

# FACULTY OF ENGINEERING

JUNE 2007

## Site visits for Students

BlueScope Steel are providing sponsorship for first year mechanical and mechatronic undergraduate students to undertake site visits to BlueScope.

This year, approximately 90 of our ENGG101 students participated in the site visits as part of their practical program. The objective was to introduce the students to the world of heavy engineering. During the tour the students observed steel making, slab casting and rolling processes.

ENGG101 introduces all of our first year engineering undergraduates to engineering analysis and allows them to experience solutions to engineering problems. Each discipline also

introduces their students to some practical aspects. The site visits allow the students to be confronted with actual engineering problems that they solve using basic engineering theory.

This tour has been sponsored by Bluescope for the past three years. BlueScope Steel's support is vital to the program.



## Student Profile

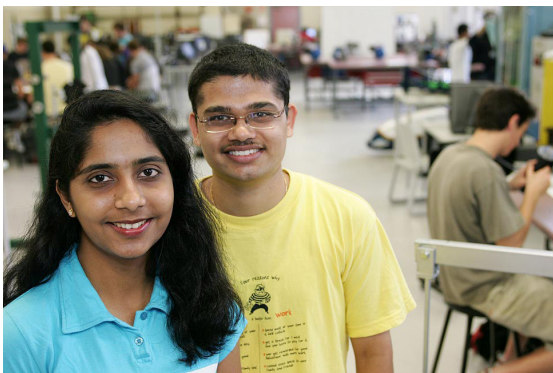
Mr Guruprasad Seshagiri Rao and Mrs Soumya Raghavendra Rao recently celebrated their one-year wedding anniversary whilst preparing to come to Australia and commence their post-graduate studies here at the University of Wollongong.

Both graduated from Mechanical Engineering degrees in 2004 and went on to take up positions in multinational engineering companies (GE, Bosch, and Toyota) in Bangalore, India. After working for a number of years they came to the University of Wollongong

to gain the competitive advantage and international exposure associated with an Australian Masters qualification.

They will both be studying for a Master of Engineering Practice, with a double major in mechanical and mechatronics engineering. This will allow them to develop and strengthen their technical knowledge as well as gain valuable management experience, a highly sought after quality in today's multinational engineering enterprises.

"We came to know about UOW after meeting Prof. Cook (Dean of Engineering) at an IDP fair in Bangalore'. UOW was one of only a handful of universities that offered Mechatronic Engineering as a distinct discipline. We were also aware that UOW had a very reputable Engineering Faculty".



## Scholarships

The Australian Government has recently released a new HDR (and including limited Masters coursework) scholarship allocation, known as the Endeavour Program. Applications for all 2008 programs of study opened earlier this month and close 31 July 2007.

Details of the program can be found at the following website

[http://www.endeavour.dest.gov.au/summary\\_endeavour\\_awards/default.htm](http://www.endeavour.dest.gov.au/summary_endeavour_awards/default.htm)

The program complements the existing IPRS scholarships and targets incoming international students from Asia-Pacific and the Middle East and outgoing Australian students wishing to continue/enhance their studies in the aforementioned regions. Limited European awards also exist.

Further enquiries can be directed to Kim Roser, Director of the Research Students Centre, UOW.

As collective minds Guruprasad and Soumya have a bright future ahead of them as they pursue careers in Robotics, Automation and Sensor research and development.

Both Guruprasad and Soumya would like to thank their family and friends for the opportunity to pursue this exciting program.

## Contents

ARC Linkage Success	2
Thomas A. Middlebrooks Award 2007	2
Faculty Funding for Females	2
Asian-Pacific Program at IEEE	2



## ARC Linkage Success



Assoc. Prof Paul Cooper

In the latest round of ARC Linkage Grants for commencement in July 2007 Associate Professor Song-Ping Zhu (Informatics) and Associate Professor Paul Cooper were successful with their application entitled "Wave to Wire: Optimising Hydrodynamic Performance and Capture Efficiency of Next Generation Ocean Wave Energy Systems". The full project request of \$313,868 was fully funded by the ARC. The industrial partner for this project is Oceanlinx Pty (previously Energetech Australia) who have already built a prototype wave energy converter at Port Kembla and are now designing their next generation of machines.

The ARC Linkage project is designed to develop a new generation of Oscillating Water Column (OWC) Ocean Wave Energy systems. This will be achieved by advancing understanding of the coupling between the hydrodynamics of the ocean wave field and the OWC, and investigating how this is affected by the OWC design, energy capture and control system characteristics. Also involved in the project are Associate Professor David Wood from Newcastle University who is an expert in aerodynamics and wind turbines, and Dr Tom Dennis from Oceanlinx.

## Diary Dates

**19 June** Faculty Committee

**17 July** Faculty Advisory Committee

## Thomas A. Middlebrooks Award 2007



Dr Samantha Livanapathirana

Congratulations to Dr Samantha Livanapathirana (Senior Lecturer, School of Civil, Mining and Environmental Engineering), and Professor Harry Poulos (University of Sydney and Coffey Geotechnics) who have been selected by the American Society of Civil Engineers to receive the 2007 Thomas A. Middlebrooks award. The award is made to the authors of a paper judged worthy of special commendation for its merit as a contribution to the field of Geotechnical Engineering. The title of the paper is: Livanapathirana, D. S. and Poulos, H. G. (2005). "Pseudostatic approach for seismic analysis of piles in liquefying soil," *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol. 131(12), pp. 1480-1487.

This paper presented a numerical approach based on the finite element method to obtain the internal response of pile foundations subjected to earthquake loading, which is an essential part in the overall seismic design process of structures.

## Faculty Funding for Females

The Women in Engineering and Physics Network are informing female students about a three week seminar in Paris, France, from 7-27th July at the Ecole d'Ingenieurs (<http://www.epf.fr>).

The seminar is entitled "Women Engineers: Creating an energy efficient future". This course costs 700 euros, which includes accommodation, course fees and all materials.

The Sub-Dean has agreed to offer six credit points to any student attending this course, which in turn will attract a \$500 travel grant from Study Abroad.

The Faculty of Engineering will match the study abroad grants (ie total commitment

## Asian-Pacific Program at IEEE



Prof. Anatoly Rozenfeld

The Asian-Pacific Program at IEEE NSS MIC is a special event held in recognition of the strongly growing development of radiation medical instrumentation and radiation detection science in Asia, Australia and New Zealand.

The Centre of Medical Radiation Physics is playing a major role in this science in the Asian-Pacific region, and is recognized internationally. Professor Anatoly Rozenfeld has been selected as a Chair of Asian-Pacific Program IEEE NSS MIC.

The conference will be held in Honolulu, USA, in October and November 2007.

The symposium and the conference offer an outstanding opportunity for scientists and engineers interested or actively working in the fields of nuclear science, radiation instrumentation, software and their applications, to meet and discuss with colleagues from around the world. Approximately 2,500 delegates will attend.

At the symposium Professor Rozenfeld will also chair a one day workshop on Proton Therapy.