

FACULTY OF ENGINEERING

OCTOBER 2006

UOW's success at Sydney engineering

The Illawarra/Sutherland Regional Group (ISRG) of Engineers Australia recently held the Engineering Studies High School Competition Regional Awards at the University of Wollongong.

This year ISRG received 29 reports from 14 schools - a record number in the six years the competition has been running. A total of 106 students, parents and sponsors attended the event.

Anne-Marie Lane from Smith's Hill High School won the student first prize of \$500 which was sponsored by Coffey Geosciences. The winning school also received \$500 and this award was sponsored by PHD Engineering.

Every student was a winner as those who did not receive a major prize of \$250 from the sponsors (listed below), received



Ann-Marie Lane and Jon Thompson (Manager Coffey GeoSciences at Unanderra)

Timber Services Pty Ltd, BlueScope Steel, Bunnings Warehouse, Hatch, Northrop Engineers and Wollongong City Council.

Anne-Marie Lane's report went on for the Stage 2 adjudication to determine the overall winner from the Western Sydney Region and the Metropolitan Region. On 8 September at the Young Engineers 2006 Public Speaking Presentation Final and Awards Night it was announced that Anne-Marie was the overall winner and she received a palm top computer. This award was sponsored by the RTA.

a finalists' award of \$50 sponsored by the Faculty of Engineering.

Sponsors of the competition were: Coffey Geosciences, PHD Engineering, ANSTO, UoW's Faculty of Engineering and Faculty of Informatics, Industrial

Meanwhile, Kirsty Last, a third year mechanical engineering student at UoW, won the public speaking final at the same event on 8 September. She beat the heat winners from the University of Sydney, UTS and UNSW and won prize money of \$750. This award was also sponsored by the RTA.

Other UOW students to receive prizes on the night were Dilini Kumarasinghe, who won the UoW Women in Engineering Scholarship, and Cameron Hough, who won the UoW Industrial Training Report Competition.



Cameron, Kirsty and Dilini at the Awards evening.

Dean's Spot

The demand from students to study in our Faculty reached record levels last week, when we individually interviewed 300 students over two days. This is a 30% increase on last year. This massive effort involved 48 interviewers from our general as well as academic staff, discussing individually with each student their requirements, hopes and expectations from our engineering courses. We also discussed what they might expect from a future career in engineering. These interviews are conducted in a very friendly atmosphere, with students asking us as many questions as we ask them. One of the common questions is about the nature of engineering e.g. 'What does an engineer do?'. We see it as a great strength of our Faculty that this question is answered by practising engineers from our own staff, and then reinforced by providing all our 'early entry' students with tours through our laboratories. In these they can see for



themselves the many and varied examples of real engineering systems we have built for research and teaching purposes. These examples range over the full set of engineering disciplines from civil, mining, environ-

mental, mechanical, materials and mechatronics, electrical, computer and telecommunications, and all areas of Physics.

The increased demand for places was spread over all disciplines, with the greatest increase being in Civil and Mining engineering. Approximately 60% of students were interested in Civil and Mining, 30% in Mechanical and Mechatronics and 10% in a science degree in Physics. Of course, every one of our engineering students also studies a number of subjects from Physics and Mathematics.

It certainly looks as though next year will be another very healthy year for engineering at Wollongong. I have also just re-

turned from a visit to India where I interviewed a large number of students wishing to study in our Masters by coursework engineering programs, and so we are also expecting a significant increase in international students complementing our domestic students for 2007.

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UoW Student News

Congratulations to Dean Cutajar and Serhiy Pysarenko who were awarded the 2nd and 3rd poster prizes at the 2006 Australian Institute of Physics Industry Day held at the CSIRO laboratories, Lindfield on September 27.

Dean also won first prize for the best oral presentation at the Engineers and Physicists in Medicine Conference (EPSM) held in Noosa in September.



