



### Dean's Spot

Please join with me in welcoming Dr Anna Carew, who recently joined CEDIR as Lecturer in Educational Development in order to work closely with the Engineering Faculty to support quality in teaching and learning.

Most recently, Anna worked as a Lecturer at the Institute for Teaching and Learning at the University of Sydney, and in teaching improvement with the Engineering Faculty at Sydney. She has a PhD in engineering education from Chemical Engineering at from the University of Sydney.

In the coming weeks Anna, who is located in the Faculty Office, will begin contacting individuals and groups within the Faculty to discuss teaching and learning issues. CEDIR are to be congratulated on taking such an excellent initiative.



### Awards

At the 3rd International Conference on Materials for Advanced Technologies (ICMAT) in Singapore, Scott Needham (PhD student) won the Best Poster Award at the symposium of Materials for Rechargeable Batteries, Hydrogen & Fuel Cells. Scott won some goodies and his poster will be displayed on the web-based IUMRS—Global Research Gallery.

### Paton Award 2005

Prof John Norrish was presented with the E Paton Prize on the 10<sup>th</sup> of July at a ceremony attended by some 700 Delegates to the International Institute of Welding Annual Assembly. The Ceremony took place in the Smetana concert hall of the Municipal House in the center of Prague. The prize is awarded by the IIW and sponsored by the Paton Welding Research Institute for:

*'significant contribution to science and technology through life time dedication to applied research and development in advanced technologies, materials and equipment for welding and allied processes. Either for applied research which has been utilized in industry or development of new industrial equipment materials and structures using welding.'*

The Paton Institute (<http://www.paton.kiev.ua/eng/inst/inst.html>) is based in Kiev and is one of the largest welding research organizations in the world. In addition to a medal the prize involves a visit to Kiev during 2006 as a guest of the Paton Institute.



The prize was presented to John by the leader of the Russian Delegation Professor Konstantin Yushchenko.

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Roger Lewis has been selected to participate in the final stage of the selection process for the 2005 ACE Quality Teaching Awards. A team will be visiting in the near future to observe a couple of classes. The results should be known in a couple of months. Good luck Roger!

New staff member, Dr. Andreas Brockmann has just been awarded the University Medal by one of the top German engineering universities, the RWTH Aachen. We are very pleased to have Andreas working with Andrea on ROSI, a project that will help solve global water problems.

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## Grant Successes

ARC Linkage International grants have been announced and Engineering has had two successes with a combined value of \$70k over three years.

Congratulations to Dr. Meng Jun Qin & Prof. Shi Ding for their project "Molecular dynamic simulation and experimental study on the mechanisms of high critical current density in superconductors" and also to Dr. Jiangtao Xi, A/Prof. Yanguang Yu, Prof. Joe Chicharo, Dr. Enbang Li and A/Prof. Huiying Ye for their project "Measuring the linewidth enhancement factor and optical feedback level factor of semiconductor lasers based on optical feedback self-mixing interferometry". Congratulations on your successful applications.

## Student Visit

On 13 July the Faculty was visited by thirty five mechanical engineering students from Kyungpook National University (KNU) in Korea. The students are learning English at Wollongong University College. They visited the Bulk Solids Handling lab, the Experimental Rolling Mill, the Fast Prototyping Facilities and the Laser Diagnostics lab. Many thanks to Peter Wypych, Zhengyi Jiang, Kosasih Prabuono and Dominic Cuiuri for showing the students through the labs and to Mark Reid for his organization and assistance during the tour.



## Taking it Easy?

Assoc. Prof. John Montagner retired last month and is now a member of the OASIS club (Old Academics Still in Service) as John continues to have responsibility for Coniston. He is also coordinating the University's enormous City to Surf team 5 again, as well as continuing in his role as President of the University Social Club.

John's farewell was held at Food Re Thought on 22 July where there were a few speeches and lots of laughs in celebration of 32 years service to the university.



*John Montagner, Chris Cook & Roma Hamlet*

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## Staff News

Dr. Hans Frimmel is our new lecturer in Physics, working with Prof. Anatoly Rozenfeld in medical radiation physics. Hans joins us from Sweden.

ISEM welcomes back Dr. Sihai Zhou. Sihai was a PhD student here and has now returned as an ARC Postdoctoral Fellow to work with Dr. Alexi Pan. Prof. Jaimoo Yoo has also joined ISEM as an ARC Professorial Fellow.

Two administrative positions in the Faculty have been advertised, the Faculty Manager's position and an Administration Assistant (job share). The positions will be filled by the time the next newsletter is issued.

Prof. Brian Uy has been elected as the Engineers Australia, Structural College representative to the newly constituted Technical Committee BD-032 Composite Construction of Standards Australia International. Brian will serve on the main committee as well as the working group for composite columns.

Brian is the only Australian member serving on similar committees for composite construction with the American Society of Civil Engineers (ASCE) and the International Association for Bridge and Structural Engineers (IABSE).

Dr. Phil Flentje and Prof. Robin Chowdhury attended the 2005 International Conference on Landslide Risk Management at UBC, Vancouver, Canada. The conference was well attended by leading scholars and experts in this area. Robin chaired an important session at the conference.



