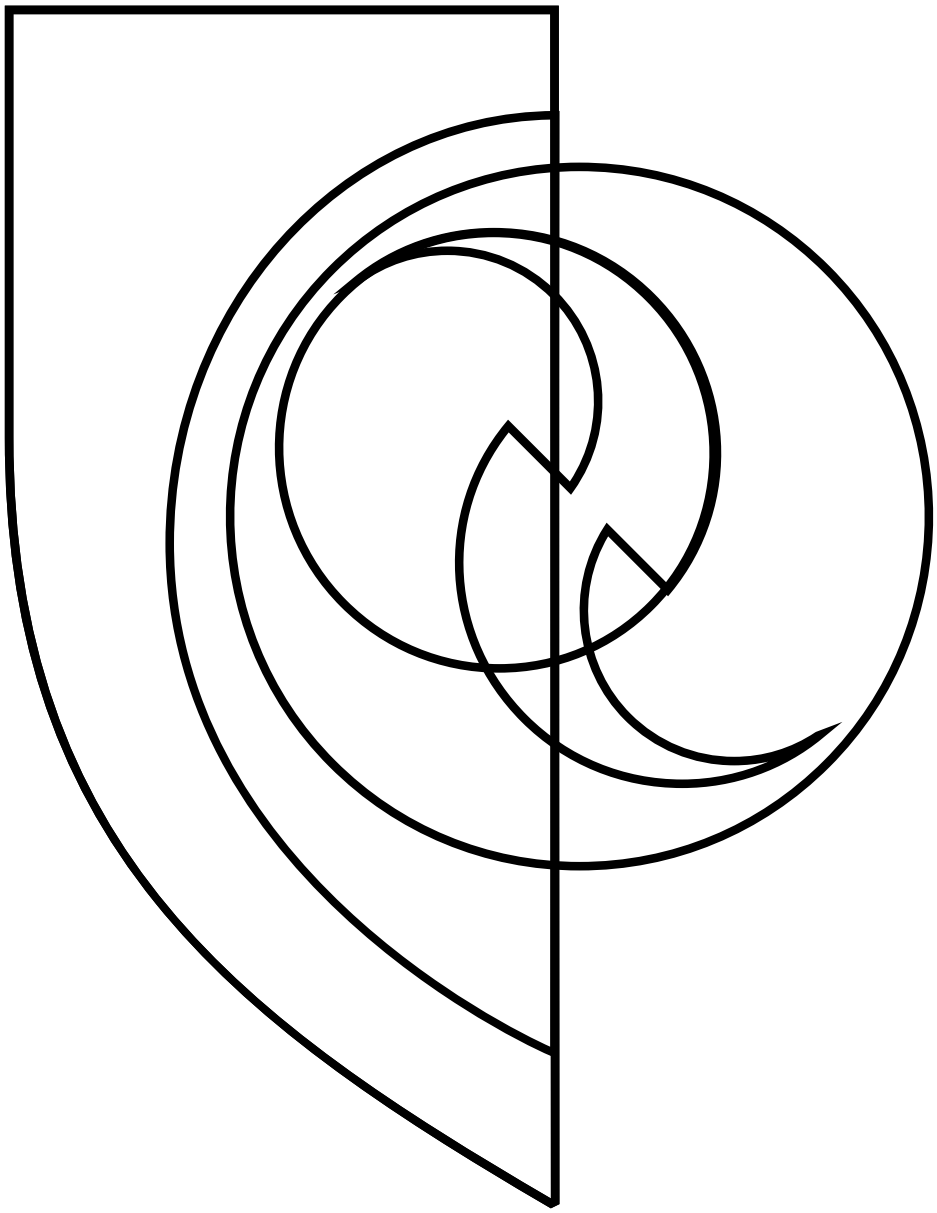
# GRATIA

Second Edition 2018

## Pere ea Letsatsi
makes
# HISTORY



# About this Issue

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# TABLE of Contents

Article on page 10

# Message from the Vice-Chancellor

The Central University of Technology, Free State (CUT) community has strengthened its foundation and the building blocks of a university of technology (UoT) in 2018, through courageous efforts in unity, creating new paradigms, anticipating the future, and challenging the status quo. Although we should be proud of our history and our origin as an institution, we are in the process of finally closing the chapter of being referred to as a "technikon", and to enhance CUT as a true, fully fledged UoT, focusing on innovative problem-solving and career-directed academic programmes, in addition to the basic responsibilities of a university, and leading the way in ensuring that our applied research, and social and technological innovations, operate to the benefit of the region and the country as a whole.

A total of 4 193 first-time entering undergraduate students were registered at CUT for 2018. The overall headcount is 19 436 students, whilst the Science, Technology, Engineering and Mathematics (STEM) headcount enrolment figure is 9 713 students, or 50% of our student complement. Furthermore, a total of 4 265 students, including 48 master's degree students and 25 doctoral degree students, graduated at the 2018 March and September graduation ceremonies. Furthermore, some remarkable achievements were recorded for 2018. The following are a few examples:

- The Transformation Office has organised the CUT Transformation Summit in May 2018, and the CUT Women in Conversation Summit in November 2018.
- The 2018 World Intellectual Property Organisation (WIPO) Summer School was hosted at CUT, in partnership with WIPO and the National Intellectual Property Management Office (NIPMO).
- Related to the African Advanced Manufacturing (AM) Innovation Awards, where several organisations leading South Africa into the Fourth Industrial Revolution were recognised, Mr Gerrie Booysen received the Gold Award for Scholarly Impact in AM for the work done by the Centre for Rapid Prototyping and Manufacturing (CRPM) around patient-specific titanium-printed facial implants; and Prof. Willie du Preez received a special recognition for Scholarly Impact in AM for his lifelong

contribution to AM. Furthermore, a Silver Award for Industry Advancement was earned by Lonmin Plc/Western Platinum Refinery for the development of 3D-printable pure platinum powder. South Africa is the first country to produce 99,9% pure platinum, and CUT was instrumental in developing the 3D-printing parameters to process this pure platinum powder.

- CUT successfully participated in the Sasol Solar Car Challenge 2018 from 22 to 30 September 2018. The competition entailed a 2 000 km long route over eight-day stages.

- The CUT-SAB-InBev Intervarsity Craft Beer Competition was successfully held, with the CUT craft beer team receiving the award for the people's choice product.

- A CUT Taskforce on the Fourth Industrial Revolution and Circular Economy (4IR+CE) was launched on 17 September 2018, to ensure our readiness in this regard.

- CUT signed a Declaration of Intent with the Ministry of Sport and Recreation South Africa, Free State Provincial Government; the National Department of Public Works; and the Free State Department of Public Works and Infrastructure, to make the National Training Centre and Olympic Preparatory Centre a reality, and to finalise the land exchange that will benefit CUT.

- Three of our Design and Studio Art students were victorious in the 2018 Phatshoane Henney Attorneys (PHA) New Breed Art Competition. CUT students scooped four of the five awards at and the winners are Mr Nkululeko Nkebe (third-year student) – overall winner; Ms Katlego Mogoera (first-year student) – runner-up and Public Choice Award winner; and Mr Xola Sello (fourth-year student) – Merit Award.

- The unveiling of the Department of Higher Education and Training (DHET)-sponsored infrastructure, totalling R700 million, took place on at both the Welkom and Bloemfontein campuses. The Minister of Higher Education and Training, Ms Naledi Pandor, attended the event at the Bloemfontein campus.

- The CUT Debate Society participated in the Women's Open Tournament at the North-West University (NWU) in Potchefstroom. Two members reached the finals, and were both ranked in the top three adjudicators of the entire tournament.

- The university continues to support the alumni programmes, for purposes of deepening a lifelong relationship between CUT and its alumni, through opportunities that promote interaction and engagement with CUT.

- A CUT alumnus, Ms Nneile Nkholise, a Mechanical Engineer, is a finalist in the All Africa Business Leaders Awards, in the category Industrialist of the Year Award, that was held on 29 November 2018. Her company manufactures durable breast prosthetic devices.

- Management implemented a special Programme for Interventions for Staff & Students on Social Challenges/Difficulties. The rationale for extending this support to our employees and students, and encouraging them to make use of this opportunity, is to enable them to access professional support in dealing with the emotional, psychological and spiritual impacts of a traumatic series of events during the #Fees-Must-Fall Campaign.

Furthermore, Ms Norah Clarke, Head of the Entrepreneurship Development in Higher Education (EDHE) Programme, mentioned that: "CUT is already considered a leader in the space of entrepreneurship development". Evidence that CUT remains a special university relates to the words of Ms Heloïse van Niekerk, Senior Human Resources Officer, Pelonomi Private Hospital, Netcare Limited, who had the following to say about our students on 14 September 2018: "I would like to congratulate CUT, first of all for looking after their own students, even after finishing their studies. Second of all, for producing good quality students. The commitment I saw from all the candidates, from being perfectly on time, well groomed, extremely good mannered, good communication skills, and their commitment to their studies, was astounding".

The university has strengthened our collaboration with external parties, and several agreements and funding opportunities were realised. Our transformation project is on track, and good progress has been made in this regard. We will continue to deal with deeper transformation matters.

On behalf of the CUT Council and Management, I would like to acknowledge all our external partners – including businesses, industry, government and society at large – for your support. In addition, the university cannot be successful without the continuous support of, amongst others, the DHET, the Council on Higher Education (CHE), Universities South Africa (USAf), professional bodies, science councils, and the National Research Foundation (NRF). Please be assured that we value and nurture these partnerships! Furthermore, I am grateful for the support and guidance of the Chairperson of Council and the entire CUT Council. CUT is blessed with committed and knowledgeable Councillors who only want the best for the institution. Finally, thank you also to our Chancellor and the Management Team, for your hard work and dedication, and to all staff and students, including Senate, the unions, student leaders, alumni and parents, for your commitment and support.

The university is certainly on a rise, and more and more time and effort are spent at strategic level, including on building strategic partnerships, and enhancing the financial sustainability of the university. The theme for 2018, "Reimagining CUT: Embracing Servant Leadership", allowed the CUT community to embrace servant leadership, which enriches the lives of individuals, builds better organisations, and ultimately creates a more just and caring world. Furthermore, we are steadfast in our focus to "reimagining CUT as a transformational, transformative and entrepreneurial university and 'model' UoT in Africa, impacting on the socio-economic development of the Central region of South Africa and beyond". This project is founded on our transformation drive and new institutionalism (change).

Looking back at 2018, there is no doubt that it was a successful year for CUT. I am convinced that our implementation of the renewed vision for CUT will result in 2019 being an excellent year!

Warm regards
Prof. Henk de Jager
Vice-Chancellor and Principal

# Feature Story


**CUT engineering students made history when they entered the 2018 Sasol Solar Car Challenge. The team not only represented the institution but the province at large. Pere ea Letsatsi was displayed at the Bloemfontein control point. CUT staff and management came to show support to the Seilatsatsi team.**

## 2018 Sasol Solar Car Challenge

### History of solar cars

Solar cars were first developed in the 1800s by Ányos Jedlik and improved as technology advanced. South Africa held its first solar car demonstration drag race in 1985, followed by the world's first solar car challenge in 1987. The solar car challenge was later introduced in South Africa, with Sasol becoming the first official sponsor of the event. Ever since then, Sasol has been sponsoring the event as part of its commitment to furthering Science, Technology, Engineering and Mathematics (STEM) education and inspiring learners to pursue technical careers.

### The journey

The Central University of Technology, Free State (CUT) ventured into this new territory for the first time in the history of the solar car challenge when they entered the 2018 Sasol Solar Car Challenge. The CUT solar racing team, Seilatsatsi, showcased their innovative skills when they competed against renowned champions from both local and international universities. Seilatsatsi was the only university team from the Central region to participate in this international race.

The newly built CUT solar car, Pere ea Letsatsi, meaning "magic of horsepower from the sun," was designed by means of Computer-aided Design (CAD), engineered and built at the university's own laboratories by CUT's Engineers.

For the challenge, the teams had to design the solar car, build it, test it, pass the scrutineering test, and drive as far as they could, using only the solar energy. Seilatsatsi managed to build their car in a short space of time.

### The team

To qualify for this innovative challenge, teams had to comprise imaginative Electrical and Mechanical Engineers and Aerodynamicists who possessed of strong backgrounds in computer science and STEM, and general project management skills. The challenge provided students with a platform to showcase their skills, as well as with exposure to networking opportunities with local and international counterparts. They were also afforded a change to design a real engineering project, which is envisaged to encourage green innovations.

With support from the university, the Technology Innovation Agency (TIA), the Advanced Energy Foundation and Sasol, Engineering students' long-standing dream to build a solar challenger car was fulfilled.

### The engineering/making of the solar car

The design was done entirely by CUT students under the leadership of Dr Nicolaas Luwes, whilst the motors and carbon fibre were commissioned from suppliers. The solar array was built by Gochermann Solar Technology that provided several teams with panels in the past.

Extensive testing of the car's aerodynamics was done by means of a 3D-printed model before the actual manufacturing started. The carbon-fibre vehicle was fitted with state-of-the-art technology for tracking power, and even a cruise-control feature.

This type of design and construction normally takes two years to complete, but the CUT team started this mammoth task in February 2018 and completed the car in time for race scrutineering on 17 September. Mechanical CAD was used to design the car, whilst simulations were utilised to analyse the aerodynamics and the custom-made suspension thereof. The simulations included analyses of the slope and other aspects of the actual South African roads, as well as sun power prediction models for that time of the year, to ensure that the power is fully utilised.

The final car was constructed using carbon fiber. Its suspension was built from solid blocks of aluminum. The tracing mechanisms were programmed to optimally follow the sun. The car also consisted of fly-by-wire systems, with custom programming, including battery management systems, a unique maximum power point tracking system, and cruise control.

### The launch

The race car was launched on 14 September 2018, eight days before the race kicked off. At the launch, Prof. Alfred Ngowi, Deputy Vice-Chancellor (DVC): Research, Innovation and Engagement, introduced the 21 members of the team of Engineers, under the tutelage of Dr Nicolaas Luwes, a Senior Lecturer in Engineering, and leader of the Seilatsatsi team.

Prof. Ngowi applauded the team for their perseverance, motivation and inspiration to put CUT on the map. CUT partners, media houses, donors, sponsors and students were amongst the attendees.

"Pere ea Letsatsi' is the catalyst to propel us up to where we want to be, and Dr Nicolaas Luwes, our Senior Lecture in Engineering, has been instrumental in making this project a success. His perseverance and inspiration have always motivated this team and all of us here at CUT. This is indeed a reason to celebrate our technological advances in this special way", said Prof. Ngowi.

### The race

On Sunday, 16 September 2018, the team took to the road for their first car test on the racing track, in preparation for the main race, which commenced in Pretoria on 22 September 2018. The actual eight-day race across South Africa, from Pretoria to Cape Town, took place from 22 to 30 September 2018. Along the way, participants stopped at eight control points, and had overnight stops in 13 towns, where they had the opportunity to exhibit their cars, and do light work on the cars to get them race-ready for the following town. Despite being newcomers in the competition, the Seilatsatsi team was not intimidated by the champions, and raced alongside them. The main aim of the competition was to test the durability and endurance of the cars.

Teams were set to cover the most distance on the set route each day, and were allowed to add loops if they had more power left in their solar cars. The team that managed to cover the largest distance per day won. The race relied entirely on good engineering, great drivers and team managers who could manage energy and work according to the weather conditions. The record to break was 4 500 km. Pere ea Letsatsi managed to clock in a total of 110,3 km of the set 4 500 km.

The racing teams were faced with diverse conditions, experiencing four seasons in one day – from scorching sun, to destructive storms and strong winds – but that did not stop them from continuing with the race.

### Other participants

Some of the world's top teams included the current world champions, Nuon from Delft University in the Netherlands, and the former world champions, Tokai University in Japan. The international new kids on the block included teams from City University in Hong Kong, China; Manipal University in India; and the Solar Energy Racers from Switzerland.

In addition to Seilatsatsi, local teams included Tshwane University of Technology (TUT); North-West University (NWU); Sonke, a combined team from St Alban's College and St Augustine's Langa Education Assistance Programme (LEAP) School. It is worthy to note that South Africa is amongst a few countries in the world where high school teams are permitted to compete in the race alongside university students.

### The awards

After finishing the race in Stellenbosch on 29 September 2018, all participating teams headed to the Grand West Casino in Cape Town, where the 2018 Sasol Solar Challenge Awards Function were held on 30 September 2018, and the cars were displayed for public viewing. Although Seilatsatsi did not win the race, they managed to receive the Student and Community Interaction and Engagement Award.

### Sponsors

CUT wishes to extend the university's sincere appreciation to the TIA, Sasol, the Product Development Technology Station (PDTS), Hyundai Bloemfontein, Fenwicks Butchery, Advanced, FibreForm, CodePure, Best, Panaroti's, and Wimpy Vikings for their generous support.

