



School of Engineering Newsletter

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Head of School Foreword

Welcome to the Spring issue of the School of Engineering Newsletter.

This issue highlights some significant issues in Research, Learning and Teaching activities for the School.

The 4th International Conference on Steel and Composite Structures was held from 21 to 23 July 2010 at the Sydney Powerhouse Museum and was sponsored by the School of Engineering Civionics Research Centre. The event attracted over 150 people including leading researchers, engineers, manufacturers, product providers, fabricators and contractors.

An International Workshop on Steel & Composite Structures was held at the University of Western Sydney and was hosted by the Civionics Research Centre in August. This workshop was the result of researchers from UK and China visiting our Centre after the ICSCS'10 conference held in Sydney in July. Based on the existing research collaboration, we believe that this workshop will be a catalyst for further collaboration in steel and composite structures research between researchers at UWS and those from the UK and China.

We continue to host international visitors to the School and Centre.

The School Honours Conference was held on the 23 September. This was a major event for the School. Thirty-six Honours students presented major achievements from their final year of research studies. Many of these research projects were undertaken in close collaboration with industry partners as detailed in this Newsletter.

UWS Open Day was held on the 29 August at our Parramatta Campus and was well attended by staff and potential students and their families.

The School welcomed mid-year intake Engineering and Industrial Design students with an orientation day held on 19 July. Approximately sixty new students attended.

This issue covers many other initiatives that are ongoing in the School and we look forward to actively engaging Alumni, Staff and Students.

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



Research and International

ICSCS'10

The 4th International Conference on Steel and Composite Structures was held from 21st to 23rd of July 2010 at the Sydney Powerhouse Museum. There were 120 presentations over three days of the ICSCS, including nine keynote speakers:

- » Professor Ir. Frans Bijlaard, Delft University of Technology, Netherlands
- » Professor Mark Bradford, University of New South Wales, Australia
- » Professor Siu Lai Chan, Hong Kong Polytechnic University, Hong Kong
- » Professor Lin-Hai Han, Tsinghua University, China
- » Dr Dennis Lam, University of Leeds, United Kingdom

- » Professor Roberto Leon, Georgia Institute of Technology, USA
- » Professor Richard Liew, National University of Singapore, Singapore
- » Professor David Nethercot, Imperial College London, United Kingdom
- » Professor Eiki Yamaguchi, Kyushu Institute of Technology, Japan

The ICSCS was convened in association with the international journal, "Steel and Composite Structures," chaired by Professor Uy and a group of local organising committee members - Prof Tao and Drs Mashiri, Zhu, Mirza, Tan and Mrs Wong-Borgefjord.

International Workshop on Steel & Composite Structures

There were eight papers presented at the Workshop on Steel and Composite Structures at the University of Western Sydney (UWS) on 20 August 2010. This workshop was the result of researchers from UK and China visiting our Centre after the ICSCS'10 conference held in Sydney in July and also hosted by the Civionics Research Centre. Based on the existing research collaboration, we believe that this workshop will be a catalyst for further collaboration in steel and composite structures research between researchers at UWS and those from the UK and China.

Greenhouse Precinct

Jon Allen hosted two Dutch greenhouse experts on 19 August who gave a presentation to Engineering staff.



Jon also visited a large-scale greenhouse in Adelaide and met with researchers at the University of Adelaide's Plant Accelerator together with the Dutch visitors i.e., Prof. Bill Bellotti and Dr. Leigh Sheppard, as part of an on-going project to establish a greenhouse precinct at Hawkesbury campus.



4th International Conference on Steel and Composite Structures 2010

Visiting Professor Seminars

Professor J N Reddy, Chair of Mechanical Engineering at the Texas A&M University, USA presented a seminar on "Nonlinear Analysis of Laminated Composite Structures Using a Refined Shell Finite Element" on 16 July 2010 at the School of Engineering.

Professor Dinar Camotim from the Technical University of Lisbon, Portugal presented a seminar on "GBT-Based Structural Analysis of Steel and Composite Thin-Walled Members and Frames" on 19 July 2010 at the Civionics Research Centre.



Professor J N Reddy, Chair of Mechanical Engineering at the Texas A&M University, USA

Research and International (cont.)

Visiting Professors and Fellows at the Civionics Research Centre Workshop

Dr Mahmud Ashraf, Lecturer, School of Civil Engineering, University of Queensland, Australia visited from the 10 to 24 July 2010 and gave a seminar on “Material modelling for stainless steel – a review on the current practices and some thoughts for the future” on 19 July 2010.

Professor Lin-Hai Han, Professor of Structural Engineering and Director of Institute of Disaster Prevention and Mitigation Engineering at Tsinghua University, China visited from 26 July to 16 August 2010. Professor Han gave a seminar on “Some Recent Developments of Concrete Filled Steel Tubular Structures in China” on 6 August 2010.

