



Proceedings



4th ASEE/AaeE Global Colloquium on Engineering Education

*Globalisation of Engineering Education
Kindergarten to Year 12 Pipeline
Transformation of the Disciplines*

Editors: David Radcliffe and Josh Humphries

26th-29th September, 2005
Star City, Sydney
Australia

All papers accepted for publication in the Proceedings of the 4th Global Colloquium on Engineering Education were submitted as full papers and peer reviewed by at least two members of an expert editorial panel. Based on these reviews, authors were asked to revise their papers before a final decision to accept and publish the paper was made. This process of reviewing is in accord with the criteria set by the Department of Education, Science and Training (DEST) of the Australian Government for published papers.

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Welcome

Welcome to Sydney and to the 4th ASEE/AaeE Global Colloquium on Engineering Education, GCEE 2005. This landmark event for engineering education in Australia combines the 4th international colloquia organised by the American Society for Engineering Education (ASEE) with the 16th Annual Conference of the Australasian Association for Engineering Education (AaeE), incorporating the 11th Australasian Women in Engineering Forum.

Since its inception in Berlin in 2002, this colloquium series has had an enviable record as a high-quality event. This is achieved by having a limited number of well developed themes and featuring up to 50 keynote and invited speakers selected by an international program committee. The program also features 190 papers submitted by authors from all continents. This is the first time this global colloquium has been held in the southern hemisphere.

The three themes of this year's colloquium are *Globalization of Engineering Education, the Kindergarten to Year 12 Pipeline* and the *Transformation of the Disciplines*. These themes are pivotal to how we attract and prepare the next generation of engineers to tackle global challenges in the face of significant changes in the discipline of engineering.

The inaugural meeting and formal launch of the International Federation of Engineering Education Societies will be hosted at the Colloquium. An initiative of the ASEE, this meeting will bring together leaders of many national associations of engineering education from Europe, Africa, Asia, the Americas and Australasia.

Another first for the Colloquium is the introduction of the "Conference Postcard". This innovative form of presentation is based on the metaphor of the picture postcard you send to a friend saying "Wish you were here". By capturing the essence of their paper in a high impact postcard presentation, delegates will be motivated to follow-up and read the full paper. Also computer kiosks in the venue allow delegates to access and discuss their web-based Postcards throughout the Colloquium.

The AaeE Excellence Awards will be presented at the Colloquium Banquet.

This event would not be possible without the financial support of our many sponsors and other supporting organisations. Please take the time to visit their displays during the course of the event. We are also indebted to the hard work of the members of the program committee, the paper reviewers and many others from ASEE and AaeE who have contributed in numerous ways to the realisation of this Colloquium.

We hope you enjoy this unique opportunity to network with colleagues from around the world and to share ideas and experiences. Enjoy!

David **Radcliffe** and James **Melsa**

Co-Chairs
4th ASEE/AaeE
Global Colloquium on
Engineering Education

History of the Colloquium Series

Engineering educators throughout the world face extraordinary challenges: new communications technologies, an increasingly fluid global marketplace, and rapidly evolving fields of research and teaching. Yet for all the wonders of a global, technologically-enhanced engineering education community, no electronic medium can substitute for the face-to-face exchanges that communities of learning have traditionally relied on for the dissemination of knowledge.

To unite the diverse elements of the international engineering education world, the American Society for Engineering Education (ASEE) holds an annual global colloquium focused on issues of interest to the international engineering education community. The colloquium links engineering educators across international borders and bring together teachers and researchers who would otherwise never have a chance to meet.

ASEE began its annual colloquium in Berlin, in collaboration in with the European Society for Engineering Education (SEFI) and the Technical University Berlin (TUB). The 2003 colloquium was held in Nashville, Tennessee, USA in conjunction with the World Federation of Engineering Organization (WFEO). During September 2004, the international collaboration continued in Beijing with the colloquium co-sponsorship by the Chinese Academy of Engineering (CAE), the National Natural Science Foundation of China (NSFC), and Tsinghua University. This year, ASEE is pleased to collaborate with the Australasian Association for Engineering Education (AaeE) for the ASEE/AaeE 4th Global Colloquium on Engineering Education. The next Colloquium is in Rio de Janeiro in Brazil in September, 2006.

Joint Organising Committee

Frank Huband	Executive Director, ASEE
Bob Black	Deputy Executive Director, ASEE
Jennifer Johnson	Manager for International Activities, ASEE
Patti Greenwalt	Director of Meetings and Conventions, ASEE
Robert Malgieri	International Activities Associate, ASEE
David Radcliffe	President, AaeE
Josh Humphries	University of Queensland
Sally Brown	Sally Brown Conference Connections
Peter May	Associate Director Conferences, Engineers Australia

The Joint Organising Committee wishes to acknowledge the contributions by other staff at ASEE, the support of the AaeE Executive and assistance of the staff and the student volunteers from the School of Engineering at the University of Queensland.

Program Committee

James Melsa	Iowa State University (Co-Chair)
David Radcliffe	University of Queensland (Co-Chair)
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Brendon Parker	University of New South Wales (Globalisation)
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Elizabeth Taylor	Central Queensland University (Transformation)
Barbara Olds	National Science Foundation (K-12 Pipeline)
Adrian Page	University of Newcastle (K-12 Pipeline)

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About Microsoft



Founded in 1975, Microsoft (NASDAQ, MSFT) is the worldwide leader in software, services and solutions that help people and businesses realize their full potential. For more information, please visit the Microsoft Web page at www.microsoft.com.

About National Instruments



National Instruments is a technology pioneer and leader in virtual instrumentation: a revolutionary concept that has changed the way engineers and scientists in industry, government and academia approach measurement and automation. Leveraging PCs and commercial technologies, virtual instrumentation increases productivity and lowers costs for test, control and design applications through easy-to-integrate software, such as NI LabVIEW, and modular measurement and control hardware for PXI, PCI, USB and Ethernet. Headquartered in Austin, Texas, NI has more than 3,500 employees and direct operations in nearly 40 countries. For the past six years, *FORTUNE* magazine has named NI one of the 100 best companies to work for in America. www.ni.com

About UGS and plm



UGS is a leading global provider of product lifecycle management software and services with nearly four million licensed seats and 46,000 customers worldwide. Headquartered in Plano, Texas, UGS's vision is to enable a world where organizations and their partners collaborate through global innovation networks to deliver world-class products and services while leveraging UGS open enterprise solutions, fulfilling the mission of enabling them to transform their process of innovation - www.ugs.com.



In Australasia, **plm** provides and supports solutions to address all stages of the Product Lifecycle to enable companies to deliver better products, faster. **plm**'s software includes NX Unigraphics, Teamcenter, NX Nastran, Femap and others. They have solutions to style, design, build, simulate and optimize products and manufacturing processes including information collaboration. www.plma.com.au



About Thiess Pty Ltd

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About Hatch

Hatch is a leading consulting, engineering, technologies, information systems, and project and construction management organization. They have more than 2,000 employees in Australia, with major offices in Brisbane, Wollongong and Perth. Hatch provide a full range of technology-driven, value-adding solutions and services to clients in the mining, minerals, metals, manufacturing, infrastructure and energy sectors through a network of more than 80 offices worldwide. Programs and projects under management have an aggregate value in excess of US\$15 billion. Hatch is an employee-owned company of more than 6,500 employees. www.hatch.ca



About Engineers Australia

Engineers Australia is the national forum for the advancement of engineering and it embraces all disciplines of engineering and engineering leadership and management. It is the largest and most diverse professional body for engineers in this country with over 79,000 members, 50% of which are under 35 years old. The major focus is on the professional development of its members. Engineers Australia is a trusted voice of the engineering profession in Australia. www.ieaust.org.au/



About Defence Materiel Organisation

The Defence Materiel Organisation (DMO) is part of the Department of Defence. Its purpose is to equip and sustain the Australian Defence Force and its vision is to become the leading program management and engineering services organisation in Australia. DMO is the biggest manager of physical assets in Australia, with an annual budget of around \$6.5 billion in acquisition and sustainment contracts, for around \$50 billion of specialised military assets. Major projects include the Joint Strike Fighter Project and the Air Warfare Destroyer Project. If the DMO was a private firm it would be one of the largest on the Australian Stock Exchange. DMO employs around 6,500 civilian, Australian Defence Force and contracted personnel in about 50 locations throughout Australia and overseas. www.defence.gov.au/dmo



About the University of Queensland / Catalyst Research Centre for Society and Technology

The University of Queensland is one of Australia's premier learning and research institutions. It is the largest and oldest university in Queensland and has produced generations of graduates who have gone on to become leaders in all areas of society and industry. Within the School of Engineering, the Catalyst Research Centre for Society and Technology seeks to create innovative, sustainable solutions to complex social and technological challenges facing industry and the community, through the fusion of social science and engineering perspectives. The Centre has developed a unique interdisciplinary research methodology at the intersection of Engineering Design, Industrial Anthropology, Learning Sciences and Information Sciences. www.catalyst.uq.edu.au



About UNESCO

UNESCO is the United Nations Educational, Scientific and Cultural Organization (UNESCO), and was founded on 16 November 1945. For this specialized United Nations agency, education, social and natural science, culture and communication are the means to the goal to build peace in the minds of men. UNESCO functions as a laboratory of ideas and a standard-setter to forge universal agreements on emerging ethical issues. The Organization also serves as a clearinghouse – for the dissemination and sharing of information and knowledge – while helping Member States to build their human and institutional capacities in diverse fields. In short, UNESCO promotes international co-operation among its 191 Member States (as of March 2005) and six Associate Members in the fields of education, science, culture and communication.

