

Faculty Newsletter

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Dean's Message

I would like to take this opportunity of thanking everyone for the support I have received over the past two months. I have spent time listening and meeting with departments informally to find out more about the work they do and to get to meet staff members across the faculty. It has certainly been a very useful exercise, and I look forward to ongoing conversations.

The ECSA accreditation visit is taking place on 14 and 15 September. I would like to thank all the staff members who worked so hard in getting all the documentation together for the ECSA report. A special thanks to Brandon Collier-Reed for co-ordinating the ECSA task team over the past year.

The faculty is engaged with the 2016 budget process against a background of pressing financial

constraints. The university is looking for ways to increase revenue and to reduce costs to ensure financial sustainability. The faculty's reviewing of departmental budgets will take place in August, and the faculty's completed budget submission needs to be at the Finance Department on 31 August.

There was a fantastic turn-out of staff and students at the Faculty Assembly which was held on 30 July. Thanks to everyone who took the time to attend and participate. It seemed that, amongst all the discussion, there were three key themes that were raised. They were social consciousness – is the curriculum geared to develop types of young minds that can apply themselves in a social and civil context; accountability – issues of how complaints are heard and resolved;



and, thirdly, academic and other support for students.

The transformation issue around names of buildings was also raised, and so we are also going to form a Names of Building group.

These working groups will form the beginning of change in the faculty, so they are the place to be right now. So, please send your name to Transform-EBE@uct.ac.za and get involved.

Visiting Scholar



Professor Lorenz Biegler is a visiting scholar in the Process and Modelling

Group in the Department of Chemical Engineering. He is working with Professor Klaus Moller and Dr Niyi Isafiade and interacting with their postgraduate students as well as giving lectures and seminars. He will be in the department from 30 July to 8 August. He is currently the Bayer University Professor and Head of Chemical Engineering at Carnegie Mellon University in Pittsburgh, USA.

His research interests lie in computer aided process engineering and include flowsheet optimization, optimization of systems of differential and algebraic equations, reactor network synthesis and algorithms for constrained, nonlinear process control.

Professor Biegler has been an insti-

tute fellow at the National Energy Technology Lab, a visiting scholar at Northwestern University and Lehigh University, a scientist-in-residence at Argonne and Sandia National Labs, a Distinguished Faculty Visitor at the University of Alberta, a Chang Jiang Scholar at Zhejiang University, a Gambrinus Fellow at the University of Dortmund, a Fulbright Fellow at the University of Heidelberg, a Distinguished Jubilee Lecturer at IIT-Bombay and the Hougen Visiting Professor at the University of Wisconsin. He is an author of over 400 publications and two books. He has taught many short courses around the world and given numerous invited presentations at national and international conferences.

New book for Professor Alison Lewis

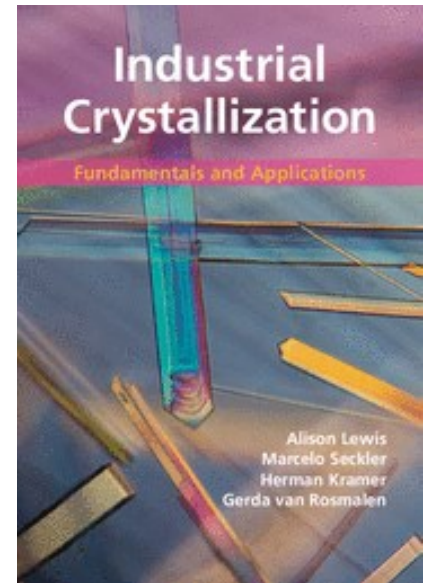
Professor Alison Lewis has co-authored a new book, *Industrial Crystallization: Fundamentals and Applications*, which bridges the gap between theory and practice, and provides the reader with a comprehensive overview of industrial crystallization.

Her co-authors are A/Professor Marcelo Seckler from the University of São Paulo, and A/Professor Herman Kramer and Professor Gerda van Rosmalen from the Delft University of Technology.

Newcomers will learn all the most important topics in industrial crystallization, from key concepts and basic theory to industrial practices. Topics covered include the characterization of a crystalline product

and the basic process design for crystallization, as well as batch crystallization, measurement techniques, and details on precipitation, melt crystallization and polymorphism. Each chapter begins with an introduction explaining the importance of the topic, and is supported by homework problems and worked examples. Real-world case studies are also provided, as well as new industry-relevant information, making this an ideal resource for industry practitioners, students, and researchers in the fields of industrial crystallization, separation processes, particle synthesis, and particle technology.

The book was published in July 2015 and can be viewed at [Cambridge University Press](https://www.cambridge.org/9781107051111).



