

# Faculty Newsletter



*Wishing you all the best over  
the festive season.  
Enjoy this time with your loved ones and  
friends.*

## NRF ratings

Congratulations to the staff members who received their NRF ratings. These ratings are significant, as they offer a national indicator of research excellence and are an important tool for benchmarking.

## New ratings



A/Prof Riana Geschke  
Electrical Engineering  
**C2**



A/Prof Paul Barendse  
Electrical Engineering  
**C3**



Prof Tomà Berlanda  
Architecture, Planning &  
Geomatics  
**C3**



Dr Sunetra Chowdhury  
Electrical Engineering  
**C3**

## Successful re-evaluations



Professor Jenni Case  
Chemical Engineering  
**B1**



Prof Alphose Zingoni  
Civil Engineering  
**B1**



Prof Eric van Steen  
Chemical Engineering  
**B2**



Dr Steeve Chung Kim Yuen  
Mechanical Engineering  
**C1**



Prof Pieter Rousseau  
Mechanical Engineering  
**C1**



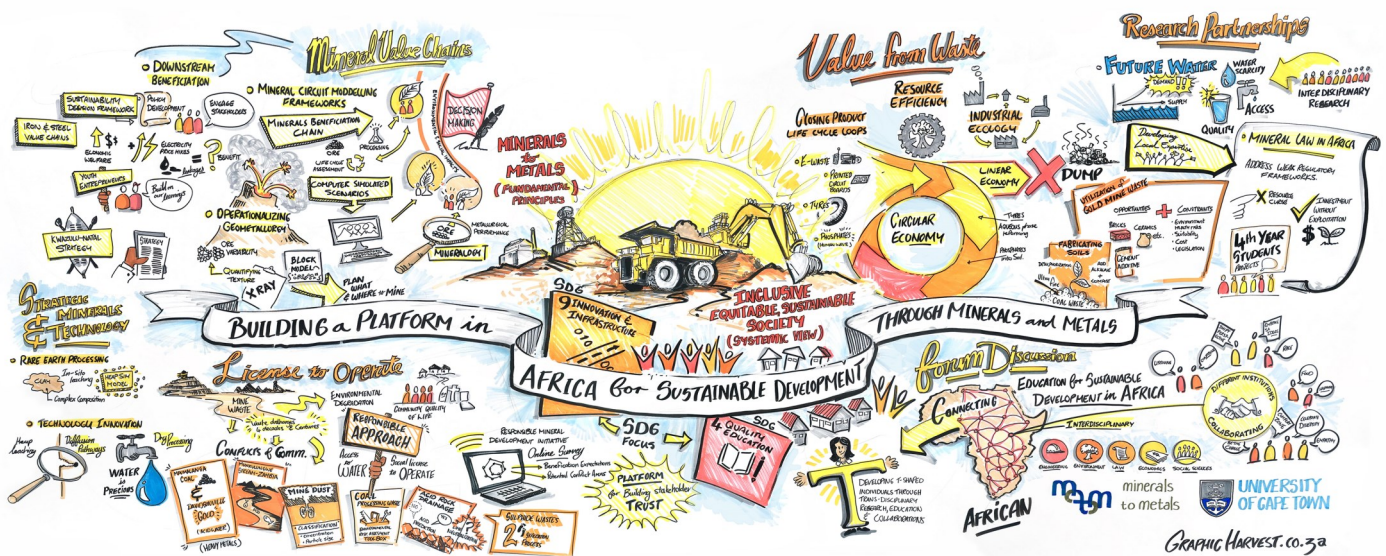
Professor Rob Knutsen  
Mechanical Engineering  
**C2**



Prof Neil Armitage  
Civil Engineering  
**C2**

## New levels of engagement for UCT's Minerals to Metals : The picture that says it all!

UCT's Minerals to Metals Initiative (MtM) is in its ninth year and recently had its URC review, which was combined with a research symposium. The different research themes and projects that make up MtM, all contributing to the goal of *building a platform in Africa for sustainable development through minerals and metals*, were captured in a cartoon by Graphic Harvest. Students and industry partners were invited to join the discussion and participate in the debate, to celebrate the achievements of MtM and chart the way forward. During the symposium, six sessions were held with topics on positioning MtM and mining for our modern world, mineral value chains, value from waste, and research partnerships.



A graphic compiled on the basis of the proceedings of the MtM Research Symposium

## Internship at the World Economic Forum

Corey Beavon, an MPhil in Sustainable Mineral Development graduate, has just returned from an internship at the World Economic Forum in Geneva, where he was working on its flagship Responsible Mineral Development Initiative (RMDI). The RMDI is a multi-stakeholder tool that provides practical mechanisms to measure and communicate the needs and expectations of different stakeholders in the mining industry.

