

Research Bites



UNIVERSITY OF
ZULULAND



Research Awards Ceremony 2013

A Research Awards ceremony was held at the Protea Waterfront Hotel in Richards Bay on 14 November 2013 to celebrate the positive contribution that researchers have made to UNIZULU's research endeavour. In addition to the guest speaker, Dr Andrew Kaniki of the National Research Foundation, guests included members of the University Executive, Deans, Heads of Departments and members of research-related committees. The event was a great success!

In welcoming guests, Prof Rob Midgley, Deputy Vice-Chancellor, Research and Innovation, emphasized that while the event showcased successful researchers and the type of research that they were doing, it was also important "to make public the kind of things we will recognize as good research behaviour" so that others can follow suit.

The Vice-Chancellor, Prof Fikile NM Mazibuko, also emphasized the importance of research and its contribution to "the prestige profile of the University", while Dr Kaniki reiterated the importance of research excellence and knowledge production in making countries more competitive internationally.

In all, 75 persons received recognition in a variety of categories and the full list of awardees can be viewed on the University website. A similar event will again be hosted towards the end of this year. The signs already indicate that even more researchers will qualify this time round. So watch this space.....!

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Department of Physics and Engineering

Dr Sifiso Senzo Ntshangase obtained his PhD in Physics from the University of Cape Town. His PhD work focused on the development of a gamma-ray detection instrument called a Recoil detector. This device is very effective in suppressing fission background, mostly encountered in the actinide region when measuring gamma-rays that follow heavy ion reactions.

Dr Ntshangase is also a proud UNIZULU alumnus, having received his Bachelor's degree here in 2002. While still doing his PhD in 2008, he was appointed as an Accelerator Physicist at iThemba LABS (the largest accelerator based, multi-disciplinary research facility in Africa and the Southern Hemisphere). His main responsibilities entailed producing various types of charged particles, using an electro-magnetic device called an Electron Cyclotron Resonance Ion Source (ECRIS). These charged ions are ultimately transported at relativistic speed, using particle accelerators in order to facilitate nuclear research activities and cancer therapy. During his tenure, he was instrumental in the assembly and commissioning of the Grenoble Test Ion Source (GTS), the most powerful ECRIS in the world. He was also appointed as a project leader for the Li beam development, which was a first of its kind to be developed and produced at iThemba LABS. This project was done in collaboration with the Joint Institute for Nuclear Research (JINR), Dubna, Russia. Currently, his research focuses on the evolution of exotic shapes in the actinides region as well as the synthesis of heavy elements.



Dr SS Ntshangase

Results based on his postgraduate research work and other collaborative investigations have been published in various peer review journals, such as Physical Review Letters, Physical Review C, Physical Letters B, Euro Physics G including many conference proceeding papers. Over the years, he has also been invited to partake in various nuclear physics experiments and gatherings in Europe and Asia. Since he assumed his latest position as a lecturer; at UNIZULU in 2012, he has supervised one MSc student (who has since been awarded a prestigious scholarship to study abroad). The quality and impact of his research outputs over the years were recently acknowledged by the NRF in form of a Y2 rating and invitation to selection panels for rated researchers.

Department of Agriculture

Doctor Godfrey Elijah Zharare is a plant scientist trained at the University of Zimbabwe. He holds a PhD in Plant Mineral Nutrition from the University of Queensland in Australia, MSc in Crop Physiology from the University of Reading in the UK, and a BSc Honours in Crop Science from the University of Zimbabwe. His main research area has been physiology and agronomy of field crops.

He was rated C3 by the NRF in December 2013 for his contribution to the mineral nutrition of groundnut (peanut). In this regard, he produced a collection of innovative work that examines in detail mineral nutrition of groundnut with respect to both its vegetative and reproductive growth using solution culture techniques. This is the first study into the mineral nutrient relations of the developing 'subterranean' groundnut

.....Continued on page 5



Dr Godfrey Elijah Zharare

pod using solution culture techniques, which allow a close control of pod's chemical environment.

Using solution culture techniques, he and a PhD student studied (i) the morphological development of groundnut pods, (ii) the pod-zone zinc nutrition of groundnut, (iii) the effects of pod-zone calcium on pod development of Virginia, Spanish and Valencia type groundnut in solution culture, (iv) the pod fluxes of magnesium, potassium, and calcium, and (v) the interactions of calcium with magnesium and pH in the pod-zone on pod and seed development of groundnut. These studies have advanced the world's knowledge on mineral nutrition of groundnut, particularly calcium.