**Dr. Phil Flentje**

Phil and Robin coauthored one paper at the conference, jointly with colleagues from WCC and the RTA, pertaining to real-time urban landslide management and discussed the development of four continuous landslide monitoring stations in the Wollongong area installed by the University of Wollongong. The paper was well received and generated numerous interesting discussions with colleagues from the USGS, Canadian Pacific Railway and from Italy, who are working on similar techniques around the world. We have the first landslide sites connected to the internet anywhere in the world.

Prof. Anatoly Rozenfeld has spent time in the US participating in a number of activities. He attended the preliminary trials of the ureteral prostate probe at Memorial Sloan Kettering Cancer Centre, NY, attended the IEEE Nuclear Space Radiation Effect conference and presented two papers on synchrotron microbe radiation therapy and microdosimetry for the space shuttle, which is a collaborative work with ESRF (Grenoble) and NASA.

Anatoly has also recently delivered an invited talk at the Prostate Cancer Treatment workshop at St. Vincent's Private Hospital on development and first testing of urethral probe in collaboration with MSKCC. Dr. Troy Coyle also participated in this workshop, discussing with urologists about clinical trials and future markets.

Dr. Michael Lerch and PhD student Heidi Nettleback spent two weeks at ESRF (Grenoble) on Microbeam Radiation therapy beamline to carry out experiments on a new magnetotherapy supported by ESRF grant.

Andrew Wroe, PhD student at the Centre for Medical Radiation Physics has returned to UOW after three months working at IAEA, Vienna. Andrew worked on the creation of a database of accelerator facilities and associated accelerator technologies around the world.

Muhammad Hadi has participated in two conferences recently. The first was in Scotland, Global Construction: Ultimate Concrete Opportunities where Muhammad chaired one session. He also presented two papers, one of which was coauthored by PhD candidate, Mr. Jalalifar and his main supervisor Assoc. Prof. Naj Aziz. The other paper was coauthored by Assoc. Prof. Denis Montgomery. The second conference was the 3rd International Conference on composites in Construction in Lyon, France, where Muhammad presented one paper.

Assoc. Prof. Peter Gibson attended the 4th Global Conference in Business and Economics at Oxford University and was awarded the prize of best paper for 'Ethical Issues in the International University Student Market'.

Prof. Buddhima Indraratna had an extremely busy visit to Europe and Sri Lanka over four weeks in July. He visited Nottingham University's Pavement and Rail Track Research Centre, interacting with staff, students and industry colleagues. Buddhima was caught up in the chaos of the London bombings whilst on a train to Kings Cross station, but thankfully his train was not a target.



Buddhima also visited Switzerland, where he was invited to deliver a live webcast colloquim on Rail Track Geomechanics hosted by the Institut fur Geotechnik. This institution has outstanding facilities, brilliant students and several nobel prize winners. Research students can write their PhD thesis in either German, French or English and most academics speak all three languages.

Buddhima also presented one of four keynote addresses at the 6th International Ground Improvement Conference at the University of Coimbra, Portugal. At this university there is a world heritage listed, ancient library, chapel and auditoriums with huge paintings with glass and stone mosaics, chandeliers and the classrooms still contain ancient timber and steel furniture and elegant ceramic tiled walls.

Dr. Weihua Li presented three papers, in collaboration with colleagues, at the ICMAT 2005 which was held in Singapore in July. While Weihua was in Singapore he gave presentations at the Nanyang Technological University and Singapore Polytechnic to promote UOW and the Faculty of Engineering to students interested in our University. Hopefully we may see some of these students studying here in the future.

## Tsunami Recovery in Sri Lanka

Buddhima Indraratna also visited Sri Lanka on his way home and assisted with tsunami reconstruction work for 4-5 days in the southern part of the island, near Galle. He reports that conditions have improved for people as more permanent dwellings, food, water and other amenities are restored. Donations from Wollongong, channeled through Buddhima have resulted in the completion of 5 houses, one of which is shown below.



Even the construction of these small dwellings took much time because of the need for considerable ground improvement, as the surface soil had little or no strength due to total remoulding by the tsunami waves. Apart from installing deep piers to support the dwellings on unaffected soils at depths exceeding 1m, Buddhima designed coarse gravel trenches to provide additional footing strength plus damping layers to provide some protection of the foundations in case of earthquake tremors to which Sri Lanka is now prone, to some extent. The houses are constructed of high strength, hollow cement blocks which are extremely strong, more solid than our brick veneer!



The owners of these new homes are extremely happy and very grateful to donors. Another contribution from Wollongong is from St. Mary's College, where students raised money to sponsor an orphan about to be university. The sponsorship will cover all of her expenses until graduation.

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## Postgraduate Student Profile

Mr. Piniseti Satya Sainath is from Vishakhapatnam, India and has joined us to study for a Master of Engineering Practice. He studied physics and materials science as an undergraduate student in India and has three and a half years experience working for a steel company.

Piniseti writes "Wollongong is an excellent university for engineering and I enjoy each and every moment I spend doing my dissertation. The exceptional facilities available here makes Wollongong my favourite university. I have made a lot of good friends in this university who are very cooperative and helpful, like my supervisor who encourages and motivates me to carry on with my work".



*Piniseti Satya Sainath*

## Diary Dates

23 August	Faculty Research Council
6 September	FEEC
7 September	Withheld Aut Results (WE) due
13 September	Physics School Committee meeting
13 September	MMM School Committee meeting