

# Faculty Newsletter

## IN THIS EDITION



## Message from the Dean

What a year this has been. It feels that we have only just begun and here we are with graduation upon us. We have 10 doctoral, 144 Master's, 122 Honours, and 499 undergraduate degrees to award, as well as seven postgraduate diplomas.

On 29 November, I was delighted to host the Faculty celebration event where we celebrated the achievements of academic and PASS staff members. These included promotions, NRF ratings, awards, retirements and various other achievements.

Congratulations to Alta Steenkamp on her successful application for funding from the World University Network to visit the University of Sydney next year.

The African Centre for Cities has been selected by Rockefeller as one of three winners of the internal grant competition and they will receive a general support grant for \$100 000. The grant is to support institutions that demonstrate high capacity to innovate. Congratulations to all staff involved.

I am pleased to inform you that the academic section in the Faculty Office will have its full complement of staff by 21 December. We look forward to welcoming the new staff members to the Faculty (see page 6).

It has been a difficult time in the Faculty dealing with the death of one of our first-year students. On 15 December I am holding a meeting with key stakeholders in the Faculty to discuss our early warning systems, to

ensure that we are able to identify and support students at risk.

I will be holding our annual DAC Indaba on 20 December where we will be discussing the outcomes of the climate survey, student experiences and student success, research and innovation, budget allocation for 2012 and curriculum revision and graduate-ness.

I would like to take this opportunity of thanking my executive team for their hard work and the support they have given me over the past year.

I wish you all a safe and happy festive season, and look forward to seeing you back in the new year.

## NRF Rating Outcome

At the Celebration function held on 29 November, the Dean congratulated the following staff members on their NRF ratings:

Professor George Ekama from Civil Engineering retained his A rating.

Associate Professor Pilate Moyo from the Department of Civil Engineering —C3 rating

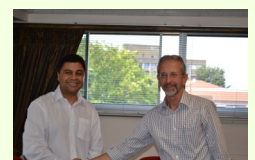
Dr Amit Mishra from the Department of Electrical Engineering—Y2 rating

Professor Sue Harrison from Department of Chemical Engineering—B3 rating

Emeritus Professor Gerhard De Jager from the Department of Electrical Engineering—C1 rating

Professor Mark Alexander from the Department of Civil Engineering—B3 rating

Professor Harald Winkler from the Energy Research Centre—B2 rating



# Deutsche Bank Urban Age Award

On Wednesday 23 November, it was announced that the international Deutsche Bank Urban Age Award has selected Cape Town to be its 2012 recipient. The Alfred Herrhausen Society, the international forum of the Deutsche Bank, has partnered with the African Centre for Cities at the University of Cape Town and LSE Cities at the London School of Economics to bring the Urban Age Award to Cape Town.

Mr Wolfgang Nowak, Director of the Alfred Herrhausen Society, said that the awards, which have been made since 2007, are set up to encourage people to take responsibility for the cities they live in. Previous awards have been made in Mumbai, Sao Paulo, Istanbul and Mexico City. The award and an amount of R750 000 will go to the project that makes the best use of urban space, where people, industry, NGOs and government work together to improve the quality of life for their communities. An independent jury of local and international judges, who span a range of disciplines and experiences, will select the winning project.

Professor Edgar Pieterse, director of the African Centre for Cities and chair of the jury, said, "With the population reaching 7 billion, we need to ask ourselves how do we govern and

use our resources to create a sustainable future. The Urban Age award will recognise and honour people who, despite the odds, are making a difference and creating spaces for healthy cities." The closing date for applications is 24 February 2012. Information can be found at [www.DBUAaward.net](http://www.DBUAaward.net).



Wolfgang Nowak, (Alfred Herrhausen Society) Nomfundo Walaza, Edgar Pieterse and Malika Ndlovu (members of the jury)

## RETIREMENT—WHAT RETIREMENT?



Kate Le Roux, the new director for CREE, with Professor Duncan Fraser

Professor Duncan Fraser from the Department of Chemical Engineering is certainly not considering slowing down, even though he will be retiring from the Department of Chemical Engineering at the end of December.

He has recently been elected chair of the Governing Body of the Research in Engineering Network, and one of the Vice-Presidents of the International Federation of Engineering Education Societies. He will also continue to be part of the group working on the new curriculum development in the Chemical Engineering department.

On Tuesday 6 December, CREE held

a seminar where Duncan spoke on Engineering Education: Past, Present and Future.