NSTF Finalists

The NSTF Awards encourage and reward excellence in scientific research, technological innovation, environmental sustainability/Green Economy, technology transfer, education and training, capacity building, management and communication and outreach, thereby honouring and celebrating outstanding contributions to science, engineering, technology and innovation since 1998, in partnership with South32 (a spin-off company from BHP Billiton).

The University of Cape Town did well with 14 finalists for the NSTF awards and four of those were from EBE. We may not have been winners, but we can be proud of the four finalists below.

T W Kambule Awards: Emerging researchers (post-docs in a period of up to 6 years after award of a PhD or equivalent in research)

Dr Melinda Griffiths, Honorary Research Associate in the Centre for Bioprocess Engineering Research in the Department of Chemical Engineering.



Research leading to innovation by a team or individual through corporate organisation

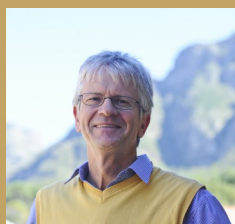
Professor Ed Boje from the Department of Electrical Engineering – Project Leader: Power Line Inspection Robot (**with UKZN and Eskom**)



NSTF Finalist

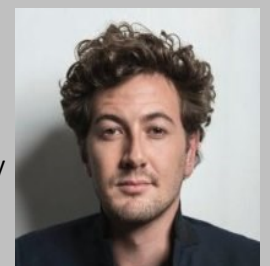
NSTF-GreenMatter Award by an individual or an organisation towards achieving biodiversity conservation, environmental sustainability and a Greener Economy (sponsored by GreenMatter)

Professor Harald Winkler from the Energy Research Centre in the Department of Mechanical Engineering



Research leading to innovation by a team or individual in an SMME (sponsored by THRIP, and initiative of the DTI)

Lumkani Fire Detection Team, UCT - Managing Director & Team Leader: Mr David Gluckman (project originally from the Department of Electrical Engineering under Samuel Ginsberg)



Celebrating excellence research in the faculty

The Faculty of Engineering & the Built Environment is focused on improving its research profile and in May 2015 staff and students received awards for their outstanding research work. Professor Danie Visser and Professor Sue Harrison presented the awards.

A **Departmental Research award** of R10 000 was given to a staff member from each department for being the most prolific publisher in the preceding calendar year. The recipients were:

- Professor Edgar Pieterse from the African Centre for Cities from the School of Architecture, Planning & Geomatics
- Dr Abimbola Windapo from the Department of Construction Economics and Management,
- Professor Kobus Van Zyl from the Department of Civil Engineering
- A/Professor Komla Folly from the Department of Electrical Engineering
- Professor Harald Winkler from the Energy Research Centre in Mechanical Engineering
- Professors Eric Van Steen and Michael Claeys from the Department of Chemical Engineering split the award.

The **EBE Research Award** of R50 000 went to **Dr Abimbola Windapo** for being the most prolific publisher in EBE in the preceding calendar year. The award was open to staff from the ranks of senior lecturer, lecturer, senior research officer, and research officer. The award was based on the weighted output of the publication count and selected additional outputs. **Professor Gerald Nurick** received the **EBE Professorial Research Award**. This award goes to the researcher in the EBE Faculty showing the best-ranked research profile over a five-year research period. Professor Nurick has been working in the Department of Mechanical Engineering in the field of impact dynamics for over twenty years. During this period, he has supervised over 60 MSc, PhD and post-doctoral graduate students who are now spread around the world. He has over 130 academic publications covering the following topics: Impact and Blast Dynamics, Crash worthiness, Material Properties at High Strain Rates, Metals and Composites, Human Response and Survivability, Impact on Sports Equipment, and Comminution.

Research student awards were made to encourage postgraduate students to publish during their degrees. The award was made to five students who had a research paper accepted by a peer-reviewed journal prior to graduation. The student had to be the first author on the paper or have played a central role in carrying out the work and writing the paper.



Dr Abimbola Windapo



Prof Gerald Nurick



Victoria Cain from Mechanical



Samkeliso Shongwe from Electrical



Elaine Govender - Chemical



Margreth Tadie - Chemical



Gabriel Lellouch - Mechanical

Electrical Engineering hosts IEEE President and CEO

UCT is home to one of the most vibrant IEEE Branches in Southern Africa. From 10 to 13 July 2015, Professor Howard Michel, the current IEEE President and CEO, made a stop in Cape Town during his world tour.

Together with 17 students and staff from the Department of Electrical Engineering, the IEEE team visited the South African National Space Agency in Hermanus where they were given a technical tour organised by David Oyedokun. David is the newly appointed secretary of the South Africa section of the IEEE, and is a lecturer in the Department of Electrical Engineering. The visit was aimed at consolidating the partnership that David had started last year with SANSA and CPUT in the area of pre-university educational-developmental projects by bringing together IEEE's legacy Teacher-in-Service Project (TISP) and SANSA's Science Advancement endeavours. Beneficiaries of this partnership include Daleel Lilla, who is currently an engineer on South Africa's Antarctic base and Athenkosi Cetyana Dyavu from Khayelitsha, who is a first-year UCT student in the Science Faculty.