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About the Minerals Council of Australia, Tertiary Education Council

The Minerals Council of Australia (MCA) represents Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society. The Minerals Tertiary Education Council (MTEC) was set up in October 1999 by the Minerals Council of Australia to build a world-class tertiary learning environment for the education of professionals for the Australian minerals industry. MTEC fosters the partnership between industry, government and academia. A network of selected university partners is dedicated to achieving true 'world class' education by cooperating in the development and delivery of undergraduate and post graduate learning in the specialist disciplines of earth sciences, mining engineering and metallurgy. www.minerals.org.au/mtec/about_mtec



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General Information

About Sydney

Sydney is Australia's largest city, set on a picturesque harbour. It has a population of around 2.5 million and it is the capital of the State of New South Wales. While Sydney is best known for icons like the Sydney Opera House, the Bridge and Bondi Beach, there is much more to this world city.

Sydney has a rich history that spans 40,000 years of Aboriginal heritage, the early Convict settlement in 1788, and the development of a multi-cultural city. You can experience this history and diversity of cultures and activities in many ways.

Airport Information

Sydney Airport (AKA Kingsford-Smith and Mascot) is located approximately 10km from the city. International flights arrive at Terminal 1 and Domestic flights go to Terminals 2 and 3.

Australia has strict rules about bringing a wide variety of animal and vegetable materials into the country. See Customs and Quarantine below.

The domestic and international terminals are connected by a five minute bus trip, with the airport only 20 minutes by taxi to the Central Business District. You can expect to pay A\$25 depending on traffic conditions. The Airport Express bus service into the city operates every 20 minutes and stops at all major hotels in the Central Business District for A\$10 return.

The rail AirportLink enables a quick 10 minute journey to the centre of Sydney or 15 minutes to Circular Quay. AirportLink train fares from the International Airport to the city start at A\$10.40 for a single fare.

Currency and ATMs

The Australia currency is the Australian dollar (A\$). Automatic Teller Machines (ATMs) are widely available and local currency can be withdrawn using Cirrus or Maestro based cards that facilitate electronic funds, point of sale (EFPOS).

Credit Cards

Visa, MasterCard and Eurocard are widely accepted. American Express and Diners Club are accepted at many hotels and some restaurants.

Customs & Quarantine

Quarantine and wildlife regulations and other restrictions may also apply to certain goods. A customs entry for customs clearance may be required if the goods carried are valued over A\$250. All travellers must declare amounts of A\$10,000 or more in foreign or Australian currency (notes and coins) you take into or out of Australia.

We recommend you check the Australian Customs Service web page.

Electricity

The electricity in Australia is 240 volts, 50 hz.

GST – Goods and Services Tax

All goods and services transacted in Australia attract a Goods and Services Tax of 10%. By law this tax is included in all displayed prices; so the price you see is the price you pay.

Visitors to Australia can claim back the GST paid on any purchase of at least A\$300 from the one store. This is done at the airport at the time of departure. You need proof of purchase (normal receipt) that shows the suppliers ABN (Australian Business Number), that GST was paid on the goods, and how much the GST was.

Media

Australian Broadcasting Corporation
Sydney Morning Herald
The Australian
Australian Financial Review

Time Zone

Sydney is ten hours ahead of Greenwich Mean Time (GMT + 10). During September, Sydney will be on standard time (not summer time). Therefore it is two hours behind Auckland, one hour ahead of Tokyo, two hours ahead of Beijing and Singapore, three hours ahead of Bangkok, three and a half hours ahead of Mumbai, eight hours ahead of Berlin, nine hours ahead of London, 14 hours ahead of New York, 15 hours ahead of Chicago, and 17 hours ahead of Los Angeles – based on summer time in the Northern Hemisphere. Sydney is 14 hours ahead of Santiago, 13 hours ahead of Rio de Janeiro, and eight hours ahead of Cape Town.

Because Australia is on the other side of the International Date Line, you lose one day when traveling west from the USA. You will gain one day upon return (across the Pacific).

Tipping

As a general rule Australian's do not tip and there is no expectation to tip.

Visa

All visitors, apart from New Zealand citizens, must obtain a Visa before travelling to Australia. Australia's Electronic Travel Authority (ETA) is an electronically-stored authority for travel to Australia for a short-term tourist or business entry. ETAs are issued within seconds of being requested through computer links between the Australian Immigration Department, travel agents, airlines and specialist service providers around the world. Over 30 countries have access to the ETA system. A recent innovative enhancement allows a traveller to apply for an ETA over the Internet. Conference delegates from non-ETA countries will need to obtain a business (short-stay) visa, even if some tourism activities are planned for part of the stay in Australia. It is called a 456 visa if it is issued as a label into a passport.

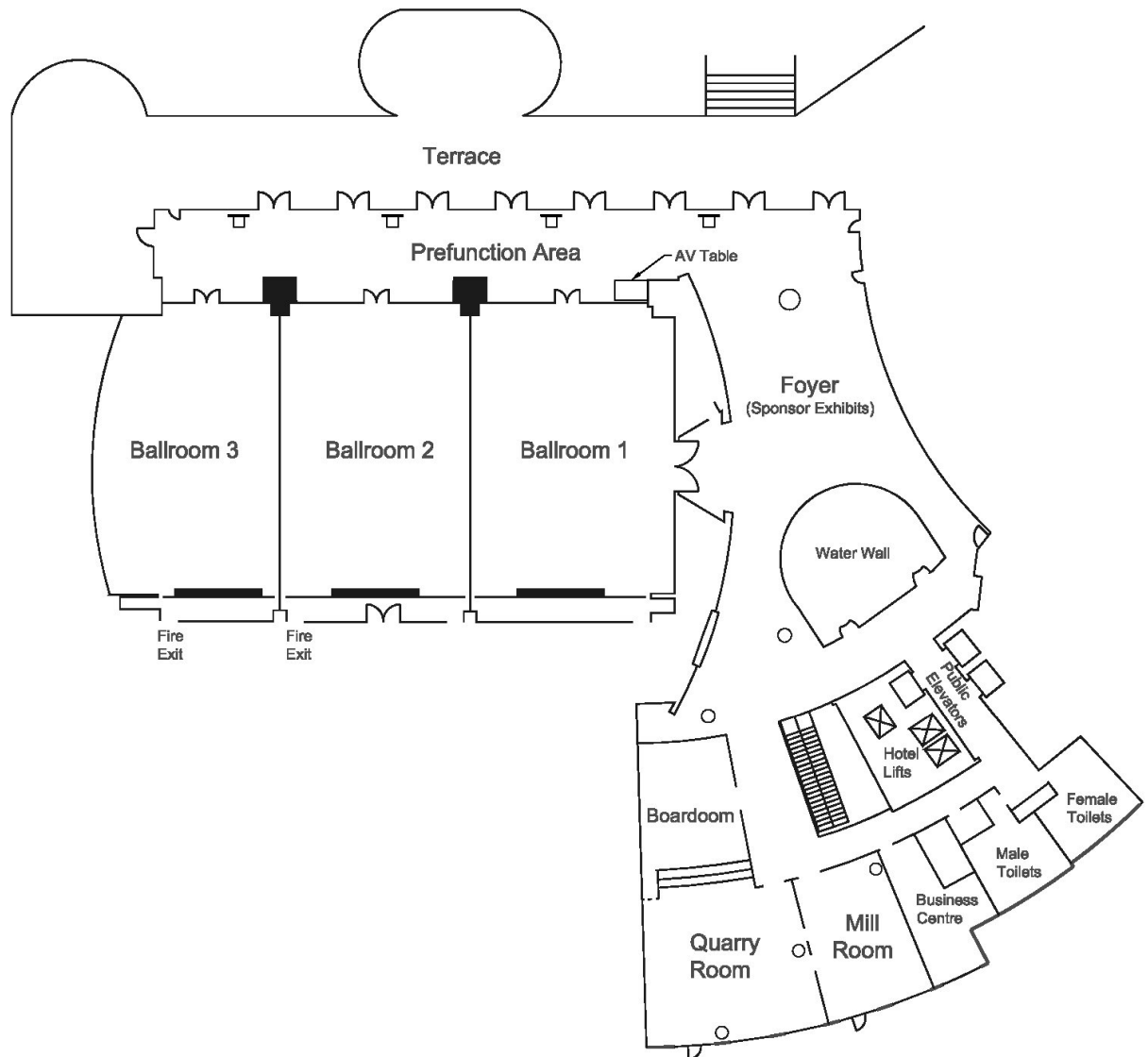
We strongly recommend you check the latest information on Department of Immigration.