While doing his PhD at UCT, Duncan filled in for a number of lecturers who were on sabbatical and this is when the teaching bug bit him. He spent three years out in industry before returning to the Department of Chemical Engineering to teach. Duncan said that it has been such a privilege working at the university where you have the freedom and intellectual space to think and discuss.

He has taught many courses in the department and introduced new innovative ways of teaching. From 1992 to 1995 he led the team who developed the new curriculum. His advice for the future is that academics need to reassert control and not let the administrative side of the university make decisions which affect their teaching and research work.

Duncan and Jeff Jawitz were instrumental in setting CREE up at UCT. They realised that CREE needed to be more than just an engineering education centre— it had to do research to gain re-

spect and become the centre it is today. Duncan has worked at institutional, national and international level to improve the quality of undergraduate engineering education. He says there is no magic formula. Education is a complex system which requires a whole range of processes working together. He feels it is time for the members of CREE to pool their talents and to work together to tackle bigger problems.



Attending the CREE seminar were three Chemical Engineering staff members who were all taught by Duncan. They are Hilton Heydenrych, JP Franzidis and Klaus Möller.

# Bringing Solar Energy to a home in Nyanga

Members of the IEEE student branch at UCT have successfully installed a 300-litre solar geyser at the Emasithandane Children's home out in Nyanga. Last year postgraduate Commerce students at UCT raised R55 000 to go towards building an extension to the home. On completion of the extension in mid-December, an array of 3-kilowatt solar panels will be installed on the new roof, which, together with the solar geyser, will save the home around R1 500 monthly on its electricity bill.

The project could not have happened without the support of a number of industry partners who have come together to support the IEEE student branch. The industry partners are Hills Solar, Solairedirect Technologies, MLT Drives, Eskom and staff in the Department of Electrical Engineering. Overall, they have donated R203 000 in equipment and funds, with an additional R64 000 coming from IEEE.

Through the Power Engineering research group at UCT, the IEEE students partnered with Crossing Borders from the University of Stuttgart, Germany. They contributed R90 000 to the project and two of their members, Helena Hingerl and Verena Steub arrived in Cape Town to assist with the installation of the solar geyser.

A main component of this project was to expose the local youth to solar energy and its benefits. In October a group of high school learners visited Solairedirect Technologies where they built a kilowatt array of solar panels. At a function on 1 December the learners from Mandela High School and New Eisleben High School did a presentation on what they have learnt about solar energy and how they built a geyser and solar panel model.

Once all the installation is complete, the IEEE students will educate the staff and children who live in the home on the benefits of solar energy. It is truly an amazing story with wonderful people doing so much to help Mama Zephina Maposela, who founded the home.



*Verena Steub, Helena Hingerl (from Crossing Borders in Germany); David Oyedokun, Tshina Mulumba, Roaldje Nadjiasngar and Blessing Katsande (IEEE student members) busy installing the 300 litre solar geyser*

The IEEE students at UCT are an amazing group of dedicated and committed young people who have given up huge amounts of time to ensure that this project came to fruition. David Oyedokun, the leader of this project, has worked tirelessly with his committee members to secure the funding, to install the geyser and to run the education programmes at the schools. The project members are mainly postgraduate students who come from across Africa - Nigeria, Zimbabwe, Congo, Chad, Swaziland, Lesotho, Ghana, Tanzania and South Africa. Professor Francis Petersen said: "These are students the Faculty of Engineering & the Built Environment can be extremely proud of. Our aim is to produce graduate students with excellent technical skills and knowledge, and a commitment to social upliftment in the communities around us."

## Intelligent Transport Systems



On Thursday 8 December, A/ Professor Marianne Vanderschuren launched the Jamie Shuttle Traveller Information System.

The South African public transport services are generally considered to be unsatisfactory and in need of improvement. Independent of the physical infrastructure and vehicle type, the provision of information has internationally been

identified as an important element that improves customer satisfaction. The trend is to provide real-time information through the implementation of Advanced Traveller Information Systems (ATIS).

One of the research projects (Intelligent Transport Systems) is investigating the potential benefits of providing real-time information in South Africa.

Supported by local companies, the first pilot system is currently being implemented on the Jammie Shuttles. This includes six TV screens in buildings across campus, one bus stop equipped with two Visual Management systems which show the different routes of the Jamie Shuttles and the departure times,

expected arrival times and indicates if there are any delays.

They are busy testing that the information is accurate and in 2012 they aim to roll it out to middle campus residences and into Observatory.



# News in Brief



Mr Thapelo Letete from the Energy Research Centre and A/Professor Harro Von Blottnitz from Chemical Engineering co-authored a chapter, **“Biofuel Policies in South Africa: A Critical Analysis”** in the book *Bioenergy for Sustainable Development in Africa* which has recently been published.