# Research Excellence


**Staff members of the Medicross Kalahari Cataract, Eye and Day Hospital came to wish Elijah Cloete and his family well shortly before the surgery. Back, left to right: Elijah's mother, Shirene Cloete; ward cleaner, Liezle Jood; Elijah's grandmother, Maralise Cloete; theatre cleaner, Anna Thomas; theatre scrub nurse, Sr Mari van Niekerk; operations manager, Rina de Vries; administrator, Anika Venter; ward nurse, Sr Soekie Pienaar. Front, left to right: Enrolled nurse, Denise Chiefer; patient, Elijah Cloete; recovery ward nurse, Sr Marlaine Swartz; and central sterile services department staff member, Thembeka Bizo.**

## Team effort to create new 'ears' for six-year-old Elijah

A team of experts from various medical disciplines and organisations came together on 24 July 2018, to assist a child born with underdeveloped ears and sealed ear canals, an unusual congenital medical condition known as microtia with bilateral congenital aural atresia. Six-year-old Elijah Cloete has undergone surgical preparation for a pair of custom-made prosthetic pinna, or external ears, and received a hearing aid as part of the efforts to enhance his quality of life.

"Elijah was born with his ear canals sealed, while the visible, external part of the ears were tiny and malformed," explained Elijah's mother, Shirene Cloete, shortly after the procedure undertaken at Medicross Kalahari Cataract, Eye and Day Hospital in Upington.

Last year, Shirene read in the media about another young man with microtia who had been assisted through an intervention involving maxillofacial prosthodontist Professor Cules van den Heever, the Centre for Rapid Prototyping and Manufacturing (CRPM) at the Central University of Technology (CUT) in the Free State and the Carl & Emily Fuchs Foundation, a private grant-making organisation. Shirene contacted the boy's parents, Nehemia and Deidre Doolabh, who put her in touch with the team, and this set the wheels in motion for Elijah to receive the gift of realistic-looking prosthetic ears, as well as a bone-anchored hearing aid.

Soon preparations were underway to assist Elijah, thanks to funding provided through the Carl & Emily Fuchs Foundation and Wohlers Associates, a rapid product development consulting firm. The CRPM CUT team and medical professionals provided their expertise and services pro bono, while the Medicross Kalahari Cataract, Eye and Day Hospital, operated by Medicross and ophthalmologist Dr Erhardt Kidson, donated theatre time.

"I am so grateful for everything that these organisations and individuals are doing to help my son. I thank God for bringing them all together to make this possible. To the family who helped me connect with the experts, the organisations that provided funding, Gerrie Booysen of the CRPM, Professor Van den Heever, maxillofacial surgeon Dr Charles van Niekerk, the friendly, caring staff of Medicross, and audiologists Julia Jensen and Andra Bester – as a mother, I want to thank you all for helping Elijah to live a normal life," Shirene said.

**Prosthodontist, Professor Cules Van den Heever; maxillofacial and oral surgeon, Dr Charles Van Niekerk; dentist, Dr Johan van der Merwe who assisted in theatre; and Medicross Kalahari Cataract, Eye and Day Hospital operations manager, Rina de Vries were amongst those who reached out to assist Elijah Cloete.**

Professor Van den Heever, the CUT team and Dr Van Niekerk had to work closely together to meticulously plan how the implants, which will hold the prosthetic ears, would be placed.

Dr Van Niekerk explains, "To hold the prosthetic ears, the implants need to be attached with small screws into the skull at just the right position. The bone to which we anchor the implants is only between 3mm and 4mm thick, therefore it is essential to plan precisely where the bone surface is adequate to hold the screws and to make sure that they are exactly the right length."

Working with Professor Van den Heever, the CRPM produced a 3D-printed positioning device, known as a patient-specific surgical stent, after taking a CT scan of Elijah's head. This stent is placed over the patient's face in theatre and is essential in guiding the surgeon to accurately position the screws for the implants, to which the prosthetic ears will attach.

In mid-June, Dr Van Niekerk performed the procedure at the state-of-the-art Medicross Kalahari Cataract, Eye and Day Hospital. Elijah's malformed external ears were surgically removed, and the implants were carefully positioned using the patient-specific surgical stent.

"After the initial surgery, we must wait three to four months for the bone to grow around and attach to the titanium implants. Once we are satisfied that the implants are securely integrated with the bone, we will undertake the second phase of the surgery, where we will place small metal structures that will form the pillars to which the prosthetic ears will attach with magnets," Dr Van Niekerk elaborates.

The CRPM CUT team will then use 3D printing to create the moulds that Professor Van den Heever and a Master's engineering student will use to make the medical grade silicone prosthetic ears for Elijah as part of the Changing Faces, Changing Lives programme sponsored by the Carl & Emily Fuchs Foundation, which aims to enhance quality of life and reaffirm the sense of dignity of those with facial disfigurement.

"Ears are fairly noticeable structures, and even though Elijah's braids have helped to disguise the malformation of his external ears, the prosthetic ears will assist to enhance the aesthetics of his face," Professor Van den Heever notes.

"The presence of 'normal'-looking prosthetic ears is more than merely aesthetic, however, it positively contributes to social aspects of a child's development. We are able to match the skin tone and texture almost exactly and do everything possible to make the prosthetic ears look as realistic as possible.

"As Elijah is only six years old, his features are still growing and in the future, we will need to replace the prostheses to remain in proportion with the rest of his face," Professor Van Den Heever adds.

While the surgeries and prosthetic ears will address the cosmetic aspects of Elijah's microtia and aid in some developmental respects, he also required assistance for his impaired sense of hearing. The head of the speech therapy and audiology department at Pelonomi Hospital, Julia Jensen, came to learn of Elijah's situation through the CUT team and arranged for him to have a hearing test with private audiologist, Andra Bester who practices in Upington, which is nearer to the Cloete family's home.

"The hearing tests indicated that Elijah had partial hearing in one ear. Due to his condition, his ear canals are sealed, and we believe that this contributes significantly to his hearing impairment. We performed a bone conduction hearing test and found that Elijah's cochleas, the part of the inner ear integral to hearing, are functional on both sides," Bester says.

Elijah was fitted with a special hearing aid. "The bone-anchored hearing aid converts sound into vibrations through the skull and temporal bone, which stimulates the hair cells in the cochlea. Sound is then transferred normally through the acoustic nerve to the brain," Jensen explains.

Bester added that Elijah would need to have a follow-up consultation with her in a few months, after he has had time to get used to the hearing aid and has learned how to process the new stimuli. She will then be able to determine the extent to which his hearing has been improved.

Dr Billy van der Merwe, managing director of Netcare's Primary Care Division, says he was most pleased that the Medicross Kalahari Cataract, Eye and Day Hospital and its staff were able to play a role in the interventions to assist Elijah.

"This young boy has shown great courage at such a tender age, and we are pleased and privileged to be doing our part in improving his quality of life. In the coming months we look forward to the successful culmination of the efforts of all the expert healthcare professionals involved and seeing the meaningful difference these interventions make for Elijah," he concluded.

**From left: Prof. Herman Vermaak, Dean: Faculty of Engineering and Information Technology; Prof. Henk de Jager, Vice-Chancellor and Principal; Dr Gary Paul, Deputy Vice-Chancellor: Resources and Operations; Prof. Hesta Friedrich-Nel, Assistant Dean of Teaching and Learning: Faculty of Health and Environmental Sciences; Prof. Alfred Ngowi, Deputy Vice-Chancellor: Research, Innovation and Engagement; Mr Martin Walzer, Project Manager Technical at Karah Assets; and Mr Cobus Vermeulen, Managing Director at Karah Assets.**

# CUT solar project: the sun is the limit

In 2013, CUT embarked on its first project called the Solar-Flower, to harness the power of the sun. The Solar-Flower was designed and developed by CUT engineering team, while the steel construction of the device was done in the mechanical workshop at the university's Bloemfontein campus. The solar stations are placed in strategic positions around both campuses and allows students to charge their devices anytime while on campus.

The next step for the team was to experiment with solar panels when used as the electricity source for a building. In 2014, the then newly erected engineering building was the first construction on campus to have solar panels placed on the roof and over time, the third and second floor of the building was taken off the power grid.

This year, CUT in partnership with Karah Assets decided to upscale the project with the installation of a Solar Plant that will produce 153,59kWp through ground-mounted 8m high panels secured on masts. The power generated will be fed into the local grid of the University and closely monitored. The monitoring also extends to temperature and irradiation for the purpose of training staff and students involved in the project.

"It is important that as technology educators we remain at the forefront of technology, particularly in the field of renewable energy. This project is a perfect example of doing just that. Besides providing a practical solution to a growing problem on campus, it also gives us an opportunity to introduce all students and staff members to the use of sustainable energy. The project forms part of a cost-saving measure by the university as the energy bill of the institution is high. By generating our electricity, we are also looking to reduce our carbon footprint." said Prof. Herman Vermaak, Dean of Faculty.

"CUT is very optimistic about the opportunities that the project will afford for learning more about solar, generating energy, and even outperforming a similar plant that stands erected at South Africa's Premier Scientific Research and Development Organisation located in Pretoria," these were the comments from the Council for Scientific and Industrial Research (CSIR).

# Academic Programmes

## CUT alumnus delivers keynote address at 21st annual research seminar


**Dr Terry Wohlers, founder and President of Wohlers Associates, Inc., a CUT alumni and keynote speaker at the 21st annual research seminar. He is seen here sharing his knowledge, experience and views with his audience about the future of Additive Manufacturing (AM) and 3D printing.**

The Faculty of Engineering and Information Technology (FEIT) hosted the 21st annual research seminar on 18 October 2018. The seminar aimed at bringing together researchers, postgraduate students, Engineers and Scientists from both academia and industry to share their views on the latest trends in engineering and IT.

In his opening address, Prof. Alfred Ngowi, Deputy Vice-Chancellor (DVC): Research, Innovation and Engagement, said that good research should have a high impact on society, and bring solutions to local problems through global collaborations. "For us to have a research impact, we need to concentrate on applied research, and have appropriate balance with fundamental research. We need to address real problems from the industry and close the gaps between research and innovation. Steps have been put in place to ensure the seriousness of this gesture, and we believe that research cannot be done without innovation and the commercialisation thereof. We need to embrace the 4th Industrial Revolution's technologies and the circular economy".

CUT alumnus, Dr Terry Wohlers, delivered the keynote address at the seminar. he is the President of Wohlers Associates Inc., an independent consulting firm that has been in existence for 31 years. The company provides technical and strategic consulting on new developments and trends in rapid product development, Additive Manufacturing (AM) and 3D printing.

Through this company, Dr Wohlers has provided consulting assistance to more than 260 organisations in 26 countries. He has also provided advice to 180 companies in the investment community, most of which are institutional investors that represent mutual funds, hedge funds, and private equity valued at billions of dollars. An analyst, author and a public speaker, Dr Wohlers has authored more than 400 books, articles, and technical papers on product development and manufacturing, and has given 150 keynote presentations in five continents. Furthermore, he was a featured speaker at manufacturing-related events at the White House in 2012 and 2014, and has appeared on many television and radio news programmes, including Al Jazeera, CBS Radio News, Bloomberg TV, CNBC, CNN, Fox Business, MSNBC, NPR, and Australia's Sky News. He is a principal author of the Wohlers Report, the undisputed industry-leading report on AM and 3D printing world-wide for 23 consecutive years. In 2016, he was appointed as an Adjunct Professor at the Royal Melbourne Institute of Technology (RMIT) University in Melbourne, Australia.

Dr Wohlers was also elected to the Society of Manufacturing Engineers (SME)'s College of Fellows in 2005 and has received an Honorary Doctoral degree in Mechanical Engineering from CUT in 2004.

When delivering his keynote address, he shared his knowledge, experience and views about the future of AM and 3D printing with the audience. He said that AM and 3D printing entails a process of digitalising a three-dimensional object, slicing it up into thin holes across sections, and then printing it layer by layer. He further stated that the AM industry is growing at a rapid pace, and that most companies are starting to invest in this technology. "Investment is propelling the AM industry, and we are seeing many new approaches and applications of the technology. We have seen investment like never before in AM and 3D printing. We have system development, materials development, applications development and other software development that just cut across so many areas and disciplines, and it is exciting to see this happen."

According to him, technology is penetrating many areas, such as sensors and electronics. Many companies have invested millions of dollars in inventory and spare parts, and are working towards digitising them, rather than having them in physical form. "This technology is also embraced in lighting design, standard and custom-designed I-ware frames, footwear, fashion, food printing, and printing of buildings and other structures," he added.

Additionally, Dr Wohlers stated that much is yet to be learned from nature, and things are only getting started. "We have only scratched the surface as to what we can do because we have built these very complex shapes and objects. I believe that we have a lot to learn from nature in biomimicry. In nature, we can learn from bone structures, humming birds, and even shark skin. We can mimic it and build parts that were impossible to produce before."

Some of the attendees at the 21st annual research seminar held at the Central University of Technology, Free State. The seminar was hosted by the Faculty of Engineering and Information Technology (FEIT) and aims to bring together researchers, postgraduate students, engineers from wide and far and scientists from academia and industry to share views on the latest trends in the engineering and Information Technology. Examining the mandibles are Mr Deon Adendorff (left) and Mr Gerrit Viljoen both from Eskom Bloemfontein.

He was very impressed with the achievements and good work done by the Centre for Rapid Prototyping and Manufacturing (CRPM) in the area of AM. "This centre is a crown jewel, and is doing exceptionally well in AM. Last year alone, approximately 580 projects were accomplished by this centre through AM and 3D printing. The centre has also managed to acquire an International Organisation for Standardisation (ISO) certificate, which allows them to do medical-related products, changing and saving the lives of ordinary citizens. This is impressive," he concluded.

Apart from the seminar, Dr Wohlers' visit included a three-day course on Design for Additive Manufacturing (DfAM), which presents best practices, and includes a DfAM guideline document that has been created over the years. It also includes design rules and guiding principles for most AM processes and materials, with an emphasis on building high-quality, functional parts. The topics addressed included consolidating many parts into one; topology optimisation; and lattice or mesh structures, which cover considerations for metal, polymer, and composite materials; the creation of custom parts; and reducing expensive support material.

Other presenters on the day were researchers from various departments within the faculty, who delivered presentations on various engineering topics.

# Language gurus translate science terminologies into Sesotho


Mr Kgosi Motlhawana, Chief language practitioner-terminology: Department of Arts & Culture Language practitioners giving his expert advice and lessons on terminology transfer.

CUT staff, lectures, students and language practitioners from different subject fields, terminology development, lexicographers and linguists from PanSALB and Department of Arts and Culture.

The Centre for Innovation in Learning and Teaching (CILT), in collaboration with the Faculty of Health and Environmental Sciences, held a two-day workshop from 30 to 31 July 2018 to develop Sesotho lexicons for 1 242 Biomedical Technology terms.

The project aimed at developing indigenous languages, and intellectualising them in all disciplines, especially in the areas of Science, Engineering and Technology (SET). Last year, the project focused on Civil Engineering, and 548 terms were translated into Sesotho.

In his address, Prof. Samson Mashele, Dean: Faculty of Health and Environmental Sciences, stated that the project involves rethinking the way in which things are don, in a quest for relevance. "We are not only doing this because of the laws of the country, but we also need to be proud of our languages. We are in Africa, so Europe cannot be in the centre of the universe in an African university. It is very important that we start to rethink the way we do things and embrace our heritage. If you look at other institutions, like Harvard, you will see that they portray their own heritage, unlike African countries, where we tend to portray the heritage of the Europeans instead of ours. This initiative is a step towards addressing transformation issues in our country, and also encourages us to be proud of our own heritage," he said.

Mr Kgosi Motlhawana, Chief Language Practitioner: Terminology in the Department of Arts and Culture, touched on a few strategies to define and develop Sesotho equivalents for terminology in different fields and disciplines. He shared some of the basic strategies to use when translating, including semantic transfer, compounding, adaptation, and borrowing from English. "Terminology is a very serious discipline. The most important strategy is to take it easy and have fun, and then you will enjoy terminology development," he concluded.


**Prof. Simon Nemutandani, Dean and CEO at the University of Witwatersrand who delivered a keynote address on the "National Health Insurance: Implications on medical aids and healthcare in South Africa."**

# Health and Environmental Sciences prestige research seminar.

On 30 October 2018, the Faculty of Health and Environmental Sciences held their prestige research seminar to encourage students in their research work and assist them to grow in their research journey. The faculty hosted Prof. Simon Nemutandani, Dean and CEO at the University of Witwatersrand who delivered a keynote address on the "National Health Insurance: Implications on medical aids and healthcare in South Africa". He also touched on the role universities and research can play in this regard.

The National Health Insurance (NHI) is a financing system that will make sure that all citizens of South Africa are provided with essential healthcare, regardless of their employment status and ability to make a direct monetary contribution to the NHI Fund. NHI believes that healthcare is a human right which should not depend on financial status.

