

Faculty Newsletter

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Message from the Dean

The second semester started off with our annual Safety Week sponsored by Anglo American Platinum. Thank you to the Health and Safety officers who put great effort into organising relevant programmes for their departments. We were privileged to have Michelle Cilliers from Anglo American's Safety and Sustainable Development address our staff and students. It is critical that we continue to raise the profile of safety to embed a culture of understanding and sensitivity towards safety.

The Ad Hominem promotions process has started for academic staff and scientific officers and should be completed by early October.

The budget for 2012 is going to be tight. We have sub-

mitted the Faculty's budget request for 2012 and the next stage in the process is the UFC Strategy Forum in September.

The Faculty has submitted five SARChI applications to the NRF through the University. Well done to those who were chosen.

Congratulations to eight staff members who will be receiving their long service awards at a function hosted by the Vice-Chancellor on 6 October. Three staff members will be receiving the long service award for 25 years, four for 15 years and one for 10 years.

Words cannot express our sorrow at losing one of our young students. Ms Sine Mahaye, a third-year civil engineering student died in July after an illness. It was also sad to hear that Professor Peter Wilkinson had died in August after a long battle with cancer. Our thoughts and prayers are with their families.

Climate change mitigation in the context of development



On Wednesday 17 August, Professor Harald Winkler from the Energy Research Centre gave his inaugural lecture on '**Climate change mitigation in the context of development**'. Harald's message was that there is no easy solution to climate change but that it would not be business as usual. There was a choice that needed to be made: extreme reductions in carbon emissions or extreme impacts. Use less energy—use it more efficiently and mostly renewables.

A podcast of the lecture can be found on the UCT website <http://www.uct.ac.za/news/lectures/inaugural/2011/>

Important Dates

- 7 September—Secretary's Day
- 30 September—Graduation Ball at Kelvin Grove
- 21 October—Last day of lectures
- 13 December—Engineering graduation
- 16 December—Built Environment graduation

Recovering energy from food waste at a UCT residence

On Tuesday 14 June, Rethabile Melamu and members of the Environmental & Process Systems Engineering research group in the Department of Chemical Engineering, launched their food waste biogas digester project at the Leo Marquard residence.

Under the leadership of Harro Von Blottnitz, the research group took possession of the biogas digester in January 2010 and have investigated the performance of this unit for recovering energy from food waste at the residence, the ultimate aim being to show that this technology can succeed in urban Africa. This has a particular importance for the research group's work with urban informal caterers and for their theory of urban "energisation".

The biogas digester presently takes about 15kg of kitchen waste daily and produces gas constantly which is piped into the kitchen to an industrial gas burner, which allows the kitchen staff to cook for around 30 minutes. The Dean congratulated the group and said that they had shown that, as an institution, it is important not only to teach about sustainable development but also to show practically. Innovation is important and this is a living laboratory.



NEWS IN BRIEF

NEW SAAE FELLOWS

Congratulations to Alison Lewis, Dave Deglon and Eric van Steen, all from Chemical Engineering, who have been elected as new fellows of the South African Academy of Engineering. The Academy provides them with a forum for sharing their abilities and eminence in the profession in promoting the aims and objectives of the Academy for the benefit of all society in South Africa.

YOUNG PERSONS' WORLD LECTURE COMPETITION



Dyllon Randall, a research officer in the Crystallisation and Precipitation Unit, has won the National Final of the Young Persons' World Lecture Competition. He will be representing South Africa in Sao Paulo in September.

NATIONAL SCIENCE AND TECHNOLOGY FORUM BHP BILLITON AWARDS

Azeem Khan from the Department of Electrical Engineering received the Kambule NSTF award as a distinguished young black male researcher over the past five years. Azeem was recognised for his contribution to the understanding of industrial energy efficiency and the design of small-wind-generator and energy storage systems

SAICE BEST PAPER 2010

Marianne Vanderschuren received the SAICE: Best Paper 2010 (Traffic and Transportation) prize for her paper entitled: "Can the South African Transport System Surmount Reduced Oil Availability?"



PRESTIGIOUS FELLOWSHIP

Alphose Zingoni, head of the Civil Engineering Department, became the first South African to be made a fellow of the International Association for Bridge and Structural Engineering. He was recognised for his cutting-edge research in the behaviour of "shell structures" - thin, curved surfaces like the domes and vaults used in the Sydney Opera House.



NEW MANAGER FOR TRANSPORT CENTRE

Romano Del Mistro from Civil Engineering was elected as the manager of the Southern Transportation Centre of Development for a period of two years. The centre acts as the agent of the Department of Transport in distributing funds in the order of R3 million among four universities (UCT, CPUT, NMMU and US) to support studies in transportation.