## Student Leadership Award

Tapiwa Tevera received the Student Leadership Award for the Best Postgraduate Student Council. Tapiwa was chair of the EBE postgraduate student council for 2011.



## South Africa’s Inventor of the Year



*Popular Mechanics* has named University of Cape Town bioengineer Dr George Vicatos as South Africa’s Inventor of the Year for his development of a versatile and potentially life-changing facial reconstruction system. His R50 000 prize money included an award for top spot in the Cutting Edge category of a nationwide inventors’ competition. The judges remarked that Vicatos’s invention “demonstrated his commitment to a better understanding of the human organism and the tireless pursuit of practical solutions for its frailties”.

([www.popularmechanics.co.za](http://www.popularmechanics.co.za))

## Mechanical Engineering Open Day

Mechanical Engineering held their annual open day where final year students display their projects and three students are selected to present their projects to the audience of parents, staff, fellow students, industry and alumni. Awards are also made to the top achieving students in various categories and this year the Department introduced a new prize—The Albert Wessels Prize - for the best student in each year of study.



## Architecture and Landscape Architecture exhibition

On 23 November, the Architecture graduate class of 2011 organised the annual MArch (Prof)/MLA 2011 Graduate exhibition at the Cape Town City Hall. The event showcased the thesis work of the 5th-year architecture and landscape architecture students. The projects were diverse and ranged from water theatres, to informal settlements, docks, stations and mountains. Staff members from the School and the external examiners were impressed by the high standard and said they were glad to see the engagement with the city around various projects. They also said that it was very exciting to see the interaction between the architects and the landscape architects. The event hosted the annual Corobrik awards and Mr Christie van Niekerk, the

Corobrik Regional Manager for the Western Cape, said Corobrik was proud to be hosting the 25<sup>th</sup> annual student awards premium event. This year for the first time they were awarding a prize for the most innovative landscape architecture student and this went to Ancunel Steyn. The Corobrik Student of the year award went to Meghan Ho-Tong. JoAnne Stramack received the award for the best use of masonry and Temba Jauch received an internship where he will spend eight months at Renzo Piano Workshop, an architect firm in either their Paris or Genoa office.



Meghan Ho-Tong with Professor Jo Noero and Mr Christie van Niekerk from Corobrik.

## 2012 EBE Postgraduate Student Council

The 2012 postgraduate student council has been elected and members have been allocated their portfolios. The Council has two additional portfolios, Health and Safety and Inter-Departmental, which has increased the membership to ten. The Chair, Graham Morrison, said that with the additional members they would be able to achieve more and ensure that they reach out to more postgraduate students.

The members and their portfolios are:

Graham Morrison: Chair

Thabo Ntsoko: Vice-Chair

Nasheeta Hanief: Secretary

Khanyisa Mabunda: Treasurer

Samantha Mudzengi: Health and Safety

Manuella D'Oliviera Pio: Academic

Irenee Kaminuza: Marketing

Pardon Mashambanhaka: Entertainment

Jia Fan: Entertainment

Bernelle Verster: Inter-Departmental



*Energetic, diverse council members ready for action. Missing from the photograph is Samantha Mudzengi.*

## 2012 EBE Undergraduate Student Council

The members of the 2012 undergraduate student council:

Vusi Baleni: Chair

Dean Rynhoud: Vice-Chair

Avashen Pather: Treasurer

Natsai Verenga: Secretary

Sameeha Osman-Latib: Academic & Transformation

Vuyiseka Mapangwana: Outreach & HR

Pitso Sekhoto: Career Development & Publications

Lee Kruse: Marketing & Memorabilia

Kweku Acquah: Events & Corporate Relations

Xolani Mandidi: Student Life & IT

## EWB 2012

EWB 2012 committee members:

Heloise Greeff	Chair
Kashir Singh	Secretary
Avashen Pather	Treasurer
Lynn Asimwe	Marketing
Dean Rynhoud	Events
Alice Wong	Communications
Birte Toussaint	Faculty Liaison
Matthew Docherty	Project Coordinator

EWB has five projects confirmed for 2012. With additional funding and resources they hope to bring the total number of projects to ten.

Currently, Paul Mesarcik is leading the installation of the Biogas Digester at Abalimi Community Gardens in Khayalitsha. Installation commenced on 21 November. The gas from the digester will be used to run the kitchen at Abalimi which closed down recently due to a lack of funds. EWB members celebrated Siyazama day with members from the community at Abalimi over the weekend.

