



Central University of
Technology, Free State

GRATIA

Central University of Technology, Free State (CUT) • December 2015



Source of knowledge:
experiments

Medical

medical product development

additive manufacturing

CRPM

I want to see a strong team with
motivated young scientists and engineers

SARChI chair: FACE TO FACE WITH PROF. IHAR YADROITSAU

CONTENTS

4 Message from the Vice-Chancellor and Principal

Feature Story

7 CUT takes a lead in 3D printing for medical purposes
8 Face to face with Prof. Ihara Yadoitsau

Academic Programmes

10 Second Annual Microsoft Development Day held
11 Management Sciences drives Sustainable Development
12 CUT sets Entrepreneurship Project in motion

Research Excellence

13 CUT wins NRF Excelleration Award 2015
14 Official Launch of Unit for Sustainable Water and Environment
15 2nd Research Culture workshop: Journey to doctoral degrees
16 CUT and local doctors passionate about changing lives
18 CUT focuses on building relationships that further its
goals of transformative technology and social development
19 AFRICRID officially launched

University Life

20 CUT Spring Graduations
22 Five Doctorates for Spring Graduations
25 CUT partners with school principals
26 Dean lays foundation for partnership with technical High school
principals
27 CUT Partners with PMSA to promote professional
project Management
28 Former UN Human Rights Commissioner unpacks constitutional
rights to equality at the Prestige Lecture
30 2nd Herman Mashaba Lecture
31 Heads of institutions meet to discuss the future
32 CUT acknowledges and celebrates excellence at the
VC's excellence awards 2015
34 Department of Accounting Awards
36 Faculty of Humanities awards
38 CUT broadens access of women in STEM
39 Language Practice Students learn from industry experts
40 Local learners benefit from community Journalism Project
41 Management Sciences hosts its annual Prestige Seminar

Highlights

42 CUT Dean wins the African Continental
Titans Building the Nations Award
43 CUT serves its 67 minutes
44 CUT Alumni take steps to strides
49 CUT celebrates cultural diversity
50 High Schools Science Quiz
51 International news
54 Fiesta del Vino Festival draws wine and food lovers to CUT
55 CUT's hub of technology and innovation in action
56 CUT and SETA'S co-host Career Fair
57 CUT top BTech Engineering students at the 2015 IPET
National Awards
57 Gymnos residence peps inmates' spirit high

Sports

58 Welkom Athlete
59 CUT Choristers at the 38th
Old Mutual National Choir Festival

Message from the Vice-Chancellor and Principal



In 2010, CUT's Council approved Vision 2020 and the associated Strategic Plans 2010 – 2015 and 2016 – 2020. As you are now well aware, CUT's Vision 2020 statement states that: by 2020, we shall be “an engaged university that focuses on producing quality social and technological innovations in socio-economic development, primarily in the Central region of South Africa”.

We are now halfway into the implementation of this vision. This is an opportune time to revisit the vision, refine and revise our strategic plan to ensure that we are on course. After consultations with university stakeholders and approval by Council, an updated Strategic Plan 2016 – 2020 will be submitted to the Department of Higher Education and Training (DHET) by the end of this year. This will provide a roadmap for attaining our goals and accelerating CUT's success.

Let me now highlight some of CUT's recent noteworthy achievements as we march towards 2020. Our mission as a university consists of three broad areas, namely, teaching and learning; research and innovation and societal engagement.

In all these broad areas, CUT is in sync with the objectives of Vision 2020. As our vision statement confirms, social and technological innovations are core to what we do. And, we insist that outcomes and impacts of these innovations in the socio-economic development arena must be a distinguishing feature of our work.

To start with research and innovation, a team of researchers from our Unit for Drug Discovery in the Faculty of Health and Environmental Sciences, led by Prof Sam Mashele, who is also our Dean of the Faculty, has discovered a new drug that has much potential to help fight aquatic

animal infections caused by aquatic parasites. These micro-organisms are widely known within the scientific world as Oomycetes – fungus-like micro-organisms that continue to wreak havoc on the aqua-farming sector world-wide. They are considered the deadliest of pathogens, causing a diminished production of aquatic food. For years, researchers across the world have been trying to understand these micro-organisms in order to control the disease and develop novel drugs against these pathogens. CUT researchers are leading the way in finding solutions that will secure and enhance aquatic farming; something that sustains many livelihoods.

Another example with direct relevance to socio-economic development in our region and beyond, is CUT's Centre for Rapid Prototyping and Manufacturing (CRPM) in which CUT has made immense investments in equipment and now lately in research capacity. In partnership with a team of three doctors from the Free State Central region, Materialise (Belgium); Technimark; Stellenbosch University and the Council for Scientific and Industrial Research (CSIR), CRPM has put a smile on many patients' faces. Recently, the doctors, Kobus Hoek (Bloemfontein); Phillip Jonsson (Kimberley) and Prof. Cules van den Heever, performed another corrective prostheses surgery on a Kimberly patient, removing a tumour and restoring the proper functioning

and aesthetics of the mouth, face and jaw using additive manufacturing technology. In 2014, two patients underwent a similar operation at the same hospital and received titanium implants which were laser sintered with the use of 3D printing from CUT's CRPM. This operation is the second of its kind in the country. It is true, successful innovation almost always relies on partners outside the académie who understand the needs of their communities and customers, and who have records of effective delivery.

We are also proud to announce the successes of Professors AB Ngowi, DP Ngidi, A Swart and Dr P Rambe in attaining the National Research Foundation (NRF) ratings from 2015 to 2020. In addition to their sustained research outputs, the first two professors are, respectively, Dean of Engineering and Information Technology and Dean of Humanities (which includes Education). Again, it is very rare to have leading researchers and academics being NRF rated whilst they hold senior management positions.

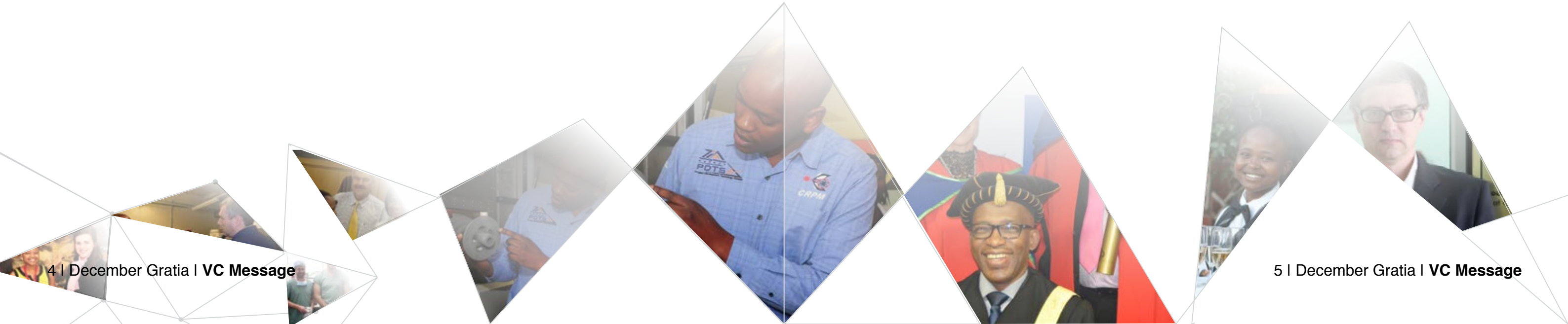
Perhaps the highlight of the year was when, on 14 August, the Minister of Science and Technology, Hon Naledi Pandor, launched the SARCHI Chair in Medical Product Development through Additive Manufacturing (AM) (or 3D printing technology) awarded by the Department of Science and Technology (DST) and the National Research Foundation (NRF) to CUT. This multi-disciplinary field is a unique specialisation within the CRPM, made possible by CUT's concerted efforts and funding over the last five years to make it a flagship of sorts at our university. Prof Ihar Yadroitsau, recruited from a top research institute in France, has been appointed as the Chair. The research Chairs initiative was established in 2006 by DST and

NRF as a response to the requirements of the industry and science to improve research and innovation capacity of public universities and for producing high quality postgraduate students.

The month of August came with another notable achievement. CUT won the NRF Excelleration Award at the NRF Awards Function held on 27 August in Durban. A relevant caption about this award says: This serves to acknowledge Central University of Technology in recognition of the most improved research performance by a South African Research Institution over recent years. In short, all these research and innovation related achievements confirm without any speck of doubt that CUT is a leading university in a number of respects and that important organisations are beginning to notice and acknowledge.

Above, we focused on research and innovation since these have always been the Achilles heel of younger universities, especially, universities of technology. Simply, we provided relevant evidence, that, whilst we still have a very long way to go, excellence in research and innovation leadership is not the preserve of traditional universities. We have also been hard at work in the field of teaching and learning. Whilst research and innovation should inform teaching and learning, the latter has to be well thought through and refined in order to benefit and advance from the former. In reality, the majority of our students will be more exposed to our teaching and learning practice than in research and innovation.

Our Strategic Transformation of Educational Programmes and Structures (Steps) process has led to a number of achievements as reported in other University publications. In short, by 2016 we will have introduced all the nine (9)



demand-driven and user-oriented programmes in the fields of renewable energy technologies, hydrology and water management, health management, education, studio art and design, community development work, and so forth. Further, our Steps process led to the introduction of across- the-board graduate attributes and what we call the 'core curriculum'. These help to instil selected generic graduate knowledge, skills and professional behaviours. All our students get exposed to them. We believe they provide a better link between the knowledge, skills and professional behaviours our graduates earn and the expectations of business/ industry and broader society.

In addition to many reviews and refinements of existing programmes, there is more that CUT is doing to ensure that we do not only produce innovations, but put them to effective use in the socio-economic development arena. Without an entrepreneurial spirit, attitude and a relevant educational philosophy and practice, our graduates will never be able to turn their knowledge, skills and innovations into sustainable instruments that help to grow our regional economy. Not by default, a number of our graduates have to be educated and trained to be job creators rather than be stifled by an educational philosophy and practice that stunts their growth in entrepreneurship.

As was demonstrated above, all our work focuses on the development needs of our region and beyond. This shows we are, indeed, an engaged university. In this respect, we host the Regional Innovation Forum – Free State which brings all stakeholders from government, business/industry, universities and broader society to focus on regional development collaboratively and in unison. This forum will, in due course, lead to a number of real regional platforms that will underpin and sustain our region, in addition to the ones that already exist at CUT and elsewhere.

As an educational institution, beyond the region-wide focus, there are specific education-focused engagement activities that CUT is involved in. Below, we highlight some of these.

Successful Standard Bank funded Winter and Spring Schools, were offered under the auspices of CUT Schools Advancement Academy (SAA), to a total of 1289 learners this year. The number of subjects offered, from which learners were allowed to select a maximum of three, was increased to nine this year, with the inclusion of Computer Applications Technology (CAT), amongst others. These teaching and learning interventions were facilitated by a number of well-versed teachers, lecturers and department officials.

Our Saturday School programme in which a total of

478 learners - 349 Grade 11 learners and 129 Grade 12 learners - participated, has been proceeding well with funding from merSETA and in-kind support of transport provided by Interstate Bus Lines. These two programmes – the Saturday School and the Winter/ Spring Schools - target learners from disadvantaged communities and schools. They are being offered by a dedicated team of subject specialists from CUT, and the Free State Department of Education.

This programme is yet another commitment of CUT in support of the Free State school system and, more fundamentally, in making a difference through community engagement.

Our Educator Mentorship Development Programme, generously funded by the Telkom Foundation, has been making content-based interventions with primary school teachers mainly in the areas of mathematics and science. Funders and institutions often ignore this foundational level of education, at our nation's peril.

In collaboration with the Free State Department of Education (FSDoE), CUT is in the process of establishing a regional Science, Technology, Engineering and Mathematics (STEM) Academy to give more impetus to professional development, training and support in STEM fields. This initiative will target teachers, lecturers, learners and students at schools, Technical Vocational Education and Training (TVET) colleges, and other post-school institutions. CUT and other reputable academic, research and training entities will provide support in the form of training, equipment, facilities, etc. The FSDoE has already provided funding to CUT for the establishment of the academy, which will primarily be hosted at Bloemfontein campus. Relating to partnerships in STEM, merSETA has also generously supported CUT over a number of years. The epitome of this partnership is the merSETA Chair that is in place and funded by merSETA. Its aim is to foster closer engagement between CUT, TVET Colleges and the broader post-school sector so that STEM knowledge could be imparted and shared; and, articulation between the university and these sub-sectors could be more seamless.

These efforts and achievements demonstrate CUT's strong sense of and focus on our vision; a powerful determination to succeed; a huge capacity for hard work; and the boldness and ability to adapt and transform ourselves to excel. CUT stands ready to deliver on its promise – to be "an engaged university that focuses on producing quality social and technological innovations in socio-economic development, primarily in the Central region of South Africa".

Prof. TZ Mthembu
Vice-Chancellor and Principal

CUT takes a lead in 3D printing for medical purposes



Mr Letsoalo Letsoalo, Junior Project Engineer at the CRPM showing Minister Naledi Pandor some of the 3D printed items during the walkabout before her key note address at the SARCHI Chair Launch held at CUT.

3D printing is revolutionising the medical field globally and it is no different in South Africa. Also known as "additive manufacturing", 3D printing for medical purposes is restoring the quality of life of people, particularly those with severe facial disfigurements as a result of cancerous tumours or injury.

The Centre for Rapid Prototyping and Manufacturing (CRPM) at CUT is at the cutting edge of 3D printing or additive-manufacturing (AM) technology for medical purposes.

The Centre does ground-breaking work in the design, development and manufacturing of medical devices using 3D printing technology. In August 2015, the CRPM was awarded a Research Chair in Medical Product Development under the Department of Science and Technology's (DST) South African Research Chairs Initiative (SARCHI), the goal of which is to increase the research output and innovation in areas that are considered essential to the country's strategic growth and development.

Speaking at the launch, the Minister of Science and Technology, Naledi Pandor, said it was important for the country to continue to build a public environment supportive of higher education institutions: "As with many

developing countries, South Africa faces the challenge of competing for leading scientists."

The Minister added that South Africa's funding of public basic research had, however, risen sharply over the past 21 years, as university research was now closely linked to national priorities and global knowledge networks.

Most of the DST's funding – well over R4 billion this year – was invested in people, said the Minister. SARCHI alone had made R470 million available this year as part of increasing research capacity at the country's universities.

The Minister said the CUT Research Chair in Medical Product Development would have a positive impact on research as a whole, and that more research projects would run concurrently to help strengthen knowledge and technological know-how in complementary research infrastructure.

Prof. Thandwa Mthembu, Vice-Chancellor and Principal of CUT, said "I am particularly pleased that CUT is taking the lead in innovations that will change the face of medical science in South Africa. The CRPM stands proudly at the forefront of innovation in this field."

Research Chairs initiative was established in 2006 by the Department of Science and Technology and the National Research Foundation of South Africa as a response to requirements of the industry and science to improve research and innovation capacity of public universities in producing high quality postgraduate students.

The key objectives of SARCHI are to:

- Expand the scientific research and innovation capacity;
- Improve international research and innovation competitiveness;
- Attract and retain excellent researchers and scientists;
- Increase the production of master's and doctoral graduates;
- Create research career pathways for young and mid-career researchers.

Honourable Naledi Pandor, Minister of Department of Science and Technology, launched the Research Chair at CUT on 14 August 2015. The chair was awarded by the National Research Fund (NRF) under the Department of Science and Technology (DST) through the South African Research Chairs Initiative (SARCHI). This Research Chair, under the leadership of Prof Ihar Yadroitsau, SARCHI Research Chair at CUT, is awarded in recognition of the phenomenal work that CUT is doing in this dynamic and exciting field. In 2014, Prof. Ihar went through SA NRF rating process and was placed in the category C (level C1).