Corey was tasked with updating and reviewing the RMDI survey in accordance with the 17 Sustainable Development Goals. He provided supporting consultation with key mining and metals companies, governments and civil society organisations on the RMDI process.

This afforded him the opportunity to get first-hand experience in the implementation of the RMDI in Guinea. He was also involved in the development of an 'off the shelf' version of the RMDI that will make the tool more accessible to all stakeholders.



## UCT triumphs again at Greenovate awards

For the second year in a row, CEM students have won the Greenovate award, which is an exciting initiative launched in 2015 by Growthpoint Properties and the Green Building Council of South Africa. The awards introduce university students to the thinking behind green building and encourage them to take it forward, into a better, greener future.

Cédric Fournier and Priscilla Nthai, property honours students, were the winning team with their project entitled “An investigation into the perceptions of occupants in office buildings that contain green building features and initiatives.” Their project was supervised by Saul Nurick and Abby Street who were at the event to see them receive the award. A second UCT research project by Stephanie Botton was tied in fourth place with two other groups. Her research title was “An investigation into the Consistency of Environmentally-Responsible Behaviour of Green Building Occupants.” Her supervisor, Karen le Jeune, said, “She uncovered a phenomenon dubbed by Saul Nurick, her other supervisor, as “Corporate-Domestic Schizophrenia” regarding green building occupants green behaviour at work vs home.”

Werner van Antwerpen, head of utilities and sustainability at Growthpoint Properties said, “The built environment has a major impact on the environment and sustainability. With the Greenovate Awards, we want to recognise excellence and innovation in students’ own understanding of green principles for the built environment, across all aspects and disciplines. These aspiring young professionals have the potential to transform the way we live, with gentler impacts on the world around us. The Greenovate Awards will link environmental challenges to innovative thinking.”



*Saul Nurick (lecturer) Cédric Fournier, Priscilla Nthai, and Abby Street (lecturer) at the event.*



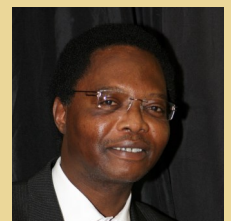
*Saul Nurick, Stephanie Botton and Karen le Jeune*

## Water Leadership award for the Dean

The Dean, Professor Alison Lewis, has been awarded the Water Leadership award from the Africa Leadership awards. The awards event took place on 7 December in Mauritius and Alison asked Dr Vimi Dookhurn from the University of Mauritius to receive the award on her behalf. The event attracts people from all over Africa and there are over 20 categories which recognise the achievements made by leaders in Africa. The Water Leadership award is conferred on “outstanding professionals who have the vision, flair, acumen and professionalism to demonstrate excellent leadership and management skills in an organisation, making changes and achieving results.”

## New UCT Fellow - honoured for distinguished work

Congratulations to Professor Alphose Zingoni from the Department of Civil Engineering. He is one of only two academics who have been elected as UCT Fellows in 2016. The Council of the University established Fellowships for members of the permanent academic staff in recognition of original distinguished academic work such as to merit special recognition. There are now 10 College Fellows in the faculty. Alphose joins Cyril O'Connor, Sue Harrison, Alison Lewis, Eric Van Steen, Gerald Nurick, George Ekama, Mark Alexander, Vanessa Watson, and Heinz Ruther.



## 2016 Iso Lomso Fellowship

Dr Malebogo Ngoepe is one of five candidates to receive the 2016 Iso Lomso Fellowship for early-career African researchers. She was selected from a pool of 248 eligible candidates from across the African continent.

*Iso Lomso*, meaning “the Eye of Tomorrow” in isiXhosa, is a new Stellenbosch Institute for Advanced Study (STIAS) fellowship and early-career support programme that will boost the careers of some of the brightest minds in African academia. The programme was inspired by the [Pro Futura Scientia programme](#) developed by the [Swedish Collegium for Advanced Study](#) and is currently funded through a STIAS grant from the [Swedish Riksbankens Jubileumsfond](#).

In addition to spending up to three periods of residency at the STIAS Wallenberg Research Centre in Stellenbosch between 2017 and 2019 to pursue their research projects, Iso Lomso fellows may also receive funding to attend international conferences, convene workshops, and visit sister institutes for advanced study in North America, Europe or elsewhere.

The candidates represent a broad range of disciplines including public health, philosophy, English literature and engineering.

Malebogo is in the Department of Mechanical Engineering. She completed her PhD in biofluid mechanics at the University of Oxford in 2014. Her project will seek to develop a thrombosis model which can be applied in both cerebral aneurysms and abdominal aortic aneurysms. Malebogo intends to partner with collaborators at the KTH Royal Institute of Technology in Sweden.

With these awards STIAS aims to fill the gap that often exists for African academics between completion of a PhD and becoming an established scholar.