During his talk at UCT on 13 July, Professor Michel emphasised the need for engineers to choose career developmental paths within their field of choice. He also suggested they look at their current place of employment and within transcontinental organisations such as the IEEE. He emphasised that what would set them aside from their peers in a competitive global workforce was the conscious decisions they made today to go above their routine tasks as demanded by their curriculum.

Prof Howard Michel rose to the ranks of a Major in the US Airforce before retiring to become a university professor at



Professor Howard Michel with staff and students from the Department of Electrical Engineering

the University of Massachusetts at Dartmouth, where he has graduated three PhD and 35 MSc students. In addition, Howard is a consultant for the US Department of Defence and private industry, specialising in the area of embedded systems, avionics, instrumentation and systems engineering. He has authored and published dozens of papers on intelligent systems, artificial neural networks and optical computing. He also holds patents for a distributed seismic and acoustic sensor system for detecting low-flying aircraft and an advanced artificial neural network based on high-frequency analogue signals. Prof Howard Michel had a long and distinguished career as a US Air Force pilot, satellite launch director, and engineer.

Capacity-building programme for local taxi operators

Herrie Schalekamp is a research officer at the Centre for Transport Studies in the Department of Civil Engineering. Over the past seven years he conducted his PhD research on the business needs and attitudes of minibus-taxi operators and associations in Cape Town. Recently his focus turned to operators in Mitchell's Plain and Khayelitsha, where the City of Cape Town's MyCiTi bus system is being rolled out.

Earlier this year Herrie developed two public-transport-related courses for minibus-taxi operators in the metro-south-east. The courses are on public transport planning and bus operations, and form part of a pilot City-funded capacity-building programme for the minibus-taxi industry. The first of these courses started in May this year, and they have been run on Upper Campus with support from the faculty's Continuous Professional Development Unit.

The target audience for the courses is the leadership and members of the minibus-taxi associations that form part of the joint venture company currently operating the MyCiTi N2 Express services, as well as their colleagues who may in future be incorporated in the MyCiTi system. 86 candidates



Herrie Schalekamp with some of the taxi operators

were pre-selected by the joint venture to participate in the courses, and each course is being run four times to accommodate groups of around 20 participants at a time.

Engaging with communities

During the June vacation our second-year architecture students, together with a few key staff members and members of the local community, helped to construct the sixth annual platform situated at Imizamo Yethu in Hout Bay. This year, an additional seating pavilion was constructed at the Hout Bay Sports Ground, to add to the first one that was built last year.

The design of the platform and its parts has been integrated into the course curriculum, and after designs had been developed and the necessary planning and community liaison had been completed, the project moved onto site. The students did earthworks, built formwork, tied and installed reinforcing, placed concrete, and finished the structure within quite a limited timeframe despite the winter weather. Initial reports from the community are that they are very happy with the additional pavilion, and there are potential plans to build a few more in due course.



Staff and second-year architecture students getting involved

Remembering Emeritus Professor Brian Paddon

Emeritus Associate Professor Brian Paddon passed away on 20 June 2015, having been an academic in the Department of Chemical Engineering from 1969 until his retirement in 1994.

Brian was born in Calcutta, India, in 1932 and spent his early childhood in Amritsar, attending school in Darjeeling. During World War II he and his sister were sent back to South Africa, and Brian matriculated at St Andrew's College in Grahamstown in 1950. He went on to UCT, where he graduated with a degree in Applied and Industrial Chemistry (shortly thereafter to become Chemical Engineering). His first job was at the Mobil refinery in Durban, where he was involved in the early development of Mobil's first fluidised catalytic cracking unit.

He returned to Cape Town in 1963, continuing to work with Mobil; and during that time completed his MBA as one of the first graduates from UCT's Graduate School of Business. In 1969 Brian left the corporate world for a position in the Department of Chemical Engineering at UCT, joining other luminaries from the early days of Chemical Engineering such as the late Donald

Carr and Heinrich Buhr. The Department in those days was small, with only a handful of lecturers, and graduating classes of between 10 and 20. However, Brian and his colleagues created a wonderful foundation for what is today widely regarded as one of the leading Departments of Chemical Engineering globally.

Chemical Engineering is deeply indebted to Brian for his dedicated and passionate contributions to the department over three decades.