Weather

September is spring in Australia. The climate in Sydney is temperate and mild. Average maximum for September/October is 20C (68F) and the average minimum is 12C (54F).

Bring a jacket and light sweater for the cool evenings.

Venue - Star City



All the major sessions for the Colloquium are held in the Ballrooms. The sponsor displays and exhibition will be held in the Foyer. Morning and afternoon tea and luncheon will be served in the Foyer or Pre-function area.

The internet kiosks for Postcards are located in the Pre-function area.

Program at a Glance

Monday, September 26, 2005

09:00 - 17:00 **Young Engineers Summit (separate registration), Ballroom 3, Star City**
09:00 - 16:00 **Engineering Librarians Round Table and Workshop (at UTS)**
09:00 - 16:00 **Environmental Engineering Meeting (by invitation)**
12:00 - 17:00 **Delegate / Attendee Registration, Foyer, Star City**
14:00 - 17:00 **IFEES Meeting (by invitation), Quarry Room**
14:00 - 16:00 **PC Tablet Workshop (20 maximum), Pirrama Room, Star City**
18:00 - 18:30 **VIP Welcome (by invitation), Quarry Room, Star City**
18:30 - 20:00 **Opening Reception, Ballrooms 2 & 3, Star City**

Tuesday, September 27, 2005

08:00 - 10:00 **Delegate / Attendee Registration, Foyer, Star City**
10:00 - 12:00 **Opening and Main Plenary, Main Keynote, Ballrooms 1 & 2**
12:00 - 13:00 **Luncheon + Presentation on Journal of Engineering Education**
13:00 - 15:00 **Plenary Session, Theme Keynotes, Ballrooms 1 & 2**
15:00 - 15:30 **Afternoon Tea / Coffee Break**
15:30 - 17:00 **Breakout Session 1**
17:00 - 17:30 **Refreshments**
17:30 - 19:00 **International Exchange Session 1**
19:00 - 19:20 **Refreshments**
19:20 - 21:00 **International Exchange Session 2**

Wednesday, September 28, 2005

08:00 - 09:00 **Delegate / Attendee Registration, Foyer, Star City**
09:00 - 10:30 **Breakout Session 2**
10:30 - 11:00 **Morning Tea / Coffee Break**
11:00 - 12:30 **Breakout Session 3**
12:30 - 14:00 **Luncheon**
13:00 - 14:00 **AaeE Annual General Meeting**
14:00 - 15:30 **Focus on Australasia Session 1**
14:30 - 17:00 **IFEES Meeting (by invitation), Quarry Room**
15:30 - 15:50 **Afternoon Tea / Coffee Break**
15:50 - 17:30 **Focus on Australasia Session 2**
18:45 - 22:00 **Harbour Cruise**

Thursday, September 29, 2005

09:00 - 10:30 **Breakout Session 4**
10:30 - 11:00 **Morning Tea / Coffee Break**
11:00 - 12:30 **Breakout Session 5**
12:30 - 14:00 **Luncheon**
14:00 - 15:00 **Rapporteur and Closing Session**
15:00 - 15:30 **Afternoon Tea / Coffee Break**
15:30 - 17:00 **AaeE Executive Meeting, Board Room**
18:30 - 22:00 **Colloquium Banquet and AaeE Awards**

Friday, September 30, 2005

09:00 - 16:00 **Australian Council of Engineering Deans meeting, Quarry Room**

Plenary and Keynote Speakers

Dr Robin Batterham

Chief Technologist

Rio Tinto Pty Ltd

Robin Batterham is Chief Technologist of Rio Tinto. He joined Rio Tinto in 1988 following a research and management career in CSIRO. His qualifications are in chemical engineering and he gained his PhD from Melbourne University in 1968 where he is now also a Professor in the Department of Chemical and Biochemical Engineering. His current role covers emerging scientific and technical issues, external R&D and the delivery of major step change technologies into the operations. 12

From 1999-2005 he was Chief Scientist of Australia and his leading role with the Government helped facilitate investment of an extra \$8.3bn for science and innovation in Australia.

Engineering Education - Random Thoughts

27 September 2005 , 10:00 : Opening and Main Plenary, Main Keynote, Ballrooms 1 & 2

Dr Simon Longstaff

Executive Director

St James Ethics Centre

Dr Simon Longstaff is a philosopher and ethicist whose work focus is mostly in the wider community beyond academe. He has been Executive Director of St James Ethics Centre since 1991. Established in 1989, the Centre is an independent not-for-profit organization which provides a non-judgemental forum for the promotion and exploration of ethics.

One of the Executive Director's roles is to encourage the process of integrating ethical considerations into the strategic thinking of the management community. More generally, Simon encourages and contributes to the active discussion of ethical questions amongst the widest possible audience. Simon has a Bachelor's Degree in Education and won scholarships to study at Cambridge, where he read for the degrees of Master of Philosophy and Doctor of Philosophy.

More information about Dr Longstaff and the Centre is available at www.ethics.org.au

Transformation of Disciplines

27 September 2005 , 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2

Dr Barbara Olds

Director, Division of Research, Evaluation & Communication

National Science Foundation

Dr Barbara M Olds joined the US National Science Foundation in March 2003 as the Division Director for Research, Evaluation and Communication (REC) in the EHR Directorate. In addition, she was appointed Acting Division Director for Elementary, Secondary and Informal Education (ESIE) in May 2005. She is a Professor of Liberal Arts and International Studies at the Colorado School of Mines where she most recently served as Associate Vice President for Academic Affairs. She has also been the Principal Tutor/Director of the McBride Honors Program in Public Affairs for Engineers and Director of the EPICS (Engineering Practices Introductory Course Sequence) Program at CSM. Her research interests are primarily in the assessment of student learning. She is a Fellow of the American Society for Engineering Education where she served on the Board of Directors from 2002-2004 and was a Fulbright Lecturer/Researcher in Sweden in 1999.

Opportunities and Challenges in K-12 Science, Technology, Engineering and Mathematics Education

27 September 2005 , 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2

Professor Low Teck Seng

President

Republic Polytechnic Singapore

Professor Low is the Principal and CEO of Republic Polytechnic in Singapore. He graduated with the BSc (First Class) and PhD in 1978 and 1982 from Southampton University, United Kingdom. Professor Low joined NUS in 1983 and founded the Data Storage Institute (DSI) in 1992. In 1998, he returned to NUS as Dean of the Faculty of Engineering. Professor Low is a Fellow of the Institution of Electrical and Electronics Engineers. He is actively involved in research and his technical interests are in Computational Electromagnetics, Nanomagnetism and Data Storage Technologies. Professor Low sits on the Board of several companies as well as the Health Science Authority and Chairs Singapore's A-Star's (Agency For Science, Technology And Research), TSRP (Strategic Research Programmes) and the DSI's Industry Advisory Committee.

