

# Faculty Newsletter

## Message from the Dean

On behalf of the Faculty, congratulations to the staff in Architecture who have recently completed a rigorous accreditation visit by the South African Council for the Architectural Profession, together with the Commonwealth Association for Architects, who had one representative on the panel. They have been given unconditional accreditation for the next four years.

My hearty congratulations to Michael Claeys and his team in the UCT-SASOL study team on Cobalt Fischer-Tropsch, who are short listed as a finalist for the 2010/11 National Science and Technology Forum Awards. They have been nominated in the category 'Research for innovation by a team or individual in a corporate organisation or institution'. The winners will be announced on Thursday 26 May 2011. On behalf of the Faculty, we wish Michael and his team all the best.

Inaugural lectures were an important part of the Faculty and over the past three years we have not hosted one. I am happy to report that we now have a list of the staff members who are due to give their inaugural lecture and my assistant, Janet Baron, is in the process of setting up dates.

The Faculty Advisory Board meeting for 2011 will take place on 1 June. Members of the board are:

- Norbert Behrens, General Manager for Group Strategy, Sasol;
- Neville Nicolau, CEO, Anglo Platinum;
- Pieter Uys, CEO, Vodacom;

- Steve Lennon, Managing Director Services Division, Eskom;
- Brian Bruce, CEO, Murray & Roberts;
- Stefan Antoni, Stefan Antoni Olmesdahl Truen Architects;
- Johan Evertse, Human Resource Director, Daimler-Chrysler SA.

I am very grateful to the new members who have agreed to give up their time to sit on the Faculty Advisory Board and I look forward to working with them over the next couple of years. Their input and advice will be crucial to the development of the Faculty.

I am delighted to report that Dave Dewar is being honoured by the City of Cape Town by being awarded the Mayor's Medal for Social Affairs and Services for his great contribution to the study of Planning in South Africa. The award will be bestowed on him on 28 April.

The articles in the newsletter are testimony to the quality of our staff and students. They all contribute towards achieving the Faculty's vision of being the Faculty of choice for national and international students and staff.

I would like to take this opportunity of wishing all our Christian staff members a very happy and blessed Easter and our Jewish staff members a happy Passover. To everyone who is going away over Easter, I wish you a good break and a safe journey.

## Launch of the Chemical Industries Resource Pack

On Wednesday 30 March Sasol held a launch of the Chemical Industries Resource Pack for Grade 12 teachers.

Chemical industries and the impact of these industries on South Africa form part of the Grade 12 syllabus. In addition to the new content, two new assessment requirements, the school research project and the practical investigation, have also been added. The chemical industry is a new topic for most teachers and this project aims to supply resource material that will assist teachers in teaching this section with confidence and expose the learners to an important set of industries in our country.

The resource pack was developed by Rene Toerien, a Research Officer: Schools Project in the Department of Chemical Engineering. The resource pack will include learner information sheets, DVD with animations, video footage and electronic quizzes, a school research project, a set of exemplar practical investigations, a set of posters and a periodic table for classroom display. The aim of the project is to provide the resource pack to every high school in the country. To achieve this goal, 6000 copies will be printed and distributed in all provinces.

Sasol have sponsored the production and printing of the resource pack. A similar project based on the Mining and Mineral Processing industry for Grade 11 teachers was sponsored by Anglo Platinum in 2009.



# HySA/Catalysis Competence Centre

On 28 and 29 March the *HySA/Catalysis* (Hydrogen Catalysis) Competence Centre held a short course on Electro-catalysis, Membrane Electrode Assemblies and Fuel Cells. The course was opened by Professor Danie Visser, who welcomed all the delegates. Dr Siyabonga Mange from the DST spoke on the DST's flagship programme HySA, followed by Dr Olaf Conrad, who gave a presentation on the HySA/Catalysis Competence Centre, and Dr Frano Barbir, who spoke on the future of hydrogen.

The course was open nationally to HySA and the staff and students of related institutions. The following international experts contributed to the course:

Prof. Frano Barbir - University of Split, Croatia  
 Prof. Claude Lamy - University of Poitiers, France  
 Prof. Anthony Kucernak, Imperial College, UK  
 Dr Mark Debe, 3M, USA  
 Dr Marcelo Linardi, IPEN (Nuclear and Energy Research Centre), Brazil  
 Prof. Guenther Scherer, Paul Scherrer Institute, Switzerland  
 Ms Anthea Bath, Anglo Platinum, South Africa  
 Dr Jens Mueller, Smart Fuel Cells, Germany



*Olaf Conrad, Jack Fletcher, Francis Petersen, Siyabonga Mange and Frano Barbir*

## New Director for HySA/Catalysis Competence Centre



Dr Olaf Conrad is the new director of the HySA/Catalysis Centre, in the Department of Chemical Engineering. He officially took the reins in January, and calls his new post – and home – here at UCT, a wish fulfilled.