As a continuation of this work, he have started research aimed at elucidating the physiological processes involved in the etiology of pops disease (production of fully grown pods with no seed inside) of groundnut. He is also researching on insect-host plant relations of groundnut leaf miner, a pest of groundnut and soy-bean that has recently emerged and threatening the viability of groundnut production on the African continent.

On the side-line he has a small research project on mushrooms (oyster and shiitake) and another project on eco-physiology of the semi-domesticated indigenous vegetables.

Department of Politics and International Studies

by Oscar Cele

Professor Christopher Afoke Isike is an associate professor at UNIZULU, an author and rated researcher, and a political analyst for 1KZN TV in Richards Bay and the Zululand Observer, for which he contributes a political opinion page.

He obtained his first Political Science degree in 2000 from University of Benin in Nigeria and also holds a B.Sc. Honours in Political and Public Administration, an M.Sc in International Relations, all from the same university, and a Ph.D in Political Science from the University of KwaZulu-Natal. In addition, he obtained a Certificate in Public Relations and participated in various short training courses at different universities, including the University of Johannesburg and the University of Ilorin in Nigeria.

Prof Isike started his academic career at the University of Benin before moving to South Africa where he took up a position as a lecturer at the University of KwaZulu-Natal. He started working at UNIZULU as a political science lecturer in 2009, teaching undergraduate 2nd year students as well as postgraduate students.

Prof Isike is an excellent researcher and has already published 30 research articles, which earned him an NRF rating at the C3 level. He is currently conducting research in pre-colonial gender relations in Africa. The project focuses on women in different countries who are forced into marriage at an early age either by cultural practice or belief systems. Prof Isike is working alone in this project but also relies on some assistance from Master's and Honours students. He hopes to finish the research in three years' time.



Prof. Chris Isike

RESEARCH OUTPUTS

The latest research output statistics that are available are those for 2012. UNIZULU produced a total of 72.91 accredited research units, which is a 5% increase over the 2011 figures, but only a 3% increase over the previous five years, which was far below the sector average of 10%. Our research Master's output (graduation April 2013) remained constant at 45 graduates, but our doctoral graduates increased dramatically by 47%, from 19 to 28.

Our unofficial projections for 2013 contain both good and bad news. The good news is that our research output has increased dramatically. The Research Office has recently submitted our 2013 outputs to the DHET and we are optimistic that around 95 units will be allocated to us in due course, an increase of around 30%. These figures are most pleasing and reflect commitment and professionalism of a number of our academic staff who have managed to conduct research under trying conditions. They deserve our appreciation and thanks.

At first glance, our 2013 graduation output of 31 Master's and 14 doctoral graduates is disappointing. On reflection, however, the reduction in numbers may be the result of quality assurance measures that were instituted last year, in which event we should not be too discouraged.

Supervisors and postgraduate students are requested to be proactive:

- In order to graduate in May 2015, a candidate must be registered in 2014. The practice of retrospective registration has been discontinued.
- Become acquainted with the provisions of the Postgraduate Assessment Policy, especially regarding the submission processes and the appointment of examiners
- Ensure that manuscripts are submitted in good time.

Overall, there is much to be pleased about. We are meeting our twin objectives of being more research and quality orientated, and indications are that we are no longer lagging behind others in the sector. One remains optimistic that we are poised for a growth spurt in the next few years.

STAFF QUALIFICATIONS

According to the DHET, the percentage of staff in the university sector with formal doctoral qualifications is 38.6%. It is generally asserted that institutional research output is both quantitatively and qualitatively linked to the number of staff with doctoral qualifications. DHET statistics indeed support such assertions, with staff at the universities with the highest per capita output having an average of 55.1% doctoral qualifications and 28.8% with Master's qualifications, those in the middle cluster having 42.3% and 33.4% respectively, while staff in the lowest per capita output cluster have 19.1% and 39.8% respectively.

UNIZULU lies in the middle of the low-output cluster. At UNIZULU the percentage of permanent academic staff with doctoral qualifications in 2012 was 26.5% and those with Master's qualifications 39.9%. (This shows a decline from 2010 when the percentages were 33.6% and 38.34% respectively.) This also means that a third of our academic staff members (33.4%) do not have the minimum qualification deemed suitable for academic activity. The UNIZULU research development plan is aligned to the national priority of improving doctoral qualifications, but it also seeks to reduce the component of permanent academic staff who do not have at least a Master's degree. (This cohort is unlikely to be reduced to zero, but a medium-term target of between 15% and 20% is realistic for UNIZULU.) Staff are encouraged to improve their formal qualifications and to make use of the generous financial support that is available from the DHET-funded development grants. In an era where great emphasis is placed on institutional transformation, appropriately-qualified staff ranks as a priority.