Pedagogical Imperatives in a Globalising World

27 September 2005 , 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2

Invited Speakers

Professor Hussain Al-Madani

Dean

University of Bahrain

Engineering Education in the Arab World

29 September 2005, 11:00: Globalisation, Ballroom 1 [Breakout Session 5]

Dr Timothy Anderson

University of Florida

Tim Anderson received his education in Chemical Engineering from Iowa State University (BS 1973) and the University of California, Berkeley (MS 1975, PhD 1980). Professor Anderson served as Director of the NSF SUCCEED Engineering Education Coalition from 1997 until its completion in 2003. This coalition of eight colleges of engineering in the southeastern USA was an incubator of educational innovations whose mission was to effect systemic change in undergraduate engineering education. He has been Editor of the *Chemical Engineering Education* journal since 1990 and is also on the Editorial Advisory Board of *J SMET Education*. Tim has over 65 publications and presentations in engineering education research to his credit, including the 2003 ASEE Annual Conference Best Paper Award. Dr Anderson's discipline research is in Electronic Materials Processing. Tim has over 160 publications as well as 260 technical presentations.

Experiences of a Multi-Institutional Coalition on Transformational Change in Undergraduate Engineering Education

28 September 2005, 09:00: Transformational Change in Academic Organisations, Ballroom 3 [Breakout Session 2]

Professor Pradipta Banerji

Dean of Alumni & International Relations

IIT Bombay

Professor Pradipta Banerji is the Dean (Alumni & International Relations) and a Professor of Structural Engineering at IIT Bombay, where he has been since 1988. He has supervised the research work of 35 MTech and nine PhD scholars, and publishes frequently in reputed research journals and proceedings in both India and abroad. He graduated with a BTech degree from IIT Delhi in 1981, securing the Director's Silver Medal as the top-ranked graduating student in Civil Engineering. He was the recipient of the exclusive National Science Talent Scholarship in India. He then completed an MS in 1983 and a PhD in Structural Engineering in 1987 from the University of California, Berkeley, USA, with a specialization in Earthquake Engineering. During this period at Berkeley, he was awarded the UC Regents' Fellowship twice, the prestigious Popert Research Fellowship once, and a Distinguished Teaching Award. He is a member of several professional societies and is a member of the Executive Council of the International Society for Health Monitoring of Intelligent Infrastructure. He has spent short periods of a few months each as a Visiting Research Professor at the University of Manitoba, Canada and the University of Stuttgart, Germany.

Globalisation and Engineering Education: An Indian Perspective

28 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 2]

Professor Alan Bradley

Associate Director Accreditation

Engineers Australia

Professor Bradley was appointed to the position of Engineers Australia – Associate Director Accreditation in February of 2002 following a 30-year career at RMIT University holding the positions of Associate Dean and Head of Department of Communication and Electronic Engineering. His academic career included leadership of a Signal Processing Research Group within the Centre for Advanced Technology in Telecommunications. On behalf of the Engineers Australia Accreditation Board, Professor Bradley manages the accreditation of engineering education programs implemented by Australian educational institutions both in Australia and internationally. This work extends to activities of the Washington Accord and other international agreements recognising equivalence of accredited engineering education programs between signatory nations.

Transforming the Engineering Education process within the Australian Context

29 September 2005, 09:00: Transformational Change in Accreditation, Ballroom 3 [Breakout Session 4]

Dr Sean Brophy

Assistant Professor

Purdue University

Sean P Brophy was the Leader of the Learning Sciences Group in the VaNTH Engineering Research Center (ERC) (www.vanh.org). Recently he became an Assistant Professor in the Department of Engineering Education at Purdue University. As part of the VaNTH Engineering Research Center, Dr Brophy's research interests relate to developing students' problem solving skills, developing formative assessment methods and using simulations and models to facilitate students' understanding of difficult engineering concepts. He received a BS degree in Mechanical Engineering from the University of Michigan, a MS in Computer Science from DePaul University, and a PhD in Education and Human Development from Vanderbilt University.

Preparing Learners to be Flexibly Adaptive in Novel Situations

28 September 2005, 11:00: K-12 Student Learning, Ballroom 2 [Breakout Session 3]

Mr Rodger Bybee

Executive Director

Biological Sciences Curriculum Study

Rodger W Bybee is Executive Director of the Biological Sciences Curriculum Study (BSCS), a non-profit organization that develops curriculum materials, provides professional development, and conducts research and evaluation for the science education community. Prior to joining BSCS, he was Executive Director of the National Research Council's Center for Science, Mathematics, and Engineering Education (CSMEE), in Washington, DC. Between 1986 and 1995, he was Associate Director of BSCS. He participated in the development of the National Science Education Standards, and in 1993-1995 he chaired the Content Working Group of that National Research Council project.

Achieving Higher Levels of Technological Literacy: A Strategic Perspective for K-12 Education

29 September 2005, 11:00: K-12 Policy Issues, Ballroom 2 [Breakout Session 5]

Dr Anna Carew

Lecturer

University of Wollongong

Dr Anna Carew trained as a Microbiologist and worked in industrial training and sustainability consulting before completing a PhD in Engineering Education at the University of Sydney. She now lectures in Educational Development with the Centre for Educational Development and Interactive Resources at the University of Wollongong. Her research focuses on understanding and evaluating the quality of transdisciplinary problem-solving, and educational development in the engineering context. Anna whiles away her free time gardening and belly dancing.

Enabling Transdisciplinary Engineering Practice through Targeted Problem-Based Learning

29 September 2005, 11:00: Preparing Engineers of a Trans-Disciplinary World, Ballroom 3 [Breakout Session 5]

Mr Dennis Colusso

Director

Product Lifecycle Management Australasia Pty Ltd

Dennis Colusso is a Director of Product Lifecycle Management (Australasia) Pty Ltd (plm), a company he helped to establish in 2003. plm is the Master Distributor and preferred partner in Australia and New Zealand for UGS Corporation, a company Dennis established in Australia over two decades earlier. He has over 20 years experience in the CAD/CAM/CAE/PDM industry, starting his career in the Aerospace industry. Prior to establishing plm, Dennis was Vice-President of Strategic Marketing, Asia Pacific, for UGS Corporation, based in Singapore. In this role, Dennis helped to spearhead the company's mission and objectives in the region, and travelled extensively throughout Asia Pacific, Europe and the USA representing UGS. This included the definition and delivery of Product Lifecycle Management (PLM) and end-to-end CAD/CAM/CAE/PDM solutions to customers. After joining in 1982, Dennis held several senior, technical, sales, marketing and managerial roles with UGS. Dennis has a Degree in Mechanical Engineering from the University of New South Wales and a Diploma in Marketing from the University of Technology, Sydney. He is a member of several professional organisations, and has written and published various CAD/CAM/CAE/PDM articles.

Educating for Product Lifecycle Management

26 September 2005, 18:30 : Opening Reception, Ballrooms 2 & 3, Star City

Ms Deborah Crossing

Associate Director Communication & Marketing

Engineers Australia

Deborah has held a variety of positions developing and implementing education, outreach and action research programs for industry and professional member driven organisations. Originally a classroom based science teacher, she has worked for the Investigator Science & Technology Centre and the SA Chamber of Mines & Energy. At the Chamber she developed and implemented a program that was part of a national education program for the minerals industry that focused on students and their teachers. As Executive Director of the Australian Science Teachers Association, Deborah was involved with government and stakeholders on the issues of attracting and retaining teachers and students in science, engineering and technology. Deborah recently joined Engineers Australia as Associate Director-Communications & Marketing with a view to strengthening partnerships between industry and education professionals.

Outreach Activities - Engineers Australia

27 September 2005, 15:30: K-12 Pipeline - Outreach Activities, Ballroom 2 [Breakout Session 1]

Associate Professor Jim Davies

Principal

Australian Science and Mathematics School

Associate Professor Jim Davies is currently Principal of the highly innovative Australian Science and Mathematics School. He has previously held a number of leadership positions within the education system in South Australia including District Superintendent and Principal of Port Lincoln High and Hallett Cove R-12 schools. He has also been a superintendent leading the introduction of a model of local school management throughout the public education system in South Australia. Prior to his career in educational leadership and administration, Jim taught Agricultural Science and was the Program Leader at Urrbrae Agricultural High School, a special focus school in Adelaide. His current professional interests are in the areas of educational innovation, re-configuration of the professional work of teachers, new designs for schooling and alternative modes of learning.