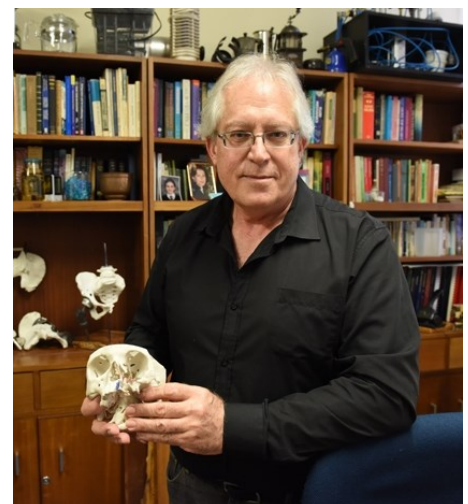
While in residence, Iso Lomso fellows will find themselves in the company of leading researchers from around the world and from different disciplines. Informal research guidance and networking with other fellows form an integral part of life at STIAS.

Director Hendrik Geyer reiterated this, saying “STIAS recognises that for many younger academics the pressures of teaching, administration and contracted work mean they receive little encouragement and incentive to develop their research strengths. In line with the vision of Iso Lomso, STIAS’s goal is to provide sustained research support to these young academics, thereby contributing to a future generation of scholars and scientists.”

## Keynote address at international conference

A/Professor George Vicatos gave a keynote address at the 17<sup>th</sup> Annual International Rapid Product Development Association of South Africa (RAPDASA) Conference. The title of his address was “Design and manufacturing of customised patient implants”. The conference was held on 2-4 November at the Vaal University of Technology and focused specifically on topics of “Building on the foundations – consolidating impact into products to enhance quality of life for all South Africans”.

You can find out more about George’s research [here](#).



## PhD awarded to Mohohlo Tsoeu

Congratulations to Mohohlo Tsoeu from the Department of Electrical Engineering, who will be receiving his PhD at the graduation ceremony on 20 December 2016. It is certainly not an easy feat completing a PhD while working full-time. It is a great achievement.

Mohohlo completed his BEng in Electronics at the National University of Lesotho in 2005, completed an MSc Eng. in Electrical Engineering at UCT in 2008, and joined Electrical Engineering as a lecturer in July 2008.

Professor Mike Inggs was his supervisor and his thesis title was “Electrical Impedance Tomography/Spectroscopy (EITS): A Code Division Multiplexing (CDM) Approach”.

The thesis exploited Code Division Multiplexing to allow imaging and spectroscopy of fast transient physiological phenomena which cannot be achieved using Time and Frequency Division Multiplexing. A high image frame rate prototype system was developed and evaluated using phantom systems that mimic human tissue electrical properties. Findings of this research confirm that Code Division Multiplexing improves the accuracy, speed and excitation energy, and provides time-frequency data consistency, addressing the limitations of time and frequency division multiplexing. The research lays the



groundwork for development of a full-scale, low-cost, non-invasive tomography system for use as a mobile, low-cost alternative to Computed Tomography and Magnetic Resonance Imaging and Ultrasound, found in large hospitals.

This technology is portable for use in ambulances and provides a unique set of electrical information that cannot be provided by the latter, more expensive, imaging methods. One application of this research is in cancer imaging. An-

other application is for the diagnosis and imaging of neurological ailments such as stroke and epilepsy. While the treatment of such neurological ailments is quick and simple, they have the potential of being fatal in less time than the ambulance takes to transport a patient to hospital for diagnosis. A further complication is that wrong treatment can severely exacerbate the ailment, hence a quick and accurate diagnosis tool is needed to allow timely ambulatory treatment. Furthermore, this technology can provide much-needed low-cost imaging for remote hospitals and clinics and save the influx of transfer patient to large hospitals and reduce the delays and expense of diagnosis. Adaptations of the technology also find applications of imaging and measurements in the mining and process industries.

## 2017 EBE postgraduate student council

### Chair

Darryl Brown  
(Chemical Engineering)

### Vice-Chair and Events

Zaynab Sadan  
(Chemical Engineering)

### Treasurer and Corporate

David Oliphant  
(CEM)

### Marketing & International Students

Fungai Changunda  
(Electrical)

### Academics

Alireza Moghayedi  
(CEM)

### Outreach

Mzwakhe Didishe  
(Electrical)

Dayle Nel is still to be allocated a portfolio



*Darryl Brown, Fungai Changunda, Zaynab Sadan and Alireza Moghayedi (missing David Oliphant, Mzwakhe Didishe and Dayle Nel)*

