

## In This Issue

- CUT received prestigious NRF Excelleration Award
- DST/NRF Research Chair (SARCHI) in Medical Product Development launched at CUT
- Research and Innovation held its annual Strategic Research Breakaway



*From left: Dr Beverley Damonse, Acting CEO of the NRF; Prof. Thandwa Mthembu, Vice-Chancellor and Principal of the CUT; Prof. Henk de Jager, Deputy Vice-Chancellor, Academic and Research at the CUT; and Dr Gansen Pillay, Deputy CEO RISA at the NRF.*

## CUT received prestigious NRF Excelleration Award

On 27 August 2015, the Central University of Technology, Free State received the very prestigious Excelleration Award from the National Research Foundation (NRF). The award ceremony was held in Durban and its purpose - to acknowledge South African research institutions for achieving the most improved research performance over recent years. Performance was measured against various critical indicators.

According to Dr Gansen Pillay, Deputy CEO: RISA at the NRF, the name of the award was derived from the words: "excellence" and "acceleration". The CUT has proven that it is keeping in line with its 2020 vision by becoming an institution of excellence. The proof is in the statistics:

- 80% increase in the number of staff members with NRF ratings;
- 82% increase in its research outputs;
- 66% increase in Master's degrees awarded;
- 80% increase in Doctoral degrees awarded;
- 50% of its research outputs were published in international scientific journals;
- 32% increase in Doctoral degrees among permanently employed staff and
- 59% increase in staff at the rank of Associate Professor and Professor.

The efforts of CUT's leaders, researchers and staff are certainly not going unnoticed. Keep on 'excellerating' CUT.

*Compiled by Ms Zenobia Louw*

## DST/NRF Research Chair (SARChI) in Medical Product Development launched at the CUT



*From left: Prof. Henk de Jager, Deputy Vice-Chancellor Academic and Research; Prof. Igor Yadroitsau, Research Professor and Research Chair-holder; Minister Naledi Pandor, Minister of Science and Technology and Prof. Thandwa Mthembu, Vice-Chancellor and Principal of CUT.*

On 14 August 2015 the Minister of Science and Technology (DST), Naledi Pandor launched the Central University of Technology, Free State's Research Chair (SARChI). Research under this chair is focused on Medical development through Additive Manufacturing (AM) under the leadership of Prof Ihar Yadroitsau.

SARChI Chairs have been developed by the DST and National Research Foundation (NRF) to strengthen and improve research and innovation capacity of public universities which will thus enable the universities to produce higher quality postgraduate students and research outputs. The SARChI is tenable for five years, and renewable for two further five year periods, giving a total life span of 15 years. Awards start at R2.5 million per annum per Research Chair in Tier 1 and up to R1.5 million per annum per Research Chair in Tier 2.

The CUT SARChI in Medical Development through AM falls within the CUT Faculty of Engineering and Information Technology. Post graduate students studying in this field are welcome to apply for studies within the SARChI at the CUT.

*Compiled by Ms Zenobia Louw*

## Research and Innovation held its annual Strategic Research Breakaway

The annual University Research and Innovation Breakaway was held on the 03 August 2015 under the theme of "Post Graduate Studies at the CUT".

The aim of the breakaway was to engage on the following issues impacting Post Graduate Studies at the CUT:

- Post graduate performance – finding the new perspective;
- The relevance of the post graduate research study;
- Roles and responsibilities and the post graduate process;
- Relevance of the post graduate research in line with government, businesses, socio-economic and political imperatives;
- Research culture and academic importance – relevance to real world challenges;
- CUT inputs towards enabling research and challenges experienced by the research community and
- Research culture – convening small/focused group research discussions.

The attendees formed groups to discuss the CUT. The development of a more intensive research culture in support of postgraduate studies showed to be a huge concern. There are many challenges in the development of a culture which is supportive of research, mostly due to the fact that it is only 10 years that the institution had to make its transition from a former Technikon to a University of Technology with a new mandate with a research focus. Relevant research programmes and projects as well as postgraduate policies, manuals and guidelines needed some attention according to attendees. Infrastructure for postgraduate students was also put forward as a major concern. The institution is gradually allocating resources and developing infrastructure in support of its post graduate studies.

In conclusion, there is evidence of progress in post graduate studies which enforces the importance of coordination between academia and research. Research culture is important in fostering post graduate studies.

*Compiled by Ms Edith Sempe*





## Research and Development hosted 3rd annual workshop

On 21 August we hosted our quarterly R & D workshop with the theme “How to be successful in your postdoctoral studies.” This workshop was an extension of our discussions on postgraduate supervision and studies during the annual R & D breakaway (3 August). Almost 60 staff and students attended the workshop. I am happy to report that there were constructive engagements on the various topics. Please find enclosed the workbook prepared for this event.

Following from the workshop, it was evident that there are needs around:

- What is research and how / when is new knowledge created?
- Scientific writing skills
- Literature review
- Methodological training
- Data analysis and interpretation
- Supervisory skills
- Funding application skills
- Ethics, integrity, plagiarism, co-authorship
- Presentation skills
- Understanding a research topic in the broader context of the research discipline
- How does one know that the research is relevant, may have impact and is in demand by business and industry

From the discussions I got the impression that many of these issues may not be included in the undergraduate research methodology modules and / or not sufficiently addressed. In addition, it appears as if at the M and D level these issues are not sufficiently addressed either.

The R & D Office (via its Graduate School) will continue to address and inform these needs. (More information to follow on what is already available and what will be covered in the next three months.)