Professor Robert Xiao, Professor of Structural Civil Engineering at the Faculty of Engineering, Science and Built Environment, London South Bank University visited from 26 July to 6 August 2010 and gave a seminar on “Simulation, Analysis and Design for Composite Materials and Structures” on 6 August 2010.

Professor Dennis Lam, Chair of Structural Engineering at the University of Bradford visited from 13 July to 27 August 2010. Professor Lam was a Keynote Speaker at the ICSCS'10 and he presented a paper on “modelling headed shear studs in composite beams with profiled metal decking” at the International Workshop on Steel and Composite Structures which was held on 20 August 2010 at the Civionics Centre, Kingswood Campus.

Dr Fei-Yu Liao, Postdoctoral Research Fellow, Department of Civil Engineering at Tsinghua University, China visited from 10 July to 31 August 2010. He presented a paper on “performance of reinforced concrete (RC) shear walls framed with steel reinforced concrete (SRC) columns: finite element model and verifications” at the International Workshop on Steel and Composite Structures which was held on the 20 August 2010 at the Civionics Centre, Kingswood Campus.



Dr Fei-Yu Liao, Postdoctoral Research Fellow, Department of Civil Engineering at Tsinghua University, China

Visiting Research Fellow, Dr Houjun Kang, Lecturer, College of Mechanics and Aerospace, Hunan University, China is visiting from 9 Aug 2010 to end of July 2011. He is working with Dr Haiping Zhu for the ARC Discovery project of “Experimental and numerical investigation of granular flow in hoppers”



Professor Dennis Lam, Chair of Structural Engineering at the University of Bradford

Community Engagement

Engineering Discipline External Advisory Committee

This Committee met on 1 July. The Head of School advised the Committee of the recent review of the School of Engineering which arose as part of a schedule of School Reviews for the University of Western Sydney.

Science & Engineering Challenge

The Science and Engineering Challenge was held on 29 June and was attended by one hundred and seventy eager and enthusiastic year nine and ten school students from five local high schools. Challenges included; gold fever, job juggle, puff puff golf, flight of the navigator, electra CITY and the dish. Penrith High topped the challenges to be the winning school on the day.

Learning and Teaching

School Honours Conference

The School of Engineering hosted its Annual Honours Conference on 23 September 2010. This was a major event for our School. Thirty six Honours students presented their major achievements from their final year of research studies. Many of these research projects were undertaken in close collaboration with industry partners namely Ajax, Arup, Australian Tube Mills, BlueScope Lysaght, Penrith Lakes Development Corporation. It was a useful experience to those students who had started their Honours degree in Spring 2010 or intended to start their Honours degree in Autumn 2011.

Mid Year Orientation

The School welcomed mid-year intake Engineering and Industrial Design students with an orientation day held on 19 July. Approximately sixty new students attended the orientation information sessions and BBQ lunch.

Mid-Year School Forum

The Mid-Year School Forum was held on 15 July 2010 at the Waterview Convention Centre in Bicentennial Park, Homebush and was attended by fifty academic & administration staff, as well as some visitors to the School of Engineering. The outcomes of the recent School Review was the focal point of discussions.



Dr Ragbir Bhatla & Dr Swapan Saha



Robyn Carter & Dr Vivian Tam

UWS Open Day

UWS Open Day was held on Sunday 29th August at Parramatta Campus and was well attended by staff and potential students and their families. The School of Engineering gave four presentations to potential students and their parents covering the three major disciplines of the School and academic staff fielded questions all day in the two open rooms. The Vice Chancellor was in attendance and declared the event "the best ever" and noted that it was close to a record attendance.

Exchange Students from Cologne University

The School also made welcome Nina Weschenfelder and Christian Wonner from Cologne University of Applied Sciences in Germany who have commenced a study exchange this semester with Industrial Design.

School staff

Below are the staff recruitments and movements within the School of Engineering and Civionics Research Centre.

July

Dr Yingyan Zhang, joined the School of Engineering from Fuzhou University. Dr Zhang has filled the position of UWS Research Lecturer and brings with her, research interest in numerical methods in solid mechanics and atomistic investigation of nano-materials.

Dr Dharma Hagare, former employee of Gosford City Council and University of Wollongong commenced in the position of Senior Lecturer in Risk Engineering within the School.

Dr George Vasdravellis joined the Civionics Research Centre taking up a Post Doctoral Research position working on ARC projects in Steel and Composite Structures.

Mary Rutkowski returned from long service.

August

Mr Mohammad Masud Rana a new PhD Scholarship student commenced in the School of Engineering. This student will be involved in experimental and analytical research considering the flexural strength behaviour of novel structural forms which is part of an ARC linkage project with ARUP, Stramit and the University of Sydney.

September

Ms Upeka Kuruppu, joined the School of Engineering as a Technical Officer. She has a degree in Chemical Engineering from the University of Peradeniya, Sri Lanka and was awarded the best Chemical Engineering graduate for the year 2004. She also has extensive technical experience having worked at 3M Sri Lanka.

Mrs Patricia Hillier, Administration Officer, departed the school to commence a secondment position in the Office of Research Services.