Formal Launch of the SAMMRI Board

On Wednesday 3 August, the SAMMRI Board formally launched the South African Minerals to Metals Research Institute (SAMMRI).

In order to promote the development of the research needed by the mineral processing industry in South Africa, SAMMRI was created as a partnership between government, industry and academia. Launched on 8 November 2010 at the DST in Pretoria, its Board consists of representatives from the five founder companies—Anglo Platinum, Impala, Lonmin, Exxaro and AngloGold Ashanti—as well as the DST and nominated persons from various bodies.

The aim of SAMMRI is also to increase the number of postgraduates entering the mineral processing industry.

UCT has been selected as the administrative arm of SAMMRI and a pilot programme will be run in 2011–2012. Heather Sundstrom in the Minerals Pro-



Left to right: Mr Marinus du Plessis (Exxaro Resources), Emeritus Professor Cyril O'Connor, Mr July Ndlovu (Anglo American Platinum), Dr Neville Plint (Anglo American Platinum) - SAMMRI Chair, and Dr Victor Ross (Lonmin Platinum) - SAMMRI Deputy Chair

cessing Research Unit is responsible for the administration work. A call for research project proposals was sent out to all higher education institutions and 20 responses were received and nine projects were awarded funding. These were selected by the industry partners and each project has an industry mentor. At the SAMMRI workshop on 3 August, the academic staff and students from the

nine projects presented on the progress of their work.

The total funding for the pilot programme is R3 million, which represents the shared contributions from the DST and founding industry partners. The long-term objective is to develop rolling funding for this initiative, shared between the DST, other cognate government departments and industry.

This is a South African mining industry initiative which has been driven by industry. The DST gave seed money to develop a case study on the status of the South African minerals processing industry. This highlighted the reasons why a joint intervention by the industry and the state is needed to ensure that South Africa has the necessary high-level skill base and the cutting-edge technology, to maintain its globally competitive position in minerals processing.

Conferences

AfricaGeo 2011 conference

UCT was the academic partner of the AfricaGEO 2011 conference which took place from 31 May to 2 June at the CTICC.

A/Professor Julian Smit from the Geomatics Division was the technical director. The conference attracted over 700 delegates from government and the private sector to prospective users, academics, vendors, policy makers and representatives of various national and international organisations working in the arena of this technology.

The theme of the conference was “Developing Geomatics for Africa”, with an emphasis on the development of Geomatics (as an industry/technology) in the African context. This brought up technological development, as well as social development of the industry to suit the needs of, and that is appropriate to Africa.

South African Universities Power Engineering Conference

The Institution of Engineering Technology (UK), IEEE Power and Energy Society (USA) and the University of Cape Town hosted the South African Universities Power Engineering Conference from 13 to 15 July. The conference brought together practising engineers, academics, students and others with an interest in electrical power and energy. It is an established forum for the interaction of professionals and students in the power engineering and related fields in Southern Africa and provided a good opportunity for students to present their research work and exchange ideas with top researchers in their fields.

The theme of the conference was “*Sustainable energy, innovation and challenges*” and it featured plenary sessions, student papers and tutorials on a number of topical issues in industry today. As in the past, the conference incorporated the Eskom Tertiary Education Support Programme report-back meeting.

STAFF NEWS

Welcome to new staff

Dr **Amit Kumar Mishra** joined the Department of Electrical Engineering in April as a senior lecturer.

In May, Mr **Khayaletu Salman** joined the EBE Faculty Office as the Statistician and Admin Officer.

Mr **Donrick April** also joined the EBE Faculty Office in May as an Administrative Officer in the undergraduate section.

Associate Professor **Arnaud Malan** joined the Department of Mechanical Engineering in June.

Dr **Caryn Fenner** joined the Centre for Bioprocess Engineering Research in June as a Research Officer.

Miss **Lehlogonolo Chiloane** joined the ERC in June as a research officer.

Professor **Gordon Pirie** joined the African Centre for Cities as the Deputy Director.

Farewell

Ms **Inge Newman**, the Postgraduate Assistant in the Faculty Office, resigned and left the office in early August.

Ms **Michelle Armstrong**, the administrative officer from the African Centre for Cities, resigned and will leave at the end of September.

Early Retirements

Mr **Theo Moyana**, the departmental assistant in the Department of Civil Engineering, took early retirement in April.

Professor **Lucien Le Grange** from the School of Architecture, Planning and Geomatics took early retirement from 30 June 2011.