'Get Real': Innovative Schooling: Australian Science and Mathematics School

29 September 2005, 11:00: K-12 Policy Issues, Ballroom 2 [Breakout Session 5]

Dr Janice Earle

Senior Program Director

National Science Foundation

Janice Earle has been at the National Science Foundation's Directorate for Education and Human Resources since 1991. She served in the Office of Systemic Reform, as Senior Program Director for the Statewide Systemic Initiatives Program from 1991-1996. She joined the Division of Elementary, Secondary, and Informal Education (ESIE) in 1996, where she serves as Lead Program Officer for the Division's assessment and applied research projects. Dr Earle serves on several federal interagency efforts such as the Department of Education's Math/Science Initiative, the interagency management team for TIMSS, the Technical Review Panel for PISA and the Planning Committee for the 2009 NAEP exam. Since 2003 Dr Earle has split her time between the Divisions of Research and ESIE. Dr Earle has a BA in History from the University of Michigan, a MA from Teachers College, Columbia University and a PhD in Education Policy and Planning from the University of Maryland.

The National Science Foundation's investments in assessing Student Learning: What have we learned?

28 September 2005, 11:00: K-12 Student Learning, Ballroom 2 [Breakout Session 3]

Dr Wilfried Elspass

Head of Research Group for eKnowledge in Engineering

ETH Zürich

Wilfried J Elspass is the Head of the Research Group for e-Knowledge in Engineering at the Centre for Product Design, Swiss Federal Institute of Technology, Zurich (ETH Zurich). Wilfried J Elspass studies aviation and aeronautics at the Technical University Aachen, Germany and got his PhD from ETH Zurich. He was Visiting Professor at MIT and Stanford University.

The objective of the research group for e-Knowledge in Engineering is to support and enhance knowledge transfer and generation by using ICT. His main interests in engineering education are collaborative and project based learning with distributed multi-disciplinary, multi-cultural teams. Other areas of interest are creativity tools and digital libraries to support product design process.

Design Education through Multi-disciplinary Collaboration in an Enhanced Learning Environment

29 September 2005, 11:00: Preparing Engineers of a Trans-Disciplinary World, Ballroom 3 [Breakout Session 5]

Dr Stephen Fityus

Senior Lecturer

University of Newcastle

Dr Stephen Fityus is Senior Lecturer at the University of Newcastle where he lectures in Engineering Geology, Geotechnical Engineering and Transportation Engineering. He has undergraduate degrees in Engineering and Science and a PhD in Engineering from the University of Newcastle. Dr Fityus has had extensive involvement with potential young engineers, through his involvement in the selection of candidates for the University of Newcastle's industry scholarship scheme, as a lecturer of students at second year level and through his involvement with the Science and Engineering Challenge.

Promoting Vocations in Engineering amongst Secondary School Students

29 September 2005, 09:00: K-12 Competitions, Ballroom 2 [Breakout Session 4]

Dr Elizabeth Godfrey

Associate Dean Undergraduate

University of Auckland

Elizabeth Godfrey is currently the Associate Dean Undergraduate at the School of Engineering at the University of Auckland after a career that has included university lecturing, teaching and 10 years as an advocate for Women in Science and Engineering. Several years of hands-on advising on International exchanges for engineering students complements her research interest into the Culture of Engineering Education which includes both how that culture is manifested in our teaching and learning practices, but also how that knowledge can be used to effect improved learning outcomes.

Engineering Students and International Exchanges: Why so few?

29 September 2005, 11:00: Globalisation, Ballroom 1 [Breakout Session 5]

Dr O Hayden Griffin Jr

Department Head

Virginia Tech

O Hayden Griffin Jr is currently Professor and Head of the Department of Engineering Education at Virginia Tech. He holds a BS and MS in Mechanical Engineering from Texas Tech and a PhD in Engineering Mechanics from Virginia Tech. He worked in a number of government and industrial R&D organizations before joining Virginia Tech in 1985 as a faculty member in the Department of Engineering Science and Mechanics. He served for four years as Associate Dean prior to moving to his current position. He is currently participating in a number of research efforts aimed at finding how engineering students learn and solve problems. He directs Virginia Tech's Joseph Ware Advanced Engineering Laboratory, a hands-on student project centre. In his spare time he enjoys spending time with his family and his classic cars.

The Virginia Tech Education-Engineering Collaborative: A Partnership for Cultural Change

28 September 2005, 09:00: K-12 Preparing Teachers, Ballroom 2 [Breakout Session 2]

Dr Roger Hadgraft

Director, Teaching & Learning

RMIT University

Roger Hadgraft is Teaching and Learning Director in the School of Civil and Chemical Engineering at RMIT University. He has been working on problem-based learning issues since 1991 and has implemented significant curriculum change using project-based learning at both Monash University and RMIT. He is a civil engineer with interests in hydrologic modelling, knowledge management and engineering education.

Integrating Engineering Education – Key Attributes of a Problem-based Learning Environment

28 September 2005, 11:00: Transformational Change in Curricula, Ballroom 3 [Session 3]

Dr Kamyar Haghighi

Chairperson

Purdue University

Professor Haghighi is Head of the Department of Engineering Education and Professor of Agricultural and Biological Engineering at Purdue University. His research focus is on mechanical design and mathematical simulation and modeling of biological, environmental, mechanical, food, and pharmaceutical systems and processes. Dr Haghighi was instrumental in developing the vision for and led the creation of the first Department of Engineering Education and the first Graduate Degree Program in Engineering Education in the world. He is also leading a task force dedicated to developing the first Purdue K-12 Engineering and Outreach Program that involves education of engineering teachers for K-12. Dr Haghighi serves on the ASEE *Journal of Engineering Education* Advisory Board and is a Fellow of the Engineering Society for Advancing Mobility.

Birth of a New Discipline

27 September 2005, 15:30: Transformation of Disciplines, Ballroom 3 [Breakout Session 1]

Mr Karlson 'Charlie' Hargroves

Project Coordinator

The Natural Edge Project

Charlie Hargroves, a Civil Engineer is the Project Coordinator of *The Natural Edge Project* (TNEP). Charlie practiced in the Australian Capital Territory as a Civil and Structural Engineer, before moving into sustainability-related areas to co-found TNEP and co-author and co-edit the publication *The Natural Advantage of Nations*. Charlie has recently undertaken a 12 month sabbatical in Boulder Colorado with his wife, Stacey, for Charlie to take the position of Visiting Scholar at the University of Boulder Colorado, USA with Professor Bernard Amadei in 2004/05. As part of the visit Charlie was placed on work experience with Natural Capitalism Inc as the Chief Executive Officer, supervised by Hunter Lovins. Charlie is currently coordinating the development of the Engineering Sustainable Solutions Program, Sustainable Business Practice Program and the Industry Training Programs of TNEP.

Making the Profitable Transition Towards Sustainable Business Practice

28 September 2005, 09:00: Transformational Change in Academic Organisations, Ballroom 3 [Breakout Session 2]

Sudan Virtual Engineering Library - Sustainability Knowledge Network (SudVEL-SKN)

27 September 2005, 15:30: Globalisation, Ballroom 1 [Breakout Session 1]

Dr. Tuan Duong Hoang

Senior Lecturer

University of New South Wales

Dr Tuan D. Hoang was an Assistant Professor in Nagoya University in Japan from 1994 to 1999 and then Associate Professor of Toyota Technological Institute from 1999 to 2003. From 2003 to present he is a Senior Lecturer at the School of Electrical Engineering and Telecommunications of the University of New South Wales. He was born and grew up in Vietnam but got his university education and PhD in Russia. He can speak Vietnamese, Russian, Japanese and English

Engineering Education: Australian and Japanese Cases

29 September 2005, 11:00: Globalisation, Ballroom 1 [Breakout Session 5]

Professor John Ingleson

Deputy Vice Chancellor (International)

University of New South Wales

John Ingleson is Deputy Vice-Chancellor (International and Development) at the University of New South Wales, Sydney, Australia. One of his major responsibilities is the development of UNSW Asia in Singapore, the first research based campus in Singapore of an international university. He is a historian with particular expertise on twentieth century political and social history of Indonesia. His best known work is on the colonial nationalist movement in Indonesia and on the history of the Indonesian labour movement. In addition to the academic work, John Ingleson prepared a number of political risk assessments for companies seeking to work in Indonesia. He has extensive experience as a commentator on current affairs concerning Asia and Australia-Asian relations.