## Cheetah tail project wins an SAIEE award

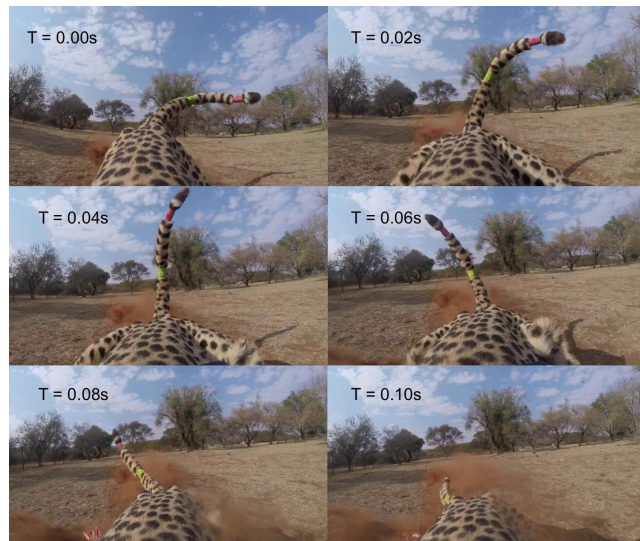
Every year, final-year students of electrical, electronic and computer engineering complete an intensive design project. The best student project is nominated by the department and they compete against students from other universities across South Africa in the SAIEE National Student Project Competition. The competition took place at NW University on 24 November 2016 with eight students competing.

Bradley Stocks, a final-year electrical and computer engineering student represented UCT. His presentation was titled *Cheetah Motion Analysis - Tracking the Cheetah Spine Using Animal-borne Cameras and a Wireless IMU Sensor Network*. Along with video and information/picture-based aides, he explained how his idea could be used to track the motion of animals turning and running, as well as being able to be used in various other applications. Bradley's supervisor was Dr Amir Patel.

The overall winner was Brinco Neethling from NW University. Bradley Stocks (UCT) and Bernard Bussy (UKZN) received discretionary awards. The judges of the competition said, "It was almost too close to call, as all the students who had delivered their presentations had done such excellent jobs."



*Fitting the device*



*Tracking the tail*

## Successful apprentice programme in Mechanical Engineering

Since 2011, the Mechanical Engineering workshop has graduated 5 apprentices. Glen Newins, the previous manager of the workshop, introduced the programme as he realised that students coming out of the trade colleges found it hard to find apprentice positions. The apprentices spend three years in the workshops, where they gain practical experience on the different machines and develop skills for the workplace.

Grant Springle is the fifth apprentice to pass his trade test at North Link College. He is presently working for his father, who has a machinery business. He said of his experience, "Compared to what my friends went through, this was the best experience ever. I got to work on a wide range of machinery and was exposed to different types of manufacturing. I was able to interact directly with the students so I got to meet a diverse group of people."

Pierre Smith, the manager of the workshop, said they had received 92 applications for the two apprentice positions they advertised for 2017. They have shortlisted six whom they will interview, and will select two who will start in the workshop in



*Grant Springle with Pierre Smith*

January 2017. The University contributed a once-off donation and the funding now comes from the SETA.

## News from CEM

### ABES/CEM greening outreach

CEM staff and students from the Association of Built Environment students (ABES), responded to a call from Green Communities to help plan and plant in Witsand, Atlantis which is slowly becoming a showcase of environmental sustainability.

The staff and students teamed up with Green Communities and Peer Africa to revamp and restore the park at Witsand Phase 1 in Atlantis as a tribute to the late Beth Basset, founder of Green Communities.

Lizette Swanevelder from Green Communities said, "We thank you for contributing towards the positive change in the Witsand community. Your contribution towards the revamp of Park at Witsand in Atlantis proved to be invaluable in delivering a quality project that will resonate for years to come."



*CEM staff and students with the community helpers*



*Alain Alexander, Carel Swart, Dave Milne, chairman of the Charles Glass Society, and Saul Nurick*

### Donation from Charles Glass Society

The Charles Glass Society is an NPO whose members and affiliates support those less fortunate. They hold a number of fundraising events during the year and this year they donated the money raised to ABES. Saul Nurick, a lecturer in the CEM department, nominated them for the award and the motivation behind ABES's selection was their community-build project and the Green Communities initiative.

Alain Alexander (outgoing ABES chair), and Carel Swart (incoming ABES chair), said that they were very grateful for the recognition and look forward to putting the donation to excellent use in giving back to the community.

## Sea-Change: navigating the waves of change

In October, CEM's quantity surveying honours students attended the South African Council for the Quantity Surveying Profession annual research conference. The theme was "Sea-Change: navigating the waves of change". The conference focused on the ever-changing construction industry, economy and current events that have changed the future of the industry and the quantity surveying profession. Research papers were presented on new approaches to construction and cost management, the role of ethics in South Africa, new strategies for the professional environment, and what the future of the industry may hold. The conference included network-

ing and social sessions that aimed to connect individuals in industry to colleagues, students and leaders in the attending professional bodies.