RESEARCH WRITERS' RETREAT PROGRAMME

The Research and Innovation team continues to promote an institutional research culture. The **Research Writers' Retreat programme**, now in its third year, is one of our flagship programmes. Thirty-eight persons have thus far attended the programme, 13 articles have already been accepted in accredited journals and 18 have been submitted to journals and are awaiting decisions from the editors. More articles are in final stages of preparation.



The programme aims to assist and equip researchers with writing skills in order to successfully publish their articles in accredited journals, focusing on presentation of:

- Research results in a way that encourages swift and efficient publication in an accredited journal
- Capturing and demonstrating new knowledge
- Assessing critically the presentation of an article for a publication from a reviewer's perspective
- Preparing a final version of the research paper, ready to submit for publication

One Retreat programme is conducted in each semester. The programme specifically targets emerging researchers and postgraduate students with their supervisors. However, our experiment last year of also inviting established researchers to the Retreat met with approval and so we will be repeating that invitation this year.

**"NO RESEARCH IS RESEARCH
UNLESS IT IS PUBLISHED"**

The third Research Writers' Retreat (RWR "C") was held during the 13th – 16th of January 2014 at Jozini Tiger Lodge. Eighteen staff members attended. The participants were a combination of emerging/inexperienced researchers and a few of our established researchers. The three-day retreat was an opportunity for researchers to focus on polishing their final draft article paper for submission to an accredited journal with off course, the assistance of our experienced facilitators. The participants demonstrated hard work and determination over the three days. At the end of the three day retreat, participants were asked to submit an action plan with their estimated dates for submission of their articles. We are positive that the hard work will produce great articles in accredited journals.



Dr N. Biyela (Sister Biyela) is a great example of the success of this programme. Since enrolling in the RWR programme in 2012, she has published five articles and has recently submitted her sixth paper with the support from our facilitators. We hope to see this trend grow among our researchers.

Research Awards



Highlights
Research productivity for
 Prof Isike and D
Research productivity for
 Profs Addison, Imenda, Mr Mthembu, Profs Reva
Most productive researchers:
Innovation award: F
Most productive research department
Role model department:
Research Department of the Year (Research and P



...s ceremony 2013



Included
Emerging researchers:
Dr Pullabhotla
Senior researchers:
Dr Revaprasadu, Scogings, Dr Zharare and Prof Zondi
Prof Edwards and Imenda
Prof Revaprasadu
Subjects: Chemistry and Psychology
Information Studies
Postgraduate output): Department of Psychology



A ROLE MODEL DEPARTMENT WITH A CULTURE OF RESEARCH

by Magdalene Kevisha Naidoo

The Department of Information Studies (IS) has been part of the University of Zululand since 1970. At the Research Awards Ceremony in November 2014, the Department was recognised as a Role Model Department in the University for the involvement of its staff in research and research collaboration, as well as the research output of its students.

This achievement brings the IS Department one step closer to fulfilling its vision, which is to be a leading national and global Information Studies Department by providing quality, career-orientated programs and services in Information Studies through teaching, research and community engagement. The Department aims to bring a progressive and innovative learning experience to the classroom, through the continuous revising of the curriculum for the degree programs offered. This enables the accommodation for new developments in the profession.

The Department, through research and publishing, generates approximately half a million Rand every year through DHET-based research outputs. This has been achieved by integrating research into the curriculum at undergraduate and postgraduate levels and ensuring that research education always leads to a research project, research reports, mini dissertations, full dissertations and thesis, or articles in accredited journals.

Through the years this Department has grown with well-qualified, enthusiastic and experienced staff members. Their work has been translated into continuous and sustained research outputs and a growing number of postgraduate student enrolments, particularly at Master's and Doctoral levels. When asked about the factors that played a key role in their success, Professor Dennis Ocholla, the Head of Department, emphasized the importance of dependable staff and strong and approachable research leadership, who are willing to share their passion and knowledge with others. In order to achieve research outputs, a motivated research leader who is qualified and well experienced, and who can be a role model to the staff is required. Such a person is likely to lead, motivate and empower staff and students. By being an example and setting achievable targets, an invested leader can build not only research capacity in the staff but would nurture a culture of research.

The IS Department's recognition as a Role Model for other departments to follow is clear proof that a strong research-minded approach and a focus on developing capacity for staff and students and students can yield impressive results.



PRESTIGE BURSARY HOLDERS CEREMONY

by Philangenkosi Zibani

At a recent the Prestige Bursary holder's ceremony was held, the Vice-Chancellor, Professor Fikile N.M Mazibuko said cheerfully "Words really fail to express my joy at the news of your selection". The function took place on the 19th of March at the Department of Education Resource Centre. The purpose of this gathering was to commend the newly-elected Prestige Bursary recipients all of whom will embark on research at a Master's level and 15 at Honours level.