Meet Prof Ihar Yadroitsau, the man behind the SARCHI Research Chair at CUT.

Prof. Ihar, as he is fondly known, joined the Faculty of Engineering and Information Technology in January 2014 as a Research Professor with a goal of increasing the research output and innovation in areas that are considered essential to the country's strategic growth and development.

Prof Ihar Yadroitsau hails from a native town in Vitebsk, Republic of Belarus. Upon completing his high school, he joined the Belarusian State University at the Faculty of Physics, as Physics has always been his favourite subject. He graduated at the Moscow State University on Laser Technologies.

His love for applied laser technology began in the mid 90's in Belarus, where he studied the physical aspects of laser-matter interaction, effects of the parameters of laser radiation on the selective laser melting processes,



Face to face with Prof. Ihar Yadroitsau

the formation of inter-particle contacts and the re-arrangement of particles during laser sintering of powder mixture, balling processes, as well as the thermal properties of powders.

In his 20 years experience working at the Institute of Technical Acoustics of the National Academy of the Sciences of Belarus, his studies were associated with optics, lasers and growth of crystals for nonlinear optics. While working there, he published about 60 articles and conference proceedings and was co-author of 4 patents.

He moved and worked at National Engineering School of Saint-Etienne in France, where he became a member of the Research and Higher Education Center "University of Lyon" between 2005 and 2013. While there, he paid special attention to the technological aspects of the laser-assisted direct manufacturing to fabricate complex functional samples from different metal powders with the desired engineered properties and performance for current industrial applications, which is fully described in his book. He obtained his PhD with honours from Jean-Monnet University in France. He worked as Senior Researcher in ENISE.

What does being a SARCHI chair mean to you, your career and CUT?

Our research is specifically and explicitly focused on wide introduction of benefits from additive manufacturing (AM) for the development of individual implants and medical devices. AM has great potential in modern industry. One of the important directions of this technology is medical product development. It was estimated that the global market of orthopaedic implants will grow to a

staggering R350 billion by 2016, of which 54.8% will be joint reconstruction at R191.8 billion. The market is expected to be driven by an ageing population where technological advancements in implant design and materials, will result in improved durability and younger age of patients undergoing surgery in the future. Thus, Medical Product Development through Additive Manufacturing is not only an important social objective, but can also serve as a driving force for the development of high-tech industry in South Africa.

SARCHI award for CUT, is a great recognition for the university as a leader in Medical Product Development through Additive Manufacturing in South Africa. This is a perfect chance for CUT to expand its scientific research and innovation capacity and improve national and international relations with other leading university in the area of Additive Manufacturing.

For me, being a SARCHI chair holder is a great responsibility from one side, and an excellent possibility to realize my academic experience into this real and very noble task. One of the set goals is to increase the production of master's and doctoral graduates. As a public university, we are responsible for the future specialists who will develop new technologies and applications.

The main focus will be directed on medical product development through Additive Manufacturing processes: patient specific prostheses, medical devices and different types of medical equipment.

The goal of the Chair is:

To promote research in Additive Manufacturing; enhance the competitiveness of CUT at national and international level in the area of AM research; involve leading scientists in the field of Additive manufacturing with demonstrated expertise in Medical product Development as well as young scientists and post-graduate students; expand financial support from public and private funds for the development of infrastructure, using modern materials and software for additive manufacturing; train staff to be able to operate all machines for plastics and metal as well as to design the objects for biomedical applications and certify the manufacturing process according to ISO standards.

Who will be working with you through this journey?

The Research Chair is supported by high level of technological competencies of staff members in the Centre for Rapid Prototyping and Manufacturing (CRPM) and Product Development Technology Station (PDTs). We have a close cooperation with doctors and surgeons and other collaborators with a clinical background. We also have very close cooperation with Prof. P. Krakhmalev from Karlstad University (Sweden)

and we make joint investigations with Dr. T.H. Becker and Prof. D. Dimitrov from the University of Stellenbosch, Prof. G.Vikatos from UCT and Prof. D. Hattingh from NMMU. Each year we have interns from Lyon University (France). As part of CUT internationalisation strategy, we will forge collaborative relationship with partners across the world. We are open to dialogue with other centres and universities, and with all the infrastructure in place, our wish is to see CUT being the hub of a world-class research in AM technology.

What do you want to see different from what has been done in the past?

The source of the knowledge is experiment, then scientists have to analyse all the experimental data, receive generalization laws, and check all laws by practice. As Professor Feynman wrote, the principle of science is 'the test of all knowledge and experiment is the sole judge of scientific truth'. CRPM has many experimental data in medical products through AM, now is the time to generalize all cases and formulate design rules for AM of different kinds of medical devices and study properties of the AM objects. Another important facet is training the next generation of researchers in this high-tech environment and disseminate the culture of research. We have to develop analytical skills of our students and young researchers, modern analytical equipment, new machines for mechanical workshop and software. To perform all the goals, we will work hard to get additional funding and to attract highly skilled professionals.

What are your wishes in this reign?

I want to see a strong team with motivated young scientists and engineers, who have excellent background in Additive manufacturing and material science. I also want to see researchers and students from other departments and faculties in our centre. It has to be an open and permanent dialogue between university, industry and specialists in biomedicine. We have to increase our contributions to national and international top-ranked journals. Also, in order to expand our horizons and involve new players who can utilise our innovations, we need to implement our research results in the biomedicine and industry, prepare a special course on the AM technology for professionals from other fields of science and technology, provide regular participation for our students and researchers in international conferences, congresses and exhibitions, and to, bring media to witness the success stories of our students and researchers.

What is your general message to young researchers who wish to be like you?

Firstly, if you want to be a successful scientist and researcher, you have to be ready to study all your life. Secondly, you have to be ready to cooperate with other scientists and be part of the team because there is nothing better and more successful than teamwork.

Second Annual Microsoft Development Day held

The use of technology is expanding and moving faster every day, in turn, users expect great experiences in the palm of their hands for every platform. Faculty of Engineering and Information Technology has embraced the new culture of digital scholarship and its staff and students are integrating this culture into their teaching and learning.

On 20 August, Department of Information Technology held its 2nd annual Microsoft Day in collaboration with Microsoft. The collaboration intends to bring new trends, new technologies, current experiences, and an in-depth knowledge about building the next generation cloud solutions using Microsoft Azure, The new Universal Windows Platform and many more.

According to the Dean of Faculty, Professor Alfred Ngowi, digital transformation is not an option, but a way to go for the engineering community. Prof. Ngowi mentioned that the latest trends in engineering, technology and design rely on sophisticated technology, referring to CAD and 3D printing that is currently taking the lead in the world of innovations and technology.



Above: Dean of Engineering and Information Technology, Prof. Alfred Ngowi believes that new generation of millennials is native to new technology, hence CUT's approach to teaching is aligned with this generation.

Below left: Mr Dave Russell, a Senior Technical Developer Evangelist for Microsoft South Africa giving a technological presentation to students.

"By 2016, all our students will go digital. Owning a laptop as a student will no longer be a fancy thing but a pre-requisite. We are doing away with hard copies and textbooks. We are currently training our students to use cloud storage to secure their files in case the laptop gets damaged or stolen. With the digital signage network, students will be able to access information even when they are off campus. Our major strategy is the partnership we have with Microsoft to ensure that we all learn about new applications and how they can benefit us to be at par with our peers."

Mr. Dave Russell, a Senior Technical Developer Evangelist for Microsoft South Africa, works with local developers to create applications on the Microsoft platform. The students were introduced to new technologies and programmes that help them to improve their skills and knowledge as developers. Mr Russell spoke about the Visual Studio, which enables every developer to build their own application as it has 12 800 functions. Other applications introduced are Agility, Light Bulbs, Source Control, Cloud Powered and Debugging and Diagnosis Experience.



Management Sciences drives Sustainable Development

Faculty of Management Sciences held its third Annual Sustainable Development Debate in a quest to promote the 'Go Green' and Sustainable Initiative - a drive of passion for the Faculty. Sustainable Development as one of the strategic priorities of CUT, aims at engaging students and enriching them with the knowledge that they might take back to their communities and play a role in securing a brighter future for the planet and the future generations; thus, reducing the carbon footprint.

The main objective of the debate was to create platforms for students to showcase their broad knowledge on the current challenging issues that continue to haunt the country's prospects of sustainable future.

Three departmental groups locked horns in an issue that poses a challenge to the green debate in the country. The theme for this year was 'Sustainable Solutions for Water Pollution, Recycling, and Waste Management'.

The event was graced by Councillor Maneheng Tsomela, member of the Mayoral Committee of Mangaung Metropolitan Municipality, who is also responsible for Environmental issues and Mr Qondile Khedama, Mangaung Metropolitan Municipality's Head of Communications in the Office of the Executive Mayor who also delivered a presentation on Environmental and Sustainable Development.

3rd position- Department of Hospitality Management (Hotel School)
Topic: Why South Africans and particular in the Free State must conserve water and stop polluting our water resources.

Winners of the debate are:



1st place- Department of Business Managements
Topic: Creative recycling open doors for income generation.



2nd position -Department of Government Management
Topic: Evergreen waste kickers – Waste Management.



CUT sets Entrepreneurship Project in motion

1st Prize: R5000- B de Klerk and E. Proos (Dr. W. Fourie. Project: Proudly South African greeting cards and necklaces



Innovation and Entrepreneurship are the most important elements and key drivers of the country's economy.

During the launch of Entrepreneurship Week in November, future entrepreneurs from different faculties came in numbers to exhibit their unique products and services to CUT and external communities as well as businesses. The aim of the week was to empower students to develop an insight needed to explore and discover new opportunities, to encourage them to become self-reliant and use their knowledge and skills to start up their own businesses and foster a robust entrepreneurial culture that will maximize the chances of collective economic and social success on a local and global scale.

This project is a culmination of Prof Thandwa Mthembu's vision of Innovation and Entrepreneurship Education which began to unfold in April 2015. Through this project, the University is planning to embed entrepreneurship into teaching and projects for staff and students. "This undertaking by the University is a radical approach with the potential to help the university make further advances in our STEPS programmes; to develop innovative and entrepreneurially oriented young people with the capacity to start and grow their companies and create job opportunities for others," said Dr Muthoni Masinde, Senior Lecturer and Project Leader at CUT.

At the end of a productive week, a panel of external adjudicators assessed the student's projects and products showcased. Six best products/projects received cash prizes. The adjudicators were David Uwah from Liberty Life, Joseph Sehloho from First National Bank and Nyaladzi Mpofu of Microsoft.

The criteria used for the best entrepreneur was:

- Sustainably and economically sound practices used to develop innovative business models based on risk, commitment, and a willingness to follow through;
- The ability to implement knowledge and skills learnt during initial stages of the project;
- Economic, social and environmentally sustainable projects which will take into account, the profit, people and the planet;
- Overall project presentation

The winners are:

Category: Engineering and Health Sciences

3rd prize: R2000-Admire Mhlaba and Solom Mwagha
Project: Sense Weather A Sensor-Based Weather Forecasting System using Weather Lore
2nd prize: R300 Viwe Mqaqa and Viann Bresler (Dr N Luwes)
Project: Autonomous indoor mapping robot
1st prize: R5000-Jacobus Faber
Project: Centre Pivot Control

Category: Management and Humanities

3rd prize: 2000-Kekeletso Seitelo
Project: KOS Designs
2nd prize: R 3,000 Boitumelo Mokhahlane
Project: Just Bee Cause (The Bee Bar)
1st Prize: R5000- B de Klerk and E. Proos (Dr. W. Fourie)
Project: Proudly South African greeting cards and necklaces

CUT wins NRF Excelleration Award 2015



At the NRF Awards 2015 is from left: Dr Beverley Damonse, Acting CEO of NRF; Prof. Thandwa Mthembu, Vice-Chancellor and Principal of CUT; Prof. Henk de Jager, Deputy Vice-Chancellor: Academic and Research at CUT; and Dr Dorsamy Pillay, Deputy CEO: Research and Innovation Support and Advancement of NRF. Photo: supplied by Mark Steenbok

At the NRF Awards function held in Durban on 27 August, CUT received the NRF Excelleration Award for most improved research performance.

The word "excelleration" in the name of the award is a combination of the words "excellence" and "acceleration" which clearly describes much of the work done by CUT over the past few years. Printed on the certificate are the words "This serves to acknowledge Central University of Technology in recognition of the most improved research performance by a South African Research Institution over recent years."

"Receiving the NRF Excelleration Award is an honour and one that we are very proud of," says Prof Thandwa Mthembu, Vice Chancellor and Principal at CUT. "It comes hot on the heels of 14 August launch of our Research Chair on medical Product Development through Additive Manufacturing which was done by the Minister of Science and Technology. CUT Research Chair is part of the South African Research Chairs Initiative funded by the Department of Science and Technology (DST) via the NRF."

The Research Chair and the NRF Excelleration Award are no mean achievements in their own right. But, because CUT never rests on its laurels, a few months ago, the Unit for Drug Research led by Professor Sam Mashale, Dean of Health and Environmental Sciences, discovered a drug for some pathology in marine life. Thus, in a space of about 3 months, CUT has had as many national and public awards and recognitions! There are many other achievements in development in many of our research centres and units.

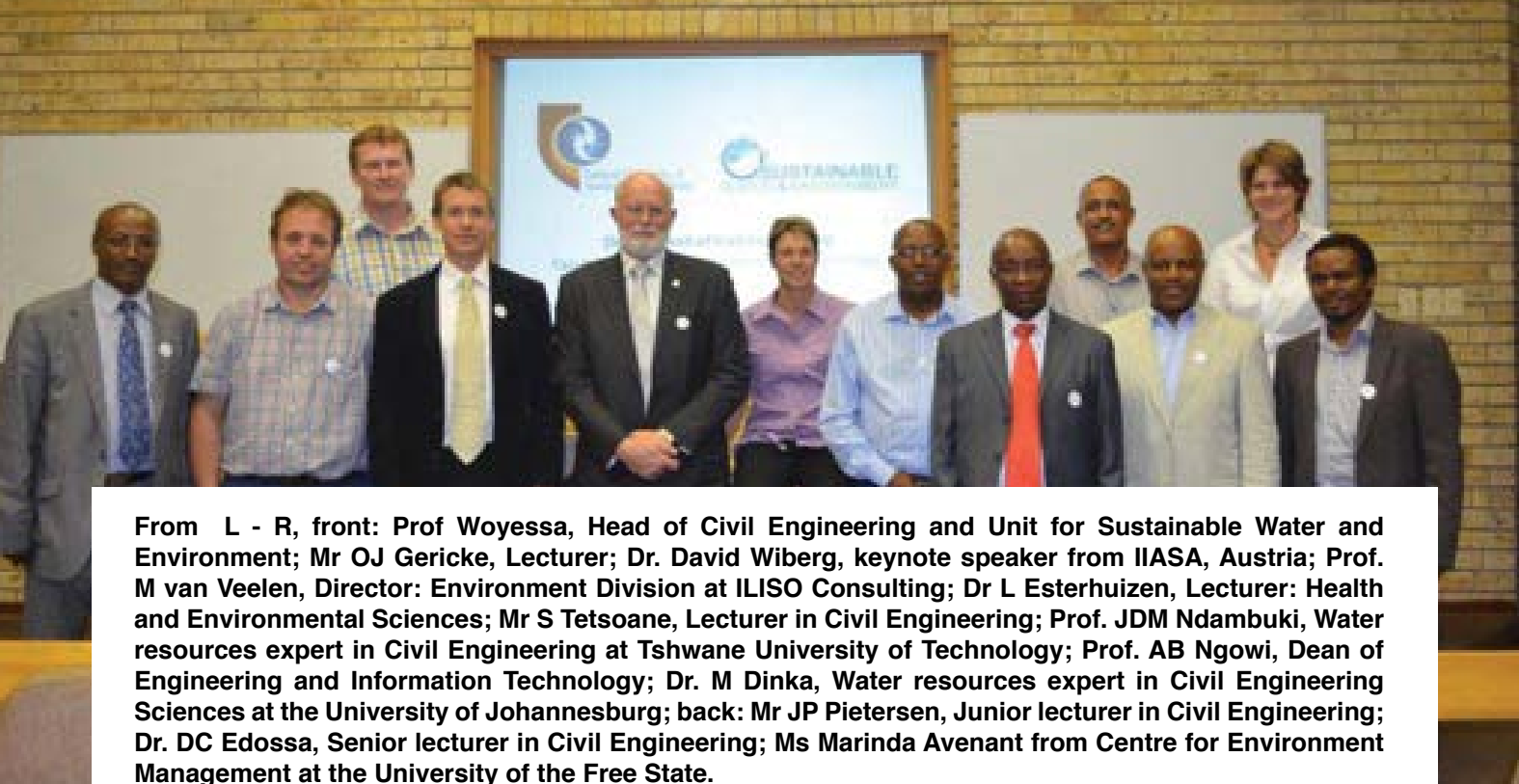
"Our Vision 2020 goal is to ensure that by 2020, CUT shall be an engaged university that focuses on producing quality social and technological innovations for socio-economic development," says Prof Mthembu. "The NRF Research Chair, the results of Professor Mashale's research and the NRF Award all points to our achieving this dream and making it a reality every day."

