natal, New Delhi, 177-198


Lorentz, SA, Pretorius, JJ, Ngeleka, KJ. 2010. Definition and Upscaling of Key Hydrological Processes for Application in Models, Pretoria, 1-51


Maharaj, B, Desai, A, Bond, PM. 2010. Zuma’s Own Goal Losing South Africa’s War on Poverty, Africa


SUGAR MILLING RESEARCH

Books

<table>
<thead>
<tr>
<th>BOOK TITLE</th>
<th>AUTHOR/EDITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Paradox of Victory: COSATU and the Democratic Transformation in South Africa</td>
<td>Buhlungu, Sakhela</td>
</tr>
<tr>
<td>Africa South: Viewpoints, 1956–1961</td>
<td>Daymond, M.J. and Sandwith, Corinne</td>
</tr>
<tr>
<td>Albert Luthuli: Bound by Faith</td>
<td>Couper, Scott</td>
</tr>
<tr>
<td>Bernard Magubane: My Life &amp; Times</td>
<td>Magubane, Ben</td>
</tr>
<tr>
<td>Cultured Violence: Narrative, Social Suffering and Engendering Human Rights in Contemporary South Africa</td>
<td>Jolly, Rosemary</td>
</tr>
<tr>
<td>Development Dilemmas in Post-Apartheid South Africa</td>
<td>Freund, Bill and Witt, Harald</td>
</tr>
<tr>
<td>From Servants to Workers: South African Domestic Workers and the Democratic State</td>
<td>Ally, Shireen</td>
</tr>
<tr>
<td>Land, Memory, Reconstruction and Justice: Perspectives on Land Claims in South Africa</td>
<td>Walker, C; Bohlin, A; Hall, R and Kepe, T.</td>
</tr>
<tr>
<td>Liyoze Line Nangakithi (Zulu translation of Spring Will Come)</td>
<td>Zulu, Ndabayakhe William</td>
</tr>
<tr>
<td>Love in the Time of Aids: Inequality, Gender and Rights in South Africa</td>
<td>Hunter, Mark</td>
</tr>
<tr>
<td>Magema Fuze: The Making of a Kholwa Intellectual</td>
<td>Mokoena, Hloniph</td>
</tr>
<tr>
<td>Race Trouble: Race, Identity and Inequality in Post-Apartheid South Africa</td>
<td>Durheim, Kevin, Mtose, Xoliswa and Brown, Lyndsay</td>
</tr>
<tr>
<td>Shembe Hymns (CD included)</td>
<td>Muller, Carol and Mthethwa, Bongani</td>
</tr>
<tr>
<td>South African Literature After the Truth Commission: Mapping Loss</td>
<td>Graham, Shane</td>
</tr>
<tr>
<td>The Curse of Berlin: Africa After the Cold War</td>
<td>Adebajo, Adekeye</td>
</tr>
<tr>
<td>Tilling the Hard Soil: Poetry, Prose and Art by South African Writers with Disabilities</td>
<td>Moolman, Kobus</td>
</tr>
<tr>
<td>Yakhal’ Indoda (Xhosa translation of When a Man Cries)</td>
<td>Mahala, Siphiwo</td>
</tr>
</tbody>
</table>
Cover: The cover captures the University’s commitment to advance women scientists and features the University’s nine research focus areas.

ISBN: 978 1 86840 726 2