The Globalisation of Universities

28 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 2]

Mr Wayne Johnson

Vice President and Executive Director, University Affairs

Hewlett Packard

Wayne C Johnson is the Vice President for Hewlett-Packard Company's University Relations Worldwide, located at HP Laboratories in Palo Alto, California. He is responsible for higher education programs in research, marketing and sales, recruitment, continuing education, public affairs and philanthropy. Wayne currently manages an organization of 23 program managers and administrative staff working across 74 universities worldwide. He received his BA in 1967 from Colgate University, Hamilton, NY and his MBA in 1971 from Boston College's Carroll School, Boston, MA. He was an Adjunct Professor of Management at Boston University from 1977 to 1999. Wayne joined HP in July 2001 from Microsoft's University Relations Department where he managed program managers and administrative staff across a customer base of 50 tier-one universities. He serves as a Board member of the Anita Borg Institute for Women and Technology (ABIWT), MentorNet (MN), NASA's Educational Advisory Committee, Corporate Foundation Alliance (CFA), Accreditation Board for Engineering and Technology (ABET) Industrial Advisory Board, the International Conference on Engineering Education (ICEE), and a member of the Glion Colloquium. He was recently appointed to the Board of Alliance for Science and Technology Research for America (ASTRA), and is a member of GUIRR (Government-University-Industrial, Research Roundtable).

Industry as a Catalyst for Innovation in Education.

28 September 2005, 11:00: Globalisation, Ballroom 1 [Breakout Session 3]

Dr Russel Jones

Managing Partner

World Expertise LLC

Russel Jones is a private consultant, working through World Expertise LLC to offer services in engineering education in the international arena. Prior to that, he had a long career in education: Faculty member at MIT, Department President at Boston University, and President at University of Delaware. He currently serves as President of the Committee on Capacity Building of the World Federation of Engineering Organisations, and as President of the Engineering Education Committee of the Pan American Federation of Engineering Societies.

Building Engineering Capacity Globally

27 September 2005, 15:30: Globalisation, Ballroom 1 [Breakout Session 1]

Dr Anette Kolmos

Professor & Vice Director, UCPBL

Aalborg University

Anette Kolmos, Professor in PBL and Engineering Education, Aalborg University. Dr Kolmos holds a PhD in "Gender, Technology and Education" (1989). During the last eight years, she has researched areas in engineering education as: Development and Evaluation of Project Organised and Problem Based Curriculum, Change from Traditional to Project Organised and Problem Based Curriculum, Development of Transferable Skills in PBL and Project Work, and Methods for Staff Development. Her publication list counts more than 100 published books, reports and articles. She is member of advisory boards for the both international educational journals, regional staff development programmes and the EU-programme on Human Resources and Mobility Programme. She is coordinator for the European Socrates project, PBL-Engineering which is developing the master programme: Problem Based Learning in Engineering and Science.

Transformation of Problem Based Learning in Engineering Education

28 September 2005, 11:00: Transformational Change in Curricula, Ballroom 3 [Breakout Session 3]

Dr Steven Kryger

National Coordinator

EngQuest

Steven Kryger is the marketing manager – schools programs for Engineers Australia. Steven has coordinated enquest since 2003 when it expanded from a regional program in Victoria to be trialled in an additional four states. Steven has overseen two stages of the EngQuest national roll-out, and has experience in other engineering schools programs and competitions.

Engineering Quest: A Case Study

29 September 2005, 09:00: K-12 Competitions, Ballroom 2 [Breakout Session 4]

Mr William Lawson

Group Local Government Leader

Sinclair Knight Merz

Bill Lawson is a Professional Engineer who practises widely in Local Government and the Indigenous Sector throughout Australia as a Principal of Sinclair Knight Merz, Australia's largest technical consultancy. In 2003, Bill was awarded the title of 'Australian Engineer of the Year' by Engineers Australia (the peak Engineering Body in Australia) for his work in assisting young Australians into the workforce and away from welfare dependence. Bill is also the Chairperson of the Tasmanian Polar Network and is involved in promoting Australia's and Tasmania's national and international commercial role in Antarctica and the Southern Oceans. Bill is the Chairman and a founding Director of the Beacon Foundation. Beacon is a 'not for profit', registered Public Benevolent Organisation founded in 1988 which focuses solely on the issue of Youth Unemployment and is funded largely by the Private/Corporate Sector. The Foundation seeks to find new ways to address all aspects of youth unemployment including real job creation and the nexus between education and work.

Generational Change and Engineering Education

28 September 2005, 09:00: K-12 Preparing Teachers, Ballroom 2 [Breakout Session 2]

Professor Jean Michel

Senior Consultant

Ecole Nationale des Ponts et Chaussées, Paris

Professor Jean Michel is Civil Engineer (ENPC – Paris). Till very recently, he was adviser to the Director of the Ecole Nationale des Ponts et Chaussées (prestigious French Engineering School, founded in 1747), after having been in charge for many years of the Department for Engineering Information and Documentation. He is presently acting as Senior Consultant, specialized in the fields of Education and Information Management and of Value Management. Professor Jean Michel is Editor of the European Journal of Engineering Education, official Journal of SEFI (the European Society for Engineering Education). He is also very active in the World Federation of Engineering Organizations and was Vice-President of the Federation until 2004. Professor Jean Michel was honoured in 1994 with the International Award of AaeE, the Australasian Association for Engineering Education.

Globalization of Engineering Education - The Bologna Process in Europe

27 September 2005, 15:30: Globalisation, Ballroom 1 [Breakout Session 1]

Mr Greg Millican

Head of Mathematics

Townsville State High School

Greg Millican is Head of Department (Mathematics) at Townsville State High School in Townsville, Queensland. He has been teaching High School Mathematics and Physics for 14 years. He has a Bachelor of Education (majoring in Mathematics). Greg is a co-founder of The Engineering Link Group, a not-for-profit organisation that has been running engineering camps and projects for high school students. It was established in 1994, and has introduced over 10,000 students from all over Queensland to engineering and management.

From Bolt-on to Built-in: Putting Teachers in Touch with Engineering and Practical Science

28 September 2005, 09:00: K-12 Preparing Teachers, Ballroom 2 [Breakout Session 2]

Dr Cynthia Mitchell

Research Director

Institute for Sustainable Futures

Cynthia Mitchell joined the Institute for Sustainable Futures (ISF) at the University of Technology Sydney in 2001. For eight years prior, Cynthia was an engineering academic and consulted widely to industry and government, won prestigious Australian Research Council funding for her research and was President of the Australasian Association for Engineering Education. Her cultural change, learning and environment work has been recognised through national and international awards. Since joining ISF, Cynthia has led projects in sustainable urban form and buildings, learning and education for sustainability, sustainable energy provision and sustainable energy provision, including distributed water services. This work creates and is reliant on transdisciplinary praxis, bringing together theory and practice from engineering, economics, futures, learning, planning, politics, science, sustainability science and transdisciplinarity itself.

Engineering Change Towards Sustainable Futures

27 September 2005, 15:30: Transformation of Disciplines, Ballroom 3 [Breakout Session 1]

Mr Michael Myers

Managing Director

Concentric

In 1983 Michael established CONCENTRIC Asia Pacific, Australia's leading provider of Engineering Technology Solutions. From reconstructive surgery at the Maximillo Cranio Facial Unit of Adelaide Hospital to helping design components for the JSF strike fighter through to writing software to carry out blast and fragmentation analysis of the Air Warfare Destroyers, CONCENTRIC Asia Pacific is involved in solving the most complex of engineering problems. With the goal of feeding inspiration back to young Australians, Michael founded the Re-Engineering Australia Forum in 1998 which has the sole focus of inspiring children to take up Engineering as their preferred career path. This year REA activities will touch 150,000 school students in collaborative activities bringing together the city and the bush, schools, universities, TAFE industry and dads. The Forum's activities, the result of passion, inspiration and innovation, have taken off Australia-wide but for ultimate success there needs to be a shift in the policies of government and the way in which Australian society understand the role and responsibilities of engineers. It is only with this can we hope to inspire our engineers of the future. Michael has a Degree in Mechanical Engineering from UTS and Master Degree in Business Administration from Macquarie University.

Re-Engineering Australia - Where do we start? How do we start?

27 September 2005, 15:30: K-12 Pipeline - Outreach Activities, Ballroom 2 [Breakout Session 1]

Dr William Oakes

Co-Director, EPICS

Purdue University

William (Bill) Oakes is an Associate Professor of Engineering Education at Purdue University and Co-Director of the EPICS Program. He earned his BSME and MSME from Michigan State University and PhD from Purdue University. Between his MS and PhD, he was a design engineer for GE Aircraft Engines. He has authored chapters in six textbooks, published over 40 conference and journal papers and has conducted 20 faculty development workshops on service-learning. He was a co-recipient of the National Academy of Engineering's Bernard M Gordon Prize for Innovation in Engineering and Technology Education (2005), and received the National Society of Professional Engineers' Educational Excellence Award (2004) and Purdue's Charles B Murphy Outstanding Undergraduate Teaching Award (2002). He is a Fellow of the Purdue University Teaching Academy and an Indiana Campus Compact Fellow.