In his address, Prof. Simon Namutandani spoke about how healthcare has become expensive and the money paid towards medical aids increasing drastically while the cover is becoming smaller. "We are currently faced with challenges where the health system is not accessible, and if accessible, there is a problem of availability of professionals. In the rural areas, there is no medication; if there is medication, there is a shortage of staff members."

He also said that colleges and universities play a critical role in addressing some of the challenges faced. "The nature of universities all over the world is to generate knowledge. Any university that does not aspire to do so will become the consumer of it. Once we have generated that knowledge, it must be distributed and translated. It is important that we distribute and translate the knowledge we generate. Does the knowledge that we produce play any role or does it remain in the head of researchers? As universities, we are faced with challenges of becoming consumers of knowledge from the west. Our students are not being exposed to the work that we as local scholars produce. We hardly see any of our local researcher's work on our library shelves and that is a huge challenge especially when we do not translate the knowledge we are generating to solve our own problems."

He further highlighted that students have a nature of wanting answers rather than solving problems. He said that they should be empowered and equipped with skills that will allow them to think beyond what is happening. "If we continue to give our students memorandum, they continue to lack the inquisitive mind. We should not give them answers. Instead, we should give them problems so that they know how to deal with the 4th Industrial Revolution needs. Some of the contributing factors to the poverty of the mind is the repackaging and reproducing of scholars from the west. We hardly have scholars that are prepared to ask questions that are beyond what is happening."

In conclusion, he said that researchers are explorers; they are testing the theories and going to areas that no one has gone to. "If you have a path you are following then you are not an explorer. The concept of asking the methodologies being used means you are taking research methodology that has been used by others. Pathfinders come up with research methodologies that have not worked before."

**Prof. Bongani Bantwini, Professor at North-West University, Potchefstroom Campus presenting on diversity in research at the research seminar hosted by the Faculty of Humanities.**

# Faculty of Humanities hosts research seminar

On 22 October 2018, the Faculty of Humanities held a prestigious research seminar, themed "Towards Diversity in Research". The purpose of the event was to harness and encourage research activities in the faculty by giving both academic staff and students from different programmes the expertise, experience, and opportunities to present their research projects, and actively engage in research-related discussions.

Prof. Bongani Bantwini, guest speaker from North-West University Potchefstroom Campus believes that research and innovation are the hope and drivers of the future. He also stated that the Central University of Technology, Free State (CUT)'s vision is aligned with the idea that research, innovation and development are key to unlocking the innumerable challenges faced by the society.

"As a higher education institution, it is imperative that you always remember that the higher education sector is the biggest contributor to the increase of research and development of any country. Research and innovation have become our hope and driver to our better tomorrow. When we talk about research, we also look at the growth of the country, technology advances, and changes. Our democracy is still young and needs research to grow it beyond. We believe that solutions to our shared challenges will only come from ground-breaking research and innovation," he said.

He mentioned diversity in research as a better way to solve complex problems and also encouraged upcoming researchers to continue digging deeper, get more involved, and come up with great topics. Finally, he advised the faculty to look into having a research identity and philosophy, and to promote multidisciplinary and interdisciplinary research.

**Attendees from universities and colleges around the country formed part of the 4th annual Scholarship of Teaching and Learning (SoTL) conference under the theme: "Transforming teaching and learning through a culture of research in higher education".**

# Debates on decolonisation of curriculum continue at the 4th annual SoTL conference held at CUT

The Centre for Innovation in Learning and Teaching (CILT) held its 4th Annual Scholarship of Teaching and Learning (SoTL) conference under the theme: "Transforming teaching and learning through a culture of research in higher education". SoTL promotes critical reflection of academic staff to tackle issues on how teachers can improve their pedagogical practices in the decolonial and post-apartheid contexts.

In his welcome address, Prof. Samson Mashele, the acting Deputy Vice Chancellor: Teaching and Learning, at the time highlighted changes in the higher education system and the implications for teaching and learning in South Africa. He pointed out that ways in which students think and do things have compelled academics to rethink curriculum and related pedagogical practices to ensure success in students.

He argued that decolonisation of curriculum has become a contested terrain. He expressed hope that the conference would unpack issues of decolonisation of curriculum and relevant pedagogies to provide a framework for challenging the seeming Eurocentric curriculum; and recognise and respect curriculum and pedagogies that embrace African ontologies and epistemologies.

Professor Catherine Manathunga, Professor of Education Research from the University of the Sunshine Coast in Australia, and keynote speaker on the day presented on "decolonising the curriculum: reflections on transforming teaching and learning through Southern higher education". She argued that Northern knowledge continues to claim universality across time and space in many academic disciplines and continues to ignore geopolitical power struggles over knowledge.

Prof. Manathunga presented her research on a range of theories from non-dominant perspectives to post-colonial indigenous feminist, social and cultural, geographic theories. She argued that this is despite decades of postcolonial, indigenous and feminist research.

The SoTL acts as a key site where contested postcolonial histories, geographies and epistemologies play out. Prof. Manathunga argued that the first step towards decolonising the curriculum, as well as teaching and learning in Africa is to foreground the history of the ancient African institutions of higher learning dating back to ancient Egyptian times.

Seven key strategies for decolonising the curriculum were advanced, namely; the need for deep listening and acknowledging pain and anger; the need to engage in a cultural interphase of history; systematic deconstruction of northern knowledge; critical whiteness studies; the need for a systematic reconstruction of southern knowledge; development of the south-south dialogue; and the need for conviviality.

Professor Monnapula-Mapesela, Senior Director: Centre for Innovation in Learning and Teaching (CILT), focussed on perspectives, opportunities and challenges for quality enhancement of teaching and learning as an equally contested area in higher education. In her presentation she used social realism, and Margaret Archer's framework of structure, culture and agency to locate discussions on quality enhancement in the context of SoTL.

A total of 135 people attended the conference. Amongst these were presenters from Durban University of Technology, University of the Free State, University of Cape Town, Motheo TVET College and CUT. Professor Isaac Ntshoe, Head of SoTL and Prof. Mabokang Monnapula-Mapesela, Senior Director for CILT, initiated and nurtured SoTL at CUT since 2015 to present.

# University Life

**Three of the twelve proud doctoral candidates from left: Dr Jane Nkhebenyane, Doctor of Philosophy in Environmental Health; Dr Sephiri Hlohlolo, Doctor of Communication in Language Practice; and Dr Emeka Amaechi, Doctor of Education.**

## 2018 Spring Graduations celebrated

Graduates at the Central University of Technology, Free State (CUT) celebrated their achievements at the Spring Graduation Ceremony held on 07 September 2018.

For the Spring ceremony, 571 graduates walked tall on the stage of the famous Boet Troskie Hall, with their families and friends singing, praising and ululating as their names were called. In total, 4 265 students, including 48 master's degree students and 25 doctoral degree students, graduated this year at both March and September graduation ceremonies.

When congratulating the graduates, Prof. Henk de Jager, Vice-Chancellor and Principal, said that CUT is determined to play a crucial role in the socio-economic development of the region, province and country, and thanked the graduates for choosing CUT as their academic home.

"You are of our own, and you have made the institution immeasurably proud for having completed your studies successfully and graduating today. By graduating, you are indeed living examples of determination and hard work, and we send you off as CUT graduates, but most importantly, as our ambassadors and proud alumni. Go out there and make us proud," he said.

Prof. De Jager also acknowledged all parents, guardians, relatives and friends of the graduates for their love and continued support. "Without your love, encouragement, praise, financial assistance and patience, none of these graduates would be here today. Thank you for all your many sacrifices, and for providing them with the best education and the opportunity to study here at CUT. Always remember that their achievements are also yours."

**From left: Prof. Henk de Jager, Vice-Chancellor and Principal; Prof. Alfred Ngowi, Deputy Vice-Chancellor: Research Innovation and Engagement; Dr Loganathan Munsamy, Dr Esther Palmer, Dr Jimmy Makoni, Madam Justice Mahube Molemela, Chancellor; Dr Pitso Kheza, Dr Sephiri Hlohlolo, Dr Dalene Crowther, Dr Jane Nkhebenyane, Dr Mohammad Parvez and Dr Jacques Combrinck.**

# CUT Chancellor celebrates the newly graduated doctors

The Chancellor's Doctorandi Dinner is one of the happiest ceremonies on the university calendar, intended to recognise the personal achievements of doctoral graduates who have attained the pinnacle of scholarship.

Hosted by the CUT Chancellor, Madam Justice Mahube Molemela, the soirée is also aimed at acknowledging the graduates' families for their commitment and continued support, as well as to celebrate and welcome the new doctors to the intellectual community.

In her address, Madam Justice Molemela congratulated the newly crowned doctors for their hard work, perseverance and commitment. "I dedicate this event to all of you. What you have achieved today is an outcome of consistent application of the mind to complex issues confronting humanity and communities. As CUT, we want to celebrate with you, and show respect to you for having earned that precious prize from us. Your achievement is a good reflection on the institution's intention to promote hallmarks as an academic institution, namely teaching and learning, research, and community engagement. Our teaching here is designed to constantly develop our capacity to teach our students how to learn, and how to take charge of their thoughts. What many of our students know is not as important as what they do with what they know."

She further expressed her appreciation to the academic staff who played a tremendous role in the development of students. "Much of your achievements could not be attained without the support of the intellectual community within the university. On that note, I wish to express my appreciation to management and our academics for their close involvement in the work of our students, and for their commitment towards strengthening the research and innovation capacity within their respective academic and research portfolios, so that this university continues to increase the development of world-class postgraduate programmes and high-quality outputs in research," she said.

**Dr Sylvan Maleho Seane (right) receiving his Chancellor's Excellence Award at the 2018 Spring Graduation ceremony. He is congratulated by Deputy Registrar, Dr Paks Tondi. Former CUT Chairperson of Council, Dr Seane, received the Chancellor's Excellence Award in the category of Leadership and Community Involvement.**

# Dr Maleho Seane receives Chancellor's Excellence Award

Dr Sylvan Maleho Seane is regarded as an exceptional leader, who consistently demonstrated the capacity to guide and motivate others to excellence with proven commitment to serving the community and improving the lives of others. A family physician by profession, Dr Seane served on the university Council from 2003 to 2018, during which as Chairperson of Council from 2010 to 2016. He made important contributions in his capacity as Chairperson of Council, and as a member and Chairperson of various standing committees of Council. Furthermore, he availed his skills and expertise to a host of other organisations throughout his career.

"I am honoured and excited about this award. My gratitude extends to the CUT Council for its guidance in policy making and ethics in governance that creates the ambiance to procure essential support and office stewardship over, above and beyond the duty of their call. We come here and celebrate an institution that stands out to make sure that individuals within it come out as different people, with different attributes, and determination to make life different for all people outside," Dr Seane said.

**Dr Sylvan Maleho Seane (right) is seen here with Prof. Henk de Jager, Vice-Chancellor and Principal (left) and CUT Chancellor, Madam Justice Mahube Molemela (centre).**

"I will forever be indebted to my family, more so to my lovely wife, who allowed me time to avail myself for CUT's calling and to the CUT community. My spirit is indeed lifted, and there is joy and satisfaction of accomplishment. To the students, you may have struggled and met with repeated challenges and failures, but you persevered, and finally you succeeded. What is critical is not how you entered, but how you exit, and I think it is honourable for all of us to make sure that our exits are honourable."

Dr Seane was born in Bloemfontein and matriculated from Moroka High School in Thaba 'Nchu in 1971. He holds a BSc Degree from the University of Fort Hare; an MBChB degree from the University of KwaZulu-Natal; and an MFamMed degree from the University of the Free State.

Dr Seane has owned a medical practice in Bloemfontein since 1983 and is currently employed as a Senior Lecturer and Clinical Supervisor of final-year medical students at the University of the Free State.

He is married to Refiloe, and the couple has three children, Letshego, Kabelo and Boitumelo.

# PhD Graduates

## FACULTY OF ENGINEERING & INFORMATION TECHNOLOGY

## Doctor of Engineering in Civil Engineering

Dr Stephen Oimen Eromobor.

**Topic:"Sustainable design of built infrastructure and engineering services for South African Universities".**

**Promoter: Prof. DK Das, PhD (IIT)**
**Co-promoter: Prof. FA Emuze, PhD (NMU)**

Dr Stephen Oimen Eromobor is currently a Scholar of Business Management at St Mary's University in Minneapolis, USA. He holds an MArch degree from Ahmadu Bello University in Nigeria.

In this research, 16 buildings at three South African universities were evaluated to determine their level of performance in terms of energy efficiency, indoor environmental quality and water efficiency. As a result, theoretical models were developed to improve these aspects of university buildings.

The novelty of the research lies in the use of Applied Systems Analysis modeling to theoretically model the building performance of university buildings. The practical implications of the study will assist in improving the building design guidelines for sustainable built infrastructure at South African universities.

The presentation of papers at five international conferences and one book chapter emanated from the research.

## Doctor of Engineering in Mechanical Engineering

Dr Jacques Combrinck with his promoter Dr J.G. van der Walt.

**Topic: "Alumide® tooling for limited production plastic injection moulding".**

**Promoter: Dr JG van der Walt, DTech (CUT)**
**Co-promoter: Prof. DJ de Beer, DTech (CUT)**
**Co-promoter: Mr GJ Booysen, MTech (CUT)**

In his doctoral research, Dr Jacques Combrinck examined the possibility of using additive-manufactured Alumide®, an aluminium-filled nylon material, as a novel alternative process for producing rapid tooling inserts for the injection moulding (IM) process.

The mechanical properties of laser-sintered Alumide® required for the design optimisation of the Alumide® inserts using SIGMASOFT® virtual moulding simulation software, were investigated. A geometrical product with conformal cooling channels was developed, which was used during actual IM trials with Alumide® inserts to investigate the durability of the moulds produced, and the effectiveness of conformal cooling.

IM trials were also conducted to determine the suitability of using Alumide® inserts with different polymer materials. Process and product development guidelines for the design of additive-manufactured Alumide® inserts, which will aid designers during the design of Alumide® inserts, were formulated. Findings of the study were published in an accredited journal, and will be presented at an international conference later.

# FACULTY OF HEALTH AND ENVIRONMENTAL SCIENCE

## Doctor Technologiae: Agriculture

Dr Ifeoma Nwafor

**Topic: "Development of an effective feeding regimen using dry chicory (Cichorium intybus) roots to eradicate zoonotic helminths in pigs".**

**Promoter: Dr HA Roberts, DTech (CUT)**
**Co-promoter: Prof. PJ. Fourie, DTech (CUT)**

Dr Ifeoma Nwafor holds a BAgricTech and an MSc from the Federal University of Technology in Nigeria, and an Advanced Diploma in Principles of Nutrition from Shaw Academy in Ireland. She is currently pursuing a Certificate in Food Safety from the Australian Institute of Food Safety.

In her doctoral study, Ifeoma investigated the pre- and post-mortem prevalence of intestinal helminths in pigs in the Free State, ultimately developing a feeding regimen using dry chicory (Chicorium intybus) roots to eradicate zoonotic helminths in grower pigs.

The results of the study revealed a high prevalence of endemic gastro-intestinal parasites plaguing pigs that are raised in smallholder farms in the area, and that the inclusion of dry chicory roots in pigs' diet could be used to design effective and sustainable helminth intervention plans to enhance smallholder pig production enterprises.

Findings of the study were submitted to various scientific journals for publication.

## Doctor of Health Sciences In Biomedical Technology

Dr Mohammad Parvez congratulated by Prof. Hesta Friedrich-Nel, Assistant Dean: Teaching and Learning in the Faculty of Health and Environmental Sciences.

**Topic: "Cytochrome P450 monooxygenase analysis in the genus Mycobacterium: Special focus on CYP123".**

**Promoter: Prof. K Syed, PhD (SKU)**
**Co-promoter: Prof. SS Mashele, PhD (Medunsa)**

Dr Mohammad Parvez obtained a BSc in Biotechnology at the Chaudhary Charan Singh University, and an MSc in Biotechnology at the University of Jamia Hamdard.

His doctoral study addressed two major gaps in P450 research, namely: (i)the molecular evolution of P450s in terms of their dynamics at both protein and DNA levels; and (ii) functional conservation across kingdoms, with a special focus on CYP123, a P450 that is highly expressed in the latent phase of Mycobacterium tuberculosis. He identified that mycobacterial P450s are highly conserved, compared to P450s from different biological kingdoms, whilst in silico structural analysis revealed that CYP123 has all P450 motifs, and bind tightly to azole drugs. The results of the study paved the way for the further characterisation and development of CYP123A1-based anti-tuberculosis drugs.

Three papers in high-impact factor journals, as well as presentations at national and international conferences, emanated from the research.

# Doctor of Philosophy In Environmental Health

Dr Sebolelo Jane Nkhebenyane, with Promoter: Prof. Ryk Lues.