The Department benefited greatly from having someone on its lecturing staff with such extensive industrial experience, and Brian became renowned as the convener of the tough Design Course - the capping course to the Chemical Engineering degree. His knowledge of chemical engineering processes was legendary, and through this he made an enormously positive impact on generations of chemical engineering students. Brian, ever cheerful and pleasant to all and sundry, was passionate about his teaching and will



be fondly remembered by colleagues not only in Chemical Engineering, but in all the engineering departments at UCT. Staff and students will recall how wonderfully helpful he was to students struggling with the basics of chemical engineering, and to new young academics still finding their feet.

The University and Chemical Engineering in particular are deeply indebted to Brian for his dedicated and passionate contributions to the department over almost three decades, and he will long be remembered by all those with whom he came into contact.

Off to UCL

The Oppenheimer Memorial Trust (OMT) awards a limited number of scholarships each year for postgraduate study at master's, doctoral and postdoctoral level in any discipline. Preference is given to candidates with a proven record of academic excellence who intend to pursue careers in academia, research or related fields.

Jarryd Buratovich, registered earlier this year for his master's degree in Civil Engineering with A/ Professor Hans Beushausen, has received an OMT award. He will be registering in September 2015 for an MSc in Civil Engineering specialising in Seismic Design at the University College, London.

In 2011, Jarryd graduated with a BSc (Eng) in civil engineering with first-class honours. He has been practising as a graduate consulting engineer in the structural department at Kantey & Templer Consulting Engineers in Cape Town.

Jarryd said, "I am extremely thankful and excited to have the opportunity to study at a leading university such as UCL. I will always be grateful for the generosity shown by the Oppenheimer Memorial Trust, who have made my ambition of studying abroad a reality. I am excited to be spending the year in London and aim to be an ambassador for both South Africa and UCT."



Reimagining the Two Rivers Urban Park Site



Edgar Pieterse and Tomà Berlanda attending the exhibition

The Masters of City & Regional Planning (MCRP) programme held a networking event and student exhibition on 11 June 2015. The exhibition was held in the newly renovated Planning Studio on Level 4 in the Centlivres Building.

The Exhibition Title was *Local Area Planning: Reimagining the Two Rivers Urban Park Site*.

The area is located at the meeting of the Black and Liesbeek Rivers, and is a unique place in Cape Town. The area, comprising sensitive ecological systems and habitats, extensive open space areas, significant institutions, historical buildings and cultural landscapes, provides an ideal space for the creation of a park that fulfils a variety of human and ecological needs and responds creatively to this quality environment.

The exhibition comprised the first-semester work produced by the first-year MCRP students. The overall aim of 'Studio A' is to embrace ideas of experiential learning, learning-by-doing and learning-through-reflection for the purpose of crafting appropriate spatial development frameworks and detailed precinct designs for a local area.

Representing Africa in Dublin

Daniel Avutia, a civil engineering graduate, won the National Institute of Materials, Minerals and Mining Young Persons' Lecture Competition for his lecture entitled *Analytical study of sink-hole propagation in South Africa*. He will represent Africa at the World Championships in Dublin, Ireland, in October 2015, where he will compete with the winners from the other five continents.

Avutia completed his BSc Civil Eng at UCT in 2010 and proceeded to do his master's in Geotechnical under the supervision of Dr Denis Kalumba. He graduated in June

2014; the title of his thesis was *Analytical and numerical study of dolomite sinkholes in Centurion, South Africa*.

Daniel is presently a geotechnical engineer with SRK Consulting in Johannesburg. The SRK Consulting (SA) Chairman and corporate consultant, Roger Dixon, said, "Daniel epitomises the technical excellence for which SRK is renowned."



Congratulations

Congratulations to Dr Amir Patel, who graduated in June 2015 with his PhD. Amir completed his BSc (Eng) in Mechatronics at the end of 2008. In 2010 he registered for his master's and in 2012 for his PhD. His supervisor was Professor Martin Braee, and his thesis topic was *Understanding the motions of the cheetah tail using robotics*. Amir became a permanent member of staff in the Department of Electrical Engineering from 1 June 2015.



Amir and his wife

Workshop in Pakistan

In April this year, Emeritus Professor Fabio Todeschini was invited by the Presidents of the Architects Regional Council of Asia and the Institute of Architects of Pakistan to teach a two-week teachers' training workshop in Islamabad, Pakistan. The participants were 19 university lecturers and professors and the workshop focused on appropriate urban design, comprising both theory and practical studio work. The workshop was well received, and he has been asked if he would be willing to give a similar workshop in Bangladesh, Sri Lanka or Indonesia in the coming months.



CPD course run in Zambia and Uganda



Dr Kalumba with Zambian participants

Dr D. Kalumba was invited by Rankin Engineering Consultants, one of the largest engineering consulting firms in Lusaka, Zambia, to conduct an in-house training programme in Geotechnical Field and Laboratory Techniques. The course was organised through the EBE CPD office, and convened by Dr Kalumba from 1 to 3 August 2015. A similar CPD program had been arranged for the engineers in Uganda at Makerere University from 8 to 10 July 2015.