Until December, Olaf had been Head of Division for the fuel cell department at NEXT ENERGY in Oldenburg, Germany.

Olaf is responsible for scientific leadership within HySA/Catalysis, and is an internationally renowned expert on PEM fuel cells with many years of experience in the development of electrocatalysts and their integration into MEAs.

Olaf began his scientific career under the advisory

of Professor Krebs at the University of Münster, Germany, completing a doctoral thesis on the topic of high-temperature melt syntheses and the analysis of the crystalline structure of I-III-VI aluminium compounds. Following this, he completed post-doctoral studies in Finland and the USA as a recipient of the Feodor Lynen research fellowship at the Alexander von Humboldt Foundation. In his subsequent position as Research Chemist at the corporate research division of the Engelhard Corporation (today a part of BASF) in the USA, Italy and Japan he helped promote the development and market launch of platinum electrocatalysts for fuel cells.

Asked about the plans for HySA/Catalysis, he mentions firstly that it's a joy to work in an already established infrastructure. "Engineering here [at UCT] is top of the line in infrastructure, competence and academic staff."

"HySA/Catalysis' mandate, in keeping with that of the DST, is that South Africa should build the competence base to create products that are homegrown and so bring investment to South Africa by setting up businesses that use our mineral wealth to create higher value-added opportunities. Human capital development is key."

## United Nations Environment Programme (UNEP)

The UNEP's Green Economy Report was published in February 2011 following a launch in Nairobi. Associate Professor Marianne Vanderschuren from the Centre of Transport Studies in Civil Engineering and Tanya Lane, a PhD student, contributed to the Transport Chapter.

The online version of the chapter can be found at:

<http://www.unep.org/greeneconomy/Portals/88/documents/ger/>



# Research Agenda Setting Conference on the Informal Economy

On 24 March, Jeremy Cronin, the Deputy Minister of Transport, gave a public lecture on the place of the informal workforce in the new growth plan. Ravi Kanbur from Cornell University and Marty Chen from Harvard University spoke about their experiences in their brief responses to Cronin's address.

The lecture opened the global research-policy network Women in Informal Employment: Globalizing and Organizing (WIEGO) research conference on the informal economy. The conference was organised by Caroline Skinner, the urban policies programme director for WIEGO, based in the African Centre for Cities. Sixty participants from 16 different countries, predominantly long-standing experts in the field, attended the conference. The conference concentrated on three countries—South Africa, India and Mexico and was planned as a working conference focusing on reviewing the state of the field with a view to identifying the critical future research gaps.



Caroline Skinner, Ravi Kanbur, Jeremy Cronin, Marty Chen and Edgar Pieterse

## 70 years of Radar in the Cape

An event held on 21 February to celebrate 70 years of radar in the Cape heralded the start of the new Master's programme in Radar. Mr Lewis Mathieson from the Department of Defence opened the evening by saying how privileged and honoured he was to be involved in the Master's programme.

Dr Brian Austen, the author of *Schonland: Soldier, Scientist*, a comprehensive biography of South Africa's "Scientist of the Century" elected in 1999, spoke on South Africa's Wartime Radar: Schonland's Challenge. His talk highlighted the role Schonland played in the development of South Africa's own radar system. From 1921 to 1936 Schonland was a lecturer and later a professor in the Department of Physics at UCT. In 1945 he established the Council for Scientific and Industrial Research (CSIR). Dr Austen is an honorary senior fellow in the Department of Electrical Engineering and Electronics at the University of Liverpool. He was in Cape Town on holiday and kindly gave up his time to come and talk about his book.

This was followed by some personal reminiscences on the Special Signal Services (SSS) by Frikkie Botha, who was a member of the SSS from 1941 to 1945, and is now a retired diplomat.

Francois Anderson from the CSIR and a UCT visiting professor spoke on Radar as a force multiplier in

safeguarding South Africa's border zones—70 years later.

It was recognised that there was a shortage of radar and electronic engineers in South Africa and there was a need to produce engineers with broad skills and a wide knowledge of radar as a system. Professor Mike Inggs from the Department of Electrical Engineering and the CSIR, in conjunction with international partners and industrial sponsors, established the Master's programme.