Lucien joined the School in February 1978. He taught on both the undergraduate and postgraduate degrees in Architecture. He was a practising architect and urban designer. From 2006 to 2010 he was the Director of the School.

Ms **Estelle Nobin**, the Postgraduate Officer in the Faculty Office, took early retirement in July. Estelle joined the Faculty Office in 2009 from the University of Kwa-Zulu-Natal.

New Addition



Congratulations to Gareth and Clare Floweday on the birth of their daughter Tessa Nicole Floweday, who was born on Saturday 4 June 2011. Gareth is based in the Sasol Fuels Advanced Laboratory in the Department of Mechanical Engineering.

Obituary

A/Professor Peter Wilkinson died on Wednesday 10 August after a brave battle with cancer. Peter retired at the end of last year after 28 years at UCT. He was a member of staff in the School of Architecture, Planning and Geomatics and taught on the City and Regional Planning and Transport Studies programmes. A memorial service was held for him on Tuesday 16 August at the Newlands cricket ground. Our thoughts and prayers are with his family and friends.



Mr Albert Martin died on 16 May 2011. In 2009, Albert celebrated 40 years of working in the Faculty. He was the departmental assistant in the Department of Electrical Engineering and in 2010 he took early retirement for health reasons. Our thoughts and prayers are with his family and friends.

Recruitment Activities

Professor SP Chowdhury and three electrical engineering students visited Hout Bay High School and Westerford High School to interact with the Grade 11 and 12 learners and to expose them to the different fields of electrical engineering and funding opportunities.



"Irrespective of our academic and research commitments, it is important that we make the time to visit these

schools. It is very rewarding to see the learners' excited faces and the appre-

ciation shown by the principal and the staff," said Professor Chowdhury.

Gabriel Machinda, a student who visited the schools, said he participated because he felt his experiences would help learners go through obstacles just as he did and not give up. He wanted to give them hope and help them reach their dreams.

Architecture Workshop

In July, Simone Le Grange organised the annual Architecture three-day workshop for 32 Grade 11 and Grade 12 high school learners from all over Cape Town. The learners have the opportunity to get a better understanding of architecture and the application process. The workshop includes visits to practices, and talks by prominent architects, lectures and design studios.

Lead Global Programme

22 Grade 11 and 12 learners from the Western Cape and from the USA spent two weeks finding out more about the different fields of engineering. The programme is sponsored by JP Morgan and is organised by LEAD Global, who are based in Atlanta. The programme included lectures, interactive workshops and projects. At the end of the two weeks, four groups did presentations on their projects around "Engineering solutions to poverty".

Career Evenings

Members of the Faculty participated in career evenings at South Peninsula, Rocklands, Springfield and Westerford High Schools. It was great to have members of GirlEng attending and motivating the female learners to consider engineering and the built environment as a career.

On 25 August, Herzlia High School will be hosting their careers evening and the Admissions Office is arranging a careers afternoon on Saturday 27 August at COSAT in Khayelitsha.

Individual visits to the Faculty

Grade 11 and 12 applicants and their parents have been coming to visit the Faculty to find out more information—particularly on the new admission criteria. They fly in from Johannesburg, KZN, PE and even as far as Kenya. They are all good potential applicants who are looking at a number of universities so it is important that they have a positive experience and get the information they require to make an informed decision.

Values and Culture Working Group

On the 15th of June 2011, the first 2011 "Dinner with the Dean" event was hosted at the Brooklands Guest House in Rosebank. Seventeen people from the various departments in the Faculty attended the evening.

The attendees were a mixture of Academic and PASS staff, and they had



the opportunity to meet each other and continue building relationships and connections. It also gave staff an opportunity to chat to the Dean and Faculty staff about any issues related

to transformation in a convivial environment.

A guest speaker, Cheryl Brown, gave a very inspiring talk about the partnership between the Centre for Higher Education and Development (CHED) Transformation Committee and Harvest of Hope, a sustainable livelihoods project that works with micro-farmers on the Cape Flats.

Women's Day Celebrations



On Monday 8 August, to celebrate Women's Day, the Dean invited all the women in the Faculty to a talk by Rhoda Kadalie.

Rhoda is the executive director of Impumelelo Innovations Award Trust, which awards innovative government and civil society initiatives that improve social service delivery in the eradication of poverty.

Rhoda gave a very motivating talk and her message was

that it is time women took action and let their voices be heard for the sake of the country. Women in the past stood up so they could vote. They met with violence, imprisonment and often death. She asked what women were doing today to ensure that the lives of women were improved.