Positioning the community as knowledge

100 students registered for the Social Infrastructures: Engaging with Community for Change winter-term course. The course is now in its third year, and by word of mouth, the interest for the course has spread through EBE. There were many interested students who were unable to register as the course was full. There has been such positive feedback and students' faces light up when they talk about the course. They feel that at last they are doing a course that teaches them how to engage with communities around their needs. They are learning how to design with the community as opposed to designing for the community. During the course, the students had learning exposure trips to various communities: Freedom Park in Tafelsig, Philippi, Valhalla Park, Pine Road in Woodstock, Mothers Unite in Lavender Hill, South Road in Wynberg, and two sites in Khayelitsha. The students came to realise how important it is to engage with the community and not to think that, as an engineer, you know what their needs are. During a visit to one of the communities, Dr Janice McMillan, the course convenor, had the community members speak in their home language, Xhosa. A few of the Xhosa-speaking students translated for



those who did not understand and the students realised how this changed the whole dynamics of the group, and the relationship between power and language.

The course looks at how students and emerging professionals engage with and learn from communities in our local context. McMillan said, "The students learn all the technical stuff in their degree courses. This course puts their knowledge into a context by learning from communities; community becomes an important site of knowledge."

Centre of Catalysis interns

The Centre for Catalysis is host to five mechanical engineering interns from CPUT. They are spending their third year working in the Catalysis laboratories. Nabeel Hussain said, "We need mechanical engineering interns to assist with building test units or testing of fuel-cell components. They are working on our industrial R&D projects." The students have a specific set of requirements, and staff in Catalysis align the work they give them with these to ensure that they are meeting the needs of their internship.

Technology Localisation Implementation Unit, an initiative of the DST, sponsors the interns for the year. The objective of this programme is to increase the graduation rate of science and engineering students through the provision of practical work and training. On completion of the year, the students could be employed by the Centre. Some of them will return to do their BTech at CPUT. Nabeel said, "We have found them to be competent and hard-working and hope that some will consider working part-time while completing their BTech."



*Standing : Somezele Dazana and Aviwe Poswayo,
Sitting Tshepang Tsieane, Noxolo Hlongwa and
Ntsika Mabentsela,*

Sustainable mineral resource development



2015 students seen with Dr Jenny Broadhurst, Professor Harro Von Blottnitz (middle), Professor J-P Franzidis (back) and Professor Sue Harrison (insert)

The second cohort of 18 students from the trans-disciplinary and inter-institutional MPhil specialising in Sustainable Mineral Resource Development was at UCT in June to attend two courses. Ten of the students are from UCT and eight from

the University of Zambia.

The group is truly an inter-disciplinary cohort – from a business analyst, geologist, forester to a recent chemical engineering graduate— and the proposed dissertation topics really show this. The programme has been

developed for a diverse group and it has the breadth and sufficient depth to develop critical thinking without being too specialised in any particular area.

The programme is run in collaboration with the University of Zambia and is addressing the inter-disciplinary framework that UCT is nurturing, particularly the interface of technology, environment and the community.

Professor Harro Von Blottnitz is the convenor of the course and took over from Professor J-P Franzidis, who retired at the end of the 2014 but is still involved in the programme. Professor Sue Harrison and Dr Jenny Broadhurst lecture on the programme.

The MPhil programme was initiated by the Institute for Sustainability and Peace at the United Nations University through their programme on Education for Sustainable Development in Africa, which they launched in October 2008.

News from the ACC

Five recent events of note in the ACC are the finalisation of two major research projects, the start of a public-art project, the launch of a new book, and hosting of summer interns from the USA.

From 1 June, 11 senior students on an International Fieldwork Programme from The New School (New York City) have been collaborating on several ACC projects (with other organisations such as Shack Dwellers International, the Social Justice Coalition and Ikhayalami). They have also been creating a Cape Town Atlas within the envelope of ACC's wider "City Desired" Project.

As part of the ACC's focus on public culture, the publication of Kim Gurney's book *The Art of Public Space, Curating and Reimagining the Ephemeral City* (Palgrave, London) is a closely textured analysis of three public art projects in Johannesburg in 2012.

In July, the ACC launched a project to rethink the relationship between public art and place in Cape Town. The exercise supports six public-art engagements that explore the significance of place outside of the City Bowl in Cape Town's townships in 2015. The Call for Proposals was for public-art projects that have been developed by township-based artists, that offer new understandings or perspectives of urban realities of Cape Town's townships through creative means.