For CUT, these awards recognise the hard work that the university has put into its research and development, and Vision 2020. Using 2012 as a base year in comparison with 2014 actuals, the university has seen a 66% increase in masters' degrees awarded, an 80% increase in doctoral degrees awarded and an 80% increase in staff holding NRF ratings. In addition, the research outputs – only articles published in scientific

journals and comparing 2011 to 2014 – saw an 82% increase. The proportion of permanently appointed academic staff holding doctorates increased to 32%, relatively high in the university technology sector. Approximately 50% of the research outputs were published in international scientific journals.

The successes that CUT has achieved lately is due to the commitment, determination, exertion and leadership of its staff members at many levels who are passionate and unstinting about fulfilling the promise to the public that CUT is indeed a university worth its name. "Our Faculty Deans play a crucial role and lead by example. Two of the four Deans we have at CUT are NRF rated researchers in their own right," says Prof Henk De Jager: Deputy Vice-Chancellor: Academic and Research. "We have achieved a lot over the past few years and it is clear that the strategies, programmes and resources we have implemented are beginning to bear fruit. However, these improvements are recorded from a fairly low base and we have hard work ahead of us to continue with this growth," he added.

CUT is committed to keeping the momentum going to transform its research agenda and programmes, thereby allowing the university to produce world-class research and the next generation of academics and researchers. "When we push harder it is not because we do not appreciate our achievements, it is because we do not wish to be complacent and we are true to being a CUT above," concludes Prof Mthembu



From L - R, front: Prof Woyessa, Head of Civil Engineering and Unit for Sustainable Water and Environment; Mr OJ Gericke, Lecturer; Dr. David Wiberg, keynote speaker from IIASA, Austria; Prof. M van Veelen, Director: Environment Division at ILISO Consulting; Dr L Esterhuizen, Lecturer: Health and Environmental Sciences; Mr S Tetsoane, Lecturer in Civil Engineering; Prof. JDM Ndambuki, Water resources expert in Civil Engineering at Tshwane University of Technology; Prof. AB Ngowi, Dean of Engineering and Information Technology; Dr. M Dinka, Water resources expert in Civil Engineering Sciences at the University of Johannesburg; back: Mr JP Pietersen, Junior lecturer in Civil Engineering; Dr. DC Edossa, Senior lecturer in Civil Engineering; Ms Marinda Avenant from Centre for Environment Management at the University of the Free State.

Official Launch of Unit for Sustainable Water and Environment

South Africa has been under pressure to reserve water since the draught of 1992 which cut dam levels by 12%. Water being the foundation of life, the country is facing water crisis and has recently heard loud cries from experts and researchers for communities to save water and use it sparingly. Water restrictions have since been imposed on communities as weak river flows also threatens the quality of drinking water.

In response to the national outcry, Faculty of Engineering and Information Technology launched the Unit for Sustainable Water and Environment on 14 October 2015. The establishment of this structure is intended to provide a platform of collaboration between various stakeholders and a multidisciplinary approach to problem solving. Prof Ngowi, Dean of Engineering and Information Technology set the scene on the new Global Sustainable Development Goals with specific reference to water and sanitation.

He said that water as an integral part of the environment, is indispensable for the efficient functioning of the ecosystem. However, poor water management practices have resulted in depleted supplies, falling water tables, shrinking inland lakes, and reduction of stream flows to ecologically unsafe levels. So far, water has been managed in a fragmented way. Surface water and groundwater are considered separately in development activities without due recognition of their interdependence. Water resources in many places are still not managed in conjunction with land resources. Water quantity and quality are generally

managed separately from one another. These fragmented approaches impede coherent analyses at regional, continental and global scales.

Dr David Wiberg made a keynote presentation on Sustainability under Scarcity: Multisystem Challenge. Dr Wiberg is from Vienna, Austria where he serves as a Director of Water Programme at the International Institute of Applied Systems Analysis (IIASA). His presentation touched on the experience of IIASA and on the importance of multidisciplinary approach in addressing the water scarcity issue as it cuts across several disciplines, such as engineering, economics and social sciences.

This was followed by presentations on the New Global Sustainable Development Goals by Prof Martin van Veelen. Presentations from the work of the unit touched on extreme hydrological events and their impact on sustainable development; namely flood analysis and drought forecasting

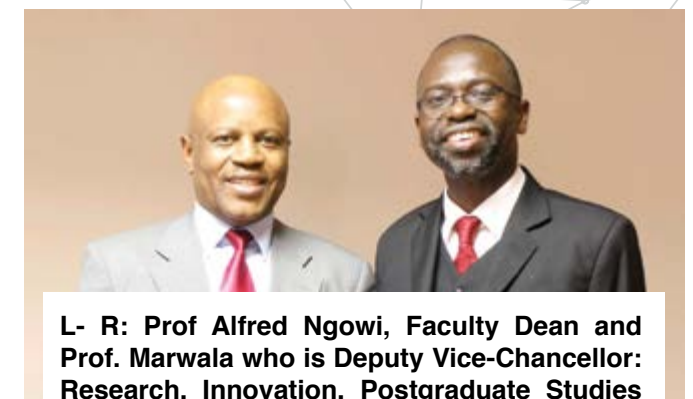
Various stakeholders and representatives from organisations such as Centre for Environmental Management (University of the Free State), Bloemwater, Department of Water and Sanitation, Tshwane University of Technology, University of Johannesburg had fruitful discussions on the way forward and the importance of such a platform in dealing collectively with challenges facing sustainable water supply for the country.

2ND RESEARCH CULTURE WORKSHOP: JOURNEY TO DOCTORAL DEGREES

Faculty of Engineering and Information Technology hosted Prof. Tshilidzi Marwala as a keynote speaker at a research workshop entitled "Journey to Doctoral Degrees" on 7 September 2015. Prof. Marwala who is Deputy Vice-Chancellor: Research, Innovation, Postgraduate Studies and Library at the University of Johannesburg, and a recent recipient for NRF award delivered a descriptive presentation on some key issues for research and innovation.

In his deliberation, Prof. Marwala tapped into the aims and drivers of research before discussing performances of staff and postgraduate students. This was followed by a touch on the importance of visiting professors and internationalisation in research. He raised the importance of postgraduate students' environment, strong linkage with the industry, Faculty's ability to source funds, joint appointments of researchers, and recruitment of post doctoral fellows.

His presentation was preceded by welcome remarks of Prof Alfred Ngowi, Faculty Dean, who highlighted the link on research to teaching, learning and engaging research centre units and groups as infrastructure for enhancing research capacity was also highlighted.



L- R: Prof Alfred Ngowi, Faculty Dean and Prof. Marwala who is Deputy Vice-Chancellor: Research, Innovation, Postgraduate Studies and Library at the University of Johannesburg

Dr. Mohamed Mostafa, research manager in the faculty, highlighted CUT's success stories on research and presented current challenges facing the University and solutions to improve research outputs.

Other presenters included Dr. Muthoni Masinde from IT department, Dr. Kobus van der Walt from Mechanical Engineering and Dr. Dillip Das from Civil Engineering. The presenters took the audience through their PhD journeys and other important factors that contribute towards the success of one's career.



From L - R: Prof. Alfred Ngowi - Dean of Engineering and Information Technology, Dr. Marita Oosthuizen - Manager of Information Technology, Welkom Campus, Prof. Herman Vermaak - Head of Electrical, Electronic and Computer Engineering, Dr. Harry Brink - Head of Mathematical and Physical Sciences, Dr. Dillip Das - Senior Lecturer of Civil Engineering, Dr. Mohamed Mostafa - Research Manager of Engineering & IT and Senior Lecturer, Dr. Muthoni Masinde - Head of of Information Technology, Dr. JG "Kobus" van der Walt - Senior Researcher of Mechanical and Mechatronics Engineering and Mrs Mpho Mbeo - Faculty Officer.

Local doctors working together with CUT to change lives

At the theatre, a team of experts busy with the operation that changed the life of a young woman while saving numerous hours of anesthesia, which in turn shortens her recuperation time. The operation was a success. Dr Hoek also confirmed that the patient is able to swallow and all is well.



A team from the Centre for Rapid Prototyping and Manufacturing (CRPM) at Central University of Technology, Free State (CUT) in partnership with doctors from the central region of South Africa, Materialise – a Belgian company which donated R65 000, Technimark in Cape Town, Stellenbosch University and CSIR, teamed up to undertake another ground-breaking surgical operation on a 32-year old female patient in Kimberley Hospital on 14 October 2015.

The patient was referred to Kimberley Hospital in 2014 and diagnosed with Ossifying Fibroma – a slow growing, non-painful tumour causing the expansion of her lower jaw. At the time, the surgery was postponed, as the patient was pregnant. She returned to the hospital in March this year and was referred for a CT scan and several medical tests in preparation for surgery. Because of her age, the trio decided to resect the tumour and immediately place a custom-made laser sintered titanium implant.

Prof. Cules van den Heever, CUT Extraordinary Professor in the Faculty of Engineering and Information Technology, together with Dr Kobus Hoek, maxillofacial surgeon from Bloemfontein, Drs Riaan Liebenberg and Phillip Jonsson at Kimberley Hospital, performed a reconstructive surgery by removing the tumour and restore proper function and aesthetics of her mouth, face and jaw. In 2014, two patients underwent a similar operation at the same hospital and received titanium implants which were laser sintered with the use of 3D printing from CUT's CRPM.

"We are privilege to be involved in the design and 3D printing of this custom-made titanium implant, pre-operative model and cutting guide. The total manufacturing cost is R40 000 and is subsidised by CUT and Materialise, Belgium," said Gerrie Booysen, Director CRPM.

The team has dedicated their time, skills and efforts as a gratuitous service of helping to restore the dignity of patients and make them socially acceptable. Other important role players who worked on the projects include Dr Anton du Plessis from the Central Analytical Facilities, Stellenbosch University, responsible for Micro CT Scanning of the implant (test for perfection), Sven Delpont from Technimark who did the stress analysis on the design (test to determine the strength of the implant), and Pierre Rossouw from the CSIR, who was responsible for heat treatment (test for implants flexibility).

"My dream is to have a Maxillofacial Prosthodontics Unit here at CUT so that we can perform more reconstructive surgeries and save more lives," said Prof. Van Den Heever.



The expert team, from left (back row): Prof. Cules van den Heever, Dr Kobus Hoek, Dr Riaan Liebenberg, Mr Gerrie Booysen and from left (front): Dr Philip Jonsson, Mr Johan Els, Project Engineer at CUT, and Mr Andre Heydenrych, Junior Project Engineer also at CUT.

Some of the case studies:

a)

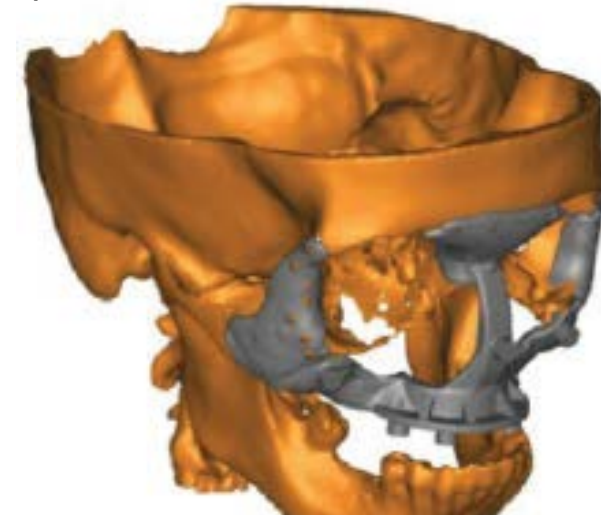
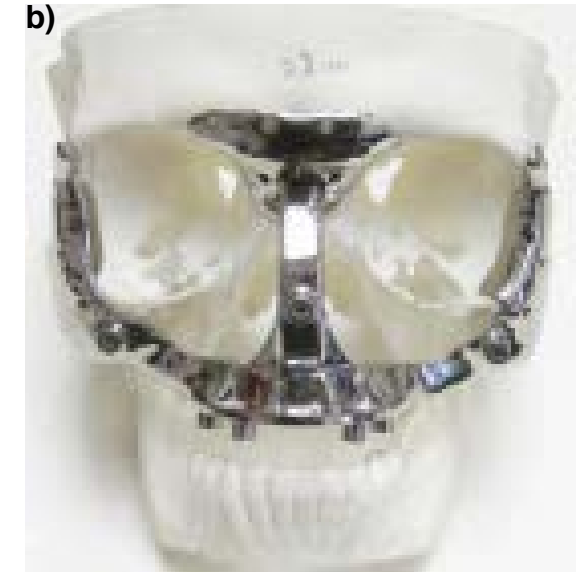


Fig 1

A female patient presented with cancer of the maxilla necessitating the entire area to be removed (Fig a). Prosthesis was designed from Computer Tomography (CT) images of the patient using specialized Magics® software (Fig 1b). The prosthesis was manufactured (Fig b) in titanium (Ti6Al4V) at the CRPM by means of the Direct Metal Laser Sintering (DMLS) process on an EOSINT M280 machine. A nylon drill guide was also manufactured through 3D printing in order to aid the surgeons in drilling guide holes in the patient's

b)



skull for attaching the prosthesis using surgical screws. The titanium implant was cleaned and sterilized by Southern Implants.

The post-op review was good and the patient was transferred after a week from the Intensive Care Unit to a general ward. The operation was performed 14 days after the CT data was received which is significantly shorter than the five weeks that it would take to manufacture the prosthesis through conventional machining techniques.