**Topic: "Food hygiene risks and related practices in central South African HIV/AIDS hospices: A qualitative assessment".**

**Promoter: Prof. JFR Lues, PhD, (UFS)**

Dr Jane Nkhebenyane obtained the BSc and BSc Hons degrees at the University of the Free State (UFS), after which she completed an MTech at CUT. She also holds certificates in Advanced Management from Yale University in the United States of America (USA), and Research Capacity Building from the South Africa Netherlands Research Programme on Alternatives in Development (SANPAD). In 2016, she completed an Erasmus Mundus tenure at Ghent University, Belgium, as an external grant holder and author of several articles.

In her doctoral study, Jane investigated the food-safety risks in HIV/AIDS hospices in Central South Africa, which are grossly under-resourced. The findings revealed multiple risks that are likely to adversely affect these vulnerable hospice patients. Ultimately, several initiatives to improve palliative care through risk assessment and skills development were proposed. An external examiner commented that the study is "an extremely well-researched topic, with a novel contribution to the hospice industry".

## FACULTY OF HUMANITIES

# Doctor of Communication In Language Practice

Dr Sephiri Hlohlolo

**Topic: "The use of translators at local municipalities: A case study of Moqhaka Local Municipality, South Africa".**

**Promoter: Dr A Mnguni, DTech (TUT)**

Dr Sephiri Hlohlolo obtained a Secondary Teacher's Diploma from the then Tshiya College of Education in Qwaqwa; BA and BA (Hons) degrees from the then Vista University in Welkom; and an MA from the University of the Free State.

His doctoral study, grounded in individual justice, distributive justice and equality theories amongst municipal residents, assessed the use of translators at local Free State Municipalities. It was found that translators are not utilised optimally in municipalities. Hence, the use of translators, and the development of multilingualism, were recommended. A multilingualism flow chart for local municipalities in South Africa, to assist with the implementation of multilingual language policies was developed. Through these strategies, indigenous African languages could be promoted. Consequently, local municipalities will strive to make provision for most of the languages, especially indigenous African languages, spoken within their jurisdictions.

# Doctor of Education

Dr Emeka Amaechi

**Topic: "Language and power relations in the Further Education and Training band in South Africa".**

**Promoter: Prof. IM Ntshoe, PhD (Wits)**

Dr Emeka Amaechi holds an Honours degree in Education: French from the University of Nigeria, an Honours Degree in Professional Curriculum Studies from the University of the Free State (UFS), and a Master's Degree in Language Studies from UFS.

His doctoral study focuses on language and power relations in the Further Education and Training band in South Africa, underscoring the effects of the articulation gap for learners whose home language is different from schools' medium of instruction. This articulation gap extends beyond school education, and disadvantages students in higher education and their future careers.

The study contributes to knowledge regarding the relationship between language in the general socio-economic context, and especially in South Africa, and emphasises the complexities of knowledge of language as a medium of teaching in South Africa, with its 11 official languages. The study further highlights the urgency of developing indigenous African languages for scientific and technological use.

# Doctor of Education

Dr Kheza Jonas Pitso

**Topic: "Designing a framework for the advancement of lecturer capacity in developing Graduate Attributes at a Technical Vocational Education and Training college".**

**Promoter: Prof. G Alexander, PhD (UFS)**

Dr Jonas Pitso Kheza obtained a Bachelor of Arts degree in 2003; the Bachelor of Psychology in 2005; the Postgraduate Certificate in Education in 2008; and the Master's degree in Education in 2014. He is currently a Senior Education Specialist in the Student Support Services Department at Goldfields Technical Vocational Training (TVET) College, where he is responsible for academic support and counselling services, in addition to managerial responsibilities.

In his doctoral research, Jonas designed a framework for the advancement of lecturer capacity in developing graduate attributes at a TVET college.

# FACULTY OF MANAGEMENT SCIENCE

## Doctor of Business Administration

Dr Dalene Crowther is with her Promoter Prof. Albert Strydom

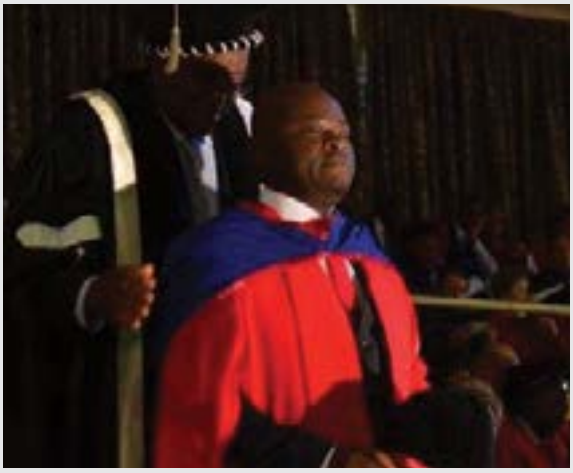
**Topic: "Formulation of a sustainable financial management strategy for South African universities' hotel school".**

**Promoter: Prof. AJ Strydom, PhD (UFS)**

Dr Dalene Crowther holds a BTech in Food Service Management, a BTech in Post-School Education, and a Master's degree in Higher Education.

In her doctoral research, she investigated the financial management practices of top international hotel schools, as well as those of hotel schools at South African universities of technology. Furthermore, research was conducted into the current financial and operational management practices of CUT's Hotel School, as well as of the university's Resource Allocation Model (RAM). A financial management strategy towards improving the sustainability of South African universities' hotel schools was ultimately developed. External assessors agreed that the study resulted in a well-formulated strategy that will add substantial value to the future sustainable financial management of hotel schools.

## Doctor of Business Administration



Dr Jimmy Makoni

**Topic: "Corporate community engagement framework for stakeholder relations in the extractive sector in the Western Cape, South Africa".**

**Promoter: Prof. MN Naong, DBA (UKZN)**
**Co-promoter: Dr DP Onojaefe, DTech (CPUT)**

Dr Jimmy Makoni holds a Bachelor of Accountancy Honours degree and a Master's degree in Business Administration (MBA) from the University of Zimbabwe.

His doctoral research focused on amplifying the value and development of a corporate community engagement framework to enhance stakeholder relations in the extractive sector, conducting a case study of the Western Cape. The framework demonstrated that, in order to promote extractive sector success and sustainability, effective community engagement should be organised around four closely linked variables, namely; context, group dynamics, implementation strategy, and outcomes. A mixed-method research approach was used to collect and analyse qualitative data through in-depth interviews with employees who are directly involved in companies' community engagement activities. The responses received were analysed using content analysis and Statistical Packages for Social Sciences (SPSS). The research found that corporate community engagement can be used to improve stakeholder relations, profitability and corporate image.

# Doctor of Human Resource Management

Dr Esther Pearl Palmer is all smiles with her Supervisor: Prof. Desere Kokt.

**Topic: "The impact of workplace spirituality on organisational commitment: The case of the Central University of Technology, Free State (CUT)".**

**Supervisor: Prof. D Kokt, DTech (CUT)**

Dr Esther Pearl Palmer holds a Bachelor's degree in Industrial Psychology, an Honour's degree in Development Studies, an Honour's degree in Journalism, a BTech in Post-school Education, and a Master's degree in Higher Education Studies. She registered for a Doctoral degree in Human Resource Management with the Central University of Technology, Free State (CUT) in 2015.

In her doctoral research, Esther investigated workplace spirituality as an emerging concept to retain academic staff and keep them committed within the South African university context. Based on the findings of the study, she conceptualised workplace spirituality and organisational commitment in a university context, and created a valid measure for workplace spirituality to assist the university to develop managerial practices that would create positive organisational experiences towards ensuring the retention of academic staff. External assessors indicated that this study was unique and interesting, and that both the candidate and the supervisor could be commended for an excellent study.

# Doctor of Public Management

Sharing a proud moment is Dr Loganathan Munsamy, with his Promoter: Prof. Tryna van Niekerk.

**Topic: "Development of an integrated disaster risk management model for the municipalities in the Free State Province".**

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

Dr Loganathan Munsamy holds diplomas in Education and Special Needs Education; a Postgraduate diploma in Public Administration; an Advanced diploma in Disaster Management; and a Master's degree in Public Administration.

His doctoral study focused on improving disaster risk management within municipalities in the Free State by developing an Integrated Disaster Risk Management Model that could assist municipalities in the province to plan, implement and manage disaster risks effectively. Based on the findings of the study, an Integrated Disaster Risk Management Model with three core elements, namely; operations management, hazard analysis and risk management, was developed. The effective use of the Integrated Disaster Risk Management Model will ensure that there is a common understanding of the main elements of disaster risk management within municipalities. External assessors indicated that the study makes a significant contribution to local government management theory, as well as to disaster risk management in Free State municipalities.


**From left: Prof Herman Vermaak, Dean: Faculty of Engineering and Information Technology, Prof. Alfred Ngowi, Deputy Vice-Chancellor, Research Innovation and Engagement, Mr Setjhaba Moloi, Head of Advanced Technology Centre: Accenture and Mr Livingstone Chilwane, Chairman of Accenture formalizing their partnership.**

# CUT and Accenture formalise their partnership

Accenture considers university communities as very important partners in innovation, entrepreneurship and skills development. A partnership between Accenture and CUT offers a fresh perspective on global trends that are practised by successful regions in the world. Through this partnership, one can only learn how regional success can be achieved when Accenture and CUT plan together and collaboratively invest resources to produce intended outcomes.

The Central University of Technology, Free State (CUT) formalised their partnership with Accenture on 25 September 2018, when they signed a Memorandum of Understanding (MoU). The purpose of the MoU is to develop and equip B-Tech Engineering and Information Technology students with the necessary skills that will allow them to excel in their field of work and set them apart from the rest. CUT and Accenture have been on this journey for a year, and they are finally formalising their relationship.

In his welcoming address, Prof. Alfred Ngowi, Deputy Vice-Chancellor, Research Innovation and Engagement said that the partnership with Accenture comes naturally because universities are always on the lookout for new things. "I believe all the technologies which Accenture is driving is what we are looking for. Working together, we will be able to give guidance to the university in the unfolding 4th Industrial Revolution. Taking our students for work integrated learning has always been part of what we do, and that is what differentiates us from the traditional universities as our students are equipped with the necessary skills to allow them to graduate with much-needed experience."

Mr Setjhaba Moloi, Head of Advanced Technology Centre explained Accenture as a global organization that plays a critical role in helping clients find solutions to their toughest problems. "We have five businesses and clients across different industries. Our businesses include a consulting firm, strategy business, digital business, technology and operations. In South Africa, we operate in five industries which are resources, products, health and public sector, financial services, and communications and media."

He also mentioned that Accenture South Africa has a clear strategy of what it wants to achieve. "One of the key drivers is to be a skills hub not only for South Africa and Africa but the world, and we want to make sure that we use our youth to deliver that. Our key focus is to create local talent with a global reach. We need to make sure that as much as we are locally relevant, we still will be able to achieve what is required and learn from the global leaders so that we remain relevant across the world."

Mr Livingstone Chilwane, Chairman of Accenture, said that they are excited and humbled to enter into a partnership with CUT. "I would like to thank you for this opportunity and hope that moving forward, this partnership will grow from strength to strength."

He mentioned that Accenture runs different programmes, which are; skills to succeed, enterprise supplier development, Accenture foundation and the internship programmes.

"The programme that we are about to embark on with CUT is the internship programme which is focused on taking students on a journey for 12 months to give them access and training on the latest technologies addressing the demands of the industry. It is also our vision to absorb some of the graduates from this programme into a remote capability Centre and give them work in the Free State. The bottom line for us is aptitude. We believe that the people with the right talent and aptitude will excell when afforde the opportunity."

# Researchers and Policy Makers collaborate to bridge gaps

**The colloquium in full swing at the Japie van Lill Auditorium.**

The Central University of Technology, Free State (CUT) and the Free State Provincial Government co-hosted a research colloquium from 12 to 14 September 2018, in order to bring researchers and policy makers together to help bridge the knowledge and information gaps in policy making and research through presentations and policy-oriented panel discussions.

Participants who played a role in the success of this colloquium included, amongst others, representatives and presenters from institutions of higher learning, such as the University of the Free State (UFS), the University of Cape Town (UCT) and CUT; government and industry representatives; Dr Benny Malakoane, Member of the Executive Council (MEC): Agriculture and Rural Development; Mr Oupa Khoabane, MEC: Department of Co-operative Governance and Traditional Affairs (CoCGTA); Dr Henk Boshoff, Public Service Commissioner;

Cllr Olly Mlamleli, Chairperson of the Provincial South African Local Government Association (SALGA); Mr Gerhard Kriel, Chief Executive Officer (CEO): Agri Free State; Mr Nakana Masoka, Chairperson of the African Farmers Association of South Africa (AFASA); Dr Litha Magingxa, Executive Manager: Agricultural and Economic Advisory, Land and Agriculture Development Bank; and Mr Tshediso Thinane, President: Free State Youth Chamber of Commerce and Industry.

The colloquium emanates from the Free State Growth and Development Strategy, which is informed by the National Development Plan (NDP). It provided guidance and direction from a planning perspective to mobilising partners into action towards providing an intended research agenda and contributing scientifically informed policies and transformed access to research work.

Some of the burning matters discussed at the colloquium included land reform and restitution; good governance; labour market developments; agro-processing; mining town regeneration; gender responsiveness; manufacturing and technology; agriculture; and youth and development.

In his welcome address, Prof. Albert Strydom, Dean: Faculty of Management Sciences and Acting Vice-Chancellor and Principal at the time, stated that the matters at hand are recent and relevant. "Let us work together to formulate clear policy implications and recommendations. As CUT, we are very fortunate and grateful that you have involved us as partners in this colloquium. The development of Central South Africa and the Free State province is an integral part of Vision 2020. We regard this occasion as one of the key outcomes of our Memorandum of Understanding (MoU) with the Free State Provincial Government, and we believe that there will be many joint strategic initiatives in the future, with the core objective to grow and develop our province," said Prof. Strydom.

Ms Elzabe Rockman, MEC: Free State Department of Treasury, stated that the colluqium provides the only platform that brings together researchers, law makers and policy makers under one roof, and allows them space to meaningfully and robustly engage. "It represents our attempt to enhance evidence-based policy making with sound and credible research at the heart of policy development. Research has shown that innovative and sustainable economic development does not only depend on the quadruple-helix partnership (Government, University, Enterprise and Society), but more on how they mutually interact on strategic objectives."

She also said that the review on higher education and regional city development from the Organisation for Economic Co-operation and Development (OECD) Report addresses four questions, namely how to develop a more inclusive labour market and education system; how to create an economy that can absorb both highly skilled and low-skilled members of the labour force; how to address the long-term challenges of poverty, inequality and poor health; and how to turn the potential of higher education into an active asset for regional development.

She further tapped into the challenges of service delivery and inadequate revenue at provincial and local government level. "On the impact assessment of government's interventions and programmes, our focus is on revenue-enhancement interventions; skills development programmes, including the provincial bursary and school-based programmes; and good governance, especially on capacity building at local government level, of which some of the issues are already receiving attention in this colloquium. We must revitalize technological innovation in the province and acknowledge the leading role that CUT is playing in this regard", she stated.

Ms Zanele Folose, one of the attendees from the Northern Cape Provincial Treasury: Economic Analysis Monitoring and Evaluation, said that she was impressed with the choice of topics presented, as they are burning matters nationwide. "This is my first attendance, and I am impressed with the research papers being presented here today. I have gained a lot of knowledge, and the papers are well researched. I think policy makers in government can really take the information shared and come up with policies that can change the lives of our people," she said.

**Prof. Henk de Jager, Vice-Chancellor and Principal and Dr Daniel Tau, Vice-Chancellor of Botswana Open University (BOU) signing towards a brighter future.**

# BOU and CUT strengthen relations

On 07 November 2018, the Central University of Technology, Free State (CUT) and Botswana Open University (BOU) signed a Memorandum of Understanding to establish a framework for the negotiation of the proposed cooperation between the two Institutions. The framework includes, but not limited to, the development of collaborative research projects; the organisation of joint academic and scientific activities, such as courses, conferences, seminars, symposia or lectures; the exchange of research and teaching personnel; the exchange of students; and the exchange of publications and other materials of common interest.

Prof. Henk de Jager, Vice-Chancellor and Principal said that he is personally impressed with Botswana as a government. "As a country, Botswana is doing exceptionally well on the African continent in terms of their economy and many other aspects."

"It is a privilege for us to cement our partnership with BOU. We see ourselves as a real winning University of Technology and we are blunt about it. We ultimately want to be the leading University of Technology in Africa on various aspects and it is because of this drive that we want to collaborate with winners. Any partnership must be a win-win situation and I believe that strengthening our collaboration with Botswana will be mutually beneficial. Although BOU is relatively new, I believe we can learn a lot from them. I am looking forward to a long relationship with our new partners."

He also said that building partnerships with SADC regions is a top priority. "We should collectively hold hands as Africans and show the world what we are capable of."

Dr Daniel Tau - Vice Chancellor, Botswana Open University (BOU) said that their institution is new as it is the latest edition to the club of 65 open universities globally. He also said that they have a huge task of developing foundational systems.