A recent symposium in Cape Town attended by some 25 people wrapped up ACC's year-long research project examining land-valuation practices in three African cities, and ways of harnessing land values to better finance urban infrastructure. This project, led by ACC adjunct professors Ian Palmer and Stephen Berrisford and supported by a team of over twenty researchers from across the region, conducted in-depth studies of Addis Ababa, Nairobi and Harare. The project also developed an interactive online database to compare the readiness of each of the region's 31 biggest



cities to implement effective land value capture.

A shorter three-month research project scrutinised the attainability of the new "urban goal" in the UN Sustainable Development Goals framework. The first-ever explicit urban goal seeks to make cities inclusive, safe, resilient and sustainable. The ACC partnered with a consultancy and the City of Cape Town to test the proposed indicators in a pilot study of Cape Town. Indicators were tested against data availability, measurability, utility and custodianship. The inquiry examined the feasibility and usefulness of the indicators and collected data for analysis. There are evidently limitations in data that the CCT has at its disposal and the regularity with which it can access household-level information. A meeting in Sweden between all five city pilot study teams raised concerns over universality, common international standards, the coherence of reporting mechanisms, and difficulties of balancing exhaustive indicators with policy relevance.

World Student Environmental Network Summit

In July, Andrew Earl, a third-year civil engineering student, and two other UCT students attended the World Student Environmental Network Summit at Murdoch University in Perth, Western Australia. The lectures were given by a diverse group of academics and professionals. Andrew said, "What struck me about the whole experience was that everyone, from all of these diverse professions and fields of academia, all had a passion for nature - appropriate as the theme for the summit was 'Reconnecting with Nature'." The other delegates were from

across the world, and from diverse fields of study and of all ages.

As the summit went on, Andrew found that as UCT students, they had a tremendous amount to give. In the sharing and discussion of ideas their insights were extremely well received and people were fascinated by their stories that they shared.

Andrew said, "I have never been in an environment where the brains that this university is forging can be compared to the rest of the world. The pride I felt in realising that the ratings have never been wrong (other than



perhaps rating us too low) - was extremely moving. We have a lot to give, and a story to tell. I can only thank UCT for helping me explore this narrative and engage with it in a critical manner."

Making a difference on Mandela Day

On Friday 17 July, 18 staff members got together in the John Martin Room to spend their 67 minutes for Mandela Day— cutting and collating 451 reading booklets for the Shine Literacy Programme.

A number of staff members also donated children's books. The collated and donated books will assist with the Literacy Hour programme that they run in the schools.

Sine's vision is a nation of readers – through their simple, yet effective literacy programme, they believe their vision for South African children can become a reality.

A big thank you for helping the Shine Literacy programme make a difference.



Architecture workshop



During the June/July holiday, 30 local high-school learners spent three days attending the Architecture workshop programme. They got to experience residence life and spent two nights in Gracha Machel residence. Six architecture students were chaperones and stayed in the residence with the learners.

Simone Le Grange and student assistants ran the programme, which aims to give interested Grade 11 and 12 learners an opportunity to discover more about architecture and the built environment. They attended lectures and went on field trips to interesting buildings and sites. They also visited various architectural practices where they could engage with professional architects. The workshop also gave them an opportunity to find out more about the Portfolio of Work requirement which is part of the application process.

Electric Vehicle challenge visit

Pieter Leveque from the Department of Chemical Engineering and David Oyedokun from the Department of Electrical Engineering hosted 11 learners who had participated in the Electric Vehicle (EV) challenge race on 24 May at the Mbombela Stadium. The race is the end result of teams from local schools designing and building single seat electric vehicles. The event is a Rotary project aimed at exposing participants to scientific concepts, design skills and technology to show them what the field of engineering has to offer in terms of a career.

The 11 learners were from Uplands College and from Imagine Scholar, which draws disadvantaged learners from a rural area in the Tonga region of Mpumalanga. They attend Imagine



Scholar on a Saturday and during their holidays. Uplands College is a private school and Rotary put these two teams together to have a look at the dynamics. During the visit the Uplands team donated their motor and control system to the Imagine Scholar team, as the latter had burnt out their motor after the third lap.

Pieter had organised lab visits for the learners to find out more about fuel

cells, and David showed them the work that is being done in alternative energy.

"Both teams were incredibly impressed with what is on offer at UCT. For the Imagine Scholar, they had never flown before nor seen a university," said Ed Coombes, Rotary President, who accompanied the learners on their trip. He is also a 1973 Chemical Engineering graduate.



Welcome to new staff

In April, Ms Louis Tait joined the ERC as a research officer.

In May, Adjunct Professor Jeremy Mann joined the Department of Chemical Engineering.

JUNE:

Miss Ka Wai (May) Ho joined the EBE Faculty Office as a postgraduate admin assistant.

Mrs Cheryl Thomas joined the Department of Mechanical Engineering as the departmental manager.