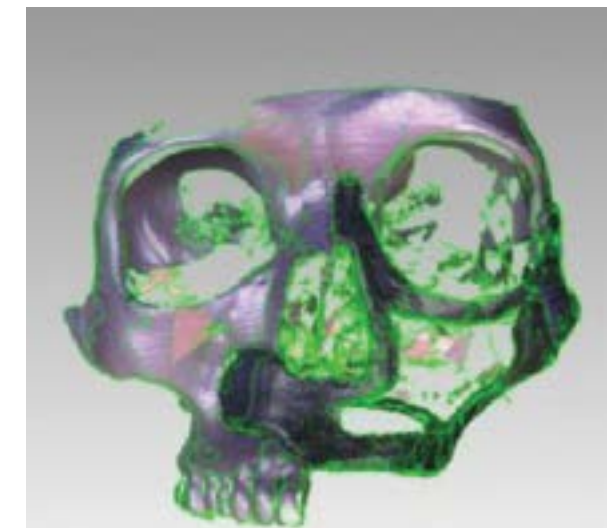


Fig 2:

A female patient presented with a tumour affecting the hemi-maxilla and orbital floor of the left eye which had to be removed. Due to the extent and complexity of the defect, it was decided to fabricate an anatomical model of part of the skull in nylon through 3D printing to plan a framework for the patient to be manufactured in titanium. The CRPM had only two weeks to design and manufacture the titanium implant, due to the rapid spreading of the cancer. It was decided to send the nylon model to the prosthodontist to cut where the bone resection was planned and to produce a wax model of the planned titanium frame. The wax model



and skull were reversed engineered using a Minolta 3D camera and Geomagic® software. The implant design was transferred to the CRPM's EOSINT M280 DMLS machine and manufactured from titanium powder. The implant was manually polished and the fitment was checked on the pre-operative model. A cutting guide was designed and manufactured in nylon through 3D printing which the surgeons used to cut the affected bone at the correct angles. The titanium prosthesis was successfully implanted during a nine-hour operation. A skin flap was removed from the patient's forearm and used to separate the oral and nasal cavities.

CUT focuses on building relationships that further its goals of transformative technology and social development



“There is more that we can do because there are limitations to traditional approaches and we need to break down the old ways of doing things to pursue better science and broader innovation. That’s what I have come here to CUT to see”- Minister Naledi Pandor during an interview at the launch of the NRF Research Chair held at CUT. She is flanked from the left by Dr Beverley Damonse, Acting CEO of NRF; Prof Alfred Ngowi, Faculty Dean; Prof Ihar Yadroitsau, SARCHI Chair Holder at CUT.

The Centre for Rapid Prototyping and Manufacturing (CRPM) at CUT specialises in Additive Manufacturing (AM), also known as 3D printing, and was established in 1997 as a centre for both commercial work and research. The CRPM’s focus on AM has led to the university developing rich relationships with organisations across South Africa including the Department of Science and Technology (DST) and the National Research Foundation (NRF). These relationships have seen the university and the department steadily grow into their goals of creating solutions that drive socio-economic change and support technological innovation.

“3D printing is set to play a fundamental role in the new industrial revolution and we are making sure that we are right on the cutting-edge of development through dynamic partnerships,” says Prof Alfred Ngowi, Dean of Engineering and Information Technology. “One such partnership is with the DST which is about stimulating and intensifying innovation so as to improve economic growth and the quality of life for all. We also work closely with the NRF to ensure consistent development and training opportunities.”

NRF and the Department have demonstrated consistent and on-going support for the research agenda within academic institutions through the South African Research Chairs Initiative (SARCHI). The goal of this initiative is to increase the research output and innovation from South Africans in areas that are considered essential to the country’s strategic growth and development.

CUT has equally been committed to these goals, driving the creation of new and insightful methodologies within the AM space for many years. The CRPM is engaged with the overarching strategies as outlined by DST and NRF and this has led to rich and dynamic partnerships.

“Our Vision 2020 goals clearly state that CUT, as an engaged institution, is focused on producing social and technological developments that really deliver results,

especially within the central region of South Africa,” says Prof Thandwa Mthembu, Vice-Chancellor and Principal at CUT. “Many of our projects are already yielding impressive returns and we are focused on maintaining this momentum going forward, and we are looking forward to five years of collaborative excellence and development in providing both staff and students with exceptional tools with which they can maintain their lead at the cutting edge of research into 3D printing technology”.

The collaborative nature of the relationship with DST and NRF has allowed CUT to focus on its deliverables and capabilities. The university is investing in AM as a niche area that allows them to embed innovation and entrepreneurship into teaching and all aspects of the educational experience.

The SARCHI Research Chair will ensure that CUT continues to provide its partners with exceptional tools and solutions to maintain their lead in 3D printing technology and bring about social and technological innovations in the country.

“The Research Chairs are tenable at universities and research agencies that are deemed to be leaders in selected fields,” says Prof Mthembu. “It is a highly competitive initiative that has all South African universities and research agencies vying for the chance to take part. The hosting of this Research Chair by CUT is another achievement to add to our growing list and, over the next five years, we will create new platforms through AM and advance new ideas through this technology.”

Through this research chair and its partnerships with leading organisations such as the DST and NRF, CUT is set to bring about innovation and transformation to the AM sector. The university is focused on bettering the lives of others through technology and this Research Chair is going to go a long way to supporting this goal.

AFRICRID OFFICIALLY LAUNCHED



Prof. Antoine Bagula from University of Western Cape, Dr Muthoni Masinde, senior lecturer, and Ms Linda Meiring, also a lecturer from Information Technology.

Department of Information Technology in the Faculty of Engineering and Information Technology officially launched the African Unit for Research on Informatics for Droughts (AFRICRID).

The main objective of the workshop was to demonstrate a general understanding of the sensors’ definitions, types and examples of range of products available for use in the market, provide a general understanding of weather forecasting theory and practice, appreciate the general application areas of Wireless Sensor Networks (WSNs), understand in detail how Libellum’s Agricultural, Events board and e-weather station operate and be able to implement a weather data collection mini-project and present the results.

Attendees from IT, Civil Engineering, Agriculture and Electrical Engineering Departments were workshoped on how to apply Wireless Network for Weather and Quality Monitoring in Southern Africa and to use sensors in carrying out both weather forecasting and quality monitoring.

Post graduate student, IT assistant lecturer and project leader, Mr Admire Mhlaba, gave a clear presentation flow on the importance of the sensors and how they can be used for mining and smart agricultural practices. He said “sensors are smart tools that can be programmed and are handy for farmers. When used fruitfully, these tools can provide an indication about certain challenges experienced on farms in cases of fire even when a farmer is 500 km away. They can also detect draughts and weather. They are the future tools for homes and businesses.”

Professor Antoine Bagula, Head of the Intelligent Systems and Advanced Telecommunications - ISAT laboratory Cape Town, from the University of the Western Cape, gave an overview of the WSNs goals. In his presentation he talked about overviewing wireless communication and its radio propagation properties, wireless sensors, their anatomy, types and utilization and communication protocols as the three fundamental concepts behind wireless sensor networks.

CUT Spring graduations



L-R: Drs Livingstone Aglosu Kofi Agbotame (Business Administration), Leana Esterhuizen (Environmental Health), Bongani Elias Sithole and Moganathan Chetty (Public Management). Front row: Prof. Thandwa Mthembu, Vice-Chancellor and Principal.

Autumn & Spring graduates reach 3427

CUT graduates came in full circle on their journey to success during the 2015 Spring Graduations that took place on 04 September.

This season, 15 masters degrees, of which five were Cum Laude in the fields of Civil and Electrical Engineering, IT, Biomedical Technology, Environmental Health, Business Administration, Public Management, HR and Tourism and Hospitality were conferred.

Five new doctorates are: Drs Philibert Nsengiyumva (Electrical Engineering) Leana Esterhuizen (Environmental Health), Livingstone Aglosu Kofi Agbotame (Business Administration), Moganathan Chetty and Bongani Elias Sithole (Public Management).

The total number of graduates for 2015 for both Autumn and Spring ceremonies totalled to 3427.

When addressing the graduates, Prof. Henk de Jager, Deputy Vice-Chancellor: Academic and Research said, "This is a proud moment for us as CUT to see you completing your journey of many years. As you celebrate your success, bear in mind that your journey does not end here, this is just the beginning. When you go out there, you will be faced with challenges of unemployment and poverty stricken communities. Those individuals are depending on you to make a difference in their lives. This occasion is a confirmation that you have all the necessary skills and knowledge to tackle all those challenges, so go out there, make us proud, conquer, and make a difference!"

Prof. Henk further thanked the parents for their continuous support towards their children's success.

Amongst the guests who graced the event were parents, students, and Prof. Sagini Keengwe, a visiting professor from the University of Dakota.

MASTERS CUM LAUDE MAGISTER TECHNOLOGIAE DEGREES

These first-rate graduates are well-equipped to play a robust role in the socio-economic development of the central region and the country.



Magister Technologiae:
INFORMATION TECHNOLOGY
MHLABA, Admire - Cum Laude, flanked by family members
"Implementation of Middleware for Internet of Things in Asset Tracking Applications: In-lining Approach."
Supervisor: Dr M Masinde, PhD (UCT)



Magister Technologiae: **BIOMEDICAL TECHNOLOGY**
JAWALLAPERSAND, Poojah - Cum Laude
"Cytochrome P450 Monooxygenase CYP53 Family in Fungi: Structural Analysis of CYP53A and its Redox Partner from the Thermophilic Fungus Thielavia Terrestris."
Supervisor: Dr K Syed, PhD (Sri Krishandevaraya University)
Co-supervisor: Prof. SS Mashele, PhD (Medunsa)



Magister Technologiae: **BIOMEDICAL TECHNOLOGY**
NTSOELINYANE, Polo-Ma-Abiele Hildah - Cum Laude
"Investigation of Anticancer Properties of Philenoptera Violacea (Klotzsch) Schrire and Xanthocercis Zambesica (Baker) Dumaz-le-Grand."
Supervisor: Prof. SS Mashele, PhD (Medunsa)
Co-supervisor: Dr IT Manduna, DSc (Colpos)



Magister Technologiae:
HUMAN RESOURCES MANAGEMENT
THASI, Malefetsane Ephraim Cum Laude
"Job Satisfaction and Work Stress of Engineers and Artisans Working at Gold Mines in the Lejweleputswa District, Free State."
Supervisor: Dr F van der Walt, PhD (UP)
Co-supervisor: Prof C Chipunza, DTech (NMMU)
Co-supervisor: Dr P Jonck, PhD (UFS)

Magister Technologiae: **BUSINESS ADMINISTRATION**
MALO, Bulelwa - Cum Laude
"Organisational Culture and Job Satisfaction Among Academic Professionals at a South African University of Technology."
Supervisor: Prof. C Chipunza, DTech (NMMU)

Five doctorates for spring graduations

DOCTOR TECHNOLOGIAE DEGREE

Doctor Technologiae: ENGINEERING: ELECTRICAL



NSENGIYUMVA, Philibert, MSc (USHERB)

Topic: “A Vision-based Quality Inspection System for Fabric Defect Detection and Classification.”

Promoter: Prof. HJ Vermaak, PhD (Twente)
Co-promoter: Dr NJ Luwes, DTech (CUT)

Philibert Nsengiyumva was born on 01 June 1965 in Rwanda. He graduated with a BSc in Physics at the National University of Rwanda in 1987. He then furthered his studies at the University of Sherbrooke, Quebec in Canada, where he obtained his Master’s Degree in Electrical Engineering in 1994. He worked as a lecturer at the National University of Rwanda and then at the Kigali Institute of Science and Technology (KIST), where he served as Head of the Department of Electronics and Telecommunication Engineering from 2002 to 2007. He is currently a Lecturer at the University of Rwanda, College of Science and Technology.

His doctoral studies focused on the development of improved methods for defect detection and defect classification in textile fabrics. He combined three methods, based respectively on the grey-level co-occurrence matrix; the wavelet transform; and the Markov random fields. The combined methods resulted in much better performance compared to the utilisation of individual methods.

Dr Philibert Nsengiyumva (Electrical Engineering) graduated in absentia.

Leana Esterhuizen (Environmental Health)



Topic: “Drinking Water Quality and Farming Practices on Dairy Farms in the Greater Mangaung Metro, South Africa.”
Promoter: Prof. A Fossey, DSc (UP)
Co-promoter: Dr E Potgieter, PhD (Wits)

Leana Esterhuizen (née Theron) was born on 19 August 1974 in Bloemfontein. She obtained a National Diploma, BTech and Master’s Degree in Environmental Health at the then Technikon Free State, and is currently employed as a Lecturer in the Department of Life Sciences at the Central University of Technology, Free State.

In her doctoral study, she assessed the quality of groundwater on 75 dairy farms in the Mangaung area from 2009 to 2013. All farmers that partook in the study utilise untreated groundwater for domestic and dairy purposes on their farms. It is generally understood that groundwater is safe and uncontaminated, and that it should not pose a health risk to consumers. This study revealed the converse. The groundwater quality on many of the farms was poor. Many farms demonstrated non-compliant levels for hardness, nitrates, coliforms and E. coli. The levels of hardness in the groundwater pose a health risk to consumers on up to 57% of the farms. The nitrate levels were above the accepted level on 50% of the farms. Bottle-fed babies are particularly at risk when exposed to these high nitrate levels. Most concerning was the high levels of micro-organisms found in the groundwater. High levels of coliforms were found on more than 40% of the farms, while high levels of E. coli were found on more than 50% of the farms. These high levels pose a health risk for clinical infections for consumers. A further concern is the use of untreated groundwater for dairy operations, which may impact dairy hygiene and the quality of dairy products produced on these farms. From this study, a water quality index was developed to describe the quality of the groundwater. This index uses a number of water quality parameters to describe the quality of the groundwater as a single value. The simplicity and ease of the application of this index will assist the farming and dairy sector to evaluate and classify groundwater, so that farmers can apply corrective action, if required. The findings of this study were published in two accredited journals and were presented at local and international conferences.

Livingstone Aglosu Kofi Agbotame (Business Administration)



“The Impact of Selected Aspects of Globalization on Small-scale Agro-based Businesses in a Rural South African Setting.”
Promoter: Prof. DY Dzansi, PhD (UP)
Co-promoter: Dr P Rambe, PhD (UCT)

Mr Livingstone K. Agbotame was born on the 23rd of December 1949 in the Volta Region of Ghana. He obtained his BSc Administration degree in 1976 at the University of Ghana. He also holds a Postgraduate Diploma in Marketing Management from the University of South Africa (UNISA), which he obtained in 1997. In 2002, he graduated with a Master’s degree in Business Administration (MBA) from the Business School of the Potchefstroom University (now the University of North-West, Potchefstroom campus).

Mr Agbotame’s thesis examined the impact of selected aspects of globalisation on the performance of small-scale agro-based businesses (SSABs) in rural South Africa. The influence of globalisation on the competitiveness of SSABs is a highly topical and relevant issue in emerging economies, particularly those of South Africa, given the extended duration of protectionism and international isolation of the country’s economy in the era of Apartheid. In view of the increasing international exposure of the South African agricultural economy to the vagaries of international trade following the removal of protectionist policies in 1994, the impact of globalisation on the least financially supported and vulnerable SSABs deserves much attention.

Therefore, the study explored the impact of globalisation aspects (namely trade liberation, free movement of labour, and technology transfer) on the SSABs in the Vryburg-Pokwani area of the North-West and Northern Cape provinces due to their intensive agro-business activities. The study, which employed a survey approach and analysis of variance (ANOVA), revealed that personal demographic factors and organisational characteristics impacted positively on the performance of SSABs to a significant degree. However, the extent of the impact of each variable was found to differ between various SSABs. The results also demonstrate that, contrary to the popular view held by many scholars that 17 globalisation negatively affects business performance; growth and survival, the reverse was found to be true.

A significant contribution of the study is the linkage of globalisation to rural small-, medium- and micro-sized enterprises (SMMEs) and fledgling emerging economies in light of the efforts being made to reduce rural unemployment, poverty and inequality, as well as the high failure rate of SMMEs in South Africa.



Bongani Elias Sithole (Public Management)

“Municipal Disaster Management in South Africa: Intergovernmental Relations as a Planning Instrument.”