The programme consists of 120 credits (coursework) and 60 credits (major project). The University of Stellenbosch is teaching part of the programme and the plan is to get other universities involved.



Brian Austen, Francois Anderson, Mike Inggs, Francis Petersen and Frikkie Botha

# STAFF NEWS

## WELCOME TO NEW STAFF MEMBERS who joined the Faculty in 2011

Ms **Chantal Ceylon** joined the Centre for Catalysis Research as a technical assistant.

Mrs **Elmarie Edwardes** joined the Department of Construction Economics & Management as a senior lecturer.

Mrs **Charmaine Findeis** joined the Department of Mechanical Engineering as a senior lecturer.

Mr **Waldo Koorts** joined the Centre for Catalysis Research as a technical officer.

Mr **Thapelo Letete** joined the Energy Research Centre as a research officer.

Ms **Liana Muller** joined the School of Architecture, Planning & Geomatics as a lecturer.

Ms **Nancy Odendaal** joined the School of Architecture, Planning & Geomatics as a senior lecturer.

Dr **Tanja Winkler** joined the School of Architecture, Planning & Geomatics as a senior lecturer.

Associate Professor **Francois Viruly** joined the Department of Construction Economics & Management.



Ms **Janet Baron** joined the Faculty Office as the Dean's personal assistant.

## Farewell

To Professor Jon Tapson, who is leaving the Department of Electrical Engineering at the end of April and will be going to the University of Western Australia. We wish him all the best in his new position and look forward to his returning to UCT.



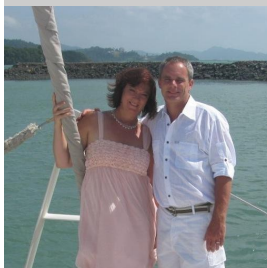
## CONGRATULATIONS



To Lance and Janine Buxey on the birth of their baby son, Daniel, who was born on 25 January 2011



To Pierre and Mauwa Bizimana on the birth of their baby daughter, Esther Pierre, who was born on 21 February 2011



Congratulations to Charmaine and Dirk Findeis who tied the knot in Malaysia on 21 January 2011.

## WORKPLACE MEDIATOR

In 2010 the University trained 28 workplace mediators from various departments across the campus, who now offer their services through DISCHO. Dr Kirsten Corin from the Department of Chemical Engineering is one of the trained mediators.

Mediation is a voluntary, confidential process whereby an impartial third party assists in bringing together two or more disputing parties in an open forum where the parties are encouraged to come to a mutually beneficial resolution. The role of the mediator is to assist the parties in finding their own way forward together by examining the issues at play and attempting to determine the best outcomes for all concerned.

Kirsten says, "In my experience of mediation, no problem is too small and it can be a very rewarding and satisfying process when both parties are committed to the process and intent on a mutually beneficial resolution."

Should you feel that you require the services of a mediator, please don't hesitate to either call Kirsten on 021 650 2018 or email [Kirsten.Corin@uct.ac.za](mailto:Kirsten.Corin@uct.ac.za), or you can contact DISCHO on 021 650 3530 and they will put you in touch with a mediator of your choice.

## MOU WITH THE CITY

On 8 April 2011, the City of Cape Town signed a memorandum of understanding with UCT to continue funding the African Centre for Cities' CityLab programme for an amount of R350 000 per year, for a further two years. In terms of the collaboration agreement with the City, the African Centre for Cities is committed to feeding the outcomes of its CityLab research programme back to the City and to continue to provide the City with support on a range of policy issues.

This support has included involvement with the City's urbanisation strategy, anti-poverty strategy, city development strategy, food security strategy and various climate change adaptation and mitigation strategies. The ongoing partnership between the African Centre for Cities and the City of Cape Town demonstrates how engagement and interaction between researchers, policy-makers and practitioners can be beneficial for all parties and enrich research, policy and practice.



*Seen at the signing of the MOU – Edgar Pieterse (Director of the African Centre for Cities), Achmat Ebrahim, (City Manager), Piet Barnard (Director of UCT's Innovation department) and Dr Martin van der Merwe, (Director of Integrated Development and Planning department in the City)*

## BOOKS



Congratulations to Manya Mooya from the Department of Construction Economics and Management, who has received a prestigious contract with Springer, one of the world's largest publishing houses, to publish his first book, *Real Estate Valuation Theory: A critical appraisal*. The book is a culmination of Manya's recent research and is expected to be published in print, as an e-book and via other media in the first half of 2013.

