



### Dean's Spot

Students in the Faculty of Engineering receive a considerable number of prizes and scholarships each year donated by individuals, industries and others wishing to acknowledge and reward our high achieving students. Awards

are available to students in all engineering disciplines and in physics, but recently we have been offered a number of new awards for our mining engineering students. Each of these awards is worth several thousand dollars to the successful student.

These include two scholarships from Xstrata, one of the world's largest coal producers with mines in Colombia, South Africa and Australia, one from Walter Mining, an Australian mining contracting company, one from Seedsman Geotechnics, an Illawarra geotechnical consulting company, and one from Thiess Pty. Ltd., involved in civil and mining tunnelling projects and contracting to the open cut mining industry.

This now means that merit based scholarships are available to students in all years of our mining engineering degree. This is only possible through the generosity of the donor companies, and we are very grateful for the farsightedness of these companies in investing so strongly in the next generation of mining engineers.



### Recognition of Mining Degree

Our Bachelor of Engineering (Mining Engineering) degree has received recognition by the Australian Institute of Mining & Metallurgy (AUSIMM) for another five years, from March 2006-March 2011.

Excerpts of the certificate of recognition include:

"The main objective of the Mining engineering degree is to educate and train undergraduates who wish to attain professional and managerial qualifications in the mining industry"; and

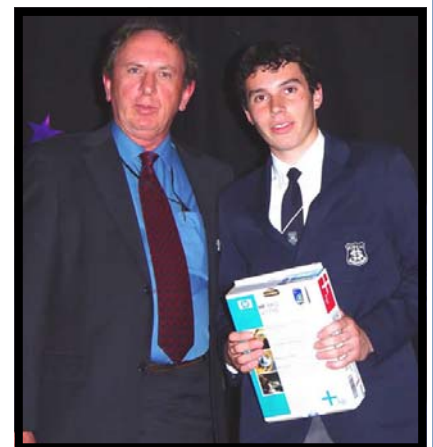
"The AUSIMM recognizes programs that equip graduates with the necessary knowledge to become world class minerals sector professionals".

### Faculty Sponsored High School Competition

The Faculty of Engineering is the major sponsor of the Engineers Australia (Illawarra/Sutherland Group) High School Engineering Report Competition. The competition was developed and introduced by Engineers Australia in 2000 and is open to students enrolled in engineering studies in Year 11.

The inaugural competition had \$500 prize money from the Sydney Division. This year the competition has attracted a total of \$6,000 sponsorship from the Faculty of Engineering, Kembla Timber and Industrial Services, the Faculty of Informatics, Coffey Geosciences Pty. Ltd., ANSTO, PHD Engineering, BlueScope Steel, Hatch Associates, Bunnings Warehouse, Northrop Engineers Pty. Ltd. and Wollongong City Council.

The competition has gone from strength to strength, in the first year there were six finalists and in 2005 there were 24 finalists, ten of whom were girls. Four of the five overall competition winners have gone on to enroll in our Faculty after completing high school.



Norm Hinsley (L), Chair of Sydney Division with Ismet Huseyin—the overall competition winner in 2004. Ismet is now an Engineering student at UOW.

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## Bridging the Gap

Our first year Civil, Mining & Environmental Engineering students were very fortunate to gain an insight into the design and construction of the spectacular Sea Cliff Bridge, which was opened recently.

Mr. Ross Abraham, Senior Project Manager for Maintenance in the Southern Region with the Roads and Traffic Authority (RTA) gave students a first hand, detailed account of the local landmark bridge project. Students were able to compare the account with other international engineering construction projects they have been studying in their course. The lecture was part of the ENGG101 subject coordinated by Professor Tim McCarthy.

Mr. Abraham's visit continues the fruitful relationship between the RTA and UOW. The RTA currently sponsors nine undergraduate students in the Civil Engineering Program and also has a number of research contracts with the School of Civil, Mining & Environmental Engineering.