EWB is delighted to have five members form part of the newly launched

EWBUCT Alumni programme. Already the members are benefiting hugely from the alumni input and experience.



## New Staff

Welcome back to Fazlin Harribi, who has returned to the Energy Research Centre as the admin assistant. Fazlin will be taking over from Ann Steiner, who is retiring in December.



## Faculty Office

In December the Faculty Office will have its full staff complement. Contingency plans have been put in place to assist the Faculty Office over the critical time in January and February to ensure the smooth running of registration for first years and returning students. Staff members and temps will be on hand to assist students, answer queries, and deal with parents who come into the Faculty Office. Department admin staff have kindly agreed to assist with first-year registration, which will take place on 2 and 3 February.

### The new staff members in the Faculty Office are:

**Ms Margo Williams** who is the new Postgraduate Officer. She will be starting on 19 December. Margo was the Postgraduate officer for the Science Faculty at UCT.

**Mrs Debby Chuter** is the new Undergraduate Manager and will be replacing Diann Donald, who retires at the end of December. Debby joined the Faculty on 12 December. She joins us from Access Trust.

**Ms Erin Heeger** joined the Faculty Office on 5 December as an admin assistant. Erin was the senior secretary at the Centre of Open Learning at UCT.

**Ms Nuraan Isaacs** will be joining the Faculty Office on 21 December as the postgraduate admin assistant. Nuraan was the undergraduate admin assistant in the Humanities Faculty at UCT.



## GRADUATION

Congratulations to a number of staff members who have family members graduating in December:

Karin Van Wyk's son Justin will be graduating with a Business Science degree.

Marlene Joubert's daughter Shandrè will be graduating with a Humanities degree (double major in Industrial Sociology and Organisational Psychology).



Susan Batho's son Chris Day will be graduating with his MSc (Eng) after obtaining his BSc(Eng) in 2007 at UCT. This is particularly special for Susan and Chris, as Chris's dream of wanting to study prior to his accident in 2000 has now come to fruition with the reward of two degrees. Congratulations to them both!

Paul Barendse from the Department of Electrical Engineering has his sister graduating from the Commerce Faculty.

Marianne Vanderschuren has the first PhD student, Eddie Beukes, graduating from the Centre of Transport Studies.



David Ikumi comes from Nairobi in Kenya. He joined UCT in 2002 as an ASPECT student and graduated with a BSc in Civil Engineering in 2006. He completed his Master's degree in 2008 and this year he will be graduating with his PhD. The title of his thesis is *'The development of a three phase plant-wide*

*mathematical model for sewage treatment'*. Professor George Ekama was his supervisor.

David is presently in Canada working on a six-month internship with Professor Vanrolleghem, in the modelEAU group at Université Laval. His main work there is to develop a protocol for the calibration of the models extended for treatment of phosphorus-rich sludge, on a plant-wide basis, and to learn more about compartmental models (that deal with fluid dynamics in a plant reactor) and improved wastewater treatment plant sludge settlers. This was mainly to be more equipped for the implementation of the plant-wide mathematical model, which was developed in the water research group at UCT, on full scale wastewater treatment plants. David will be returning to Canada after the graduation for about two and a half months.

## GETTING THE RIGHT SUPPORT

Siphesihle Radebe will be graduating in December with his BSc Chemical Engineering. It has taken him four years to graduate despite the setbacks he experienced during his studies. He comes from Newcastle in Kwazulu Natal and is one of eight children. His father is a taxi owner and his mother is unemployed.

He matriculated in 2007 from Dedangifunde High School with four As and two Bs and was offered bursaries and scholarships to attend the University of Kwazulu Natal and Wits University. He chose UCT as he had heard it was the top university in Africa. He considered studying medicine but decided he wanted the challenge of engineering and changed his choice to chemical engineering.

Since he joined UCT in 2008, Siphesihle says it has certainly been a hard journey. He has suffered from blackouts over the four years he has been here. Siphesihle heard about Nazeema Ahmed, the Faculty student psychologist during orientation. When he realised he was in trouble, he made an appointment to see her. He said that at first it

was extremely difficult opening up to her but, with her assistance and support, he found the courage, as he knew he needed help to solve his problems.