The students wrote a blog on their experiences at the conference. Brendan Ardagh wrote, "The SACQSP research conference was an excellent event that exposed us as students to the leaders in industry and the opportunity to network with future colleagues and role models. Throughout our academic careers we are seldom exposed to such a variety of industry professionals, and to be afforded the opportunity to take part in the conference was truly inspiring."

Sister Kashala wrote, "The SACQSP



*Sister Kashala*

research conference was a wake up call for me. Above all the research, I think the conference opened my eyes to seeing greater things about the profession and allowed me an opportunity to have bigger dreams."

## Affordable housing in Cape Town's inner city

*Both realistic economic factors and policy changes have a part to play in increasing the viability of affordable housing*

The need for affordable housing in Cape Town's inner city is hard to overstate. Right now, the city's lowest income group spends roughly two hours a day and at least 15% of their monthly salary on getting to and from work. In other words, the people who can least afford it are the same ones who have to travel the furthest and pay the most to get to their workplaces.

A new paper produced by the Department of Construction Economics and Management identifies the challenges presented by the lack of affordable housing in Cape Town's city centre – and some possible solutions.

"Right now, there's a significant backlog in the supply of units," explains Robert McGaffin. "Apartheid planning resulted in fragmented and sprawling cities, and in Cape Town this is exacerbated by the fact that land close to the city centre is particularly expensive."

So what can be done to encourage the development of more affordable housing in the inner city? McGaffin, along with co-authors Francois Viruly, Mark William Massyn and Nicole Hopkins, argues in their 2015 paper that development costs such as land acquisition, construction costs, financing and marketing must be balanced by the need to create a product that is truly affordable to a lower- to mid-income market. According to the paper, both



realistic economic factors and policy changes have a part to play in increasing the viability of affordable housing.

Increasing the height of buildings and dividing developments into smaller units can help improve the ratio between development costs and profitability for property developers, while still keeping housing affordable.

"There is a perception that South Africans are unwilling to consider smaller living spaces; but I think the phenomenon of backyard dwellings, in which people are willing to pay for cramped accommodation because it is well located, shows that is not the case," McGaffin says. "In places like inner-city Joburg, the private sector is renting out 15m<sup>2</sup> spaces, at a rate of 98% occupancy."

According to McGaffin, the cumulative effect of very stringent building standards has been underestimated as a stumbling block to affordable development.

"Obviously it's very important for standards to be in place when it comes to human habitation; but a balance has

to be struck between making buildings safe to live in and making them affordable. Otherwise, a few will get to live in safe spaces, while those who can't afford it will be forced to live in dangerous buildings. If it's just a case of red tape, then simplifying these standards could have a positive effective on the viability of affordable developments," he says.

Repurposing existing stock into low-cost housing would allow significant savings to be passed on to lower-income households. "We have a habit, locally, of using the most expensive type of development method, namely new builds, to try and cater for the lowest income segment of the market," McGaffin says.

As the paper puts it, "Not only are existing buildings cheaper, but they also make up the bulk of the built stock in the city, and therefore represent the best opportunity to deliver affordable housing at scale."

How does McGaffin see the situation changing in the future? "I'm quite positive," he says. "I think a lot of the suggestions in the paper are things that are already starting to happen."

"Also, the good news about a slowing economy is the fact that it can put the brakes on property prices. I think in the next several years we will see a slowing of the commercial market, and this may free up some already existing stock to be repurposed into affordable housing."

## Finalist for Gold Medal Award

Kenny Toplis, a BSc (Hons) in Quantity Surveying 2015 graduate, was a finalist for the Association of South African Quantity Surveyors (SAQA) Gold Medal Award. This award is given to the student whose academic achievements are of outstanding merit and whose personal qualities promise to positively contribute to the profession. In 2016, Kenny is working for FWJK QS in Cape Town.

*Kenny receiving the award from ASAQS President Dr Stephan Ramabodu*





## Chemical engineering poster day

It was great to see the buzz in the foyer of the Chemical Engineering foyer and all the final-year students presenting their posters.



## Civil host a dinner for present and past Carnegie fellows

On 17 November, A/Prof Mark Zuidgeest, from the Department of Civil Engineering, hosted a dinner at the fine-dining Asian Fusion restaurant Kitima in Hout Bay, to celebrate the end of the department's successful Carnegie Project. The project started in 2011 and received generous support from the Carnegie Corporation of New York. Carnegie fellows and alumni as well as their mentors and supervisors attended the event. The success of the project is in developing a cohort of trainee academics who will become the next generation of academics in Africa and who can strengthen higher education in Africa

Special guest of the evening was Professor Mamokgethi Phakeng, the deputy vice-chancellor of research and internationalisation, who shared her life story of becoming a senior academic and university executive, her passion for research, and her views towards research excellence in a transformed UCT, as well as the importance of being socially responsive. Both students and staff felt very honoured and privileged to have had the opportunity to mingle with the DVC in such an informal setting.