*Compiled by Prof Laetus OK Lategan*



*Middle row, 5th from left - Dr Hanita Swanepoel - Post Doctoral Fellow from the Life Sciences Department at CUT, with delegates at the IFT's 75th Anniversary*



## CUT Post Doctoral Fellow attended IFT 75th Anniversary

The 75th anniversary of the Institute of Food Technologists (IFT) was held in Chicago, Illinois during July of this year. CUT's Post Doctoral Fellow — Dr Hanita Swanepoel had the honor of participating in the IFT Lead 360. Lead 360 is a global leadership forum that brings together international, dynamic, and high potential new professionals over two to three days of training. Training was mainly focused on providing leadership skills to participants. During this programme, a team of 24 delegates received individualised coaching. These delegates networked and developed their “One Big Idea” - an action plan that would make a difference in promoting leadership and future growth of food sciences professions (IFT Lead 360 programme).

Twenty four strangers unified as one team to create the #pLayitforward initiative. Through a modified bingo board (LINGO), the team was also challenged to take ideas from the Lead 360 programme and develop key initiatives in leadership, emotional intelligence, networking, growth and outreach that could be implemented in the workplace, community and higher educational institutions. With 24 team members from 14 countries participating in 24 activities, the aim was to make an impact in the science of food, worldwide. Progress will be posted on IFT.org, and it is hoped that more researchers will join the initiative.

“Through this experience, I have met new friends, gained greater self-awareness, and have a much deeper appreciation for the universality of leadership and teamwork.” Dr Hanita Swanepoel said.

*Compiled by Dr Hanita Swanepoel*

## FEIT 2nd Research Culture Workshop: Journey to Doctoral Degrees



*From left: Prof Alfred Ngowi - Dean, Faculty of Engineering and Information Technology; Dr Marita Oosthuizen, Senior Lecturer, Information Technology; Prof Herman Vermaak - Professor, Computer Systems; Dr Harry Brink - Senior Lecturer, Maths and Physical Sciences; Dr Dillip Das - Senior Lecturer, Civil Engineering; Dr Mohamed Mostafa - Research Manager, Faculty of Engineering and Information Technology; Dr Masinde Muthoni - Senior Lecturer, Information Technology; Dr Kobus van der Walt - Senior Researcher, Mechanical and Mechatronic Engineering and Ms Mpho Mbeo - Faculty Officer, Faculty of Engineering and Information Technology.*

The Faculty of Engineering and Information Technology hosted a research workshop entitled “Journey to Doctoral Degrees” on 7th Sep 2015. The workshop was honoured by a high profile keynote speaker: Prof Tshilidzi Marwala the Deputy Vice-Chancellor: Research, Innovation, Postgraduate Studies and the Library at the University of Johannesburg. Prof Marwala is a recent recipient for NRF award for research development.

Prof Marwala delivered a very descriptive presentation on key issues for research and innovation. He deliberated on the aims and drivers of research before he discussed performances of staff and postgraduate students. This was followed by a touch on the importance of visiting professors and internationalization of research. The key points he raised included the importance of postgraduate students’ environment, the strong linkage with industry, sourcing funds from municipalities, joint appointments of researchers, and the importance of recruiting post doctoral fellows. His presentation was preceded by Prof Alfred Ngowi’s talk on how to link research to teaching and

learning and engagement. Emphasis on research centres, units and group as infrastructure for enhancing research capacity was highlighted. Then, Dr Mohamed Mostafa, the Faculty Research Manager, talked about the recent achievements of CUT in research and discussed the current challenges to improve CUT research output.

Other presentations were also delivered by Dr Muthoni Masinde from the Information Technology department, Dr K van der Walt from Mechanical and Mechatronic Engineering and Dr Dillip Das from the Civil Engineering department. The presenters took the audience through their PhD journeys and showed different experiences as Dr Masinde is a foreign national studied in Kenya and Belgium before obtaining her PhD from South Africa. She highlighted the role of the family in supporting female progress. Dr van der Walt showed, by model, how involvement in local problems can assist with international recognition. He emphasised that students should take ownership of their studies. Finally, Dr Das gave a very dramatic experience with highlights of the importance of choosing the right supervisor.

The event was concluded by Dr Mostafa. He thanked Prof. Marwala for sharing his experience with CUT and the other presenters for inspiring CUT’s postgraduate students. He expressed the need for speeding up the fostering of a research culture at CUT.

*Compiled by Prof Alfred Ngowi*



*On the left: Prof Alfred Ngowi - Dean, Faculty of Engineering and Information Technology with the Keynote speaker - Prof Tshilidzi Marwala - Deputy Vice-Chancellor: Research, Innovation, Postgraduate Studies and Library at the University of Johannesburg.*





# RESEARCH AND INNOVATION

## Newsletter

### Upcoming Events

#### October

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|-------|--|
| 19-21 | SATN Conference  |
| 22    | Faculty of Humanities Annual Research Seminar                                  |
| 28    | Faculty of Engineering and Information Technology 18th Annual Research Seminar |
| 29    | Faculty of Health and Environmental Sciences Annual Research Seminar           |

### From the Dean's desk...

It is often said that a research culture is the basis for competitive research participation, growth and finding a strategic niche. In return, it is also claimed, that it is the quality of activities, their relevance and impact that secure a sustainable research culture.

The conclusion is obvious:

A quality research culture supports quality research whilst quality research builds a quality research culture.

This newsletter gives evidence to this conclusion. It is exciting to see the many research projects impacting on our university community, business industry and social communities. It is very rewarding to note that a research system can be small but still meaningful. The recent award from the NRF, the launch of the SARChI in additive manufacturing and the many national and international activities give testimony to the world class research performed by staff and students. Without your input a quality research culture was not possible!

Best wishes for the remainder of the year!

*Prof Laetus O.K. Lategan*