He also said that he is impressive with CUT including the staff members who displayed passion and enthusiasm in their work. "There is something attractive about this institution. There are many impressive things that we have seen and heard here and I have noticed the passion, creativity, innovativeness and the quality of staff members you have. What we saw in the Faculty of Engineering will definitely take this institution to greater heights. There are many universities that have been around for a long time but are not as innovative and creative as you are. They do not exude the passion and enthusiasm that we have witnessed here. Keep up the good work."

He further thanked CUT for the opportunity to ultimately formalise the relationship. "I would like to see tangibles rolling out of this MoU. It is a framework and i believe with time, there will be more specific agreements around certain specific projects and initiatives. There is a lot of potential and I am convinced that a lot stands to be derived from this agreement."

# Student leadership share best practices at NASDEV Summit

**CUT SRC leaders from Welkom campus: Back row from left- Mr Black Mkwani, Finance Officer, Mojalefa Ferete, Finance Officer (Bloemfontein Campus) Front row: from left Leepo Makoko, Residence and Accommodation Officer, Gladstone Moletsane, Education and Transformation Officer enjoying the interactive session and sharing humorous moments.**

**Mr Sakhile Mnguni, UFS Qwaqwa campus SRC President engaging speakers on challenges that students are facing.**

From 07 to 09 October 2018, the Central University of Technology, Free State (CUT), in collaboration with National Association of Student Development Practitioners (NASDEV), presented a Student Leadership Summit. The summit served as a platform for robust engagement, experience and knowledge sharing amongst students and student development practitioners from different institutions.

The main objective of the summit included providing development opportunities, support and resources to student development practitioners and administrators; ensuring a vibrant and politically clear student service leadership in higher education; and working towards professionalism in terms of student development in South African Higher Education. The event was coupled with research presentations, sharing of best practices, and networking across the Higher Education sector.

Representatives from the North-West University, Vaal Triangle Campus; the University of the Free State (UFS); and Motheo Technical Vocational Education and Training (TVET) College graced the occasion.

In his keynote address, Prof. Henk de Jager, Vice-Chancellor and Principal, said that through quality education and skills development, economic imbalances, unemployment and inequality can be addressed. He indicated that education empowers people to survive and strive, and it isthe most effective weapon against poverty. "As a collective leadership, we need to stand up against these challenges, and make a difference."

He stated that CUT management, together with the students and the union leadership, learnt some key lessons on leadership during the #Fees-Must-Fall Campaign. "We have learnt to listen, serve, and engage with all stakeholders through constructive and open-minded engagements. We also learnt how to become caring leaders and have emotional connection, and to be politically astute and economically savvy. We also created a home away from home, and have access for success, to ensure that all students and staff have a sense of belonging," he said.

He further touched on the Human Project, focusing on inequalities, transformation and multiculturalism, which is aimed at assisting staff and students to reach their full potential; enhancing a caring institutional culture; and promoting leaders who regard themselves as change agents and protect their ethical values.

When he spoke about ethical leaders, Prof. De Jager cited that such leaders should possess certain principles and qualities, including serving and respecting others; building trust; creating a shared vision that students collectively understands; practising fairness; being reasonable when dealing with people; and understanding different cultures, and should be consistent, have an open-door policy and be accessible, stand up against corruption, become change agents, engage face to face with people, and always have a positive attitude.

Mr Temba Hlasho, President of NASDEV, said that NASDEV is a living organisation and the only student affairs organisation in the country that successfully and effectively organises student affair practitioners under one roof, sharing practice, networking, and developing a community.

He stated that their organisation embraces five key leadership principles for success, namely; becoming the market's preferred provider, establishing the right tone and institutional culture, embracing a culture of continuous improvement, hiring people with good critical judgement, and facing the brutal facts of reality. He encouraged students to continue engaging and networking, and to always be inquisitive, in order to improve the practice.

Dr Paks Tondi, Deputy Registrar: Student Services, said that the role of NASDEV is to effectively provide support to students as they pursue their studies and discover their talents. "The cohort of officials consciously and unconsciously plays a role in ensuring that, as students enter their career journey, they should also be conscious of challenges that exist within the society and be able to address them. Through its various progammes and activities, NASDEV also serves a purpose of creating space for progressive student development practitioners to reflect on their work as they share their experiences and develop a body of knowledge that informs these practices," he said.

He further shared the four key principles that make a great leader, namely; integrity, respect and attitude, effectiveness, and problem solving. "These principles can assist you in your development as leaders and ensure that you effectively and efficiently serve your constituency," he concluded.

**CUT staff and management with delegates from the university of Botswana.**

# CUT-CRPM and two Botswana institutions secure Finnish funding to develop Additive Manufacturing Ecosystem for Southern Africa

CUT-Centre for Rapid Prototyping and Manufacturing (CRPM), in collaboration with the Botswana Institute for Technology, Research and Innovation (BITRI) and the University of Botswana (UB), has successfully secured Finnish funding from the Southern African Innovation Support Programme (SAIS), following the identification of synergy in the research and innovation projects of CUT, BITRI and UB.

The SAIS is a development initiative that supports the growth of new businesses through strengthened innovation ecosystems and cross-border co-operation. Established in 2011, the programme provides capacity building, and funding for networking, knowledge-sharing and supported projects in which new mechanisms for enhanced innovation and enterprise development in the Southern African Development Community (SADC) are piloted.

The SAIS 2 Call for Proposals (2018/1/CN) will fund projects under three thematic areas, namely stronger ecosystems, scaling enterprises, and inclusive innovations. The CUT, BITRI and UB Consortium jointly secured € 150 000 (R2 550 000) under the Stronger Ecosystems thematic area.

To qualify for funding, the project consortium applying for a grant from the SAIS 2 Innovation Fund should comprise of at least two independent legal entities from at least two different SADC member states, of which the only one – in this case CUT – can act as signatory to the grant agreement with the SAIS 2 Innovation Fund. The signatory to the grant agreement with the SAIS 2 Innovation Fund has to be a legally registered entity from one of the five SAIS 2 partner countries, i.e. Botswana, Namibia, South Africa, Tanzania or Zambia.

The goals of the project are to develop a joint AM ecosystem, focussing on medical applications; commercialise AM implants and medical devices in South Africa and Botswana; transfer knowledge from CUT to BITRI and UB; with further joint development to ensure long-term sustainability in the medical AM market; and expand into AM entrepreneurship and broad-based use of product design and related AM in Africa for both industrial and medical use.

**From left: Zhangjie Fu, Vice Dean, School of Computer and Software from Nanjing University of Information Science and Technology, Mr Jinlong Si, Chinese Student Union representative and CUT alumni are listening attentively to presentations of the day by Mr Gerrie Boysen, Director, Centre for Rapid Prototyping and Manufacturing.**

# NUIST and CUT declare to form strong cooperation

China is one of the most influential and established countries in the world, and an important and beneficial partner to CUT and the country. In 2016, CUT was selected as one of 12 universities of the 60 Brazil, Russia, India, China, South Africa (BRICS) universities to form part of the international network. The Network University Initiative was formed to serve as a research and educational project, aimed at bringing together higher education institutions from BRICS countries.

On 12 October 2018, Nanjing University of Information Science and Technology (NUIST) delegates visited CUT to explore possible areas of collaboration, and to sign a Memorandum of Understanding (MoU) with the university. Representatives from both universities delivered brief presentations on their programmes, in order to provide a broader understanding and a clear picture of their different operations.

Amongst the possible areas of collaboration identified, the two parties agreed to establish co-operative relations in terms of academic staff and student exchanges, training, and education.

They also declared their intention to undertake joint activities, including research, the preparation of reports, development projects, cross-cultural exchanges, joint research papers and applying for a Confucius Institute in the region.

NUIST currently consists of 19 professional schools and is on the list of China's national "double first-rate" universities and disciplines. It is also amongst the high-level universities in the Jiangsu province.

**Mr Deng Zhiliang, Vice President of Nanjing University of Information Science and Technology (NUIST) holding Nanjing flag with Prof. Alfred Ngowi, Deputy Vice-Chancellor: Research, Innovation and Engagement.**

**Prof. Alfred Ngowi, Deputy Vice-Chancellor: Research Innovation and Engagement; Mr Leonard Mofokeng, Secretary; and Adv Joseph Machaka, Deputy Secretary from Free State Legislature.**

# CUT and FS Legislature join forces to make a difference in the province

Building strong and lasting partnerships with business, industry, government and the community is key to the development and advancement of institutions of higher learning around the world.

On 27 August 2018, CUT and the Free State Legislature signed a Memorandum of Understanding (MoU), in view of contributing to the socio-economic development of the province.

The main objective of the signing was to establish a framework for the negotiation of the proposed co-operation, which includes, but is not limited to, training in research methodology relating to the legislature's processes, procedures, programmes and projects; the practical application of policy and programme analyses in legislative mandates; the practical implementation of project management within the legislative context; the monitoring and evaluation of programmes and projects; an analysis of Free State Legislature documents emanating from the Executive Council, towards providing an effective oversight function; quality report writing within the legislative framework; and the development of training programmes for capacity building of Free State Legislature staff.

In his welcome address, Prof. Alfred Ngowi, Deputy Vice-Chancellor (DVC): Research, Innovation and Engagement, mentioned that CUT cannot work alone in its contribution to the development of the province and the lives of the people.

"In order for us to constantly produce good results and have an impact in the province, we need partnerships. We need to join forces. We believe that you have the same kind of mission as ours, and hope that, through our project management programme, your organisation will be able to provide more effective and efficient service. This is a great occasion for us to be able to exhibit our Vision 2020, as we want to position ourselves as an entity that is committed to uplift socio-economic and technological innovations for the province. We constantly strive to get good ideas into business, and apply what we research on", he said.

Mr Leonard Mofokeng, Secretary of the Free State Legislature, stated that legislatures in South Africa have been in existence for two decades, during which they have established a system towards ensuring the implementation of their core functions, including law making, oversight, and public education and participation.

**Mr Leonard Mofokeng, Secretary: Free State Legislature, happy to be part of the nation building programme between CUT and Free State Legislature.**

He further said that "despite the successful implementation of these core functions, we have identified functional and operational challenges, such as the continued review of systems and operations of the legislature, implementation of structured legislative operational plans, and, most importantly, the empowerment and knowledge management of human capital of the legislature. Following on the resolution of the National Speaker's forum on the adoption of the sector oversight model, legislatures were challenged to devise legislative means as strategies geared towards fulfilling the obligations of the Constitution of providing the necessary services to the inhabitants of the province."

In addition, he indicated that traditional theories and practices were known to be two separate concepts, but that global challenges today compel the merging and fusing of the two, as they complement one another. "Therefore, while advocating theory, we simultaneously have to include practice. This MoU seeks to repurpose the operations of our committees in the legislature, to ensure effective and efficient oversight on the executive, while ensuring informative and educative public participation to the inhabitants of the province", he added.

"With these concepts in mind, we believe we will also be addressing the challenges of the Fourth Industrial Revolution, and the artificial intelligence, which compels the merging of theories and practices, and addresses the global dynamics within our areas of work. I would take it upon myself to impart these fundamental relations with CUT to our colleagues in other legislatures, and, hopefully, CUT could be regarded as the gateway to creativity and innovation within the legislative sector of South Africa, and eventually devise an academic programme for the management of legislatures in South Africa. It is our gratitude to be part of this nation-building programme between CUT and the Free State Legislature, and we would like to add that both institutions are established with the sole purpose of doing good to other human beings", Mr Mofokeng concluded.

**Dr Brand Pretorius, guest speaker at the 4th annual Dr Herman Mashaba public lecture. Dr Pretorius is a Free Stater who made an incredible mark in the field of Business Management during his career in the motor industry of South Africa. He has been in business for over 45 years and views leadership as the most potent competitive advantage any business can ever have. He delivered the lecture on 'Effective leadership: the key to sustainable business success'.**

# Dr Brand Pretorius delivers lecture on effective leadership

"If there is poor or no leadership, followers spend their day in darkness. They have no direction, they completely disengage and deliver poor results, but when there is quality and effective inspirational leadership, the lights are switched on, and people have direction and hope, and they do their best to engage and deliver outstanding results." These were the words of Dr Brand Pretorius, guest speaker at the 4th Annual Herman Mashaba Public Lecture on 05 September 2018, when he compared leadership to electricity. The theme of the lecture, which was presented by the Faculty of Management Sciences, was "Effective leadership: the key to sustainable business success".

Dr Pretorius indicated that choosing a topic for the lecture was an easy task, as Dr Mashaba is an outstanding leader. "I therefore deemed it appropriate to share my thoughts about effective leadership, the key to sustainable success. I am dedicating this talk to Dr Herman, as an outstanding leadership role model."

He mentioned that, according to the international research firm Gallup, only 8% of South African employees are fully engaged, trust their leaders implicitly, try to live and behave in accordance with the values of their organisations, spontaneously try to do their best, and believe in the vision and mission of their organisations.

Approximately 42% confessed that they are disengaged; that they do just enough to stay out of trouble, and to them, work is like a life sentence, an unnecessary evil to endure, with the inevitable consequence being that they deliver very poor results. "When you are an effective leader, you get people to buy into your vision; behave in line with the core values of the organisation; and volunteer their intelligence, energy, loyalty, contribution and commitment. They accept co-responsibility and deliver outstanding results but bear in mind that it is not easy to get people to spontaneously volunteer their energy, intelligence and commitment. Over 14 million books have already been written about leadership and management, and it tells us that the answers are not clear. Leadership is both an art and a science, and human behaviour is unpredictable." he said.

**The audience at the 4th annual Dr Herman Mashaba Lecture on Entrepreneurship is listening attentively to Dr Brand Pretorius as he delivered a lecture on effective leadership.**

When sharing his journey with the audience, Dr Pretorius highlighted a few lessons he learnt about leadership and experiences; what he believes in and stands for. These are:

**Lesson 1:** Effective leadership of self; **Lesson2:** Leadership is not a right, but a responsibility; **Lesson 3**: Leadership has nothing to do with power, position or authority; **Lesson 4:** Leadership is attitude based, whilst management is skills based; **Lesson 5:** Have your own authentic leadership philosophy or approach – visionary transformational leadership, or autocratic transactional leadership; **Lesson 6:** Ethical leadership; and **Lesson 7:** Effective leaders vs. hope.

As he unpacked the lessons, he stated that, if you cannot lead yourself, you will be unable to lead other people. He indicated that "leadership is not a right, but a responsibility, privilege and an everyday honour, where leaders have to learn the moral mandate to lead. It has nothing to do with power, position or authority, but has everything to do with influence, and there is no shortcut."

He also drew a comparison between leadership and management. "The difference between leadership and management is that leadership is about giving direction, motivating, inspiring, trusting, involving and caring about the people, while management is about co-ordinating and planning efforts, organising and controlling people". He further emphasised that leadership plays a pivotal role in providing direction and motivation, while management is important when it comes to effective execution. "Leaders focus on the future, effect change, put their emphasis on people, inspire and trust, while managers put efforts on today, maintains the status quo, put their emphasis on processes and activities, and micro-manage and control."

Dr Pretorius learnt about ethical leadership, which he regards a prerequisite for effective leadership. He stated that "leadership is not about charisma, but character, and not personality based, but principle based. It is not a way of behaving, but a way of being, so if you behave in an ethical manner, you can earn the trust and triumphs of your people."

According to him, effective leaders have a positive and clear vision, and are not afraid of the future. They embrace change; optimise synergies; and instill and exemplify the right values, such as openness, honesty and respect for all people. They do not discriminate, but encourage teamwork, accept responsibility, and pursue excellence in everything.

In conclusion, he advised leaders to be a light switch every morning; suppress their egos; build their characters; lead with humility, care and respect; and to always be willing to serve. He applauded Dr Mashaba for his distinct leadership skills, strength and determination, even when the environment was not conducive. "Dr Herman Mashaba, as one of South Africa's top entrepreneurs, started Black Like me in 1985, and did incredibly well, despite all the obstacles that were created by the Apartheid regimen. I have known him for over 30 years and have had the privilege of serving under him on the Board of the Free Market Foundation. He is a warrior and crusader for capitalism, and I have learnt a lot from him. He is now the bold and brave Mayor of the City of Johannesburg, a beacon of hope, and a source of inspiration to millions of South Africans, including me," he said.


**Dr Adriana Marais is one of the 100 Mars One Project astronaut candidates in the running to move to the red planet in the next decade. Mars One project is to send humans to Mars on a one-way ticket.**

# Dr Adriana Marais explores beyond earth

Dr Adriana Marais, Theoretical Physicist, Head of Innovation at SAP Africa, and aspiring extraterrestrial is a regular keynote speaker at academic, corporate, educational and public events across South Africa and the world. On 29 October 2018, the Faculty of Health and Environmental Sciences hosted Dr Marais, where she delivered a public lecture entitled "Africa defining its own path amidst the 4th Industrial Revolution."

Dr Marais believes that human beings are living at a unique point in the history of life on Earth. Developments in science and technology are taking place at an unprecedented rate, and the expansion of the society beyond this planet is within reach.