Promoter: Dr CD Olivier, PhD (UFS)

Bongani Elias Sithole was born on 10 March 1970 in Ladysmith, KwaZulu-Natal. He matriculated in 1995 through a correspondence course with Lyceum College in Kimberley. He obtained a Postgraduate Diploma in Bible Studies at Hebron Bible College in 1995, whereafter he completed his Master’s Degree in Disaster Management at the University of the Free State in 2006, and a Postgraduate Diploma in Land Management and Informal Settlement Regularisation at the Institute for Housing and Urban Development Studies at the Erasmus University in Rotterdam, the Netherlands in 2008.

His research mainly focused on the design of a model for co-operative governance for the development of an integrated disaster management strategy for municipalities in the Republic of South Africa. In his study, he not only developed a model to be used by all spheres of government in their assessment and in dealing with risks and disasters in a co-ordinated manner, but he also provided an overview of the history of the development of disaster management in South Africa. External assessors indicated that the study makes a valuable contribution to the field of disaster management. Recommendations were also made with regard to ways in which forums or structures can be established and to utilise the Intergovernmental Relations Framework Act, 2005 to give effect to the implementation of co-operative disaster management strategies.



Moganathan Chetty (Public Management)

“An Integrated Debt Management Model for Municipalities in the Free State Province.”

Promoter: Prof. T van Niekerk, DTech (CUT)

Co-promoter: Dr CD Olivier, PhD (UFS)

Mr Moganthan Chetty was born on 21 September 1962 in Durban, KwaZulu-Natal. He matriculated in 1982 at the Asoka Secondary School in Chatsworth, Durban, KwaZulu- Natal, after which he obtained a National Diploma in Public Management; BTech in Public Management and BCom (Hons). In 2010 he completed a Master’s degree in Business Administration at the Durban University of Technology (DUT) and the University of KwaZulu-Natal (UKZN) respectively.

Mr Chetty is currently employed as a Director at the Free State Provincial Treasury.

The aim of his doctoral study was to identify debt management and the consequences thereof, and to develop an integrated debt management model for municipalities in the Free State.

An extensive theoretical review of related literature was conducted using both national and international sources. The statistical calculations and analysis of the data collected focused on four areas, namely debt management, service delivery, municipal policies, and financial systems and controls. Each group was homogeneous and correlated to regression and/or progression on debt collection.

The high expectations of the public for effective and efficient service delivery made it crucial for municipalities to increase the debt collection ratio. Hence, the development of an integrated debt management model for Free State municipalities.

The integrated debt management model focuses on maximising revenue collection. A holistic approach for municipalities’ sustainability is crucial in ensuring that all the critical elements are simultaneously addressed. The model may seem simple to implement; however, cognisance should be taken of the diverse political nature and socio-economic status of the municipal customer base.

CUT partners with school principals

Partnerships between CUT and schools play an important and critical role in the success of the region and beyond. On 26 August 2015, South African Principal Association (SAPA) joined CUT academia for a strategic dinner as a way of building and maintaining good relations that already exist.

Apart from the partnership, a bigger picture is for schools to understand the role of CUT as a University of Technology in terms of its broader objective of driving the socio-economic development agenda within the Central Region.

In his welcoming address, Vice- Chancellor and Principal, Prof. Thandwa Mthembu outlined a clear focus and purpose of CUT as a University of Technology(UoT). “As a UoT, our focus and purpose is clear and we are living it. Innovation and Technology is our core business and Science, Technology, Engineering and Mathematics (STEM) is our priority. I am proud to stand here today and inform you that we are close to a 50% enrollment in those fields as compared with our peers,” he said.

Mr Giel de Villiers, Director for Schools Advancement Academy highlighted the role of CUT in adding value to local schools. He said that improving Science, Technology, Engineering and Mathematics (STEM) outcomes, and learner retention is a major focus of the academy. The University is already working with various schools in the Province through Mentorship Development Programme and STEM Academy to support the Department in meeting its set targets with schools, while improving quality of education in the province.

Deputy Vice-Chancellor, Prof. Henk de Jager presented the progress and success of CUT. Currently, CUT has the highest percentage of academics holding doctorates amongst all other UoT’s. “As a medium size university,



DVC-Academic and Research-Prof Henk de Jager, Mr Pobe, South African Principals Association, Prof Ngidi, Dean of Faculty-Humanities and Prof Thandwa Mthembu-Vice-Chancellor and Principal for CUT.

our main focus is to keep it that way so that we can produce high quality graduates that are relevant to the market and industry.”

One of the role players on the day included Mr Russel Davies, Director for Rural Education Access Programme (REAP) whose programme is to assist young , motivated and talented rural learners who are financially challenged to achieve their academic goals.

The interaction was a fruitful one as principals had an opportunity to meet face to face with the leaders of the institution and ask more questions regarding the enrollment processes, new programmes, financial assistance and research development.



Some of the high school principals who attended the dinner

Dean lays foundation for partnerships with technical high school principals



Principals on a tour at the Faculty with the Dean of Engineering and Information Technology, Prof. Alfred Ngowi and staff members.

Prof. Alfred Ngowi, Dean of Engineering and Information Technology, met with technical high school principals, subject heads and Motheo District officials in the Department of Education to formalise a working relationship with technical schools in the Province. About 10 schools were invited and taken on a tour around the Faculty's facilities.

The purpose of this venture is to afford technical high school principals an opportunity to learn more about what the faculty can offer, the admission point system, bridging programmes etc. so that their school learners can be informed and know what to expect from the faculty when making career choices.

When addressing the principals, Mr Bob Tladi, Chief Director: Free State Department of Education and Motheo TVET College, said that Motheo TVET College

has established a long term relationship with the university and was excited about prospects of taking the STEM project to the next level.

Principals also highlighted that grade 10 learners need to be exposed to engineering careers, as this will build a foundation for them in making informed choices when they start with their careers. This will help to reassure them that they are on the right path. Principals also requested the faculty to allow their learners access to CUT laboratories and other well-equipped technological facilities so that they could be encouraged and motivated.

"We are currently working closely with technical schools and TVET colleges in order to promote women in engineering, to upgrade skills and to increase the number of women in engineering fields," said Mr Tonde Mangara, a lecturer and new merSETA chair.

CUT Partners with PMSA to promote professional project management



Mr Jurgan Oschadleus, a guest speaker and founder of Act Knowledge, Mr Sapokie Ramorena, CUT lecturer in Project Management, Ms Dilshaan Duearte-events coordinator from PMSA and Mr Danie van Jaarsveld from Hebron Property Group at the lecture.

The Department of Business Support hosted Mr Jurgan Oschadleus as a guest speaker at its lecture series in partnership with Project Management South Africa (PMSA) on 9 November 2015. This lecture is part of efforts by the Department and PMSA to promote and advance professional project management in South Africa; especially among post-graduate students at CUT and professionals in business and industry.

Mr Oschadleus is founder of Act Knowledge based in Australia. He is an international speaker, educator and consultant on project leadership, influence and effective communication. He combines his background in history, education and technology projects with a fascination for sport and psychology, and uses this to challenge people's thinking and help them create new mental connections, apply knowledge and achieve the outcomes they seek. His lecture covered the latest research into the emotional intelligence and social awareness to explore the communication challenges that project leaders and

team members encounter every day. It also looked at how successful managers no longer rely on the traditional authority of the "command and control" culture to deliver outcomes. "We need to foster relationships and influence to build commitment and accountability in our teams," he said. These, and many others, were the issues and challenges he presented to the participants, which enabled interactive engagements through debates and discussions.

"PMSA is the representative professional body for Project Management in South Africa that enables the development and recognition of world-class project practitioners in the sector. As the department, we are extremely proud to be associated with PMSA, which is one of the most recognised PM professional bodies that aspires professionalism in PM in South Africa. Being a member illustrates the high status of our BTech Project Management Program," said Prof. Dennis Dzansi, Head of Business Support Studies at CUT.



From L- R: Professor Craig Mahoney, Principal, and Vice-Chancellor at the University of West Scotland; Dr Muthoni Masinde, Head of Information Technology; Prof. Thandwa Mthembu, Vice-Chancellor, and Principal; Judge Navi Pillay; Prof. Annabel Fossey, Head of Life Sciences; Prof. Mojalefa Ralekhetho, Acting Executive Director: Strategy Execution Unit; and Prof. Henk de Jager, Deputy Vice-Chancellor: Academic and Research.

Former UN Human Rights Commissioner unpacks constitutional rights to equality at the Prestige Lecture

CUT hosted Judge Navi Pillay as a guest speaker at the Prestige Lecture held on 6 August 2015 at Japie van Lill Auditorium. The Prestige Lecture is one of the most important calendar days in the life of CUT. It is a yearly event of prestigious standard to which internationally acclaimed speakers in their respective fields of expertise are invited to engage with the university, partners, and the community at large.

Judge Navi Pillay is among such speakers whom CUT found her commitment to social justice, human peace, and stability in the world relevant to social issues shaping thinking and practices within CUT and society at large.

The university recognises her as an outstanding scholar of note, having distinguished herself among her peers with her work. Being an activist at heart, she epitomises a true symbol of social justice, equality and human dignity in our communities and across the globe. Her long standing commitment to social justice and equality, her keen interest and support for peace in the world provided a dynamic, engaging analysis of the constitutional rights to equality. Judge Pillay has been an inspiration, not only to many international organisations that have worked with her over the years, but also to CUT in that we too would like the world to focus on us for solutions.

Her lecture focused on the Constitutional Right to Equality as a theme emanating from transformational challenges facing higher education and the country. The theme for the lecture was not accidental; it emanated from our understanding of transformational challenges facing higher education and society at large, which include but are not limited to access to higher education, rights to equal participation in education, funding, and the scourge of racism in our society. These rights offered an opportunity to re-examine the roles of universities, state organs and civil society in relation to their implications for country and the world at large.

It also covered the country's Human Rights laws and institutions which continue to be indispensable tools in protecting individuals from the worst abuses of power; thus enabling them not only to vote, but also to claim their inalienable rights such as access to clean water, electricity and health.

She commended South Africa for having the most desirable constitution compared to the rest of the world. "In my twenty years of service as an International Judge and United Nations Commissioner for Human Rights, the comment that I have heard over and over again about South Africa is that, we have the best constitution, particularly because of a Clause on 'the right to dignity and equality.'"

The Judge cited that Human Rights advocates in United States who constantly complain that the absence of an Equality Clause in the US Constitution hampers them in seeking constitutional protection against many forms of discrimination, including disparity in salaries and police response to violence, as they are not treated as violations of constitutional principles.

"These laws and institutions, however imperfect, are often the last line of defence for the powerless in our societies, and surely cannot be ignored by government, business, and external partners. To the contrary, these laws and institutions must be explicitly implemented in delivery of economic and social rights."



She said that Human Rights framework is a product of struggle which "as we look forward to the next decade of our democracy, we all agree that ignoring the needs and expectations of our communities will surely be to their peril."

Top: Judge Navi Pillay delivering her key note address to internal and external stakeholders at CUT.

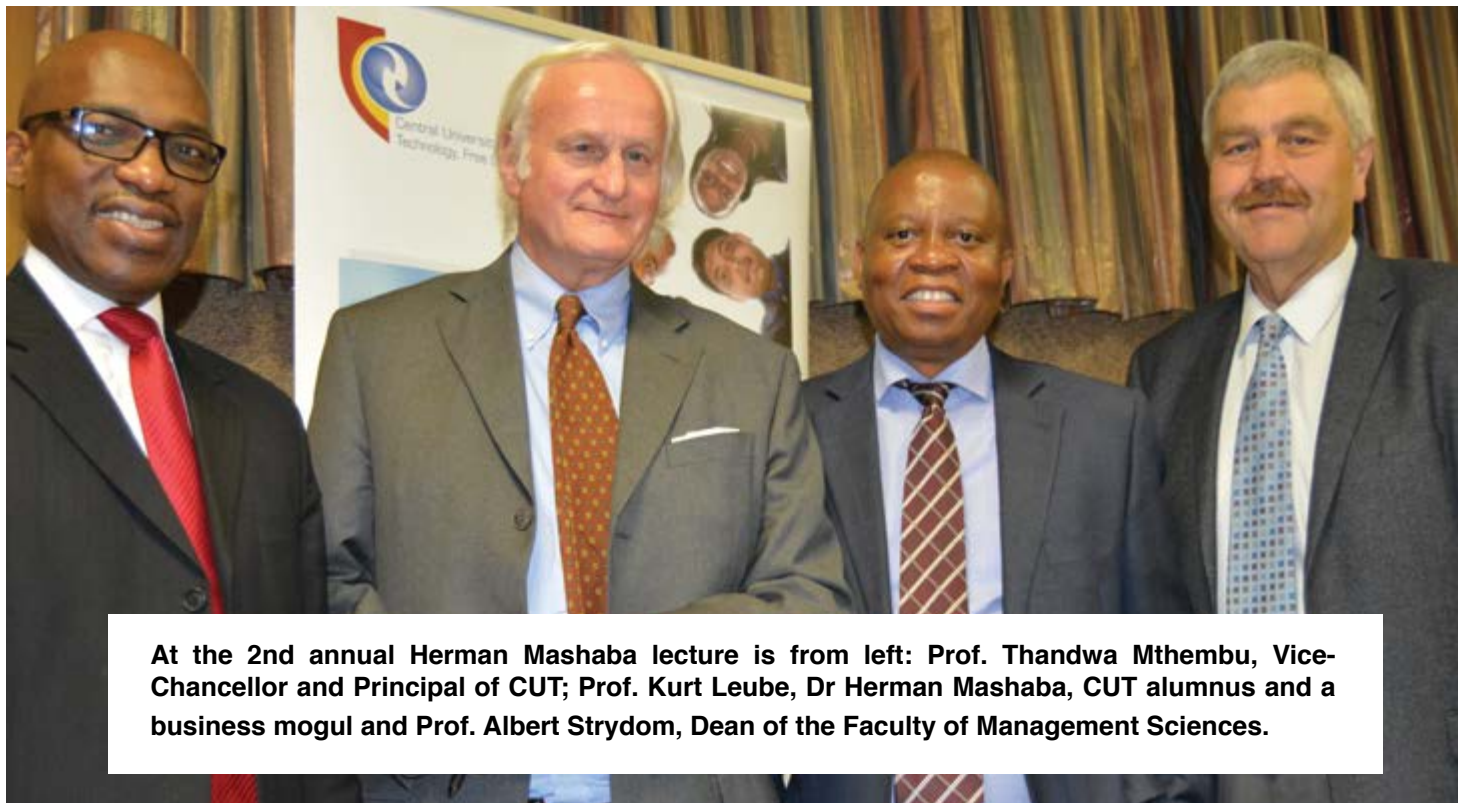


Left: Professor Craig Mahoney, Principal, and Vice-Chancellor at the University of West Scotland and Judge Pillay.



Front row L - R: Professor Craig Mahoney, Principal, and Vice-Chancellor at the University of West Scotland and Prof. Thandwa Mthembu, Vice-Chancellor, and Principal of CUT were among the audience at the prestige lecture.

2nd Annual Herman Mashaba Lecture held



At the 2nd annual Herman Mashaba lecture is from left: Prof. Thandwa Mthembu, Vice-Chancellor and Principal of CUT; Prof. Kurt Leube, Dr Herman Mashaba, CUT alumnus and a business mogul and Prof. Albert Strydom, Dean of the Faculty of Management Sciences.

Faculty of Management Sciences held its 2nd Herman Mashaba Lecture on Entrepreneurship on 28 September 2015. The lecture served as a continuation of the first lecture in terms of broad objectives of creating an entrepreneurial spirit among CUT students. It was named after Dr Herman Mashaba, a CUT alumnus, with the aim of helping the university to make further advances in developing innovative and entrepreneurially oriented academic programmes for its students.