Wollongong's spectacular Sea Cliff Bridge

## New Prizes for Faculty High Achievers

The David Charles Davies Memorial Prize has been established for the most innovative and/or ecological approach to engineering, and will be awarded to the group with the highest average mark for ENGG101 projects. Mr. Davies daughter, Professor Jan Davies (University of Calgary) visited in February to present a cheque for \$4,000 to cover the prize for four years.



David Davies (1905-2001), CP Eng, MStructE, MIE(Aust) was born in Wales and led an extremely adventurous life, starting in the coal mines of South Wales. He graduated in 1927 with an engineering diploma and this, along with further study and his work experience was to serve him very well in many countries around the

world.

In 1934 he took a job in the oil fields of Persia, his journey took him via France, Egypt, Palestine, Lebanon and Syria and Iraq. From Persia, David came to Australia and worked in Melbourne before taking a job with BHP in Wollongong. When war was declared David returned to Britain to join the army, but because of an injury to his arm, was refused service, however, he was accepted in the Indian Army. His work took him all over India during this time.

David returned to Wales after WWII, where he married and, with his bride, returned to Wollongong, staying until 1956. Itchy feet struck again and David moved his family to Vancouver, where they settled. After retirement David made 14 visits to Australia between 1984-1999, traveling widely in the country that he loved.



1938 - David Davies (L), just up from the pits, speaking with Bertie Morland.

Other new prizes to the Faculty are the Coffey Geoscience Prize, Northrop Sustainable Energy in Buildings Prize, Excell Automation and Control Prize. All of these awards will be presented at the Faculty Prize Night on 12 April, 2006.

## European Space Agency Success

Two Faculty researchers, Dr. Phil Flentje and Dr. Daniel Palamara have had success with a Category-1 European Space Agency research proposal. Phil and Daniel now have access to over €40,000 worth of satellite data for the Illawarra region, which they intend to evaluate for landslide and mine subsidence mapping potential.

## Staff News



We welcome Cholat Rujikiatkamjorn, Research Associate, to the Faculty. Cholat recently completed his PhD in Civil Engineering at UOW and will graduate in July. He is working for Professor Buddhima Indraratna on an ARC Discovery project and a Rail CRC project "Design Upgrading of Australian Rail Tracks in Soft and compressible Coastal Soils".

Congratulations to Rong Zeng and Zaiping Guo on the birth of their second child, a boy, Liam Qimin Zeng on 12 March. Liam had a healthy birth weight of 3.725kg and was 51.5cm long.

## Inspirational

Dr. Alexandra Golab was recently invited to give a presentation to celebrate International Womens' Day at Warrawong High School. She was selected to speak as she works in a non-traditional field for women.



Alexandra spoke to female students about her career path and the girls were very responsive and asked many questions. One girl approached Alexandra after the presentation and said she was awe-inspired—a great result!

## Global Roaming

Professor Robin Chowdhury was invited by the Chancellor of Vellore Institute of Technology (VIT), India to be an overseas advisor to the Centre for Disaster Mitigation and Management (CDMM), which was recently established at the University. Robin chaired a round table meeting of experts on Landslide Management and Mitigation held at VIT 15-17 March.

State-of-the-art research concerning slope stability and landslides was summarized by various participants at the meeting.

Delegates considered a number of key questions on landslide hazard and risk with particular reference to different regions of India and the management roles played by major organizations concerned with infrastructure. The outcome of the meeting was a series of recommendations to be circulated to public and private agencies concerned with these issues.

Professor Brian Uy (Head of the School of Civil, Mining & Environmental Engineering) recently gave one of two keynote addresses at an International Symposium on the Design and Application of High Performance Steel in Construction in Hong Kong. This symposium was organised by The Hong Kong Institute of Steel Construction and sponsored by Arcelor International Hong Kong, Ove Arup & Partners (Hong Kong) Limited & Hong Kong Ying Fat Welding Equipment Company Limited. The symposium was also supported by the Materials Division of The Hong Kong Institution of Engineers & the Department of Civil and Structural Engineering, The Hong Kong Polytechnic University.