In her presentation, she spoke about her research into the origins of life, the technology required to sustain terrestrial life on Mars, and the various projects aiming to send human missions there. She describes how the establishment and potential discovery of evidence of life on Mars would be one of the most profound possible contributions of science to humanity.

She also addressed big questions, such as where we come from, how life on Earth emerged, where water comes from, and where we are going.

"We live in an unprecedented era where we have more information at our fingertips than ever before. Not only in the history of humanity, but indeed in the history of the planet. We are unique as humans in terms of creating knowledge and data, and storing information, and at a capacity that is both wondrous and extremely inundating, and that can be terrifying at times. In this era full of overload of information, we need to take a step back and ask big questions.

As we try to understand where we come from, let us assume we have created the periodic table full of all the elements required to create life. There are many gaps missing in terms of our understanding of where we came from."

She said that glycine is the simplest amino acid, which is a building block of proteins, and that all living systems contain protein. "Therefore, amino acids and glycine have been detected floating in-between stars in our galaxy."

She mentioned that water has been facilitating life from the beginning. How life emerged on Earth is still not understood from a scientific perspective. "My favourite theory in terms of how life may have arrived on Earth is called 'panspermia'. It is the theory that life on Earth may have been delivered to the planet by a meteorite, which may have contained some kind of fungal spores known to be able to survive journeys through space in vacuum at extremely cold temperatures. There is no consensus from a scientific perspective on how life on Earth began, but what we do know, is that life on Earth is abundant; we can see it from space. The green stuff is the photosynthetic forest, the blue is teaming with ocean life, and we know that our bodies contain over 70% water; over 70% of our planet's surface is covered with oceans. Water is an entrancingly important molecule for life, and it may have even facilitated the formation or origins of life on whichever planet it first emerged on."

She said that life is the most mysterious phenomenon ever encountered. It is tricky to study life as a living system. "One of the very crucial developments in understanding terrestrial life is in terms of understanding that all living systems on earth contain DNA. Life on Earth is one big interconnected system; we are all interdependent; the air we breathe comes from the photosynthetic organisms; and we are a beautiful living network."

She further mentioned that everyone is a decedent of some brave ancestor who has made a one-way trip. "Assuming that none of us is still living in central eastern Africa where homo sapiens first emerged, I think the next step by humanity will be ancestors of future generations who will make one-way trips off the surface of Earth."

She also highlighted that the curiosity rover has been taking videos and images, sending data for research purposes, such as the radiation level on the surface of Mars, not only in terms of potential health risks, but also in terms of sunlight disposal for power, and analysing the composition of the sand. With all this data, the first settlers on Mars will have more information about the destination they will be arriving at.

"We are living in an unprecedented era, and technology is happening faster than ever before. We have access to the sum of human knowledge, and we have the opportunity to watch the grandest adventure not only in the history of humanity, but also in the history of life on Earth. It has taken 4.5 billion years on Earth to get to this day and point where we are discussing potential missions to live on the surface of Mars.

We need a perspective shift in terms of how we are using the technology here on Earth. We already know what to do, but I do not believe we are doing it fast enough, and perhaps it would take demonstrating how we can survive in a desert at negative 50 degrees, with an atmosphere filled with living underground to protect from the radiation. If we can live there and be happy, then I believe there is no longer an excuse for poverty on Earth."

**From left: The Kuzwayo family, Cllr Boysie Phehlukwayo, Chairperson of Council (left), Honourable Naledi Pandor, Minister of Higher Education and Training ( 3rd from left) and Prof. Samson Mashele, Dean of Health and Environmental Sciences after unveiling Ellen Kuzwayo Building is housing the Faculty of Health and Environmental Sciences.**

# Central University of Technology, Free State (CUT) honours former learders

CUT honoured former leaders who had contributed significantly to the development of the region and institution at the official unveiling of buildings on 05 and 20 September 2018 at the Welkom and Bloemfontein Campuses respectively.

All descendants and extended family members of the honoured heroes and heroines; the Minister of Higher Education and Training, Ms Naledi Pandor; government representatives; partners; and representatives from industry gathered at the Bloemfontein campus to witness the historic moment when these leaders' names were engraved on the CUT walls.

In his welcome address, Cllr Boysie Phehlukwayo, Chairperson of the CUT Council, said that the university managed to significantly reduce the infrastructure backlog on both campuses through the support of the DHET. He stated: "construction of student residences is helping us to meet current on-campus student residence demands, as we still need more on-campus space to expand on our existing stock on student accommodation." "In particular, Mama Kuzwayo, who many of us cannot claim to have had the good fortune of knowing, but have had the privilege of knowing and experiencing the contribution that she and her generation of freedom fighters had made to our struggle; Ntate Molemela, from whose life as an intellectual, an entrepreneur, a fearless sports administrator the university continues to draw lessons; Ntate Setai, whose selfless service to the university remains an inspiration to many of us who had worked close with him. We will continue to draw lessons from their work and the wealth of knowledge they had shared with us. We are making a bold statement that, as the CUT family, we will continue to draw courage and lessons from these leaders who came before us, by highlighting the important roles each had played in our country," he said.

In her address, Honourable Naledi Pandor, Minister of Higher Education and Training, said that she is honoured and privileged to join in the unveiling celebration, and mentioned that the DHET firmly believes that quality infrastructure is a key ingredient towards success in higher institutions of learning.

"We are committed to ensuring that we have accessible, decent and safe buildings which will make studying stimulating and enjoyable for all students and staff within our institutions. Since 2007, government has invested R20 billion in infrastructure development at our universities throughout the country. A substantial share of this sum, to the value of R1,3 billion, has been allocated to the two universities that are hosted in the Free State province.

**The Setai family with the Minister of Science and Technology, Honourable Naledi Pandor, Minister of Higher Education and Training Registrar, Dr Nothemba Mrwetyana and Dr Gary Paul, Deputy Vice-Chancellor, Resource and Operations.**

Our support to CUT has resulted in the construction of the state-of-the-art buildings at both the Bloemfontein and Welkom campuses, and today we officially unveil them. As the primary funder of infrastructure at public universities and Technical Vocational Education and Training (TVET) colleges, our government is also committed to ensuring that infrastructure is properly maintained and managed," she said.

The heroes and heroines that we celebrate today through naming these buildings laid that strong foundation, and the only task that we have, is that we must make that foundation work for South Africa. You are extremely lucky that the families have allowed you to utilise their names, you are most fortunate that an entrepreneur who began from a background that was not privileged has allowed you to utilise his name. I hope the buildings we unveil today will have young people of that calibre utilising them."

She further highlighted the steps taken by government to ensure an increase in access to education opportunities and the success thereof, and the challenges faced in providing sufficient (scarce) skills. "That means, as a country, we must produce more Engineers, graduates competent in science and mathematical disciplines, to ensure that our young people do not only acquire an undergraduate degree, but proceed to honours, master's and PhDs. At present, our country lags far behind compared to other countries around the world, and we need to address these gaps. Access is not sufficient to success, and this does not mean we do not have creativity in South Africa, but it means that we are not putting our creative skills to conversion and commercial product that we have registered as a patent. We need to become better in this regard," she stated.

"We also want to see much more being done with respect to emerging scientific areas such as nanotechnology, where this university has become particularly innovative. I hope in the digital space we will see CUT becoming a centre of excellence. I was pleased to see that South Africa has more incubators than any other country on the African continent, and we need to draw on that positive effect. The presence of incubators is important, because that is where entrepreneurs are made.

Prof. Henk de Jager, Vice-Chancellor and Principal, said that it was a special moment in the history of CUT, where we celebrated a journey that started nine years ago. CUT is certainly building momentum in the drive to be re-imagined as a transformational and entrepreneurial university, and a model university of technology in Africa, impacting on the socio-economic development of the Central region, South Africa and beyond. He indicated that "we could not achieve what we have without partnerships, and therefore we are proud to be associated with the Department of Higher Education and Training, which is focused on driving postgraduate education in this country. The department has shown tremendous support to our needs, and today we are going to witness those results."

Speaking on behalf of the Ellen Kuzwayo family, Ms Boitumelo Kuzwayo, granddaughter of Ms Kuzwayo, described her grandmother as a staunch believer of education, who constantly encouraged other people to study, and who was also leading by example. "My grandmother taught me to always teach people about history, to enrich minds, always strive for excellence, and not to limit myself. I am also proud to share with you that three other institutions have named academic buildings after her," she said.

Prof. Bethuel Setai was represented by his daughter, Ms Nthabiseng Sibanda, who conveyed her sincere appreciation to the university for honouring her father and the Setai family: "As the Setai family, we are humbled for this recognition by the university, and we are happy to be part of the CUT family. We are happy that his legacy has been cemented with CUT forever." Ms Sibanda described her father as an advocate of mentoring, a researcher and author, a community champion of Bloemfontein, former member of the CUT Council, and an academic in the field of economics, who dedicated his life to sharing knowledge and uplifting his community.

She indicated that the Setai family will donate books and his autobiography to the CUT library, as a token of appreciation to the university.

Mr Molemela, son of the late Dr Rantlai Petrus Molemela, represented the Molemela family. He described his father as a hard worker who had the drive and passion to give, an entrepreneur at heart with little education. "My father had limited education but was the first black man to own a hotel, obtain a liquor licence, a contractor, and the first to own a professional soccer team. He loved architecture, and I believe that, if he was here, he would be pleased to see the building named after him. It is an honour for us to receive such recognition and are pleased to say that CUT is a home to the Molemela family." It is worth noting that Dr Molemela was the father-in-law of the CUT Chancellor, Madam Justice Mahube Molemela.

**The Molemela family happy after the unveiling of the Management Sciences Building that is named after Dr Rantlai Petrus Molemela. With them is the Minister of Higher Education and Training, the Honourable Naledi Pandor (second row middle), Prof. Albert Strydom, Dean: Management Sciences (on the left side of the minister), Prof. Alfred Ngowi, Deputy Vice-Chancellor and Principal, Research Innovation and Engagement (second row right) and Cllr Boysie Phehlukwayo, Chairperson of Council (back row right).**

The Ya Rona, Tataisong, Petrus Molemela, Bethuel Setai Library and Information Services, and Ellen Kuzwayo buildings were unveiled in Bloemfontein Campus.

At Welkom Camps, Mrs Zodwa Keto, spouse of the late Prof. Clement Tsehloane Keto, spoke on behalf of the families and conveyed her sincere appreciation to the University for honouring their families and naming buildings after them. "I wish to applaud CUT for recognising our loved ones for their respective contribution to this university and what it is today. We feel valued and appreciated to be part of this historical event that takes us back to where our journey began. Our interaction with you has taught us something about the sense of care and support. Your hospitality will remain engraved in our hearts and memories forever."

The following buildings were unveiled at the Welkom Campus: Lemmy Mule Building(formerly known as 'O' block), Alwyn Louw Auditorium (formerly known as Auditorium 03), the Thutong Building (formerly known as Academic Student Support Centre), The Mangaliso Robert Sobukwe Building (formally known as 'P' block), Clement Tsehloane Keto Library and Information Services ( formerly known as the Library and information services), Hugh Africa Building(formerly known as 'A' block) and Maipato Mokatsanyane House, the newly built student residence consisting of five wings, namely: Unity house, Ikaya Lethu house, Maya Angelo house, Protea East and Protea West houses.

### Lemmy Mule Building

Lemmy Mule is a self-made trailblazer in the entrepreneurial field within the Lejwaleputswa District, where the Welkom campus is situated. He has served in a number of bodies in the area of business development, such as the National African Federated Chamber of Commerce and Industry (NAFCOC), the Foundation for African Business and Consumer Services (FABCOS), and, most notably, on the Council of the erstwhile Vista University, representing the Lejweleputswa District. In this role, he has served the university with distinction. He continues to be associated with the Welkom campus through his willingness to share his expertise.

### Clement Tsehloane Keto Library and Information Services (LIS)

Prof. Keto was appointed as one of the former Deputy Vice-Chancellors (DVCs) at the then Vista University, and later as the Vice-Chancellor and Principal of that university. He officially opened the current library of Vista University on 27 June 1997, and it is against this background that the CUT LIS was named after him.


**At the unveiling ceremony, the Lemmy Mule family is flanked by (from left): Dr Garth van Gensen, Deputy Chairperson of Council and former Alumni President; Dr Oupa Makola, Welkom Campus Director; Mr Tshiamo Moleme, Director: Infrastructure in the Department of Higher Education and Training; Mr Kgabele Mule, son, Mr Lemmy Mule, Business mogul and honoured guest, and Prof. Henk de Jager, Vice-Chancellor and Principal.**

### Alwyn Louw Auditorium

As the first Campus Principal of the Welkom campus of the erstwhile Vista University, Prof. Alwyn Louw rendered distinguished service to the university. The auditorium is currently being used for meetings of the Welkom Campus Management Committee and research seminars, and thus it was befitting to name this space after one of the distinguished founding fathers of the Welkom campus.

### Ellen Kuzwayo Building

The building is named after an activist at heart, whose life is an inspiration to the CUT community. A novel drug was discovered in this building by young scientists. This drug has the potential to fight aquatic animal infections caused by aquatic parasites. These young researchers are leading the way in finding solutions that will bring an end to this socio-economic challenge facing aquatic farming.

### Ya Rona Building

Ya Rona is a new Engineering Building in which the Science, Technology, Engineering and Mathematics (STEM) Academy was recently jointly launched by CUT and the Free State Provincial Government (FSPG).

### Bethuel Setai Library and Information Services Building

The late Prof. Bethuel Setai was the first Director-General of the FSPG, and a long-serving member of the CUT Council. His family donated his books and writings to the CUT university library as a token of their appreciation for naming the building after him.

### Petrus Molemela Building

Mr Petrus Molemela was a CUT Council member and alumnus, and also received an Honorary DTech in Business Administration from the university. Furthermore, he was the Chairman of the Celtics Club. His inspiration to CUT lies in the fact that he had an entrepreneurial spirit, and the drive to succeed as a sports administrator and entrepreneur in a very demanding and challenging environment.

### Mangaliso Robert Sobukwe Building

Mr Mangaliso Robert Sobukwe was a teacher, lecturer, lawyer, and the first Students' Representative Council (SRC) President of Fort Hare University. He was also the editor of The Africanist newspaper; Secretary of the African National Congress (ANC) branch in Standerton; and founding member and first President of the Pan Africanist Congress (PAC). He spent nine years in solitary confinement on Robben Island, and contributed imminently to the liberation struggle in South Africa. He became popular through the philosophy of "One Race, the Human Race." However, amongst his followers and peers, he was simply known as "Prof. Sobukwe".


**The Maipato Mokatsane family with student leaders, CUT Management, Council members and Residence House Committee members.**

### Hugh Africa Building

Prof. Hugh Africa has contributed to the development of higher education in South Africa as a selfless leader who has served in various roles in the field for more than 50 years. He was at the forefront of higher education transformation in the post-Apartheid era and distinguished himself through his high sense of integrity and care for others.

A respected academic, Prof. Africa served on the Council on Higher Education (CHE), and also provided exceptional leadership as Chairperson of the Higher Education Quality Committee (HEQC), which instituted a rational system of quality promotion and assurance.

### Thutong Building

The building currently houses the Centre for Innovation in Learning and Teaching (CILT) and the Department of Teacher Education, which both perform educational functions. The term "Thutong" means a place of education (teaching and learning), and thus the name relates to the functions performed by the building's occupants.

### Maipato Makatsane House

Mr Maipato Mokatsane was born on 30 April 1976 in Viljoenskroon and was raised in Theunissen. He studied at the former Vista University, where he was elected, in absentia, as the SRC President. He was highly respected by everyone, even his opposition. His leadership assisted the university to expand its horizons. He died in a car accident whilst still serving in the SRC as President, but he continues to inspire generations of student activists.

**Mrs Zodwa Keto, Spouse of the late Prof. Tsehloane Keto, is congratulated by Dr Garth van Gensen, Deputy Chairperson of Council and former Alumni President, Mr Tshiamo Moleme, Director: Infrastructure in the Department of Higher Education and Training and Dr Oupa Makola, Campus Director.**


# National Training and Olympic Preparatory Centre becomes a reality

On 10 November 2018, CUT and the Department of Sport and Recreation South Africa (SRSA) signed the declaration of intent to exchange pieces of land between the two parties. The two pieces of land will subsequently be used as National Training Centre for South African athletes in preparation of Winter or Summer Olympics, Commonwealth Games, as well as world class sporting events.

The centre will be housed in Cecilia Park- a piece of land which is still owned by CUT. It will serve as a sport-development hub for the whole country where young athletes will be groomed, nurtured and developed to become world class athletes to tackle the world. Furthermore, the piece of land in the Psychiatric Complex will be used by CUT to reduce the infrastructure backlog for its academic projects as well as expand student accommodation.