Using Service-Learning to Prepare Engineers for a Trans-Disciplinary World

29 September 2005, 11:00: Preparing Engineers of a Trans-Disciplinary World, Ballroom 3 [Breakout Session 5]

Ms Cheryl Paten

Education Coordinator

The Natural Edge Project

Cheryl Paten is a lecturer in the School of Environmental Engineering, Griffith University where she is working to further embed sustainability principles and practices into the curriculum.

Through formal collaboration with Griffith she is also engaged with the TNEP secretariat - an ongoing, not-for-profit partnership driven by a group of young engineers and scientists based in Australia. Hosted by Engineers Australia, TNEP is focused on assisting nations, through a whole of society approach, to achieve sustainable genuine-progress. Cheryl has co-authored a chapter on 'Greening the Built Environment' in the international publication, "The Natural Advantage of Nations: Business Opportunities, Innovation and Governance in the 21st Century", and assisted with editing other chapters of the book. She is on the Advisory Board to the International Journal of Sustainability in Higher Education, and is a Board member of the Engineers Australia Environmental Engineering College. In 2005 Cheryl was awarded Queensland Young Professional Engineer of the Year.

Making the Profitable Transition Towards Sustainable Business Practice

28 September 2005, 09:00: Transformational Change in Academic Organisations, Ballroom 3 [Breakout Session 2]

Dr George Peterson

Executive Director

ABET

George Peterson has been Executive Director of ABET since 1993. He headed the Faculty and Teacher Development of the Division of Undergraduate Education and was Program Director in the Undergraduate Science, Engineering and Mathematics Education Division at NSF. George was Chair of the Department of Electrical Engineering at the US Naval Academy and Assistant Vice President for Academic Affairs and Professor of Electrical Engineering at Morgan State University. He has had extensive accreditation experiences. He has held numerous volunteers positions at ABET from service as an ABET program evaluator to Chair of the Engineering Accreditation Commission and he currently chairs the Council for Higher Education Accreditation (CHEA) Specialised Advisory Panel and serves on the CHEA Committee on Recognition. George is a Fellow of the Institute of Electrical and Electronics Engineering (IEEE), a Fellow of ABET, a Fellow of the Institute of Engineers Ireland (IEI) and a Fellow of the Institute of Electrical Engineers (IEE). He earned his PhD in Electrical Engineering from the University of Illinois and is a registered Professional Engineer in the States of Colorado and Maryland.

Accreditation of Engineering Programs

29 September 2005, 09:00: Transformational Change in Accreditation, Ballroom 3 [Breakout Session 4]

Professor Rafael Quevedo-Camacho

President

Asociacion Nacional de Facultades y Escuelas de In

Professor Quevedo-Camacho is a Biochemical Engineer, from the University of Sinaloa. He is currently President of the Ibero American Association for Engineering Education (ASIBEI) and the National Association for Engineering Education. Mexico (ANFEI). Professor Quevedo-Camacho is Dean of the Technological Institute of Tijuana. From 1979-1998 he was a Professor in the Technological Institute of Los Mochis (1979-1998) and also Professor in the University of Sinaloa from 1985-1989. He has co-author of the book Food Engineering.

The ASIBEI and the Ibero-American Engineer

28 September 2005, 11:00: Globalisation, Ballroom 1 [Breakout Session 3]

Professor John Raine

Deputy Vice Chancellor

Massey University

Professor John Raine is Deputy Vice-Chancellor (Auckland & International) at Massey University. John Raine was formerly Pro Vice-Chancellor (Enterprise and International) at the University of Canterbury (1999-2004), where he had responsibility for International business, interdisciplinary research centres, commercial research, technology commercialisation and the Centre for Continuing Education. He was Head of the Department of Mechanical Engineering between 1998 and 2001, and of the Design Teaching and Research Group in this Department (1986-2001). He was employed in product development and technical management in the UK engine test plant industry 1975-77 and 1980-84, and maintains a strong involvement in product innovation. He co-founded Christchurch Microcogeneration Systems Company, WhisperTech Ltd in 1995. He founded the University of Canterbury technology commercialisation company Canterprise Ltd in 1999, and co-founded the Canterbury Innovation Incubator Ltd in 2001. He was a member of the NZ Ministry of Economic Development Design Task Force 2002-2003.

Design-Led Engineering Education, Industry Links and Product Innovation - a Global Imperative

29 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 4]

Dr. Teri Reed Rhoads

Associate Dean for Engineering Education

The University of Oklahoma

Teri Reed Rhoads is associate dean for engineering education of the College of Engineering and assistant professor in the School of Industrial Engineering at the University of Oklahoma. She received her Ph.D. in Industrial Engineering from Arizona State University. Her research interests are diverse in that she studies effective means of learning in the engineering classroom and within the engineering curriculum. She is interested in not only the cognitive domain of learning, but also the affective domain and how to assess each. In addition, she researches recruitment and retention issues. Her current research grants include developing a Statistics Concept Inventory, a gender equity study on success within an industrial engineering program, a study from the STEM talent expansion program on minority success, an REU experience, a GK-12 project on authentic teaching, a Lois Stokes Alliance for Minority Participation programmatic grant and an associated Bridges to the Doctorate grant, and a planning grant on a courseless curriculum. In addition, she is the creator of an elementary outreach program called the Sooner Elementary Engineering and Science (SeeS) Clubs which has over 3,000 encounters with Norman area elementary children from 11 different sites in each school year and involves over 150 different college students as volunteers.

After the Funding: Sustaining Outreach Initiatives

29 September 2005, 11:00: K-12 Policy Issues, Ballroom 2 [Breakout Session 5]

Professor John Rickard

Vice Chancellor & President

Central Queensland University

He read Mathematics at Queen Elizabeth College, University of London from 1963-1966 and then moved to the University College London to study for his PhD in Geophysical Fluid Mechanics. After completing his PhD in 1969 he moved to Australia to take up a Lectureship in the Mathematics Department at the University of Melbourne. In 1980 he moved to Griffith University to take up his first professorial appointment. He subsequently returned to Melbourne in 1984 to take up one of the two Foundation Chairs at the newly established Graduate School of Management at the University of Melbourne. In 1992 he joined Deakin University to head their Graduate School of Management and (what is now) Deakin Australia, the University's commercial arm. In 1994 John was appointed Pro Vice-Chancellor and Dean of the Faculty of Business and Economics at Monash University. He moved to Southern Cross University in March 2000 to take up the position as Vice-Chancellor (President). July 2004 saw John leave SCU for the position of Vice-Chancellor (President) at Central Queensland University.

The Transformed University

28 September 2005, 09:00: Transformational Change in Academic Organisations, Ballroom 3 [Breakout Session 2]

Dr Howard Rollins Jr

Director, Office of International Education

Georgia Institute of Technology

Director, Office of International Education, Georgia Institute of Technology, 2003- present. Professor of Psychology, Georgia Institute of Technology, 2003- present. Executive Director, Institute for Comparative and International Studies, Emory University, 1998-2002. Director, Center for International Programs Abroad, 1996-2001. Professor, Department of Psychology, Emory University, 1968-2003. Awarded the M Creekmore Award for Contributions to International Education, 2001. Recipient of several research grants and author of numerous articles in cognition and development. Have directed summer study abroad program in on numerous occasions. BA Wake Forest University, 1964; MA University of California, 1966; PhD University of California, 1968.

The International Plan: Global Competence for Undergraduates in Engineering

28 September 2005, 11:00: Transformational Change in Curricula, Ballroom 3 [Breakout 3]

Professor Luiz Scarvada

Vice-Reitor

Pontifical Catholic University of Rio de Janeiro

The presenter is Vice-President of Pontifical Catholic University of Rio de Janeiro – puc-rio and former Dean of Engineering of this Institution. The presenter participated on the organization and implementation of a national program on engineering education reform in the second half of the 90`s (last century) and helped to organize the project in puc-rio related to that program. The presenter is presently a member of the Pan-American Academy of Engineering, member of the Committee on Capacity Building of Unesco, member of the Engineering of the Americas Task Force and member of the Educational Committee of Upadi (Unión Panamericana de Asociaciones de Ingenieros).