Brian's address was titled "Successful applications of High Strength Steel in Australia and Design using High Strength Steel". The use of high strength steel has had significant interest in Hong Kong since the newly released Hong Kong Steel Design Code (September 2005) has permitted its use for structural engineering applications. Brian served on the international advisory board of the drafting of this code.

Mr. Paul TC Pang (L), Chief Structural Engineer, Hong Kong Buildings Department presents Prof. Brian Uy with a gift following his address.



## Weekly Visits by Librarian

Michelle Riggs, the Engineering Librarian, is available for consultations in the Faculty Office (4.109A) each Monday between 1.30-3.30-pm.

Michelle is happy to assist postgraduate students and staff with any enquiries they may have on library issues. Everyone is encouraged to make use of this wonderful service to the Faculty.

## Award

Cholachat Rujikiatkamjorn, our new staff member, has won an award from the Australian Geomechanics Society (AGS), Sydney Chapter, for outstanding PhD research. This is the first time that the AGS, Sydney Chapters has initiated this award, which Cholachat will receive at the Faculty's Prize Night on 12 April. Cholachat will graduate with a PhD at UOW's July ceremony and is currently a research associate in the Faculty's School of Civil, Mining & Environmental Engineering.

## Visitors to the Faculty

Mr. Wei Ren, an Endeavour Australia Cheung Kong Scholar, from the University of Hong Kong has joined the School of Engineering Physics. He is hosted by Professor Chao Zhang and will be working in the Solid State research group for four months. Their collaboration will focus on electron transport in carbon nanotubes, hybrid spintronics structures and DNA.

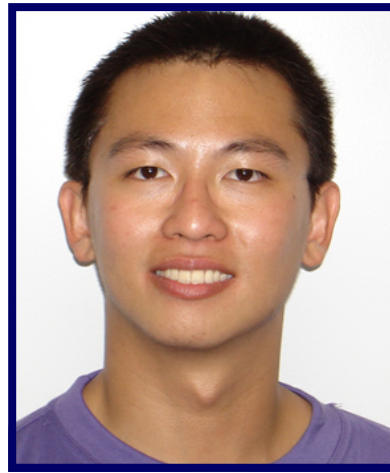
The award that Mr. Ren has received is part of the Endeavour Program to allow high performing scholars from Asia to come to Australia to further develop their expertise in their chosen field.

Professor Sarah Springman from the Institute for Geotechnical Engineering, Eidgenössische Technische (ETHZ, Swiss Federal Institute of Technology), Zürich, visited the Centre for Geotechnical and Rail Track Engineering from 14-16 March. Professor Springman delivered a presentation on the topic of "Geotechnical Characteristics of Selected Swiss Soils". The research collaboration with Professor Buddhima Indraratna, on the degradation of rail ballast and formation soil stabilization has been strengthened during her visit, under the UOW Internationalisation Program.



Prof. Springman (Centre) with the team from the Centre for Geotechnical & Rail Track Engineering

## Student Profile



Yew Hon Calvin Foong is from Singapore and is currently studying a Master of Engineering Practice (Asset Management). After completing his undergraduate degree at Nanyang Technical University, Singapore, Calvin worked in the oil and gas industry.

Calvin chose to study this dynamic new course because it is highly valued in industry. He states that he will have good career prospects at the end of his studies and may go to Brisbane or back to Singapore. Calvin enjoys living in Wollongong, although it is much quieter than life in Singapore!

## Barbecue to Welcome New Students

The Mechanical Engineering and Mechatronics Students Societies held separate barbecues to welcome new students to the Faculty and as a social event for all staff and students to meet.

Students wishing to join the Mechanical Society and be involved in social and technical events, such as Formula SAE team support, inter-engineering society sporting events should contact any of the executive of the Society or Associate Professor Paul Cooper.



A busy lunchtime Mechanical Society barbecue, with generous support from the Faculty's technical staff.



## Diary Dates

4 April	WAC Committee
11 April	Faculty Committee
12 April	Faculty Prize Night