Welcome to this Autumn edition of the School of Engineering Newsletter for 2011.

To our first year students, congratulations for choosing to undertake your studies at UWS School of Engineering and so begins your journey to achieving your chosen degree. I trust that you will make use of School resources and that your first year experience will be a good one.

To our returning students, welcome back and I hope that the summer break has renewed your enthusiasm for study and you are ready for the challenges that lay ahead.

This year has started exceptionally well for the School with the Australian Research Council, Excellence in Research Australia Research Scorecard released by Senator Kim Carr on January 31, 2011. The Civil Engineering discipline received a 3 out of a possible 5 which ranks the discipline equal 10th in Australia. A ranking of 4 translates to “evidence of performance above world standard”, whilst a 3 translates to “evidence of performance at world standard” for the two units of assessment.

To further attest to the excellent research that is being carried out in the School, Dr Xinqun Zhu had a book titled “Moving Loads – Dynamic Analysis and identification techniques” published with Professor Law (Hong Kong Polytechnic University) by CRC Press on 22 February, 2011. Furthermore, Dr Ragbir Bhathal has recently published a book on Aboriginal Astronomy which was the result of a community engagement project with indigenous students of the Greater Western Sydney region. This year also sees the establishment of the new research Group for Bioelectronics and Neuroscience (BENS) which is headed by Professor Andre van Schaik and will involve staff of both the Schools of Engineering and Medicine.

The School and Civionics Research Centre welcomes new academic staff members who have started in the new year, Dr Ee Loon Tan, Dr Ming Zhao, Prof Andre van Schaik, Dr Ken Tokeshi, Dr Mahbubur Rahman and Dr Chunwei Zhang. Further new appointments have been made with staff expected to commence throughout 2011 and a recruitment effort is currently underway for six more academic positions.

This new year also brings together a new fresh look for the newsletter which has been arranged by Narelle Chambers our School Administration Manager and designed by Baden Chant from the UWS iMedia and Design Unit.

I hope this year is a successful one for our staff, students and collaborators and we look forward to sharing more news about the School of Engineering and Civionics Research Centre throughout 2011.

Professor Brian Uy
Head, School of Engineering & Director, Civionics Research Centre

HoS Foreword

Upcoming Events
The Engineering & IT Careers Expo
12 April 2011 from 1.30 – 4.00 pm in Building Z on Kingswood campus.

April Graduation Ceremony
April 18, 2011 from 5:00pm at Parramatta Campus Auditorium.

Engineers Australia Western Sydney Regional Group presents
Modern Rail Innovation in Japan – April 28, 2011
Register on-line https://events.engineersaustralia.org.au/ei/getdemo. e?id=528&s=_5SG0UQ2UE

UWS Day Campbelltown
June 7, 2011
ARC Research Scorecard
Minister Carr and the ARC have released the Research Scorecard and UWS School of Engineering achieved a 4/5 in Civil Engineering, FOR Code (0905) which ranks UWS equal 3rd in Civil Engineering in Australia and states: "The Unit of Evaluation profile is characterised by evidence of performance above world standard presented by the suite of indicators used for evaluation."

Engineering FOR Code (09) received a 3/5 at UWS which placed the School 10th out of 30 Engineering Schools in the Country. A ranking of 3 states: "The Unit of Evaluation profile is characterised by evidence of average performance at world standard presented by the suite of indicators used for evaluation."

New research Group
Reverse engineering the brain
A new Research Group for Bioelectronics and Neuroscience (BENS) has been funded by the College of Health and Science at UWS from strategic investment funds. Two new professors will join UWS as part of this effort: Prof André van Schaik, a world leader in neuromorphic engineering has been appointed as the group leader, and Prof Jonathan Tapson, an expert in statistical computation, sensors, and robotics, will join BENS in April, 2011. Expertise in sensory neuroscience is provided by four staff members from the School of Medicine, Prof Vaughan Macefield, Prof John Morley, Dr David Mahns, and Dr Carl Parsons. Dr Antonio Lauto, an expert in biomedical engineering, from the School of Biomedical and Health Sciences completes the current staff, with more staff expected shortly.

The question of how the brain works is one of the remaining big questions in science, and reverse engineering the brain has been listed as one of the most important contributions engineering can make to science in the current century. BENS will conduct neurophysiological and psychophysical investigations combined with theoretical, computational and electronic modelling studies, to discover how the brain creates a coherent interpretation of the external world based on input from its senses. The outcomes of this research will then be applied to create electronics sensors with built-in brains.

Aboriginal Astronomy
As part of the School’s strategic initiatives of implementing a comprehensive Indigenous strategy and improving cultural sensitivity, Dr Ragbir Bhathal has researched and written a book on Aboriginal Astronomy. His research shows that the Aboriginal people were not only keen observers of the night sky but were also able to distinguish the colours of the stars and even related the movement of the stars to the seasons and food supply cycles. They also beat the great physicist Isaac Newton to the recognition that the earthly laws of physics apply to the heavens. Their views of the night sky not only differ from, but probably pre-date, those of other civilisations. Professor Michael McDaniel, a former UWS Dean of Indigenous Education, congratulated Dr Bhathal for his work.

Moving Loads
Dr Xinqun Zhu in collaboration with Professor Siu-seong Law (Hong Kong Polytechnic University) has published a second book by Taylor & Francis Group, CRC Press on 22 February, 2011. Titled, Moving Loads—Dynamic Analysis and Identification Techniques, the book is a study of the vehicle-bridge/track/road interaction phenomenon.
Learning and Teaching

Orientation Day 2011
The School of Engineering opened its doors to 600 enthusiastic new first year students on February 24. For those who attended, the day started with course information sessions providing information and advice on the skills and strategies needed to succeed at university, followed by tours of the School of Engineering and a BBQ lunch for students and staff. In the afternoon students split into smaller groups to attend workshops giving students the opportunity to meet their Head of Program and ask questions.