Prestige bursary funding for a period of three years (for the Honours and two Master's years) was awarded to top UNIZULU graduates based on the marks obtained in their final year of undergraduate study. Honours students were awarded R40,000 and Master's students R80,000 per annum.

The Vice-Chancellor highlighted that "the Prestige bursary is one of the most highly prized bursaries at UNIZULU, both from the point of view of benefits and the wide and quick opportunities for postgraduate studies. A person selected on this bursary, which is one of the most desirable prizes, stands a chance of reaching the highest point in their research endeavour". She also pointed out that it is an added honour for us all, that recipients' future research-related activities continue to improve the good name of University of Zululand.

**"WORDS REALLY FAILED TO EXPRESS
MY JOY AT THE NEWS OF YOUR
SELECTION"**

DHET Prestige Honours Bursaries

Mazibuko NM - Public Administration
Buthelezi WH - African Languages & Culture
Mthembu W - Botany
Mnguni H - Development Studies
Mlambo HV - International Relations
Ngcobo S - Industrial Sociology
Dlomo LM - Information Science
Khumalo SP - Development Studies
Gasela LP - Industrial Sociology
Gwamanda NNP - Information Science
Mthethwa NP - Biochemistry & Microbiology
Zibani PS - Communication Science
Shoba MS - International Relations
Mlambo ZL - Psychology
Cele MW - History

DHET Prestige Master's Bursaries

Nkuna LL - Development Studies
Methule MM - Development Studies
Duze L - Economics
Memela SR - Social Work
Ngqulunga KI - Economics
Mbili AD - Public Administration
Manqele SS - Public Administration
Mafuka EF - Information Science
Sigcau N - Communication Science



Research Office News

Accolades / Awards

NRF AWARDS/SCHOLARSHIPS:

Congratulations to the following researchers

Prof MO Adigun	THRIP
Prof RK Baum	Indigenous Knowledge Systems
Prof A Beesham	Incentive Funding for Rated Researchers
Prof DP Cyrus	Incentive Funding for Rated Researchers
Mr M Cele	SANHARP
Prof SD Edwards	Incentive Funding for Rated Researchers
Ms CM Duma	S&F – Scarce Skills Masters Scholarships
Ms R Dunpall	S&F – Innovation Doctoral Scholarships
Prof NW Kunene	Thuthuka
Mr DS Luthuli	S&F – Scholarships & Fellowship Programme
Mr XH Makhoba	S&F – Scarce Skills Postdoctoral Scholarships
Dr BS Mavule	S&F – Innovation Doctoral Scholarships
Mr S Mlowe	S&F – Innovation Doctoral Scholarships
Mr SC Masikane	S&F – Scarce Skills Doctoral Scholarships
Mr S Mlowe	S&F – Innovation Doctoral Scholarships
Mr MS Mthembu	Thuthuka
Ms BM Nkosi	Thuthuka
Prof N Revaprasadu	International Science & Technology Agreements
Prof N Revaprasadu	SA Research Chairs – NanoTechnology
Ms T Schultz	S&F – Scholarships & Fellowships
Prof PF Scogings	Incentive Funding for Rated Researchers

NEWLY NRF RATED RESEARCHERS

Prof C Isike

Dr SS Ntshangase

Dr GE Zharare

Forthcoming

Events

Research Writer's Retreat

9-13 June 2014

21-25 July 2014

18-21 August 2014

20-23 October 2013

Supervision Training

23-26 June 2014

DVC Forum Richards Bay

2 July 2014

Doctoral Supervision

5-7 August 2014

According to Rossouw TM, Van Zyl C, and Pope A “Responsible conduct of research: Global trends, local opportunities, *S Afr J Sci* 2014 page 30 we should distinguish the following notions:

“**Research ethics**’ usually includes the processes in terms of which the proposed research study is scrutinised to assess compliance with the desired values and principles that are part of ethical research”.

“**Research integrity**’... has a broader meaning and may be understood to also incorporate implementation of the research processes and the conduct of the researchers”.

“**Responsible conduct of research**’ is an umbrella term that includes notions like authorship, plagiarism, research misconduct, whistle-blowing, research ethics guidelines, codes of conduct, conflict of interest, research ethics and other training”.

The authors say that in practice the distinction between ‘research integrity’ and ‘responsible conduct of research’ is increasingly being blurred.



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If you would like to publicize your research efforts in our next issue of Research Bites, please contact **AYANDA MKHIZE AT EX 6273** at the Research Office for more information.