From left to right: Aloysius Soon (from Sydney University), Dean Cutajar (Centre for Medical Radiation Physics, UoW) and

Behzad Fatahi was awarded the First Prize for Geotechnical Research Contributions at the Young Geotechnical Engineers presentations held at the Institute of Engineers in Sydney on the 13th September. Behzad was awarded \$500, a trophy and free membership of the Australian Geomechanics Society.

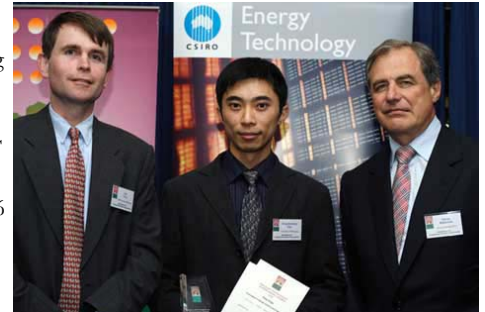
Behzad's PhD research is on "Mechanics and Numerical Modelling of the Influence of Native Tree Roots in Stabilising Rail Tracks on Weak Soils". A CRC-Rail Researcher, Fatahi is supervised by Prof. Buddhima Indraratna and Dr. Hadi Khabbaz.



Dr. Kurt Douglas (UNSW and Australian Geomechanics Society Committee Member and YGP Representative) and Behzad Fatahi (UoW).

Prize for innovation in energy

Zheng Wei Zhao, a PhD candidate from ISEM, Faculty of Engineering UoW, received the first prize for "Innovation in Energy Science and Engineering" at the NSW and ACT Postgraduate Student Energy Awards held on 5th September 2006 at the University of Technology, Sydney. This award was sponsored by CSIRO Energy Technology.



PhD Candidate Zheng Wei Zhao receives first prize for Innovation in Energy Science and Engineering.

About 20 entries were received from six universities in NSW & the ACT. Entries consisted of a project summary and a project poster display (including an 8 minute talk and two minute question time). Entries were allocated to one of three categories: Energy & Society, Innovation in Energy Science & Engineering Energy - Achieving More With Less, and were assessed by a panel of Judges. Three sponsored prizes were awarded in each category - Gold (\$1000), Silver (\$500) and Encouragement ("cent-a-meter").

Zheng Wei Zhao will also receive a travel bursary (return airfare and one night's accommodation) to represent NSW & ACT at the Inaugural National Postgraduate Student Energy Awards in Melbourne. This event will coincide with the AIE National Conference titled 'Energy at the Crossroads' to be held from 27 to 29 November 2006.

Safeguarding Australia 2006

The 5th Homeland Security Summit was held at the National Convention Centre in Canberra on 19-21 September 2006. The Summit was organised by the Research Network for a Secure Australia (RNSA) funded by the Australian Research Council. The Security Summit is an annual event that brings together both researchers and practitioners in the fields relating to one of the national research priority areas entitled Safeguarding Australia. The three-day Safeguarding Australia Summit provided an opportunity for attendees representing government, business and academic communities to discuss new trends that are shaping Australia's homeland security strategies.

On the third day of the Summit, the RNSA Security Technology Conference was organised. The Conference featured about forty technical papers presented by Australian and international researchers working in the area of protection of critical infrastructure against acts of terrorism.

University of Wollongong is an active

member of the ARC Research Network for a Secure Australia. At the Summit, UoW was represented by three presentations from Dr Alex Remennikov (School of Civil, Mining and Environmental Engineering) and Dr Katina Michael and Holly Tootell (School of Information Technology and Computer Science). At the end of the Conference, the papers presented by Dr Remennikov and Dr Tootell were nominated for the best paper award. Dr Remennikov's paper on an innovative approach to designing anti-terrorist perimeter protection for critical buildings received the 2006 RNSA Conference Best Paper award.

Diary Dates

- 10 Oct.** Faculty Research Committee
- 17 Oct.** Faculty Postgraduate Research Student Committee
- 24 Oct.** WAC
- 31 Oct.** Faculty Committee