*A/Professor Mark Zuidgeest, Dr David Ikumi, Asaph Kabasha, John Okedi, Professor Mamokgethi Phakeng, Rowen Geswindt, Professor George Ekama, Hazvinei Tsitsi Tamuka Moyo, Professor Neil Armitage, Dr Denis Kalumba and Philemon Arito*

The remaining project funds (US\$140) were donated to Professor Phakeng's Adopt a Learner Foundation, a non-profit organisation that she started in 2004, which provides financial and educational support to students from township and rural areas to acquire higher education qualifications.

## Retirements

The following staff members will be retiring this year. The Dean said, "Thank you for the contribution you have made to this faculty. You have touched so many lives and contributed to countless numbers of students who have graduated. We wish you all a long, healthy and happy retirement."

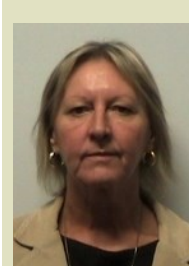


Peter Dobias from the Department of Chemical Engineering joined UCT in March 1993. He is the Principal Technical Officer and Workshop Manager.

Harry Paul Daniels joined UCT in 1970 and has been in the Department of Electrical Engineering one month short of 47 years. He started off as a cleaner and was moved to the workshop as an attendant, where his skills were observed. He got his first promotion after three years to laboratory attendant. He studied at night school and completed his matric. He went on to study at a technikon and was promoted to technical officer and finally senior technical officer in the Power and Machines Labs.

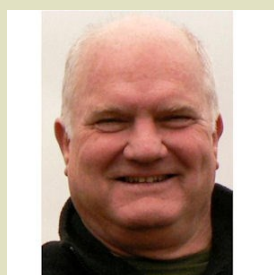


Julian Mayer joined the Department of Mechanical Engineering in 1978 as a technical officer. He began working in the mechanical workshops, but soon found he was not cut out for machining components, and he was put in charge of the department's electronic equipment. He never looked back and he enjoyed supporting students and academics with the design and manufacture of all equipment and electronics. He said that the high point of his time at UCT came in 1995 when he designed, supervised and taught part of a hands-on first-year course entitled "Introduction to Engineering". The course, still running today, seeks to introduce first-year engineers to electrical, chemical and electronic concepts and expose them to practical aspects of engineering.



After 13 years in the EBE Faculty, Erica Le Roux has taken early retirement from the end of October 2016 but she has agreed to stay on part-time until early next year. Erica joined the Faculty in 2003 and was in charge of the faculty's IT portfolio under the Deanship of Professor Cyril O'Connor. In 2007 the facilities portfolio was added to her job and she started working full

day. During her time Erica has overseen big building projects like the renovations of the Centlivres Building, the seventh level of the Menzies Building and the building of the NEB and the New Snape Building. Professor O'Connor said, "There is the old saying that nobody is indispensable. I would however venture to suggest that Erica le Roux, in the context of the complexities of University systems, comes very near to being in that category!"



Professor Mike Inggs from the Department of Electrical Engineering will continue as an Emeritus Professor in 2017. However, he will be spending most of his time consulting in the Space industry in South Africa and overseas.

Professor Inggs started the Radar and Remote Sensing Group in 1988. The group has grown to include five academics, A/Professor Daniel O'Hagan, who was recruited to replace Mike in the Radar Master's, Professor Riana Geschke, Dr Simon Winberg, A/Professor Amit Mishra, and Dr Yunus Gaffar with Emeritus Professor Barry Downing and A/Professor Andrew Wilkinson also assisting the group.

There are three postdocs: Paul Cavalier, Shirley Coetzee and Lerato Mohapi. To find out more about their research visit the [Radar Master's website](#)

The group has a number of technologies heading towards industrialisation by Cape-based companies, including a UCT spinoff, known as droneSAR. The latter is a miniature imaging radar suitable to fly on small drones, to allow farmers to monitor crop performance.

Mr Hubert Tomlinson retired after 47 years in the Department of Mechanical Engineering. He started working at UCT at 19 years old and has worked himself up through the ranks to retire as the Principal Technical Officer. Hubert is going to enjoy his retirement and is off on an overseas trip.



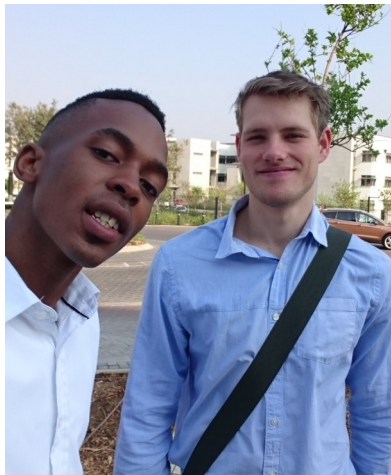
Professor Pragasen Pillay has taken early retirement from the Department of Electrical Engineering, where he worked part-time. He also works at the University of Concordia in Canada. He is a specialist in renewable energy and in 2008 he received the order of Mapungubwe—a national order awarded to South African citizens for excellence and exceptional achievement.