In his acknowledgement speech, Prof. Henk de Jager, Vice-Chancellor and Principal spoke with complete enthusiasm and excitement about this gesture and said, "We are here as a university to demonstrate our appreciation to the department for this huge investment in sport development agenda in our province which I believe, will not only benefit student athletes within the region, but also, breed aspiring athletes within our province. We see this centre as an opportunity to support the ongoing agenda of transformation within universities where sport development is at the centre of social cohesion programme."

Mr Alec Moemi, Director General of the Department of Sport and Recreation commended all nine provinces for their financial support into this project. The provinces will set aside 10 percent of the budgets towards the completion of the infrastructure project.

Prof. De Jager said that the centre will go a long way in helping all educational institutions in the region to produce more names such as Helgardt Muller; Trevor Nyakane; Zola Budd; Os Durandt; Chris Dry and Seabelo Senatla, who are proud CUT Alumni. He told guests that CUT was proud to be associated with the Department of Sport & Recreation South Africa; Free State Provincial Government; National Department of Public Works, and Free State Department of Public Works & Infrastructure, to make the National Training Centre and Olympic Preparatory Centre a reality.

Among the dignitaries who graced the event were: Deputy Minister of Sport & Recreation SA: Honourable Gert Oosthuizen; MEC Leeto, MEC for Sport, Art, Culture and Recreation, Director General of Sport & Recreation South Africa: Mr Alec Moemi, Director General of the Free State Province: Mr Kopung Ralikontsane and CUT management.

**Joining hands to a brighter future are from left: Mr Michael Makwa founder of Makwa Brokers Consultants Agency (MBCA), Mr Tshimane Montoedi, CEO: Mineworkers Development Agency (MDA), Prof. Henk de Jager, Vice Chancellor and Principal and Prof. Alfred Ngowi, Deputy Vice-Chancellor: Research Innovation and Engagement.**

# CUT makes strides towards private sector partnership

On 08 November 2018, the Central University of Technology, Free State (CUT) signed a Memorandum of Understanding (MoU) with Makwa Brokers Consultants Agency (MBCA) and Mineworkers Development Agency (MDA). The MoU is envisioned to pave path to other third parties identified by MBCA and MDA for potential future project collaboration with CUT.

Prof. Alfred Ngowi, Deputy Vice-Chancellor, Research Innovation and Engagement said that the vision of the institution is to be an engaged university in the areas of social and technological innovations particularly in the central region of South Africa. He also said that the collaboration will open closed doors and grant access to stakeholders whom the university could not reach out to in the past. "When we talk about engagement, we mean in a sense of reaching out to all types of communities. We have a large experience of engaging with peer institutions both nationally and globally, but when it comes to the private sector and government organisations, we do not have much engagement and that is part of what we aspire to achieve effectively."

Mr Tshimane Montoedi, CEO: Mineworkers Development Agency (MDA) said that the main purpose of the MDA is to make sure that once members lose their jobs due to retrenchment or dismissals, there is alternative economic development or activities for them. "Our mandate is primarily enterprise, skills, sustainable and socio-economic development. We are working jointly with several institutions in the country and the purpose of these partnerships is to ensure that we achieve our objective. We might be having different challenges but the main challenges that confront us as a country is unemployment, inequality, poverty and lack of skills in the economy."

He further alluded that they are making strides through partnerships as they have since assisted and touched the lives of the people in the deep rural areas through enterprise development, learnership and agricultural programmes. "We hope that forging this new relationship with CUT will help us take our work and programmes to greater heights. We are very delighted to be associated with such a credible institution. With the challenges that are facing South Africa, we can take this as an innovation hub and come up with innovative solutions to our problems."

Mr Michael Makwa, founder of Makwa Brokers Consultants Agency (MBCA) said that their organisation serves as an exit opportunity strategy enterprise, where they focus on servicing post-graduates by nurturing and grooming them, making them ready for entrepreneurship or labour market. "Together with CUT, we intend to look into fine-tuning and commercialisation of selected intellectual products of note. We are looking forward to bringing our efforts together to trigger a wave of industrialisation initiatives in various sectors. The 4th Industrial Revolution will also be explored as it has become the mid-wife of technology advancement. Therefore, we will produce only quality products and services from these initiatives. Today we are taking the first step towards our mutual goal. It is going to be a journey full of experiences. Let us celebrate these first steps of this journey for they will grow into giant steps that will make us better citizens of this world."

# Highlights


Photo Credit: Pierce van Heerden, Courant.

**From left: Mr Stephen Gooch, FNB Free State Regional Head, Mr Johan Els, Operations Manager, Centre for Rapid Prototyping and Manufacturing (CRPM), Mr Gerrie Booysen, Director: CRPM; Ms Christel Basson, Mahareng Publishing General Manager; Dr Gary Paul, Deputy Vice-Chancellor: Resources and Operations at CUT; and Mr Dan Maritz, Director: Communications and Marketing at CUT.**

## Centre for Rapid Prototyping and Manufacturing (CRPM) scoops the most innovative local business award

On 18 October 2018, the Courant local newspaper, in collaboration with First National Bank (FNB), hosted the Best of Bloemfontein Awards at the university, to acknowledge and recognise the most deserving businesses and institutions in Bloemfontein. The Central University of Technology, Free State (CUT) CRPM team, led by Mr Gerrie Booysen, received an award in the category Most Innovative Local Business in Bloemfontein.

The CRPM is a research centre at CUT that offers a 3D-printing service to industry, academia and postgraduate students. Established in 1997 as part of a research initiative, the centre has advanced drastically in terms of making an impact and changing the lives of ordinary people around the country through the application of innovative technology. Internationally, many reports showcase the benefits of 3D printing in healthcare, elaborating on aspects such as reduced theatre time using 3D-printed implants, cutting/drilling guides and pre-operative planning models. The reduced theatre time also has a ripple effect, as it expedites the recovery time of patients.

Since its inception, the CRPM's primary focus has been on the 3D printing of patient-specific implants and devices, resulting in the first South African 3D-printed hemi-mandible implant in 2014. In 2016, the CRPM received International Organisation for Standardisation (ISO) 13485 certification for the design and manufacturing of patient-specific implants by means of 3D printing, making CUT the first university in Africa to obtain such certification.

3D printing is a process involving joining materials to create objects from 3D data, usually layer upon layer, as opposed to subtractive manufacturing methodologies. A design of the product is created, translated into data, and loaded on the 3D printer. The product is "grown" using various powders, i.e. nylon or titanium. The powder is then spread on a powder bed, where a laser melts the first layer of powder according to the data that has been programmed onto the printer. This process is repeated until the design has been manufactured into an actual product.

# CRPM celebrates 21 years of innovation and excellence

Proud moments at the unveiling ceremony: partners (from left) Mr Heinrich van der Merwe, Operations Manager at the Vaal University of Technology, Ms Sheryl Pretorius, Senior Manager Client Services at merSETA, Mr Sechaba Tsubella, Acting Director: Advanced Manufacturing Technologies from the Department of Science and Technology (DST) and Prof. Henk de Jager, Vice-Chancellor and Principal.

The Central University of Technology, Free State (CUT)'S Centre for Rapid Prototyping and Manufacturing (CRPM) celebrated 21 years of innovation and excellence in changing and touching the lives of ordinary people in South Africa. Established in 1997 as a centre for commercial work and research using rapid prototyping, rapid manufacturing, rapid tooling and medical product development technologies, the centre currently possesses ten Additive Manufacturing (AM) machines, making it one of the best-equipped AM centres of its kind in the southern hemisphere. These AM technologies has opened the possibility of moving directly from computer-aided design (CAD) to a physical prototype or model, which is used by product industrial designers for form and function tests, as well as final prototypes, before tooling commences.

"CUT's innovation drive and value chain is demonstrated through many successful projects, one of which is the CRPM, that serves as an important link between our innovation ecosystem and external stakeholders. CRPM is a world-renowned centre for its innovations and the impact it is making on society; thus, CUT is gaining momentum in its drive to be reimagined as a transformational university and 'model' university of technology (UoT) in Africa, impacting on the socio-economic development of the Central region, country and beyond," said Prof. Henk de Jager, Vice-Chancellor and Principal, at the 21st anniversary celebrations of the CRPM held on 18 September 2018.

Prof. De Jager further stated that strong partnerships are required to build external networks, as well as internal cross-unit networks to generate ideas from new connections. He indicated that "you cannot take the university to the next level without partnerships. CUT is a university of the people and the region and has been forthcoming with encouraging idea generation and building strong external networks. In the space of the innovation ecosystem, we have to join hands, and not compete against one another".

When taking the audience through the 21-year journey of the centre, Mr Gerrie Booysen, Director: CRPM, shared the impact made using 3D technology in changing the lives of ordinary people in the region and the country. He presented some of the successful cases, dating back to 2015, when the centre produced approximately 3 614 prototypes, and indicated how the centre has grown immensely, producing more than 13 000 components to date.

He further mentioned that the centre was awarded with International Organisation for Standardisation (ISO) 13485 certification in 2016, and stated that the CRPM is the only manufacturer of titanium implants in the African continent, as well as the South African Research Chairs Initiative (SARChI) for Medical Product Development through Additive Manufacturing. "I am really excited about our growth, the team efforts and dedication, support from our Management and Council, and our incredible partners and sponsors for making us realise this dream. All these achievements will open the doors for commercial manufacturing of medical devices here in South Africa, and also offer us global export opportunities," Mr Booysen said.

Mr Letsoalo Letsoalo, Project Engineer at the CRPM (right) showcasing some of the prototypes produced to the delegates from Botswana International University of Technology during the centre tour. The guests are from left: Prof. Ochieng Aoyi, Prof. Edward Lungi, and Dr Mmoloki Mangwala.

**Prof. Henk de Jager, Vice-Chancellor and Principal congratulating Prof. Deon de Beer, the newly appointed DST Innovation and Commercialisation of Addictive Manufacturing Chair (DST ICAM Chair) at the DST ICAM Chair Launch and CRPM 21st anniversary celebration.**

He stated that the centre is investigating new ways and methods of doing things, as they are currently developing custom-made designs for temporomandibular joints with cutting guides. "In the past, we used to have just a fixed implant, and now we will also have moving components, and this is our current big research project," he concluded.

Ms Sherly Pretorius, Senior Manager: Client Services at the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA), indicated that the future of AM looks bright. She stated that "in the future, 3D printing will position itself more prominently in the manufacturing landscape. The time is now where industry needs to be capacitated on the relevancy of adjusting to 4.0 technology. We entered into a partnership with CUT to benefit the merSETA, stakeholders as well as CUT, and, more importantly, it will be beneficial to the merSETA sector and South Africa as a whole."

Mr Jaco Hart, industry partner from the Council for Scientific and Industrial Research (CSIR), spoke about the impact of AM products, and the involvement of CRPM in assisting them with producing corona cameras through AM. He applauded CUT for their consistency and excellent service.

Meanwhile, the university, in collaboration with merSETA, has also launched the first Department of Science and Technology (DST) Innovation and Commercialisation of Additive Manufacturing Chair (DST ICAM CHAIR), under the leadership of Prof. Deon de Beer.

# CRPM duo acknowledged at inaugural african advanced manufacturing innovation awards

**Gerrie Booysen accepts his award from Prof. Sibusiso Moyo, Deputy Vice-Chancellor: Research, Innovation and Engagement at the Durban University of Technology.**

Several organisations leading South Africa into the Fourth Industrial Revolution were recognized at the inaugural African Advanced Manufacturing Innovation Awards held at the Tramways in Port Elizabeth on 7 November 2018.

The awards were presented to 25 organisations in six categories, according to the organisers, as a means to identify, promote and reward innovation in the advanced manufacturing and composites industry, including 3D printing, robotics and automation.

Our own Mr Gerrie Booysen, Director: CRPM and Prof. Willie du Preez, were amongst the nominees who scooped the awards at the prestigious ceremony. Mr Booysen received the Gold Award for Scholarly Impact in Advanced Manufacturing for the work done by the Centre for Rapid Prototyping and Manufacturing (CRPM) around patient-specific titanium printed facial implants while Prof Willie du Preez received a special recognition for Scholarly Impact in Advanced Manufacturing for his lifelong contribution to Advanced Manufacturing. Working with state hospitals and doctors, the high-tech work of the University has transformed the lives of hundreds of patients with muscular-skeletal irregularities.

To be considered for the award in this category, winners had to demonstrate contribution to R&D in AM, provide proof of published articles, literature and the impact of this knowledge in industry as well as demonstrate their contribution pertaining to new and fresh thinking, models and paradigms.

It is worthy to note that South Africa is the first country to produce 99.9% pure platinum and the Central University of Technology, Free State (CUT) was instrumental in developing the 3D printing parameters to process this pure platinum powder.

***Information supplied by Andy Radford, Managing Director at Mandela Bay Composites Cluster***

**Prof. Herman Vermaak excited to fill in his new role as Dean of Faculty of Engineering and Information Technology.**

# Faculty Dean apointed

The Central University of Technology, Free State (CUT) has appointed Prof. Herman Vermaak as Dean of the Faculty of Engineering and Information Technology, following the appointment of the former Dean, Prof. Alfred Ngowi, as Deputy Vice-Chancellor (DVC): Research, Innovation and Engagement.

Prof. Vermaak is a distinguished Engineer, and a specialist in Automation, Robotics and Renewable Energy. He holds a PhD in Electrical Engineering from the University of Twente in the Netherlands, and is a registered Professional Engineer and Technologist, as well as a qualified artisan.

Prof. Vermaak is not new to academia and leadership in the higher education sector. He has been working in the higher education sector for more than 23 years, as a Lecturer, Senior Lecturer, Associate Professor and Professor at CUT. He was Head of Department of Electrical, Electronic and Computer Engineering at CUT for 11 years, and has been the Assistant Dean for Research, Innovation and Engagement in the Faculty of Engineering and Information Technology since January 2017.

In addition, Prof. Vermaak was the first holder of the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA) Chair for Engineering Development at CUT. Furthermore, he received a number of awards, including the Vice-Chancellor's Excellence Award in the category Established Researcher, which he received twice, and the Vice-Chancellor's Excellence Award in the category Advanced Teaching Career. Prior to joining the academe, Prof. Vermaak worked in the industry for ten years, at the Goodyear Tyre Company and the General Motor Corporation, respectively.

Prof. Vermaak has been involved with the Accreditation Committee of the Engineering Council of South Africa (ECSA) for more than ten years. He served as team leader for several accreditation visits at engineering faculties within South Africa, as well as Chairperson and member of seven international review panels who conducted institutional and programme reviews. Three of these panels acted on behalf of the International Engineering Alliance (IEA), which governs the International Engineering Accords. He is also a programme evaluator and assessor for the Council on Higher Education (CHE), and a representative of ECSA with CHE.

He has published and co-published more than 30 articles in journals and conference proceedings; presented and co-presented more than 40 papers at international and national conferences; and successfully supervised more than 30 master's and doctoral degree students. Prof. Vermaak was awarded a DAAD Visiting Professor sponsorship in 2018. Finally, he is a senior member of the Institute of Electrical and Electronic Engineers (IEEE); a senior member of the South African Institute of Electrical Engineers (SAIEE); and an established researcher, with a C-rating from the National Research Foundation (NRF).


**Mr Karabo Mokoena, Faculty Administrator in the Faculty of Humanities received an award under the Category of Support Staff - Administrative staff award. He was recognised for his dedication and diligence in his role within the faculty. He was awarded with R10 000 cheque by Prof. Henk de Jager, Vice Chancellor and Principal (left) and Dr Gary Paul, DVC: Resops (right).**

# Excellence is not an act, but a habit at CUT

CUT held its 3rd annual Vice-Chancellor's Excellence Awards on 31 October 2018 to reward excellence of both academic and support staff, who have consistently walked an extra mile in ensuring that their hard work and efforts adds great value towards the success of the university.

The ceremony was dedicated to celebrating the achievement of both support and academic staff who have attained exceptional levels of excellence in their respective fields of speciality. "We salute each and every hero and heroine for their many efforts to support CUT in achieving our set mandate of teaching and learning, research and community engagement.

The Vice Chancellor's Excellence Awards are held annually to recognise exceptional performance of our employees for their sustained and outstanding achievements and to acknowledge excellence & leadership in the categories of teaching, research and innovation and scholarship in community engagement. These accolades are a symbol of recognition of hard work and dedication of our staff members. It is only through people that we can create an exceptional university. I wish to congratulate the recipients of these awards. You can all feel proud of your achievements, and we thank you for bringing credit to the university." said Prof. De Jager.

The recipients not only received certificates of recognition but were also awarded a sum of R30 000 each. Winners may take 1/3 of the amount as a cash benefit and the remaining is intended to enhance their teaching, research, innovation, community engagement.


Dr Dee Mtyongwe, from Dental Assisting in Health and Environmental Sciences received an award under Advanced Career Teaching category. She is a lecturer in Dental Assisting and is being congratulated by Prof. Henk de Jager, Vice Chancellor and Principal (left) and Prof. Mabokang Monnapula-Mapesela, Senior Director: Centre for Innovation in Learning and Teaching (CILT).