This year, the lecture was presented by Prof. Kurt Leube, an acclaimed Professor from Stanford University in the USA. He spoke about the history of the Austrian School of Economics and its implications for the 21st Century. The School dates back to the 19th Century when it was first founded in 1871 with the publication of Carl Menger's Principles of Economics. Many of leading Austrian Economics scholars left Austria from as early as 1930s to ply their trade in a number of top seeded universities in the US and UK. No wonder its influence is felt across the globe and practised by many successful economies in the world.

He shared some ideas about the Austrian School of Economics and its differences with other schools of economics which uses logic of a prior thinking, where a person can think on their own without relying on the outside world to find out about economic laws of universal application; whereas other mainstream schools of economics make use of data and mathematical models to prove their point objectively. "A minimum of theoretical perception of how capitalism works or what an open and free society stands for, at all times is a necessary precondition of any serious political discussion. Taking

sides or judging matters responsibly compels everyone to have more than just a passing notion of a few economic parameters.

"Only those who are able to challenge futile ideas and positions with sound socio-economic analyses and viable alternatives will endure in the looming row over free markets, redistribution, or business ethics," he said.

Prof. Leube is also a Research Fellow at the Hoover Institution and specialises in Austrian Economics, Economic Philosophy, and the History of Economic Thought. In addition to his research work at Hoover, he also teaches 'Austrian Economics' in the EISP and CS Programs. He holds several recurrent Guest Professorships at leading European and South American universities, and serves also as the Academic Director of the "European Center of Austrian Economics Foundation" (ecaef.li) in Vaduz, Principality of Liechtenstein.

Professor Leube is a resident of California and native of Austria and was educated in both, Germany and Austria. After working in Austria in different positions, he accepted an appointment as Research Fellow at the Hoover Institution, Stanford University in late 1983, and subsequently moved to California where he presently resides. In 1985 he was also appointed Professor of Economics at California State University, Hayward, and became their Professor Emeritus in 2002. Professor Leube is internationally recognised as "a leading authority in the tradition of the Austrian School of Economics and one of the closest collaborators and disciples of Nobel Laureate Friedrich A. von Hayek".

Heads of institutions meet to discuss the future



Professor Craig Mahoney, Principal, and Vice-Chancellor at the University of West Scotland and Prof. Thandwa Mthembu, Vice-Chancellor, and Principal for CUT agreed that they will pull together to build a successful partnership between the two universities.

On 05 August 2015, Professor Craig Mahoney, Principal, and Vice-Chancellor at the University of West Scotland (UWS) made a return visit to Prof. Thandwa Mthembu, Vice-Chancellor, and Principal at CUT, following the Vice-Chancellor's visit to the University of West Scotland a few years ago. The main purpose of the return visit is to discuss the possible partnership between the two universities and cement the ties that already exist. Prof. Mahoney visited all CUT faculties and met with Deans and heads of departments.

At the end of the visit, the two principals aim to achieve targeted plans of taking their institutions to a brighter future.

Some of the plans set up for discussions are:

- ❑ Setting up a Memorandum of Understanding (MoU) between UWS and CUT;
- ❑ Exploring joint international funding opportunities;
- ❑ Looking at staff/student exchange between institutions and joint collaborative research projects that may include other partners;
- ❑ Discussing possible future invitation of Prof Mahoney to activities of the Vice-Chancellor's forum in South Africa, with which Professor Mthembu is involved.

Prof. Mahoney is a dynamic public advocate of higher education who has a keen interest in differentiated student-centred learning, teaching excellence, internationalisation and research informed teaching. He is an ardent supporter of the use of e-learning; technology enhanced learning and open educational resources. Previously, he served as CEO at the Higher Education Academy.



At the VC's excellence awards 2015- Back row: L-R: Dean of Management Sciences, Prof. Albert Strydom, Innovation Awards recipient, Prof. I Yadroitseu, Advanced Career Teaching Award recipient, Prof. A Swart, Community engagement Award recipients, Mr GM Muriithi, Mr F Zulu and Mr P Potgieter. Front row seated: L-R: Dean of Humanities, Prof. David Ngidi, Deputy Vice-Chancellor: Academic and Research, Prof Henk de Jager, Early Career Research and Community Engagement Awards recipient, Dr M Masinde, Early Teaching Award recipient, Ms Greyling, Established Career Research Award recipient, Prof. W du Preez and Dean Engineering and Information Technology, Prof. Alfred Ngowi

CUT acknowledges and celebrates excellence at the VC's excellence awards 2015

Vice-Chancellor's Excellence Awards is an annual event aimed to recognise and acknowledge employees who walk an extra mile in their field of work to achieve exceptional performance for sustained and outstanding achievements in research and innovation, teaching, curriculum innovation and community engagement activities that are in line with Vision 2020. The prestige event was held on 05 November 2015.

The objective of the awards is to:

- Demonstrate the University's commitment to research and innovation, teaching, curriculum innovation and community engagement-related activities.
- Create an environment which recognizes and rewards achievement in research and innovation, teaching, curriculum innovation and community engagement.
- Enhance excellence in research and innovation, teaching, curriculum innovation and community engagement through a recognition process.

Category A: Teaching Awards .There are three awards in Category A: Teaching Awards, namely: Early Career Teaching Award, Advanced Career Teaching Award and The IAUP/VC Excellence Award: Curriculum Innovation. This means that all full-time and fixed term appointed academic staff members are eligible to be nominated for a teaching and curriculum innovation award.

Category B: Research and Innovation Awards includes

Early Career Research Award, Established Researcher Award Innovation Award. All full-time and fixed term appointed academic staff members are eligible to be nominated for a research or innovation award. Research awards are for researchers in two different categories. Awards are based on a researchers' involvement in a variety of research activities such as publications, patents, conferences and grants obtained.

Category C: Community Engagement Award: The Community Engagement Award is made to a staff member who has excelled in the area of community engagement. This should include a project that can demonstrate sustainable community engagement activities and the promotion of socio-economic benefit and social and/or technological innovations.

In acknowledging the recipients, Prof Henk De Jager, Deputy Vice Chancellor: Academic and Research said that achieving excellence is not a walk in the park but leadership, dedication, selflessness, compromise, sleepless nights and commitment. "I commend our recipients for a sterling job done. They are the role models for our students and fellow staff as they have excelled in their fields and impressed our CUT community, showing us that they are living the values of our strategic plan," he concluded.

The recipients each received a benefit of R30 000 cheques for all categories towards enhancement of their teaching and research. Winners may take 1/3 of the amount as a cash benefit. It should be noted that this year, seven of the ten recipients were from Faculty of Engineering and Information Technology.

2015 Winners are:



Community Engagement Awards-L-R-DVC, Prof. Ngowi, Mr Muriithi, Dr Masinde, Mr Zulu and Mr Potgieter



Prof. Du Preez



Prof. Ihar Yadroitseu - Research and Innovation award



Dr Masinde-Early Career Research Award



Ms Cameron Greyling, Early Career Teaching Award



Prof. James Swart, Advanced Career Teaching Award

Department of Accounting Awards



The Department of Accounting rewards its students with prizes during a prize-giving ceremony for showing excellence in their academic endeavours.

Department of Accounting and Auditing hosted its first prize giving function on 20 October 2015. The aim of hosting the prestigious event was to recognise hard work, diligence, and achievements of top students in the department.

A total of 21 students from both Welkom and Bloemfontein Campuses received honours from various sponsors who contributed towards the success of the prize giving. Amongst the partners and sponsors who attended

the event were, South African Institute of Professional Accountants (SAIPA) represented by Ms Haremakale Makhetheng (SAIPA: Training Manager, The Institute of Internal Auditors South Africa (IIASA) represented by Mrs Refilwe Mocwaledi, Ms Selma Kruger (Graduate Marketing Specialist), PPS and Mr Johan Botha from LexisNexis. PwC representatives, Mr Hjalmer Gerber and Ms Onalenna Halenyane, who also addressed the students on attributes of accounting graduates prized by industry.



Mr Adriaan Taylor, Head of Accounting and Auditing, and Miss Selma Kruger, PPS Graduate Marketing Specialist presenting a trophy to Yonela Matoti (Middle), a top BTech student: Financial Information Systems.



Mr Adriaan Taylor, Head of Accounting and Auditing, and Mrs Haremakale Makhetheng, SAIPA: Training Manager presenting a certificate to Mafasune Machobane, a top NDip Cost and Management at Bloemfontein campus.

Faculty of Humanities Awards

Faculty of Humanities held its annual Prize-Giving Awards Ceremony on 04 September 2015. The aim of this event is to recognize and reward best performing students in the faculty, to keep them motivated and focused on their goals.



E du Plooy-Special Achiever Award-MTech-Fine Arts-Cum Laude



J N Letsatsi-Sponsorship Awards for best BTech student in Language Practice



Sponsorship Award-Ms Myburg



Mojalefa Koai-MTech Lang Practice-Cum Laude



N Mokgothu-Overall Best Student-Jewellery Design



Nokuthula Mbuli- versatile student-Dept. of Communication sciences

CUT broadens access of Women in STEM



At the WEIT launch, women students in Engineering and IT came together to celebrate their successful launch. Back row: Mr Slabbert, merSETA regional manager FS and NC; Mr Bruno Marchio, Project Coordinator, merSETA Chair; and Prof. Alfred Ngowi, Dean of Engineering and Information Technology, attendants and the WEIT committee

The Manufacturing, Engineering and Related Services SETA (merSETA) Chair in Engineering Development is intended to increase the capacity in their TVET sector and technical high schools in the two provinces (Free State and Northern Cape) as well as promoting women in engineering.

CUT officially launched Women in Engineering and Information Technology (WEIT) on 13 October 2015. This follows suite from Nelson Mandela Metropolitan University in Port Elizabeth whom have already implemented the initiative for their female students (WELA).

The merSETA Regional Manager for Free State and Northern Cape, Mr Slabbert, is in support of the national agenda in increasing the pool of graduates in scarce skills. He further mentioned that Technology Education will broaden access for female students in the Science, Technology, Engineering and Maths (STEM) field. Mr Slabbert, challenged and motivated female students to consider careers in Engineering when making career choices.



Women of the hour who executed the successful launch of the WEIT association, from left: Dr Muthoni Masinde, WEIT Patron; Morakane Moletsane, WEIT Treasurer; Ndakhona Bashingi, WEIT Chairperson; Diteboho Dlamini, Deputy Chairperson; Mr Tonde Mangara, merSETA chair and Project Coordinator; Refilwe Choche, Secretary; and Mixo Hlungwani, Public Relations Officer

Language Practice students learn from industry experts

Language Practice students learn from industry experts during Industry Day.

Department of Communication Sciences at Central University of Technology, Free State (CUT) hosted an annual Industry Day on 15 October 2015 to commemorate October as Media Freedom Month. The aim of the Industry Day is to give Language Practice students a glimpse of what the industry has to offer; subsequently to meet and rub shoulders with the who's who in the industry.

Eight speakers shared their knowledge and expertise with the students on the state of news media globally and nationally in the post-modern era of social media. CUT students who boast a Language Practice qualification from the CUT can enter the labour market as language practitioners, linguists, translators, public relations officers, communication officers, journalists and copy writers.

As such, people who are knowledgeable in these fields addressed issues and challenges they are often confronted with, whilst also sharing their success stories. Topics included film and TV production, writing of books, editing, publishing, and journalism, sport commentating and public relations.



Pictured L-R: Dr Mardi Delpont, lecturer: Communication Sciences Department and organiser of the event, Tebogo Baruni, first-year Language Practice student, Refiloe Makibi, third-year Language Practice student, Chris Vorster, lecturer and researcher: Drama and Theatre Arts, University of the Free State, Jaco Jacobs, publisher: Children's Books, LAPA Publishers, and Dr Brenton Fredericks, Head of Communication Sciences.

Local learners benefit from community Journalism project



Pictured are Dr Mardi Delport, Lecturer: Communication Sciences Department (corner left front row) and Ms Sandra Mulder (middle back row) with the third year students and learners from Sentraal and Tsosetso High schools.

CUT third-year Language Practice students recently engaged in their annual community newspaper project to share their knowledge and expertise with local prospective journalism students. Community Journalism Project is a joint venture between CUT Department of Communication Sciences and Central Media, a multi-media company specialising in print, electronic, radio and digital platforms.

In its fifth year of existence, the project aims to introduce high-school learners who have shown interest in journalism and community journalism to the industry. CUT's Language Practice students presented an overview of the journalism industry and practical hands-on tips on how to become a good journalist. This year eight learners from Sentraal and Tsosetso High Schools attended the workshop.

Faculty of Management Sciences Prestige Research Seminar 2015

Faculty of Management Sciences held its Annual Prestige Research Seminar on 29 September 2015. Attended by about 65 faculty members, the theme of this year's research seminar was: "Cutting Edge Research Responsive to Regional Needs."

The purpose of this year's research seminar was to promote pragmatic and contemporaneous research among academic staff and postgraduate students in the Faculty and to give academic staff and postgraduate students an opportunity to showcase their completed research and review theoretical papers of their peers within the academic community.

The guest speaker was Professor Stella Nkomo, Deputy Dean of Research and Post-Graduate Studies in Human Resources Management at the University of Pretoria. Her presentation mainly focused on doing research that raises scholarly voices in Africa.

"I believe that any research in the management field that is done in Africa must always have an African explanation because theories from the west are not always applicable to the African context," she said. Professor Nkomo commended the Faculty for the quality papers that were presented.

Some of the presented papers were mostly empirical in nature. Some focused on interesting areas such as bona fide inadvertent errors, sustainable development, workplace spirituality, business social responsibility, venture creation, internet casinos, and self-harming behaviour, among others. It was also noted that this year, the number of postgraduate student presenters who participated in the seminar increased to 12 as compared to only four participants in the previous year.



A post-graduate student (left) was amongst presenters whom Prof. Stella Nkomo (right) and Prof. Albert Strydom, Faculty Dean (middle) awarded certificates of participation. All papers presented will be considered for inclusion in the Interim Journal for 2016.

CUT Dean wins the African Continental Titans Building the Nations Award



Prof. Albert Strydom, Dean: Faculty of Management Sciences was nominated to take part in the Titans Building the Nations Award (South Africa and the Southern part of the SADC countries). He competed with the best in the mentioned regions on 28 July 2015 in Johannesburg and won both the Country and Region (SA & SADC South) Award in the category of Education and Training: Academic.

The annual Titans-Building Nations Awards is a recognition programme that pays tribute to the powerful men in Africa who play pivotal roles in the development and growth of their country, the African continent, and its communities.

On 10 November 2015, he competed for the Continental Award with the rest of his peers from other regions in Africa and again, Prof. Strydom proved his capabilities and competence when he was announced as the winner for the African Continental Titans Building the Nations Award. The prestigious event was held at Gallagher Estate in Johannesburg.

Asked about his excitement and feelings for being the country and regional winner in this prestigious event, Prof. Strydom said that his win was a team effort that gave his faculty and CUT the necessary exposure in Africa and beyond. "I was totally caught by surprise when my name was announced.

I am honoured and humbled and want to extend my appreciation and recognition to all colleagues who played a role in what we have achieved as a team. I would also like to thank CUT for affording me the opportunity to participate in the event. The hard work and efforts we put to build the nation in line with our Vision 2020 has paid off. This opportunity has given us good exposure and it is evident that CUT can compete with the rest of the world."

Central University of Technology serves its 67 minutes



Top left: Tree planting at Nzame primary
Top right: Mr Gustav Wilson - Director of Correctional Service.
Middle right: Mr Suntosh Pillay Mamdela Rhodes Foundation.
Bottom right: Shoprite Mobile Soup Kitchen, Ms Magdalene Struis.

CUT in partnership with University of Free State, Department of Correctional Services, Shoprite Mobile Soup Kitchen, Interstate Bus Company, and Protea Hotel celebrated Mandela month and served their 67 minutes at Joe Solomon Primary School in Heidedal and Nzame Primary School in Rocklands on 24 July 2015.