## Property Honours present to Attacq Board of Directors

As part of a group project for the Advanced Property Studies honours course, Lwando Njokweni, Shaun Janse Van Vuuren, Jed Johnson and Candy Williams-Jones were tasked with determining whether a property investment/development company was worth investing in. They were allocated Attacq as their subject company.

Part of their research involved a telephonic interview with Michael Clampett, head of Asset and Property Management for Retail at Attacq. He enjoyed their interview so much that he wanted to include them in Attacq's Future Project, which invites high school students from all over South Africa to Gauteng to attend their annual financial results presentation. It was the first time they were going to include university students and were only willing to fly two of the group to Johannesburg. It was decided that Lwando and Shaun would represent the group. Clampett wanted them not only to attend the Future Project, but also to present to the Attacq Board of Directors a financial, geographical and economic analysis to determine whether it was worth investing in Attacq.

After months of preparation Lwando and Shaun entered the boardroom nervous but ready to take on the challenge.



*Lwando Njokweni and Shaun Janse Van Vuuren*

They presented their analysis to a boardroom of five Attacq board members, indicating to them in the end that maybe Attacq wouldn't be the optimal decision for an investor, especially given that their capital outlay had been high over the preceding years owing to the huge development of the Mall of Africa; thus holding on to their funds temporarily to escape the negative effects of cost of capital on share pricing would be the soundest decision for an investor. The Board of Directors was intrigued by their insight, but scrutinised it by asking many questions and probed their graphs and analysis. In the end, they were very impressed and applauded them

for their efforts, and told them that they would include their analysis in a future board meeting.

The next day Lwando and Shaun attended the results presentation and learned a lot about Attacq's financial position. "We found it interesting to hear all the financial information that was in the presentation coinciding with our research, and it felt good to know that we were on the right track with our analysis," said Lwando. "We are grateful for the experience. The people at Attacq were very generous and open to us. They were helpful in providing criticism as well as positive feedback on our presentation."

## 2017 EBE undergraduate student council

### Chairperson:

Tondani Nevhutala  
(Civil Engineering)  
[NVHTON001@myuct.ac.za](mailto:NVHTON001@myuct.ac.za)

### Vice Chairperson:

Emma Chetty  
(Chemical Engineering)  
[CHTEMM001@myuct.ac.za](mailto:CHTEMM001@myuct.ac.za)

### Academic Chair:

Hope Kgaphola  
(Mechanical Engineering)  
[KGPHOP001@myuct.ac.za](mailto:KGPHOP001@myuct.ac.za)

### Treasurer:

Julian Nakiyaga  
(Civil Engineering)  
[NKYJUL001@myuct.ac.za](mailto:NKYJUL001@myuct.ac.za)

### Secretary General:

Nyasha Mawungwe  
(Chemical Engineering)  
[MWNNYA001@myuct.ac.za](mailto:MWNNYA001@myuct.ac.za)

### Career Development/ Corporate Relations & Sponsorship:

Eric Xiao  
(Construction Studies)  
[XXXTIA001@myuct.ac.za](mailto:XXXTIA001@myuct.ac.za)

### Events/Marketing:

Linda Ndebele  
(Construction Studies)  
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### Information & Technology/

**Memorabilia:**  
Michael Gazimbi  
(Civil Engineering)  
[GZMMIC001@myuct.ac.za](mailto:GZMMIC001@myuct.ac.za)

### Outreach/ Publications:

Vukheta Mukhari  
(Civil Engineering)  
[MKHVUK002@myuct.ac.za](mailto:MKHVUK002@myuct.ac.za)

### Transformation/ Student Life:

Anjalee Ramjee  
(Chemical Engineering)  
[RMJANJ001@myuct.ac.za](mailto:RMJANJ001@myuct.ac.za)

## Welcome to new staff

Mrs Nuraan Hartley, senior secretary in the Faculty Office, became a permanent member of staff in October.

Mrs Liza Cirolia, research officer in African Centre for Cities, became a permanent member of staff in November.

Dr Patroba Odera joined the Division of Geomatics as a senior lecturer from 1 December.

## Resignations

Ms Sandra Christian, personal assistant to Professor Sue Harrison, resigned at the end of August.

Mr Marc Wust, chief technical officer in the Centre for Catalysis Research, resigned at the end of September.

Mrs Zakiya Chikte, postgrad admin assistant in the Faculty Office, resigned at the end of September.