Mr Pierre Smith is the new workshop and laboratory manager in the Department of Mechanical Engineering

JULY:

Miss Lesley Sibanda joined the African Centre for Cities in July as a research officer.

Miss Sarojini Pillay joined the Department of Chemical Engineering as the departmental manager.

Ms Alvira Mentoor joined the Department of Chemical Engineering as a laboratory manager.

Resignations

JUNE:

Miss Zulpha Geyer, admin officer for CREE, resigned in June.

Ms Liezl Matthews, senior technical officer in the Centre for Materials Engineering, resigned at the end of June.

JULY:

Ms Khanyo Ngubo, assistant faculty finance manager in the Faculty, resigned and left on 17 July.

Congratulations

Congratulations to A/ Professor Riana Geschke and her husband on the birth of their son Rainer. He was born on 13 June and weighed just under 4 kg. His big sister, Gabriele, is fascinated with her baby brother.



New HOD for ChemEng

Professor Eric Van Steen is the new HOD for the Department of Chemical Engineering. He took over from Professor Alison Lewis on 1 June 2015. Professor Van Steen was previously HOD of Chemical Engineering from 2003 to 2007.



Farewell

Barney Baron joined the Department of Construction Economics and Management in June 2002. He was due to retire at the end of 2014 but stayed on for six months to hand over to Mark Neutt, who is now the departmental assistant. Barney had been at UCT for 31 years.



Professor Paul Bowen and Barney enjoy a laugh at his farewell.

Liezl Matthews left the Centre for Materials Engineering at the end of June to go and explore her options. She did her BSc (Eng) in mechanical engineering (2005) at UCT and her MSc (2008) in the Centre for Materials Engineering under the supervision of Professor Rob Knutsen. Liezl was a senior technical officer and played a big role in supporting research in the Centre, as well as in the EEPEI specialisation centre in Material Science.



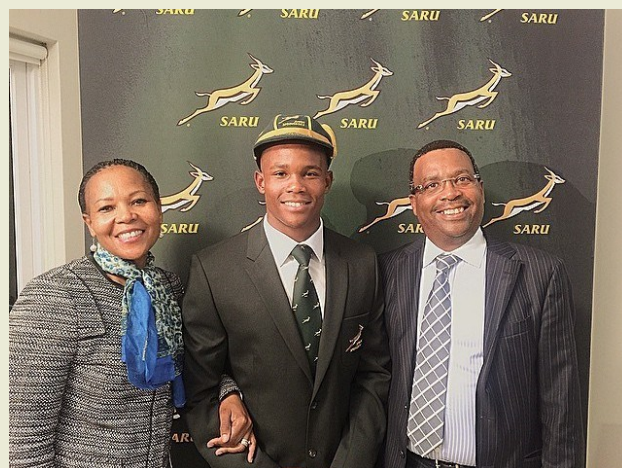
Jane English, Liezl Matthews and Soraya Allies

Meet EBE's Baby Bok

Khanyo Ngcukana, a first-year property studies student, took leave of absence to play for the Baby Boks' World Rugby U20 Championship in Italy last month. In the game against Australia, the Baby Boks won 46-13, with Khanyo scoring a try. They were placed third in the final standings, after losing to England in the semi-final and beating France in the third-place playoff.

"I feel honoured and privileged to have been selected to play for the Junior Boks this year," said Khanyo. "Wearing the green and gold was a dream come true. The team spirit and competitiveness in the build-up to the campaign was unbelievable. We didn't get the result we desired but the memories made on and off the field will never be lost."

Khanyo's father, Connel Ngcukana, is a 1989 UCT electrical engineering graduate and was in Italy to watch his son.



Khanyo Ngcukana seen with his mother, Nikki, and father Connel Ngcukana, at the capping event

Musical talent in MechEng

Julian Mayer is the principal technical officer in the Department of Mechanical Engineering, where he has been for 36 years. What a lot of people don't know about Julian is that in his spare time he plays bass guitar in a country-rock band, the Rocking Horse. In March this year, the band travelled to Nairobi to headline the first country-music festival in Kenya. They spent three days in Nairobi as guests of the concert management, and were accommodated, wined and dined in the finest fashion.

The show was well organised and staged at a popular outdoor venue – the Ngong Road Racecourse. Entertainment was provided by several local bands, as well as musicians from neighbouring countries. Julian said, "One of the highlights was a goat race – one of the most entertaining things I've ever witnessed." He added, "Our band closed the show, and we were very well received by the



Julian Mayer second from left with the band Rocking Horse

audience, many of whom had dressed in appropriate 'Boots and Hats' style."

Although it was a long way to travel to deliver a performance, it was well worth the effort, and they are looking

forward to playing at the next concert in Kenya. "The hospitality and friendliness of all the people we met - management staff, musicians and local folk - was wonderful," said Julian.