## NEW ENGINEERING BUILDING

Council have approved the budget of R235 million for the new engineering building. The increased budget will allow for the development of a surface science laboratory which will house the Electron Microscope. It will also ensure that it is a building which strives to incorporate as many aspects of a 'green' building as possible.

The Snape laboratories have been demolished and the ground is being prepared for the new building. Invitations to tender have gone out and will be sent to Council for approval in June before the building can begin.

We would like to thank the staff and students who have been coping with very dusty and often noisy conditions during the demolition phase. We are doing all that we can to make sure that the working conditions are bearable. If you are experiencing unbearable noise or dust, please contact Erica Le Roux immediately and she will liaise with the project manager.



## Student News

The Career Development Programme partnered with the Southern Africa Initiative of German Business (SAFRI) to recruit students for an Internship at Daimler in Stuttgart, Germany. This opportunity was promoted across all the SADC universities and 4 out of the 9 students selected are from UCT, with two being from the EBE Faculty. They are:

Ms Sancha Nagooro, who is doing her Master's in Chemical Engineering, and

Mr Gregory Moys, who is doing his Master's in Mechanical Engineering .

They left in February and are doing their 6-month internship in the areas of chemical analysis and car research & development .

### STUDENT RECRUITMENT

The Faculty of Science hosted its annual outreach Science Day at Kensington High School on Saturday 12 March. The day is aimed at promoting careers in the field of Science and encouraging learners to study Mathematics and Science.

This year representatives from GirlEng and members of the Power and Energy Society from the UCT IEEE student branch attended the day to promote engineering to the high school learners. Grade 11 and 12 learners from Kensington High School and other surrounding schools attended the day. UCT IEEE gave a presentation on the work they had done in developing a wind turbine at Oaklands High School.



*Roseline Akita, Amulet Matlala and Melvinia Chidi*



*David Oyedokun, Erlin Hattingh, (teacher from Oude Molen Technical High school) Roaldje Nadjiasngar and Allan Kweli.*

UCT IEEE Women in Engineering is a society that encourages the participation of women and girls in the field of electrical engineering. They visited Thandokhulu High school to talk to the female learners about the opportunities in electrical engineering.

### EWB UCT

EWB UCT is going full steam ahead under the leadership of the new chair, Wiebke Toussaint, and 11 active committee members. This year they have



*2011 EWB committee members*

signed up over 250 members. They have a number of very exciting projects up and running for the first semester.

- **Shonaquip**, a social-entrepreneurship company that designs and manufactures wheelchairs for rural and township communities is planning to redesign some of its wheelchair models for mass production and also wishes to improve on the 18-year old initial designs. As its team has experience with the intricacies of designing for disabled people, but not really an engineering background, it is looking for EWB members to be involved.
- **Sheffield Road drainage project** will entail going into an already existing informal settlement with Ikhayalami and doing a topographic survey to determine the gradients so that a basic drainage system can be put in place to prevent puddles during heavy rains
- **SHAWCO Health** has requested EWB UCT to design a moveable shelter structure for the Shawco Health mobile clinics.
- **Abalimi Bezekhaya** has approached EWB UCT to develop an alternative energy solution to irrigation in the community gardens. The current system requires a supply pump to draw water out of the borehole and a booster pump to increase the pressure to supply overhead sprayers. They propose to design install and test a low cost, low pressure drip irrigation system that will dispose of the need for a booster pump and save both energy and water. If the system is accepted by the farmers, it will be extended to the rest of the gardens and will allow for the possibility of developing a wind or solar borehole pump.

They would greatly appreciate any academic staff who are able to volunteer their expert advice or some supervision. For further information you can contact Wiebke Toussaint at [wiebke.toussaint@ewbuct.org](mailto:wiebke.toussaint@ewbuct.org)

## CITY OF CAPE TOWN CORPORATION MEDALS

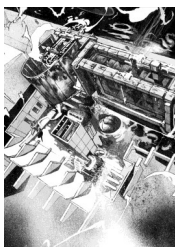
On Thursday 31 March, students from the Faculty of Engineering & the Built Environment were invited to the Mayor's office to receive the City of Cape Town Corporation Medal. A bronze medal was awarded to Matthew Gadd, the top second year engineering student; a silver medal to Benjamin Meltzer, the top third year engineering student and silver gilt medals were awarded to final year students in each department. They were: Sandy Campbell - Chemical Engineering; Struan Robertson - Civil Engineering; Allan Maclaurin - Electrical Engineering; Justin Womersley - Electrical and Computer Engineering; Charles Bradshaw - Mechatronics; Thomas Knight - Electro-Mechanical Engineering; Adriaan Van Brakel - Geomatics; Shannon Maclean - Mechanical Engineering; Samantha Shan - Architectural Studies; Gavin Marcus - Construction Studies; and Gina Whitaker - Property Studies. The Mayor, Dan Plato, congratulated the students and said how important the relationship with the university was to the City. He hoped that the students would consider a career with the City as their skills were much needed to build and develop the infrastructure in many of the municipalities.