Arlene Warren, Shaunelle Adams, Nelly Dili, Bulelwa Manxiwa and Samantha Reizenburg

African Women Leaders



Lebogang Mahlare, a third-year chemical engineering student, was selected to represent South Africa at the MILEAD Leadership Institute in Ghana from 12 July to 4 August 2011. The MILEAD fellows were chosen through a highly competitive selection process and criteria. Lebogang was selected in recognition of her remarkable role and accomplishments as a community leader and her passion for women in engineering in South Africa.

25 fellows were selected from twenty-five different African countries, representing Pan-African diversity, with multi-disciplinary academic, professional and social backgrounds. The Institute is a three-week intensive residential leadership training programme designed to equip emerging African women leaders with the knowledge and cutting-edge skills as 21st-century lead-

ers. The Institute was hosted by the Institute of African Studies at the University of Ghana.

"One meets twenty-five phenomenal women who are striving for a better Africa," said Lebogang. As representatives from across the continent, each one undergoes a rigorous, intensive programme that trains young women between the ages of 19 and 25 through workshops, seminars, lectures, debates, discussions and team building on how to best represent the future of African Women. Lectures and workshops from influential women in parliament, higher education, government and non-governmental organisations give insight into various fields and help better understand how one can improve their society.

Upon completing the three-week institute one has to return home and implement a project that will change their community. This past year, Lebogang, as the National Media and Marketing Director of SAWomEng, identified two key areas needing improvement in women leadership and transformation, particularly in the male-dominated field of engineering. "Women are still grossly underrepresented and my work is aligned with improving the status quo."

Safety—whose job is it anyway?

The perception of risk and safety has changed, as has our understanding of our responsibilities. The stakes today are far higher as people are more knowledgeable—and, as a result, a lot less tolerant. While safety and environmental aspects have always been of concern to large corporations, over the years we have seen them move up on the agenda. Michelle Cilliers from Safety and Sustainable Development at Anglo American was addressing the staff and students at Faculty's annual safety week.

The safety week programme is sponsored by Anglo American Platinum and took place from 25 to 29 July. The departments arranged various safety-related activities for their staff and students which included industry visits, guest speakers and seminars.

Michelle congratulated the Dean on the work he has done in the Faculty in raising the profile of safety, and the importance of safety as a core competence of engineers. She said com-



Francis Petersen, Michelle Cilliers and Jack Fletcher

panies found it advantageous to recruit graduates who had an understanding of, appreciation of and positive approach towards safety and risk management. "it is critical for us that our graduates go out into the workplace with a full understanding and sensitivity towards safety, and with a mind-set of zero harm," said the Dean.

Michelle emphasised that in order to change perceptions around safety, there had to be a concerted effort by leadership. It was important to understand the culture as people brought different attitudes and behaviours into the workplace, and there were different levels of risk taking. There had to be a consistent message across the Faculty on how we managed and approached risk. "It is all about understanding risk and the consequences attached to taking those risks. Once you understand this, you can put in the appropriate controls to manage those risks," she said.

Anglo American has embarked on a partnership with universities and UCT is one of the key-players in delivering a risk management course which is presented at four levels: executives, managers, supervisors and front line staff.

The New Engineering Building (NEB)

The final clearing of the site has been completed and Filcon, who were awarded the main contract, moved onto site on 4 August. An energy modelling contractor has taken a rating and will now model the building and test it against the Green Star rating.

The NEB PIC under the chair of Professor Cyril O'Connor meets on a monthly basis to drive the NEB project. Professor Vanessa Watson is the new chair for the NEB User group, which represents the users of the building and reports to the NEB PIC. Four reference groups have been formed which will feed into the User Group: Civil Engineering; Chemical Engineering, Interim Snape, and Sur-

face Science. The Dean has set up a forum to start discussions on the design of the new learning studios which will be situated in the new Snape building.



Discussions are being held to solve the problem of space in the Centlivres Building. It has been suggested that the original Snape Building be demolished and a new structure built in the current space, with an addi-

tional floor below and one floor above, to accommodate the learning studios and the Department of Construction Economics and Management. This will provide much needed space in the Centlivres Building for Architecture and Planning. The costing of the demolition and rebuilding of Snape still needs to be finalised and the project needs to be approved by Council.

A web camera has been installed on the Chemical Engineering building and can be accessed at the IP address: **10.22.11.126**.

The Dean continues with the fundraising campaign and has secured the following funding:

Anglo American:	R3 million
Anglo American Platinum:	R5 million
Lonmin:	R3 million
SANRAL:	R20 million