New workshop manager

Congratulations to Pierre Smith on his new position in the Department of Mechanical Engineering's workshop. Pierre was the principal technician in the workshop and from 1 June he is the workshop and laboratory manager. Pierre has been in the department for four-and-a-half years. Before that he worked for ten years in the food and wine industry.



Developing young African leaders

Bakang Palai, a 2007 UCT Property Studies graduate, has been selected for the 2015 Mandela Washington Fellowship for Young African Leaders. The programme is part of the President's Young African Leaders Initiative, and embodies President Obama's commitment to invest in the future of Africa.

Palai will be one of 13 Fellows from Botswana, selected for their proven record of accomplishment in leading and promoting positive change in their work as well as in their communities. They will be joining 500 leaders from across Africa.

In June, Bakang will join the University of Reno in Nevada for a six-week academic residency which will include leadership seminars, and men-



toring and networking sessions, as well as community-service opportunities. After the academic component, the Fellows will travel to Washington, DC, for a presidential summit to interact with senior US government, business, and civic leaders, including Barack Obama.

"The continent is going through a great transformation. As leaders, there is a need to address critical challenges, which include employment for the

youth, poverty alleviation and wealth creation. We need to come up with strategies and programmes that will provide the best quality of life, to promote good governance and to fight corruption and other ills in our countries," Bakang said.

Bakang has over seven years' experience in real estate developments and investments. He is currently the Property Development and Investments Manager at Khumo Property Asset Managements. He is the co-founder of the Botswana Green Building Council and is currently serving as an independent grading assessor for the Botswana Tourism Organisation.

On his return, Bakang will be available to mentor students as well as give talks to the faculty.

2014 Young Engineer of the Year Award to civil graduate

Makotsene Makgalemele, a 2008 UCT civil engineering graduate, received the 2014 Young Engineer of the Year Award from Consulting Engineers South Africa (CESA). The judges looked for outstanding performance in areas including technical achievement on a project; educational achievement; recognition, such as awards received; contributions to sustainable development; leadership ability; and the candidate's contribution to the image of the firm and the industry as a whole.

In May 2015, Makgalemele visited the Department of Civil Engineering to talk to the first-year students about her experiences. While at studying UCT, Makgalemele was an active member of the EBE Student Council, SAWOMEng Committee and SAICE Student Chapter. She is currently an Associate Director and shareholder at HHO Africa Infrastructure Engineers, where she was a bursary student. She is a Senior Project Leader/Engineer in the Roads and Transportation Division of the Johannesburg Office. Makgalemele is an active member of her firm and industry, having assisted in starting



Makotsene Makgalemele talking to first-year civil engineering students

up the company's Young Professional Forum at HHO. She is also a member of the SAICE National Young Members Panel and CESA's YPF Exco. Makgalemele is a registered Candidate Engineer with ECSA and is determined to be registered as a professional this year.

EBE Teaching Retreat 2015

18 people attended the EBE Teaching Retreat 2015, held at the Mont Fleur conference venue on 25 and 26 June.

Dr Kasturi Behari-Leak from the Centre for Innovation in Learning and Teaching facilitated the retreat, and together with Professor Jenni Case brought many new teaching concepts to the attendants.

Dr Margaret Blackie from Stellenbosch University gave a seminar that was very interesting, and Nazeema Ahmed, the EBE Psychologist, gave a very thought provoking and insightful workshop on *Engaging with Students*.

Abby Street, the coordinator of the retreat, said, "The retreat was a great success. Staff left feeling they had grown in their teaching philosophies."



Architecture's SPACE & TRANSFORMATION Lecture series

01 – July 22
Mpho Matsipa
Architecture, Dislocations and other Thought Experiments

02 – July 29
Tshego Moilola
Right On Time! A journey of authenticity in a time of parody

03 – August 5
Lesley Lokko
Cut and Paste

04 – August 12
Nolan O Dennis
(Dis)orientation and the hyper-reality of rainbows

05 – August 19
Yewande Omotoso
The Merits of Discomfort

06 – September 9
Solam Mkhabela
People, Places + Perceptions: Street Politics and Urban Education in Visual Formats

07 – September 16
Tanzeem Razak
From the Edges: Navigating Multiple Identities in transforming society/unequal profession

08 – September 23
Jay Pather
Remaking Places: A consideration of temporal forms in the making of place for elusive and indeterminate futures

09 – September 30
Mphethi Morojele
I draw [from] what I like

**Lunch Time
Lecture Series 2015**

University of Cape Town
School of Architecture,
Planning & Geomatics

SPACE & TRANS FORMATION

The Pink Room
Centlivres Building
Upper Campus
–
13:00 – 14:00
July + August +
September 2015