At both schools, some learners used to sit on the floor because of shortage of chairs and tables. As part of the 67 minutes, stakeholders involved thoroughly cleaned the classrooms and surroundings and proudly donated roll-up carpets, tables, planted trees and shared a hot soup with the learners. Learners also learnt about the legacy of former President, Nelson Mandela and what the 67minutes means.

Two of CUT's exchange students, Ms Sofie Hoorens from Ghent University in Belgium and Ms Carolin Oertle from Aalen University, Germany, were very delighted to share their 67 minutes with the amazing South African learners.

Amongst the guests who graced the event was Mr Yase Godlo Manager with his entourage from Nelson Mandela Foundation in Johannesburg and Mr Clive Solomon who was the counsellor of Heidedal from 1979-1994.



Alumni Strides

Alumni Chapters In Gauteng Launched

CUT launched the second Alumni Chapter on 19 September in Johannesburg. The launch came a month after the Free State launch in Bloemfontein.

The purpose of the event was not only to launch the chapters but also to forge close ties with former CUT students in all provinces, interact, share CUT vision and ideas on how best they can contribute to the advancement of the university. It also serves as a platform to share the latest developments of the university’s vision 2020 and the realisation thereof.

In his remarks, Prof. Mojalefa Ralekhetho, SEU Executive Director, said that CUT remains an intellectual home and support base for the Alumnus. “You, as CUT’s advocates and ambassadors are the most important constituency of the university. You add value to the governance structures

of the university. We value you as important stakeholders and pillars of society and we want to partner with you.”

Dr Garth Van Gensen, CUT Alumni president said that he was a proud CUT graduate who has taken ownership and highly involved with university programmes. Dr Garth mentioned the ways and forms of partnerships that Prof. Ralekhetho mentioned and said that alumni could dedicate their support by being committed and getting actively involved. “Keep track of the university progress and comment about them on your social media.” He also said that they should be on the front line in raising funds for the Alumni and be part of its growth and advancement. “Help recruit other members for the association; be a proud sponsor and donor towards bursaries, VC’s projects, and research projects in any faculty of your choice. Advocate, advertise, and be a mentor in your region. Challenge those that are looking down on you.”



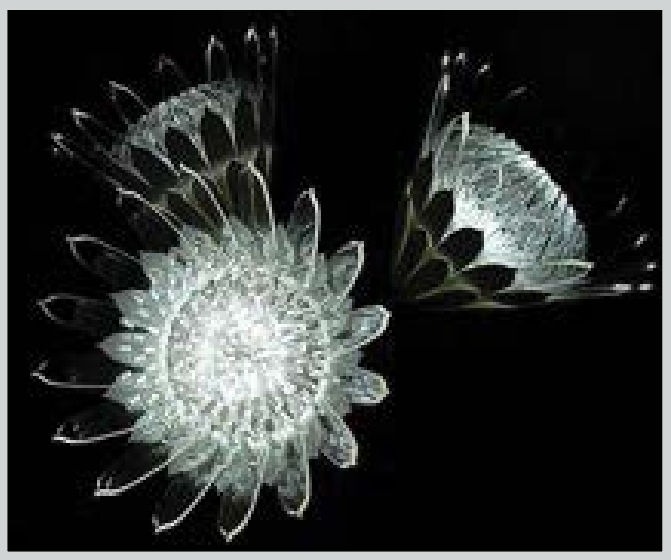
Some of the Gauteng Alumni Members were nominated to serve in the Gauteng Alumni Chapter in order to contribute towards the alumni programmes that are envisaged for the Gauteng Region.

Meet Erick Strydom



Erick Strydom started his Design Career at Central University of Technology in 2010. He excelled in his course due to his background in Fine Art and Conceptual Thinking, receiving the Prize for Best Design Student for three consecutive years 2010, 2011, and 2012. He was awarded the Best Communication Design Student in 2010.

With his creative thoughts and an eye for detail in his design ways from a young age, he was crowned National finalist in the Institute of Packaging South Africa for two consecutive years (2011 and 2012) and won Best in Brief and Runner-Up during 2012 for his Inventive packaging solutions. Mr Strydom also received an overall



International 13th Place during the World Packaging Organisation- Student World Star Packaging Awards in USA 2013

Always inventive and advanced in his career, Erick was also a Provincial Finalist for ESKOM Energy Efficient Lighting Design Awards and received a National 2nd Prize for his Design that awed the spectators. In addition, during 2012 , he submitted an intricate instillation art piece, entitled “Control”, for the SASOL New Signatures Art Competition where he was chosen to be part of the Top 100 to exhibit at Pretoria National Art Museum.

Upon completing his studies in 2012, Erick filled the position of Designer at Brand New in Bloemfontein.

Alumni Strides

Bernard Matsoso becomes global



Mr Bernard Matsoso is a Teaching Practice Coordinator in the Faculty of Education at Cape Peninsula University of Technology, Cape Town. Before joining CPUT, he worked at UNISA, Pretoria campus where he was responsible for establishing partnerships with SADC universities and schools in the interest of foreign students in the College of Education. This proud CUT alumnus earned various qualifications in his career path, namely: HRM at CUT; B-Tech (HRD) TUT; (PGCE) UNISA; and (PGCE) University of Derby, UK. In 2005, he received Erasmus Mundus Scholarship and studied a Master's degree in Local Development. He is currently completing his Master's Programme in HRM with CPUT. His research topic is entitled: "Efficacy of training and development programmes for new administrative staff at a selected University, Western Cape".

Due to his diverse academic background in Economics, HR and Education, Mr Matsoso spent five years teaching in South Korea and Japan respectively, which are rank high among the best education systems. He has recently returned from the Ohio State University, Columbus, USA as a visiting scholar. During his visit, he presented a research paper at the International Teaching and Learning Forum entitled "The reaction of supervisors towards an introduction of tablet devices during teaching practicum supervision". He later attended an International Conference on Human Resources Development Research and Practice held at the University College Cork, Ireland in June 2015 where he presented his current research work. Mr Matsoso's areas of interest are training and development, teaching practice and ICT in education research.

Fezile Sonkwane launches a book-Native Footprints

Fezile Sonkwane, a B.Ed (FET) Languages Degree graduate launched a book called Native Footprints. The 21 year old from Welkom is an author, a columnist for The Weekly newspaper, an educator, an essayist and a former student leader. The book is a collection of reflections and thought provoking essays. The essays distinguishes themselves in that they follow the usual, predictable and sterile dominant narrative that confronts the reader on a daily basis. Each essay invites a reader to a dialogue. It is about trying to understand socio-political phenomenon, isolation and discribing its various manifestations and permutations and proffering various possibilities on how to tackle it. The book Native Footprints was launched on 05 August 2015.

Fezile is also a fellow to CUT's unique programmes that deals with the twin challenge of equity and excellence, namely, the Stars of Academe and Research (SoAR). This programme is designed for young aspiring academics that are being nurtured and as Leaders in Education and Development (LEAD). These programmes are intended to ensure that CUT has a sufficient supply of excellent academics engaged in teaching and research for the sustainability and innovativeness of the university.



Nico Baird flies high

Upon completing his N Dip in Language Practice, Nico Baird became one of the first graduates in South Africa to complete his B Tech degree in Language Practice at Central University of Technology, Free State (CUT).



He specialised in communicative media, including graphic design and video production. He focused on effective academic communication in both poster design and instructional video production. His professional career started as Director of Multimedia at the University of the Free State's Faculty of Health Sciences. During this period, he completed a Post Graduate Diploma in Health Professions Education. After joining the CUT eLearning and Educational Technology team in 2004, he started as Instructional Designer at this institution. He returned to his alma mater to train the trainers in the use of technology in teaching. In 2012, he completed his Magister in Health Professions Education at the Faculty of Health Sciences in UFS and in 2015 his PhD in Health Profession Education.

In the past ten years, he has become a regular on the education and technology conference circuit with innovative and pioneering talks. Through the innovative work and his dedication to learning in a changing world, he was selected as one of South Africa's first Apple Distinguished Educators in 2007. He served in various committees and associations, including the National Association of Distance and Open Education South Africa (Nadeosa), South African Association of Health Educationists (SAAHE) and Golden Key International Honour Society. He also presented an array of posters and papers at national and international conferences. Nico reviewed and published articles for various presentations. His knowledge of technology and e-learning methods made him a well-known industry expert in South Africa, with his tips featured in weekly columns and talk shows in newspaper and national radio stations. He is currently working at WITS University where he is the Lead Educational Developer of the eLearning Unit.

Lebo takes CUT brand abroad



Ms Lebo Selloane, a Radiography graduate from CUT was selected for the 2015 Mandela Washington Fellowship for Young African Leaders. The Mandela Washington Fellowship for Young African Leaders is the flagship program of President Obama's Young African Leaders Initiative (YALI). As a Mandela Washington Fellow, Ms Selloane spent 12 weeks studying Business and Entrepreneurship at the University of Notre Dame in the U.S. and also participated in a Professional Development Experience (PDE) as part of her fellowship at IBM.

Ms. Lebo Selloane is originally from Kutloanong in Odendaalsrus. She has eight years of experience in the Radiography profession, first as a diagnostic radiographer and then involved in sales and marketing of radiology equipment. Currently, Ms. Selloane is Managing Director of a company, Visionary X-rays, established to offer onsite mobile X-ray services to business communities with employees prone to occupational lung diseases and also offers advanced radiology services to the rural areas in a mobile X-ray trailer.

She holds a B.Tech (Diagnostic) degree from the CUT and is a final year MBA student at MANCOSA Graduate School of Business. Through her community engagement she co-founded a non-profit organisation, Dream Girls Foundation. As a chairperson, she focuses on empowering young women through a range of educational and entrepreneurial programs. Upon completion of the Mandela Washington Fellowship, Ms Selloane is determined to implement what she has learnt to empower young women through her foundation.

Alumni Strides

CUT YOUNG FARMER FLIES HIGH

Meet Phil Bowes

MR Bowes was born and raised at Lily Vale farm in Queenstown Eastern Cape. He attended Winterberg School near Fort Beaufort in the Eastern Cape where he matriculated in 1993.

One year after concluding his Diploma at CUT (Then Free State Technikon) in 1997, he began his career as one of the first 50% black owned farm input supply businesses in “non-homeland” South Africa with his partner, Ivan Martin who is still in the same business to date. He then went on to work for Land O’Lakes International Development to implement a US government funded development project in the Eastern Cape. Doors soon opened for him to broaden his portfolio at Land O’Lakes when he was appointed in 2005 to manage a Southern Africa regional programme spanning 5 countries. During that time he concluded an MBA through NMMU in PE.

In his career, he has been involved in designing and implemented nine enterprises and industry focused economic development strategies involving five countries. Sub-sectors supported have been; input supply, livestock and table grape production, processing and export. Project responsibilities have included, fund raising (both for development service projects and for businesses), credit policy research, management training, business planning, value chain intelligence, retail promotions in the EU and UK as well as the development of multi-media accredited training course materials. Internationally speaking, he honoured invitations from US, Kenya, Egypt and Argentina. He has also been invited to engage in land reform policy advisory services to organised agricultural groupings in South Africa.

Paarl - VinPro, the service organisation for 3 600 South African wine producer and cellar members, has appointed Phil Bowes as manager: transformation and development as of 1 September 2015.

The organisation strives towards commercial sustainability for its members, as well as that of the broader producer industry and its strategic role-players. As such, it regards itself as a mouthpiece and representative at all relevant



forums and in dealings with Government.

Bowes was previously the transformation manager at the table grape organisation Sati. His qualifications include a Diploma in Agricultural Management Practice from the Central University of Technology in Bloemfontein, and an MBA from the Nelson Mandela Metropolitan University in Port Elizabeth.

Based in South Africa, he was also previously involved with the US Food Company and cooperative, Land O’Lakes, in implementing initiatives funded by the US Government.

His Nephew, Owen Hartley is currently studying mechanical engineering at CUT.

Bowes has since made presentation both locally and abroad and has also contributed to agriculture publications.



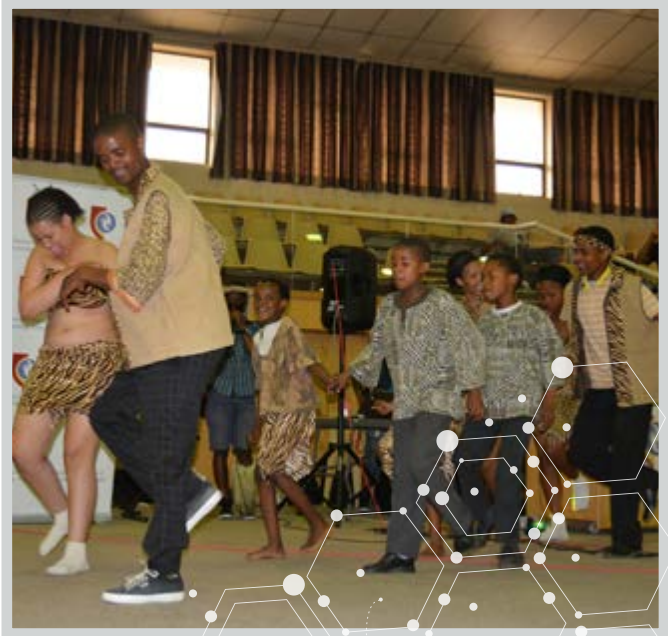
CUT celebrates cultural diversity



September marks the annual heritage month in South Africa and the celebration thereof gives recognition to cultural diversity where different cultural and ethnic groups come together and share traditional music, dance, outfits and food.

CUT students celebrated their 15th annual cultural fair on 11 September 2015. Ten cultural groups took part in exhibiting their diversity at the same time, teaching, sharing, learning and embracing each other’s cultures. The main purpose of the colourful event is to cultivate the spirit of social cohesion and acceptance, promote dignity and mutual respect, and strengthen a harmonious teaching and learning environment.

Participants included Bapedi, Batswana, Ama-Zulu, Coloureds, Ama-Xhosa, VhaVenda, MaTsonga, BaSwati, BaKhoisan and Basotho who all came in their traditional attires and enjoyed activities such as poetry, traditional music, dance food and umqombothi (traditional beer).



Grey College Secondary School-Quiz Whizzes for 2015

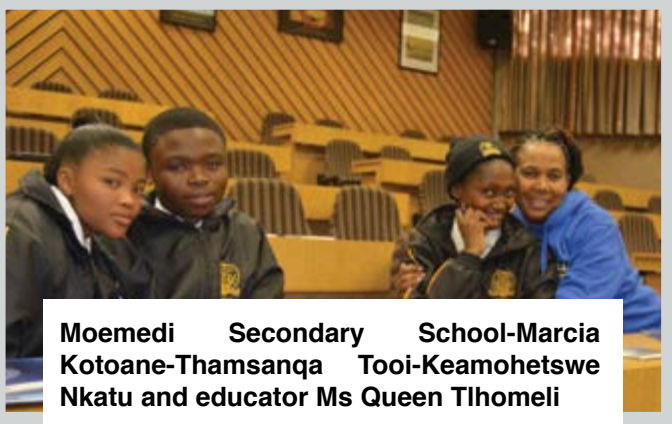
Faculty of Engineering and Information Technology hosted 17 successful annual high school Quiz Whizz competitions to promote the importance of Science, Technology and Environment fields. The prestigious event has been hosted by the Faculty since 1999. Any high school in the Central Region is afforded an opportunity to participate free of charge, and the three finalist schools (plus standby school) all receive study bursaries for 2016 to the value of R47 500-00.

The Quiz, now in its 17th year, made history when schools from previously disadvantaged communities entered the quiz for the first time in 2015, winded their way up to the top and became the first two schools from previously disadvantaged communities to qualify for the Quiz finals. Eight new schools from the region participated for the first time this year. The schools went through various preliminary rounds until the final three. Trials are held at Bloemfontein, Welkom and Kimberley.