FPAA Ron Coffey Award
Ms Leanne Grocott received the inaugural Ron Coffey Award in 2010 for academic excellence in the Bushfire Protection Program. The award, valued at $500, is issued by the Fire Protection Association of Australia (FPAA). Ms Grocott graduated in 2010 and achieved GPA 6.0 in her pursuit of the Graduate Diploma in Bushfire Protection. The award was presented at FPAA conference at Gold Coast in October 2010. The award is part of fulfilment of the MOU signed between the College of Health and Science and FPAA in February 2010 to promote professional education and research.

Graduation
The first December Graduation Ceremony for the School of Engineering was held on December 15, 2010 and will become an annual event. Sixty two of our students were able to graduate at the end of the year as a celebration of their studies.

Course Decision Day
UWS Course Decision Day – Penrith was held on 4 January and was well attended by prospective students. School staff presented a variety of informative sessions to assist students to choose the right course and to find out more about career options and pathways on offer at the School of Engineering.

New Key Program in 2011
Bachelor of Engineering – Mechanical Engineering commenced as a new key program in 2011. Units of study for this program include advanced mechanics, thermodynamics and fluid mechanics.

Capital Works Update
Refurbishment of tutorial rooms and lecture theatre and the installation of air conditioning in building XA was completed during the summer break. The rooms are lighter and brighter and have been fitted with new audio and visual equipment and furniture.

Rooms, XB.G.26, XB.G.38 & XB.G.15 have been converted to academic office space for permanent and sessional staff on the ground floor in Building XB.

Computer labs in XB.1.02 & XA.1.03 & Z.G.03 have been upgraded to i5 computers.

Preparation for the 1,000 tonne machine installation is progressing and the machine is expected to be commissioned in May 2011.

Reception Hours
Ground floor reception, Building XB, Kingswood campus is now open from 8:30am to 5:00pm. Our first year student contact officers for administration support are Teresa Cheong and Mary Rose Rutkowski, both located within reception.
Indigenous employment and engagement

In 2010, the Indigenous Employment and Engagement (IE&E) Office was shortlisted as a finalist and the winner of the National Award administered by the Australian Human Resource Institute (AHRI), the Fons Trompenaars Award for Diversity and Cross Cultural Management, for its work on negotiating Cadetships, Traineeships, Brokerage placements with Industry and Government and various other initiatives for Aboriginal and Torres Strait Islander peoples.

As recognition of the School’s role in promoting indigenous Employment and Engagement, along with other UWS hiring managers, the School Technical Manager Dr. Mithra Fernando and the Indigenous Trainee of the School Mitch Quirk were invited by the Director, Indigenous Employment and Engagement, Melissa Williams to meet with the Senator for Sport, Indigenous Employment and Economic Development and Social Housing and Homelessness, Hon. Mark Arbib on Friday 18 March 2011 at the Parramatta Campus.

The Minister expressed the government recognition of the role played by the UWS Colleges and Schools in inspiring, motivating, advising and providing leadership in creating opportunities for the champions of the next generation of success stories.

Staffing

Continuing Appointments

Associate Heads of School

These appointments are current until 31 December 2011.

» Dr Sasha Alexander as Associate Head of School (Engagement and Industrial Design)
» Dr Jeffrey Zou as Associate Head of School (International and Engineering)
» Dr Swapan Saha as Associate Head of School (Learning & Teaching and Construction)
» Professor Yang Xiang as Senior Associate Head of School (Research and Engineering)

Visiting Academic

Associate Professor Pramod Kumar Gupta from the Indian Institute of Technology Roorkee, is visiting from March to July. Pramod received the Endeavour Research Fellowship award. He will undertake research work at the Civionics Research Centre under Professor Brian Uy.

Exchange Student

Mr Patrick Scholthess from the Swiss Federal Institute of Technology Zurich, is visiting from March to July. He will assist Dr George Vasilouvalis, Postdoctoral Research Fellow with his Civionics research project.

New Appointments

Dr Yingbin Feng has been appointed Lecturer in Quantity Surveying and is due to commence in April, 2011.

Dr Jonathon Tapson has been appointed to the position of Professor in Electrical and Electronic Engineering. After relocating from South Africa he will commence in April, 2011.

Dr Andreas Momber has been appointed to the position of Associate Professor in Construction Materials. After relocating from Germany he will commence in September, 2011.

Dr Mahbubur Rahman – Postdoctoral Research Fellow commenced in January 2011. He is working with Dr Haiping Zhu’s ARC Discovery project “Experimental and numerical investigation of granular flow in hoppers” and is also located within the Civionics Research Centre.

Dr Chunwei Zhang has taken up the position of Senior Lecturer in Structural Control within the Civionics Research Centre and commenced in January, 2011.

Dr Ee Loon Tan has been appointed to the position of Lecturer in Concrete Structures and commenced on 14 February, 2011. Ee Loon has recently completed his PhD at UWS.

Dr Ming Zhao has been appointed to the position of Senior Lecturer in Computational Fluid Mechanics and commenced on 11 March, 2011. Ming joins us from the University of Western Australia.

Dr Ken Tokeshi – Postdoctoral Research Fellow commenced in December 2010. He is working with Associate Professor Chin Leo’s ARC Discovery project “Geotechnical characterisation of compacted ground based on passive ambient noise techniques” and is located within the Civionics Research Centre.

New Staff

Professor Andre van Schaik is located within the School of Engineering. Andre is leading the newly formed Bioelectronics and Neuroscience (BENS) interdisciplinary research group.

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