He managed to pass all his courses in first and second year but in the mid-year exams of third year, he failed his two electives. He was devastated as he had received a bursary from Mintek and was concerned that it would be taken away from him. He started to lose hope but, through the support he received from his family, Nazeema, Professor Duncan Fraser from Chemical Engineering, and his Pastor, Apostle MJ Mohlala from Shekainah Healing Ministries in Khayelitsha, he passed third year and has now passed all his final-year courses and he and his partner, Farai Mashayamombe, have obtained 90% for their final-year project thesis and will receive the Final Year project award. He acknowledges the support and guidance that they got from their supervisors, Dr Aubrey Mainza, Lawrence Bbosa and Ditendi Tesh. Siphesihle will be joining Mintek in January 2012. He was given the opportunity to do his Master's degree but he wants



to go through the training programme at Mintek first, so that he can find a project which interests him, before coming back to do his Master's in 2013.

Siphesihle wanted to tell his story so that other students know that the support is there for them but it is important that they seek it when they are having problems. "I cannot express my gratitude to those who have helped and supported me over the four years. Without their support I would not have made it through. Glory be to God"

## NEW ENGINEERING BUILDING

We are delighted to report that all users (Departments of Chemical and Civil Engineering and the Dean's Suite) who will be located in the new engineering building have signed off on their space, and the final design has been approved. It has been a long journey, but it has been an important process to get the departments' input and to ensure that everyone is happy with the space which has been assigned to them.

The UB & DC have in principle given their support to demolish the Snape Building and erect a new 'EBE Teaching and Learning Building' but it will depend on the cost. SAOTA architects have drawn up a preliminary design and will now proceed to do a concept design and the quantity surveyors will cost the new building which will be presented to the University Finance Committee on 19 February before going to Council on 3 March for approval.

Foundations of the new building are



now complete and the foundations for the Surface Sciences Laboratory are well advanced. Filcon, the contractor, will be working on the site up until 20 December to ensure the building progress remains on track.

Work is progressing well in the computer laboratory in the Chemical Engineering Building and work should be finished by the target date of 27 January 2012.

We are pleased to report that the latest Health and Safety audit has been done and the safety consultant is satis-

fied with the contractor's performance.

We are fully aware that staff members in Civil and Chemical engineering have had to endure the noise and dust of the new building and thank them for their patience and understanding.

We would also like to take this opportunity to thank Professor Cyril O'Connor, who has been the Chair of the NEB PIC for 2011. He has done a great job in ensuring that all the necessary procedures have been followed. He has kept everyone on their toes and managed to get agreement from all parties so that the design of the building could be signed off and everyone is happy. Thank you also to all the members of the PIC and the User Groups for their input and patience over the past year. It has been a long and often difficult journey but it is important that everyone has participated and had their say. And a big thank you to Erica Le Roux who has serviced the PIC and User Groups.

# TRANSFORMATION

## Visit to the Holocaust Centre – 30 November 2011

The Values and Culture Transformation committee organised a visit to the Cape Town Holocaust Centre November 2011.

Ten people from EBE took part in the visit and it included people from the different departments, as well as the faculty office. The visit included a workshop that focused on the historical, moral and ethical dimensions of the Holocaust, in particular the issues of prejudice, racism, intolerance, discrimination and the abuse of power. The connection that exists between Nazism and the racism of apartheid was also highlighted and discussed. As part of the programme, the attendees visited a permanent exhibition on the history of the Holocaust. The exhibition included text, archival photographs, film footage, multimedia displays and recreated environments.

Everyone who attended the workshop was deeply touched and we all left with a deeper understanding of the Holocaust and Human Rights.



Seen enjoying lunch are Gary Groenmeyer from the Department of Chemical Engineering and Mrs Kehinde Awodele from the Department of Electrical Engineering



**Schöllkopf-Schüler spenden für Zisterne.** 1.400 Euro sind bei einer Spendenaktion von Schülern der Kirchheimer Jakob-Friedrich-Schöllkopfschule zusammengekommen. Nun wurde dieser Geldbetrag einem Repräsentanten der Jabulani-Foundation in Südafrika überreicht. Professor Dr. Charles T. Gaunt, der an der Universität Kapstadt Elektrotechnik lehrt, berichtete unter anderem über die schlechte Wasserversorgung für ärmere Bevölkerungsschichten. Das Geld, das die Schüler durch unterschiedliche Aktionen wie Kuchenverkauf, Tütenpacken oder Pfandflaschensammeln eingenommen haben, wird nun für eine Zisterne verwendet, für die Vorschule im ländlichen Gebiet Zithulele am Ostkap von Südafrika. pm/Foto: Jean-Luc Jacques

*Trevor Gaunt getting some publicity for UCT over in Germany*



Remona Moodley, a final year Electrical Engineering student, was crowned the first princess at the Miss South Africa 2011 pageant on 11 December.

Photograph from <http://www.misssa.co.za/pageant/2011/finalists>