Ms Leandra Jordaan, Deputy Director: Web and Print, in the Communications and Marketing Section, received the support Staff award under the Middle Management category. She was awarded the R10 000 cheque by Prof. Henk de Jager, Vice Chancellor and Principal (left) and Dr Gary Paul, DVC: Resops (right)

## The awards and certificates were awarded in the following categories:

### Category A: Teaching Awards

- Early Career Teaching Award: Ms L Bokopane from the Faculty of Engineering and Information Technology.
- Advanced Career Teaching Award: Dr. D Mtyongwe from the Faculty of Health and Environmental Sciences.

### Category B: Research Awards

- Early Career Research Award: Dr. OJ Gericke from the Faculty of Engineering and Information Technology.
- Mid-Career Research Award: Prof. EM Masinde from the Faculty of Engineering and Information Technology.
- Established Research Award: Prof. FA Emuze from the Faculty of Engineering and Information Technology.

### Category C: Community Engagement Award

- Community Engagement Award: Mrs A Slabbert from the Faculty of Management Sciences.

### Category D: Innovation And Entrepreneurship Awards

- Innovation and Entrepreneurship Award: The two researchers who received the award are: Mr. I van Zyl and Mr. A Kinnear from the Faculty of Engineering and Information Technology.

### Support Staff

- Senior Management, Dr O Makola
- Middle Management, L Jordaan
- Administrative staff: K Mokoena


Dr Oupa Makola, Campus Director from the Welkom Campus received the R10 000 cheque as the excellece award under Senior Management Category. He was awarded for taking leadership role in research work (which led to two books under his belt) and his community development and engagement programmes; especially his SABC slots where he is a regular studio guests to address social challenges impacting on youth and society at large. He is flanked by Prof. Henk de Jager, Vice Chancellor and Principal (left) and Dr Gary Paul, DVC: Resops.


Ms Lindiwe Bokopane, Senior Lecturer: Elec/Electronic/Comp Eng. in the Faculty of Engineering and Information Technology, received an award under Early career Teaching and is congratulated by Prof. Henk de Jager, Vice Chancellor and Principal (left) and Prof. Mabokang Monnapula-Mapesela, Senior Director: Centre for Innovation in Learning and Teaching (CILT).

# Faculty of Humanities Awards Top Achievers

The Faculty of Humanities held their Annual Prize-giving Ceremony on 14 September 2018, to celebrate and recognise top-performing students in the faculty. The ceremony not only served as a token of appreciation and acknowledgement for the hard work and dedication put in by the students, but also as a form of encouragement to other students to always strive for the best in all they do.

The keynote speaker, Dr Molaodi Tshelane, Lecturer: Risk Management and Economic and Management Sciences (EMS) Discipline Co-ordinator: School of Social Sciences and Language Education at the University of the Free State (UFS), applauded the students for undoubtedly working hard to reach the top, and receiving awards for it. "I am very impressed with the achievements of everyone here, but I am especially in awe of those of you whose efforts will be awarded. I believe that many of you have strived to do your best to be a part of this ceremony, and I am certain that all those steps represent the true spirit of the Central University of Technology, Free State (CUT) to produce countless stars. We must recognise and award excellence. Individually and collectively, our destiny lies in the ability to connect the points of light in our lives, so that we can see the broader patterns of eternity. As we work hard, choose wisely, overcome opposition, and exercise faith in what we do, we will recognise that our destiny is not merely to gaze into the night sky, but to create and organise the stars, so as to survive in life."

The event was sponsored by PPS Insurance Company Ltd.

Welkom Campus student, Mr Xolani Dlaedwa received the Best BTech Student: Language Practice award. He is seen here congratulated by Dr Brenton Fredericks, HoD: Communication Sciences.

Ms M.S Lowings received the Best BTech Student in Graphic Design award. She is congratulated by Mr Patrick Moremoholo, Lecturer: Design Technology.


Mr Titus Williams, Faculty Administrator, is seen here congratulating Ms P.V Ramatlama who received two awards: Student Advisory awards and the Most Versatile Student in Language Practice.


Mr J.D van Rooyen received the Best 3rd year Bed (SP &FET) Computer Science award. He is seen here with Prof. Wendy Setlalentoa, HoD: Teacher Education.

**Zero cavity is the way to go for the Dental Assisting programme students. They are flanked by Mr Kevin Henry, an expert in Dental Assisting, mentor, champion and Co-Founder of IgniteDA from Colorado in the United States (back row-right) and the Dental programme Senior Lecturer, Dr Jeanne Oosthuysen (backrow-left).**

# Kevin Henry inspires dental assisting students

On 16 October 2018, Mr Kevin Henry, an expert in Dental Assisting and Co-Founder of IgniteDA, came all the way from Colorado in the United States of America (USA) to encourage, motivate and empower the Central University of Technology, Free State (CUT)'s Dental Assisting students.

Considered one of the top cheerleaders for Dental Assistants, Mr Henry has a passion for ensuring that Dental Assistants are respected and enjoy their careers to the fullest. He encouraged and motivated students to take pride in what they do, and to always pick each other's brains once they are in the world of work. "Dental Assistants often don't feel like they are being respected, paid and appreciated as much as they should be. Assistants have the potential to flourish in their roles and become even more valued members of the team and industry. They can be some of the biggest assets of any dental practice if they understand how to move ahead in their careers," he said.

"Always remember that you are not just an assistant. You are important in the eyes of the patient; you are the heartbeat, backbone and soul of the practice. When you get into the real world, don't be an island. Always keep up with each other, stay connected, and exchange ideas. I hope that you find a dental practice that runs like a business and trains their team to work with them in advancing their business," he concluded.

IgniteDA is regarded in the sector as a trusted mentor and champion for the life cycle of a Dental Assistant's career. It is a platform where Dental Assistants feel like they matter; that they have a space in the business. The goal of IgniteDA is to empower, enlighten and educate every Dental Assistant.

# Erasmus YEBO training held at cut

**Participants from universities around South Africa and abroad at the Erasmus Yebo Training held at CUT.**

The Central University of Technology, Free State (CUT) International Office hosted a training session on Intercultural competencies and Managing multicultural research groups from 22-25 October 2018. The sessions targets academics that supervise students who have intercultural competences with an international flavour. This event aims to improve and support the modernisation, accessibility and internationalisation of Higher Education in partner countries. The project further addresses the problems and challenges facing Higher Education sector, with specific reference to postgraduate management systems.

The Yebo Project is an international collaborative project involving seven South African and five European Universities. Participating Universities in South Africa are the University of the Western Cape, Tshwane University of Technology, Cape Peninsula University of Technology, University of Pretoria, University of Stellenbosch, University of Cape Town and Central University of Technology, Free State participating as co-leaders in the Erasmus+ Capacity Building of Higher Education (CBHE) YEBO! Project.

Profs. Fanny Poujol, from University of Montpellier, France, Liezel Frick, from Stellenbosch University and Stephanie Giljohann, from Technical University of Berlin, Germany, facilitated the workshop.

# CUT tees off to raise funds

Many students are battling financial hardships every single day. The cost of education, accommodation, food, books, stationary and transport are but a few of these battles' students fight in their quest to be educated and contribute to their country. Many of them simply don't have the financial backup and as a result they always drop-out.

For the past 10 years, the Central University of Technology, Free State (CUT) golf club and Wellness Centre has successfully hosted golf day to address some of these challenges and provide tangible assistance to financially needy students.

Due to budget constraints, #FEESMUSTFALL and the economy that is under pressure, a large number of students are in dire need of assistance each year. This annual event supplements the financial aid fund to needy students. In 2017, about 1759 students were supported with food parcels, transport fees, book vouchers and meal tickets.

The event is made possible by the partnerships and sponsors received from both external and internal sponsors. Some of the main sponsors of the event include ER24 – Natasha Fourie, IntelliMali – Julian Topkin and Konica Minolta - Cindy Snyman. CUT Vice-Chancellor and Principal Prof. Henk de Jager and Deputy Vice-Chancellor, RESOPS Dr Garry Paul also participated and took a few strokes in playing the club of ball sport.


**From left is Mr. Gert Cronje, Manager: Wellness Centre and Mr Paul Greeff, Psychologist: Student Academic Development.**


**Mr Dennis Ntokozo Dladla (L) is one of the top achievers who has successfully completed the Emergency Management Professional Programme (EMPP). He received top achiever certificates in basic digital literacy, academic and communication literacy, mathematics and physical science. He is seen here being congratulated by Dr Jeanette Du Plessis (R).**

# Emergency Management Professional Programme (EMPP) awards

The Minister of Health along with the Health Professions Council of South Africa (HPCSA) has outlined a process of restructuring medical education and training to align it with international trends. This process was implemented by the Professional Board for Emergency Care (PBEC) in 2006-2007 and was structured to align Emergency Medical Care (EMC) with other health sectors in South Africa. These new qualifications are also aligned with the new Higher Education Qualifications Framework (HEQF), which the short learning programmes were not.

The short course is intended to assist applicants for the new NQF aligned EMC programmes, that has been introduced for the upgrade in qualification of current Emergency Care personnel in South Africa namely; those who hold one of the three EMC short course qualifications and are currently registered with the Health Professions Council of South Africa, those who do not comply with the basic entry requirements for the new NQF qualification but holds a matric certificate or equivalent thereof i.e. those with the correct modules/subjects but not with the required grade.

In her address, Prof. Hesta Friedrich-Nel, Assistant Dean: Teaching and Learning Health and Environmental Sciences said that the EMC programme at CUT has gone through difficult waters but together with role players such as the Department of Health, Free State College of Emergency Care and the University of Johannesburg, they managed to identify the concept of EMPP programme. "This is a tangible evidence of active collaboration between CUT Clinical Sciences Department and the Free State Department of Health Free State College of Medical Care. This is also an indication of the advancement of EMC programme where we are going to be inclusive, correct those who have been left behind and give them an opportunity to do better and get a university qualification."

On behalf of the EMPP class of 2018, Mr Maputla Liphoko - class captain, said that the journey has not been easy, as they had to diverge from their daily routine of working shifts to being in class and studying overnight for tests. "It is said that education is the key to success and I believe that a transformative education is a candle that will light our paths when darkness show its ugly face. It is the key that will open the doors of despair and strengthen hope.

I am proud to stand here today and say we have grown from where we started. The success we are celebrating today no matter how small it may look to others, carries the potential key to open doors to diversity and ensure that the EMS of the coming years will be much improved so that we can be able to deliver the best service to our communities."

Mrs Coleen Kala from the Free State Department of Health said that the day is significant for CUT, Department of Health, students and the country. She said that the former pre hospital EMC has evolved over the years and the EMS College is now migrating to higher education and that is a huge challenge for the department .

"This is a special initiative between CUT and the Department of Health. We are so excited for being part of this new NQF EMC qualification in partnership with CUT and the University of Johannesburg. We already have a Memorandum of Understanding (MoU) with the two institutions and as far as CUT is concerned this is just an extension of what we already have. It shows that our relationship is growing and we are evolving and keeping up with the developments and needs of the society. I would like to thank CUT for the mutually beneficial and healthy relationship we have. I know there are still many more to come and it shows that we are expanding and growing."

**The EMPP students, lecturers, facilitators, organisers and representatives from the Free State Department of Health happy for the success achieved.**

# LETTER FROM THE PRESIDENT OF CUT ALUMNI ASSOCIATION

Dear Alumni and Friends,

Greetings from myself, the President of the CUT Alumni Association, and the entire university community.

The year 2018 represents my first term of office as President of the Alumni Association. I wish to take this opportunity to thank you, our alumni, for taking an interest in your alma mater. We have witnessed an increased hype on different social media platforms during the Alumni Association elections and campaigns. I wish to extend my sincere appreciation to everyone who participated in the electronic voting process, and who took the time to attend the inaugural Annual General Meeting (AGM), which ushered in a new beginning for the current Executive Committee.

The purpose of this letter is to inform you of the plans we have made since the beginning of our term of office in May 2018. As you are aware, communiqués from the Vice-Chancellor and Principal are shared with us, with the intention of communicating CUT's achievements. We have decided to extend this form of communication to the alumni, as a means of ensuring clear communication to the entire constituency that accurately reflects our aspirations and goals. I hope that you will appreciate our efforts to reach out to you and to improve our dialogue, in an attempt to ensure that you are kept up to date and informed about the latest developments that are taking place within this office. We will thus be staying in touch with you through the letters from the President.

I am pleased to announce that the university has pledged to invest in the Alumni Association through greater engagement with alumni; inspiring alumni to stay connected to CUT; and supporting the association's vision, thereby contributing to its success – a commitment that was well received by the Executive Committee.

CUT is privileged to have incredible, selfless leaders who are willing to contribute to the development and growth of both the university and its Alumni Association. Their selflessness is aligned with the institution's theme for 2018, namely that of servant leadership. Also, as the year 2018 was marked the year of servant leadership, we intend to serve our mandate as your servants.

In July 2018, we held a two-day meeting to reflect on the Alumni Association's standing, and to consider how we could rethink and reimagine it as a vibrant, engaged and progressive association. As a result, we devised a strategy document, which serves as our action plan to achieve the aforementioned goals. In our strategy document, we identified seven key milestones as our focus areas for the next three years. The Executive reflected on short-term actions that could be easily implemented, whilst acknowledging the need for a long-term action plan through which to engage alumni to reconsider CUT as their university of choice.

Over the last couple of weeks, we held meetings with various stakeholders within and outside of the university, lobbying for their support; securing their buy-in of the strategy; and, finally, securing funding for the activities that we have planned. I am pleased to inform you that all our endeavors are beginning to bear fruit, which we intend to share with you.

I wish to extend our sincere appreciation to you and to CUT management for the continued support in our plans to make the Alumni Association a structure that forms part of the university; as we find our place within the institution; and whilst we are determining how we could best serve you.

The institution has committed the resources and processes to ensure the success of the Alumni Association, as envisioned by the CUT Statute and the university's Vision 2020. We now call upon you, our alumni, to pledge your support by giving your time, contributions, referral and any form of gratuitous service to the institution within your respective areas.

Our plans are intended to achieve the following objectives:

- Continuing to identify and promote the success and achievements of alumni, thereby enhancing the credibility and reputation of CUT in the higher education sector.
- Deepening the lifelong relationship between our alumni and the university through opportunities that promote interaction and engagement with CUT.
- Administering alumni programmes that will encourage all of you to identify with CUT, whilst generating and sustaining your interest and participation in the university.
- Inspiring you to contribute to the development and promotion of our good name and reputation.
- Enhancing your experience with the university as a student, employee or former graduate.
- Strengthening our communication efforts by ensuring continuous feedback and information sharing, so that you can become part of the activities in the area of the institution, and in your respective areas or provinces.

We are in the process of revamping the institutional database to ensure that it is up to date, world class and interactive, providing you with continuous communication with other alumni locally and internationally. Follow-up communication on this effort will follow shortly, and will hopefully encourage you to update your information, so that we can stay close to you, and you with us.

In order to ensure that we stay connected to you, and provide you with satisfactory and relevant activities, a survey in the form of an online questionnaire will be distributed via e-mail and on social media platforms. I encourage you to fully participate in the survey, so that we can take your needs into consideration. We believe this will enhance the manner in which you interact with the university and ensure that each touchpoint of the university has a satisfactorily aligned alumni component.

As the Executive Committee, we have committed to focus on areas and activities that will add value to you, our alumni, and, most importantly, to the university, over the next three years. These focus areas will include addressing the matters pertaining to historical debt, outstanding graduation certificates, blacklisted graduates, and current higher education challenges faced by young South Africans, particularly the current students and graduates of CUT.

In our upcoming newsletter, we will also provide you with a brief profile of the newly elected Executive members of the Alumni Association, together with their respective portfolios. These members are:

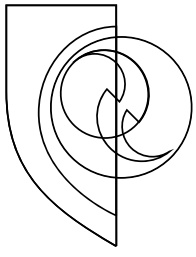
- Gama Major Cindi: President of the Alumni Association, and member of the CUT Council;
- Chabana Chabana: Deputy President of the Alumni Association;
- David Makhoali: Executive: Finance;
- Kabelo Moremi: Executive: Education and Transformation, and member of the Institutional Forum (IF);
- Luyolo Busakwe: Executive: Community Engagement and Programmes;
- Mbuyiselo Frans: Executive: Communication and Social Media;
- Kagisho Mmetseng: Executive: Events and Marketing; and
- Lebogang Khutlang Farmer: Executive: Projects.

I am confident that you have made the right choice by voting for the above leaders, who, as servant leaders, are eager to enhance the quality of life of CUT students and graduates. Once again, we invite you to stay in touch with us; watch this space; look out for invitations to participate in our activities; and contribute to the cause of socio-economic freedom.

I thank you for your patience during this period of reimagining the CUT Alumni Association as an engaged and a progressive association of CUT graduates.

Stay blessed!

**Gama Major Cindi**
**President of the Alumni Association**



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