*Back right: Adriaan van Brakel, Thomas Knight, Justin Womersley, Matthew Gadd, Benjamin Meltzer, Gavin Marcus, Charles Bradshaw  
Front right: Gina Whitaker, Francis Petersen, Dan Plato, Shannon Mclean and Samantha Shan*

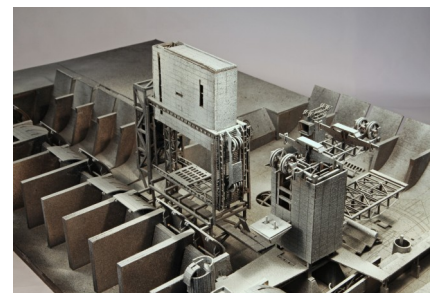
## Architecture students win two top National prizes

Two students in Architecture have walked away with top honours in two prominent national design competitions.



Stefan van Biljon, a 2010 graduate in the MArch(Prof) programme, was awarded the Corobrik Architectural Student of the Year Award for 2010. In this competition the top students from eight Schools of Architecture compete in presenting their final-year Dissertation projects to a panel of three judges. Stefan's project, titled *KL-Metamatic Ghost Ship*, was highly praised by the judges for its theoretical depth and rich architecture.

Temba Jauch won the Saint Gobain "Design Hub" competition. This competition emphasises sustainability in design and construction, integrated with social and urban design issues. Temba's project dealt with the re-use of the Athlone Power Station site. This design project was produced in the BAS(Hons) Design Studio under the guidance of the architect Rod Lloyd.



## CONGRATULATIONS

Mohamed Mukuddem, a third year mechatronics student, has been selected to attend the International Scholar Laureate programme delegation on engineering in China in June 2011. He was selected based on his outstanding academic performance as a member of Golden Key International Honour Society.

Erik De Ridder and Wandile Mamba have been selected for a six month internship on the South African-Washington programme. The primary purpose of the programme is cross-cultural, religious, racial, disciplinary and political leadership in South Africa. The programme takes place over a period of six months, five weeks of which are spent in Washington DC during the June/July winter holidays, where each participant will get the opportunity to intern in a prestigious Washington DC organisation.

## HIV/AIDS CAMPAIGN



The Dean with members of the Faculty executive, postgraduate student association and the undergraduate student council, participated in the HIV/Aids voluntary testing campaign to show the EBE student body that it is important to know your status.

### Important dates

16 April	University Open Day
4 May	Faculty Awards evening
13 May	MinQuiz
18 May	Voting Day
20 May	Lectures end
31 May—5 June	Examinations
9 & 10 June	Graduation

## RECYCLING



Recycling is very important at UCT – we produce up to 8 tonnes of waste on a daily basis! The GCI has been very involved with Properties and Services in creating and implementing a recycling system at UCT. All bins on upper and middle campus have been grouped into stations and people are expected to throw their waste into the right bin. Waste is collected and taken to a sorting facility and UCT receives some of the revenue from recycled goods.

Duke Metcalf from Property and Services has informed us that it is a policy of Supercare that their staff may not sell recycling products for personal gain. The same goes for UCT staff.

The Supercare staff should have two bags—one for “wet waste” and one for recycling. UCT staff are asked to separate recycling waste in their offices so that it can be correctly allocated for Wasteman, who are contracted by the University, to collect the recycling.

**At the moment about 65% of UCT’s waste is recycled—the challenge is to increase this!!**

## NOMINATIONS FOR THE SPECIAL FACULTY AWARDS

The Faculty's annual awards evening is set for Wednesday 4 May at 18h00 in the Centre for African Studies Gallery. Each year the Faculty recognises the contribution students have made to the university over and above their academic work. The students nominated in the past have shown extraordinary commitment to social responsiveness and we acknowledged them with a Special Faculty Award. Over the past three years we have acknowledged students who have founded EWBUCT, SAWomEng, GirlEng, and students who have been involved in outreach projects, and one year we awarded a student who had graduated against all odds.

Please could you send any nominations to [Mary.Hilton@uct.ac.za](mailto:Mary.Hilton@uct.ac.za) by Thursday 21 April.