This year, Grey College triumphed in the final round against new players: Moemedi Secondary School in Bloemfontein and Motswela Secondary School in Kroonstad.



Grey College learners: Mr Luan Nel, Louis Schoonwinkel and Mathew Barnard



Moemedi Secondary School-Marcia Kotoane-Thamsanqa Tooi-Keamohetswe Nkatu and educator Ms Queen Tihomeli



School Quizz Adjudicators



Motswela Sec School-Kroonstad Ms Mpolai Malefane-Educator-Motsapole Ramaema-Mr Sechaba Pilenyane and Mr Victor Golisi

CUT staff awarded Erusmus Mundus Scholarship

CUT staff members have been awarded the greatest opportunity to study at different European universities. The six months Erasmus Mundus Scholarship funded by the European Union, is exclusively awarded to students coming from both EU and non-EU countries that have been selected to attend one of the Erasmus Mundus Joint Programmes at Masters or Doctorate level.

This year, only 93 out of 271 applicants were selected. The course started in August for Masters Degrees and September for PhD. The duration of their course is six months.



Ms Daphney Mkhize, a junior lecturer in Accounting at Welkom campus left the country on 01 August 2015 and is currently at Uppsala University in Sweden. Daphney is adamant that the exposure will broaden her horizons and she will also learn other perspective in her career field-Masters in Cost and Management Accounting.



Dr Lize Theron is a senior Lecturer in Civil engineering. Dr Lize believes that the most benefit of the programme for her is knowledge transfer. Dr Theron will be exposed to a high quality education system, which will add value to her PhD degree in the field of Geotechnical Engineering. She will be based in one of the oldest research intensive Universities in north of England-Newcastle University. She is due to depart in December 2015.



Ms Jane Nkhebenyane is a lecturer, a PhD candidate, microbiologist in Life Sciences department and a supervisor to postgraduate students. Ms Jane believes that the programme will enrich her knowledge and enhance her research abilities that will enable her to take research to greater heights. She is proud to be amongst the 93 successful applicants across the globe and is excited that she will be working closely with the world-renowned researchers at Ghent University in Belgium. Her research entails the characterisation of food borne pathogens isolated from vulnerable settings like hospices. She will be leaving for Belgium in September.



Ms Refilwe Moleyane is an Academic Exchange/ Study Abroad coordinator who will be visiting Uppsala University to learn more about the best practices, new systems, and processes that will equip and sharpen her skills in her current portfolio, which she will implement in her office to work towards achieving CUT's vision 2020 strategy. Her month exposure will be in October 2015.

ISA INAUGURATED AT WELKOM CAMPUS

CUT International office inaugurated the International Student Association (ISA) on 07 August 2015. The theme for the day was: “why fit in when you are born to stand out!”

CUT considers the inauguration as an important development towards the integration of international students into the broader CUT community. It also supports the internationalization strategy of the University, which calls for the globalization of its academic offerings.

Dr Makola, Campus Director for Welkom campus mentioned that a university is universal as it shares the same purpose of disseminating information and knowledge to all students worldwide. “What is happening in a University here should not be different from what is happening in Britain.”

Dr Nkonoane, campus Deputy Director said assured the international students that CUT is pleased to have them and they should consider it their second home. “Geography made us neighbours but history made us friends for life! In my message of support, I pledge here today that I will play an advocacy role in making sure that our campus is fully integrated.”

Mr Julius Akaba, International Student Association (ISA) chairperson and MTech –Business Administration student said that the purpose of the association is to

create equality and make all international students integrated as new members of CUT family. “The rise of an international student does not mean the fall of a local student. Whether you are an exchange or international student, we are all CUT students and we all belong here. It will be appreciated that our local fellow students can accept and support us and give us that sense of belonging.”

Mr Arthur Johnson, Director for international Office said that there is no international office without international students. “No student has a right to tell a fellow student that they are foreigners. Africa is a home for all of us. “He pleaded with international students to help ‘us’ to become better human beings. “ We are here to listen because we do not understand.”

Mr Mark Dzansi, one of the international students from Ghana mentioned that as international students they also have a responsible role to play. “We have a very big role to play, we have to learn the good things from our fellow local students as well as teach them the good. Inculcate the good that you have learnt here back to your people and enrich them with the knowledge gained. Engage with local communities and learn, get involved in outreach programmes and leave a mark so that you can be remembered. When you see me, see yourself in me. We are all here to serve a purpose in each other’s lives, he concluded.”

There are only 13 international students at Welkom campus

CUT students explore Belgium



Front row: Angel Galaletsang Mokhuwa, Kgalaletso, Refiloe Makibi , Ward and Marie(founders) and a group of djembe performers who were at a developmental project where they are raising funds for the needy African primary school children in Maritania.

On 28 February 2015, three Communication Sciences students from Welkom Campus left for Belgium on a four months academic exchange programme. At Thomas More University in Mechele City, the students, Angel Mokhuwa-B Tech, Monyatsi Makhunoane B Tech, and Refiloe Makibi 3rd year National Diploma were enrolled for Communication Management and all attended in the same class. The subjects offered were Media Analysis, English 4, International Project 2, Survival Dutch, Ethical Managerial Problem Solving, Asian business Topics and Intercultural Communications. All three of them echoed the same sentiments about CUT curriculum that made them outstanding in all they did. Their programme ended in June and their performance is reflected in their academic results.

Refiloe Makibi said, “We were selected based on our academic performance. For me, South African Education is superior and CUT’s curriculum is the best. In Belgium, we performed exceptionally well because here at home we do a lot of theory, assignments, tests and examinations where’s in Belgium they do not write tests and for me everything that we did was a piece of cake. They do not attend school every day, there’s free days where students do assignments and study and here we learn to multitask, which is the best practice.”

Angel Mokhuwa elaborated on the trio’s performance. “We were exceptional and the experience was breath taking. All we did was to study! We never missed a class and learnt the basics of Dutch. I would like to see CUT implementing oral exams because it ensures that students know their work and understand what they have learnt. I am proud of the quality of education we get here at CUT, at Thomas More, we were given less work, and we were scared that we will end up being lazy but overall, we are grateful for this opportunity.”

Monyatsi Makhunoane spoke about the culture and diversity he observed at Thomas More. “Thomas More is a University with a culture that is very diverse, student there are from all over the world. This was an eye opener for me as I have learnt to be more accommodative to new experiences. Assessments are mostly done in a form of presentations and oral exams. Students are not hostile around their lecturers. What was most interesting is that, they have a subject that is part of the curriculum where they fundraise for a certain project and are assessed on it. I am still happy to be part of CUT. Our curriculum is still the best!”



International students at Welkom campus



Fiesta del Vino Festival draws wine and food lovers to CUT

The annual Fiesta del Vino reinvented itself again this year. Tickets were sold-out within the first week. This year, 220 guests were treated to an eight-course food and wine pairing prepared and served by first and second year students and the hotel school staff members who rolled-up their sleeves to get their hands dirty in ensuring the success of the event.

The sponsors for the event included Meridian Wine Merchants, Distell and DGB who have shown commitment and undying support for the event since its inception.

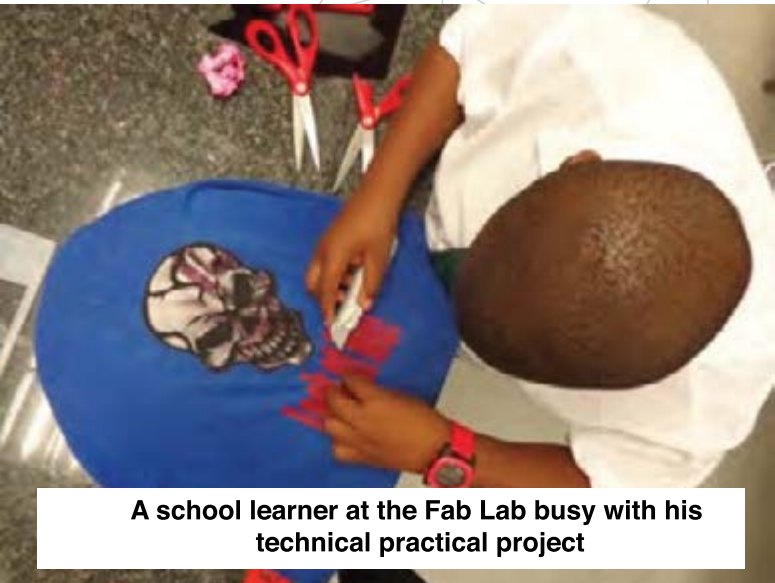


The best food and fine wine prepared and served by 1st and second year students at the hotel school.

CUT's hub of technology and innovation in action

FabLab assist needy students

The FabLab is an important enabler for students in need of support and equipment for the design and development of academic projects. The facility is used primarily by engineering and art students, with significant involvement of architectural students from the University of the Free State. In addition, a large number of school learners also make use of the facility for the development of practical projects of a technical nature.



A school learner at the Fab Lab busy with his technical practical project



SAB KickStart Ignite programme participants

SAB KickStart Ignite Programme

CUT is an official participant in the SAB KickStart Ignite programme. This is a six month programme, executed with the support of the FabLab, aimed at empowering seven selected participants, each to develop and manufacture a new innovative product for the marketplace. By the end of the programme each participant will also be the owner of a registered start-up business to market the relevant product and will have attended a series of short business development courses. Through participation in this programme SA Breweries financially contributed a significant amount of money towards the running expenses of the FabLab.

Innovation and Incubation Competition

Vision 2020 Innovation and Incubation Competition is an annual competition offered in the interest of students who execute innovative projects.

Five prizes to the total value of R63 000 were won in the 2015 competition.



Above: The prize-winners and some staff members involved in the IIP Competition. Front row from left to right: Ms KR Kgosiemang (2nd), Mr M van Rooyen (winner), Mr A Dintwe, Ms E Muller (5th) & Mr M Thapelo (3rd). Second row from left to right: Prof L Lategan, Prof G Jordaan, Prof H de Jager, Mr M Nkuna & Mr C van Beukering (4th).



Left: Mauritz van Rooyen, winner of the 2014 competition, receiving his prize from Prof. H de Jager. DVC: Academic and Research.

CUT and SETA'S co-host Career Fair



Exhibitors and CUT staff ready to assist students at the SETA Career Fair.

CUT's Work Integrated Learning (WIL) hosted the Sector for Education and Training Authorities (SETAs) Career Fair on 15 October 2015. WIL prepares students for the world of work by integrating academic learning with industry-based learning. Not only are students expected to complete their WIL credit bearing module, but they are also expected to do so in an environment related to their qualification and within specified periods. This workplace learning is structured, planned, monitored and assessed at the correct NQF level which is equivalent to 30 credit points

Twelve SETAs took part at the fair and approximately 400 students attended the exhibitions. According to Prof. Mabokang Monnapula-Mapesela, Dean of Academic Development and Support, WIL in conjunction with CUT Innovation Services-CUTis, managed to raise an amount of R11.7 million from various SETA's to assist students with placement stipends, internship and bursaries for 2015. At the exhibition stalls, SETA's provided information, guidance on available internships, learnerships, bursaries and much needed career opportunities to CUT students.



Students engaging with SETA team members at the fair.



L-R: Mischa Lottering and William Allan Kinnear receiving their certificates and gold coins for their highest academic achievement in their studies from Ian du Plessis, current president of IPET.



CUT top BTech Engineering students at the 2015 IPET National Awards

On the 13 November, two CUT's BTech Mechanical Engineering students attended The Institute of Professional Engineering Technologists (IPET) National top BTech graduate awards held at Marx Park Sports grounds in Emmerentia, Johannesburg.

The duo out did themselves on their academic achievements, making them the highest in BTech category. William Allan Kinnear got an average of 80% in his overall Mechanical Engineering subjects while Mischa Lottering received the best woman award with an average of 75%. They were awarded with certificates of recognition and gold coins from IPET. The two students were accompanied by Benjamin Kotze, a Senior Lecturer at the department.

Gymnos Residence students pep inmates' spirits high

Gymnos residence students under the leadership of Ms Beauty Nelani (ARM) and Mr Erich Pretorius put words into action when they extended their hands to the Grootvlei prison inmates as part of their community engagement projects. The main objective of this gesture is to inspire inmates to be positive about life and not give up on their dreams.

At the first visit, the students donated art and crafts material and books and on their second visit to the prison, the students challenged the inmates at the soccer grounds and Gymnos saw victory of 3-0 during the penalty shootout. According to Ms. Nelani, the inmates were thrilled to play against soccer stars who participated in the FNB varsity cup and AB Motsepe tournament. Students later donated rugby and soccer balls, and other related sports equipment.



Gymnos residence students at the Grootvlei prison with inmates after a soccer match. Students also donated Rugby and soccer equipment to inmates.



Proudly CUT: Congratulations to the athlete, Mr. Thabang Ambition Masihleho (second from Left), and his immediate team of support, Deputy Sports Manager, Mr. Ntlengeni Ponki Smith (L) Team Manager :SA Athletics Ms Hanlie Murray and , the and the coach, Dr Jacob Segalo.

CUT ATHLETE BRINGS BRONZE HOME

Mr Thabang Ambition Masihleho, a National Diploma Marketing student at Welkom campus put CUT on the map when he participated and brought a bronze medal home from the 2015 Gwangju Summer Universiade (World University Games) held in South Korea recently. Universiade is a 12-day multi-sport event for global university students and this year, 170 countries participated.

Our own Thabang Masihleho qualified for the competition during the USSA Track & Field Championships hosted by University of Stellenbosch in April this year. His qualifying time was 1:04:58.00, which made him one of the selected few to represent South Africa in South Korea from 3rd to 14th July 2015.

In the morning session of the 10th day of competition, the men's half-marathon squad managed to secure a bronze medal in the team event, spearheaded by Thabang Masihleho who finished eighth in the individual race, clocking 1:07:11.00 (finishing time).

The national squad ended their competition with a total of five medals (two gold and three bronze).

Victorious: At the 2015 Gwangju Universiade , South Korea, Thabang Masihleho proudly displays his bronze medal.



CUT Choristers at the Choir Festival

CUT Choristers at the 38th Old Mutual National Choir Festival

CUT Choir took a lead on 19 September 2015 at the 38th Old Mutual National Choir Festival, competing against six best choirs. The choristers scooped first position under the standard category at the home ground, Boet Troskie hall.

The standard category consists of 30-48 choristers who have to choose African and Western pieces prescribed for each category. Competitors includes Matjhabeng Harmonic Voices, Meloding Community Choir, Phomolong Inter Choir, Mangaung Metro Municipality Choir, Ben Marcato Marvellous Sound and Marvellous Chorus .

Standard category – western songs:

1. Gia intorno dei venti/Feriam! Feriam! – il Profeta (by G. Meyerbeer)
2. The Fair – Faust (by C. Gounod)

3. Light as air at early morning – Faust (by C. Gounod)

Standard category – african songs:

1. Waza wamuhle Mzantsi (by S. Njeza)
2. Finale Act 1 – Madiba the African Opera (by S. Njeza)

CUT choristers will be waving the CUT flag high when representing Free State Province at the national competitions. The event will be held at Vista Arena, Bloemfontein on 06-07 December 2015. The winning choirs for large category will walk away with R10 000, R9 000 and R8 000 respectively, while standard category winners can expect to win R8 000, R7 000 and R6 000 for the top three positions.

The National Choir Festival is a national choral music competition conducted at district and provincial level culminating in a National final. The annual festival runs from January to December.



About this Issue

Editorial Team

Mpho Makanyane
Dan Maritz

Publisher

Communications and Marketing
Central University of Technology, Free State (CUT)

Private Bag X20539
Bloemfontein, 9300

Tel: +27(0)51 507 3053