Mrs Babalwa Mtini, operations manager in the ERC, resigned at the end of November.

Dr Roald Brosius, senior research officer in the Centre for Catalysis Research, completed his contract in early December.

## PhD for Thandazile

Thandazile Moyo will be graduating with her PhD on 20 December. Her thesis title was "An Electrochemical and Leach Study of the Oxidative Dissolution of Chalcopyrite in Ammoniacal Solutions." Her supervisor was Prof Jochen Petersen, and she had Adjunct Professor Mike Nicol (Murdoch University) as a thesis adviser.



Thandazile did her undergraduate degree at the National University of Science and Technology in Zimbabwe and did her internship at Metallon gold Mine (How Mine) in Bulawayo, Zimbabwe. She worked as a junior technical engineer at BASF Mobile Emissions in Port Elizabeth before registering for a postgraduate degree with Chemical Engineering at UCT. She is currently doing a post doc fellowship with Minerals to Metals (MtM), working on value recovery from electronic waste with a long-term vision of starting the UCT Urban Mine.

Apart from her work, she is involved in community work and for the last three years has been organising the CeBER outreach campaign at Siyazakha Primary School. She has also started a programme teaching electronic recycling to LEAP Maths and Science School learners, and has developed a good relationship between MtM and LEAP School. She is a family person, married with one child.

## 2017 Mandela Rhodes Scholarship



Christian Polorigni, a final-year civil engineering student, has been awarded a Mandela Rhodes Scholarship for 2017 which offers a combination of financial support for postgraduate studies and a high-quality leadership development programme, with the intention of building exceptional leadership capacity in Africa.

Christian will be doing his master's degree in waste water under the supervision of Professor George Ekama and Dr David Ikumi. He was part of the EBE undergraduate student council in 2015. He is very excited and grateful for the scholarship. Christian is from Togo, and as an international student there are not many funding opportunities. In January he will be attending a camp where he will meet the other Mandela Rhodes scholars.

## Minerals to Metals' Thursday Forum

In 2016 Minerals to Metals (MtM) started a forum which took place on Thursdays at lunch time in the Garnet room. Staff and students across the faculty were invited to join the forum. Dee Bradshaw, director of the MtM, said, "It was initiated to develop social skills that are often left underdeveloped within a rigorous technical space. Aristotle defined rhetoric as 'the faculty of observing in any given case the available means of persuasion'. Engineers and academics are more familiar with the art of discourse than rhetoric, which has been greatly neglected. However, rhetoric is a powerful tool, and essential in today's modern world where the art of persuasion can change the course of a nation. The multi-disciplinary nature of the work that scientists do requires the ability to communicate one's ideas and persuade those from a non-technical background."

The forum has a few central objectives:

- creating safe space for dialogue
- building trust
- improving communication
- learning to listen
- learning from new cultures and perspectives



minerals to metals

- developing social contextual understanding

The topics for discussion varied widely, but there was an underlying focus on culture, beliefs and values. After the murder of anti-mining environmental activist and community leader Sikhosiphi 'Bazooka' Rhadebe, the documentary *Shorebreak* was shown. Other documentaries discussed were the *Miners Shot Down* and *Black Lives Matter*. Particularly memorable were the discussions around the anniversary of the Marikana massacre.

The Thursday Forum provides one key platform where students, lecturers and other stakeholders can engage in an informal yet structured safe space to reflect on common challenges.

## Lita Nolutshungu joins the Department of Civil Engineering



Lita Nolutshungu joined the Department of Civil Engineering in 2014. She did her Master's degree in Geotechnical Engineering under the supervision of Dr Denis Kalumba. She is registering to do her PhD in 2017, and has recently been employed as an assistant lecturer in the civil engineering department.

## UCT Toastmasters

Professor Dee Bradshaw initiated the formation of the UCT Toastmasters club. It provides the ideal environment in which to nurture and develop "T-shaped" individuals that have the empathy and respect necessary to work in inter-disciplinary teams to co-create and address trans-disciplinary challenges.

Toastmasters is so much more than "self-improvement for communication skills". It is an international organisation and network of support committed to the development of leaders and communicators at all levels and in all cultures. It does this through local clubs that provide a safe positive peer-learning environment in which members are empowered to develop communication, leadership and general organisation and man-

agement skills. This results in greater self-confidence and personal growth and equips each individual to develop into their full potential.

Senzo Mgabhi, a Master's student who has attended Toastmasters, said, "This has been a wonderful journey for me. Toastmasters has helped me in developing my leadership, communicative and relationship skills. I am currently serving as VC President Public Relations, and there is a lot I have learnt. There is also proper guidance and mentorship from senior and experienced members. We have manuals on competent leadership and communication. As you can see I really have a lot to say."