Engineer of the Americas: A Professional for the Western Hemisphere

28 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 2]

Dr Alfredo Soeiro

Professor of Civil Engineering

University of Porto

Alfredo Soeiro is a graduate in Civil Engineering from the University of Porto (1976); PhD from the University of Florida (1989); Founder and Vice President (1992 – 98) of EUCEN (European Universities Continuing Education Network); President of IACEE (International Association of Continuing Engineering Education – 2001 – 04); Pro-Rector of University of Porto (1998 – 2003); President (2003 -....) of SEFI (European Society of Engineering Education); Academic Dean and Vice-Dean of Civil Engineering (2004 -....).

European Experience in Engineering Education and in Accreditation

29 September 2005, 09:00: Transformational Change in Accreditation, Ballroom 3 [Breakout 4]

Dr Sheryl Sorby

Professor & Associate Dean of Engineering

Michigan Technological University

Sheryl A Sorby is a Professor of Civil and Environmental Engineering and Associate Dean for Academic Programs in the College of Engineering at Michigan Technological University. Sorby is active in the American Society for Engineering Education and the American Society of Civil Engineers. She is a past Chair of the Engineering Design Graphics Division of ASEE. She was a recipient of the Dow Outstanding New Faculty award and the Distinguished Teaching award, both from the North Midwest Section of ASEE. Her research interests include spatial visualization and computer aided design. She is the author of numerous articles on engineering education and recently received WEPAN's Betty Vetter award for research on women in engineering for her work in developing 3-D spatial skills.

Working with K-12 Partners to Improve Understanding of Engineering Programs

27 September 2005, 15:30: K-12 Pipeline - Outreach Activities, Ballroom 2 [Breakout Session 1]

Dr Kendall Starkweather

Executive Director

International Technology Education Association

Kendall N Starkweather, PhD, is Executive Director/CEO of the International Technology Education Association (ITEA) located in Reston, Virginia, USA. ITEA is the only major association in North America existing solely for the purpose of promoting technological literacy at the K-12 school levels. His background includes high school teaching experience, a decade of teacher education experience at Eastern Michigan University and the University of Maryland, and 25 years with ITEA in association management. Dr Starkweather's efforts have been directed towards professional development and creating educational materials to support the teaching of Technology, Innovation, Design, and Engineering (TIDE). His work addresses such topics as problem-solving and technology, how technology affects people and the environment, technological systems, and the impacts of technology. His primary interest is to help teachers and students reach their potential through a better understanding of technology and engineering.

A K-12 Engineering Pipeline Model based upon Standards for Technological Literacy

28 September 2005, 11:00: K-12 Student Learning, Ballroom 2 [Breakout Session 3]

Dr Daniel Tan

Director, Centre for Educational Development

Nanyang Technological University

Dr Daniel Tan is currently the Director, Centre for Educational Development, and Associate Professor, School of Electrical and Electronic Engineering at the Nanyang Technological University. He obtained his BSc from University of Ashton, Birmingham, England. He subsequently achieved a PhD from the University of Manchester, Institute of Science and Technology and a post-graduate Diploma in Teaching in Higher Education from the Nanyang Technological University. His research interests cover Internet and computer security; human factors and usability. He is involved in several projects on information warfare, encryption, authentication, intrusion detection systems and usability.

The edveNTures of eLearning in NTU: A Case Study

27 September 2005, 15:30: Transformation of Disciplines, Ballroom 3 [Breakout Session 1]

Professor Masataka Tanigaki

Professor

Kyoto University

Professor Tanigaki works at the International Innovation Center at Kyoto University. Prior to that he was at the Department of Chemical Engineering and Institute of Atomic Energy. He earned his BSc from Kyoto University and his MSc and PhD from the University of Wisconsin-Madison.

Accreditation System and the Challenge of Engineering Education in Japan

29 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 4]

Dr Phillip Wankat

Director of Undergraduate Degree Programs

Purdue University

Phillip C Wankat is the Clifton L Lovell Distinguished Professor of Chemical Engineering and the Director of Undergraduate Degree Programs in the new Department of Engineering Education at Purdue University. He earned his BSChE from Purdue, his PhD in Chemical Engineering from Princeton University and a MSED from Purdue. His technical research is in separation processes, and he has written two textbooks – Equilibrium Staged Separations (Prentice-Hall) and Rate-Controlled Separations (Kluwer). He has also been very active in developing new teaching processes, and in teaching graduate students how to teach. He is the author of The Effective, Efficient Professor: Teaching, Scholarship and Service, Allyn & Bacon, Boston, 2002, and co-author of the book Teaching Engineering, available free at https://engineering.purdue.edu/ChE/News_and_Events/publications/teaching_engineering.

Survey of K-12 Engineering-oriented Student Competitions

29 September 2005, 09:00: K-12 Competitions, Ballroom 2 [Breakout Session 4]

Professor Shouwen Yu

Professor

Tsinghua University

Professor Yu Shouwen is a Professor of Tsinghua University, Beijing PR China and a member of Engineering Education Committee of Chinese Academy of Engineering. He completed the postgraduate study in Engineering Mechanics at Tsinghua University in 1960. Prof Yu was a Visiting Research Fellow in Germany under an Alexander von Humboldt Fellowship from 1985 to 1987. He also is Vice-President and Dean of Graduate School of Tsinghua University (1992 – 1999). Vice President of Chinese Society of Research of Higher-Education. Vice-President of the International Conference of Fracture (2001-2005). Editor-in-Chief of "Acta Mechanica Sinica" (1999) Prof Yu co-authored five books and published 320 scientific and technical papers and about 35 papers in the field of Engineering Education. He is the co-recipient of four prizes awarded by State and Ministry of Education of China.

Engineering Education in a Time of Rapid Change

29 September 2005, 09:00: Globalisation, Ballroom 1 [Breakout Session 4]

Full Program

Monday, September 26, 2005

09:00 - 17:00 **Young Engineers Summit (separate registration), Ballroom 3, Star City**

Young Engineering Excellence and Leadership: Progressing Australia's competitive edge.

09:00 - 16:00 **Engineering Librarians Round Table and Workshop (at UTS)**

This pre-colloquium session will provide an opportunity to share ideas with like minded colleagues in an open, informal and friendly forum.

09:00 - 16:00 **Environmental Engineering Meeting (by invitation)**

12:00 - 17:00 **Delegate / Attendee Registration, Foyer, Star City**

14:00 - 17:00 **International Federation of Engineering Education Societies Meeting (by invitation), Quarry Room**

14:00 - 16:00 **PC Tablet Workshop (20 maximum), Pirrama Room, Star City**

18:00 - 18:30 **VIP Welcome (by invitation), Quarry Room, Star City**

18:30 - 20:00 **Opening Reception, Ballrooms 2 & 3, Star City**

Dennis **Colusso**

Product Lifecycle Management Australasia Pty Ltd

Educating for Product Lifecycle Management

Tuesday, September 27, 2005

08:00 - 10:00 **Delegate / Attendee Registration, Foyer, Star City**

10:00 - 12:00 **Opening and Main Plenary, Main Keynote, Ballrooms 1 & 2**

Robin **Batterham**
Rio Tinto Pty Ltd
Engineering Education - Random Thoughts

12:00 - 13:00 **Luncheon + Presentation on Journal of Engineering Education**

Jack **Lohmann**
Georgia Institute of Technology
Developing a Research Journal in Engineering Education

13:00 - 15:00 **Plenary Session, Theme Keynotes, Ballrooms 1 & 2**

Chair: Jim Melsa

Low **Teck Seng**
Republic Polytechnic Singapore
Pedagogical Imperatives in a Globalising World

Barbara **Olds**
National Science Foundation
Opportunities and Challenges in K-12 Science, Technology, Engineering and Mathematics Education

Simon **Longstaff**
St James Ethics Centre
Transformation of Disciplines

15:00 - 15:30 **Afternoon Tea / Coffee Break**

15:30 - 17:00 **Breakout Session 1**

Globalisation, Ballroom 1 (15:30 - 17:00)

Chair: Brendon Parker

Russel **Jones**
World Expertise LLC
Building Engineering Capacity Globally

Jean **Michel**
Ecole Nationale des Ponts et Chaussées, Paris
Globalization of Engineering Education - The Bologna Process in Europe

Karlson 'Charlie' **Hargroves**
The Natural Edge Project
Sudan Virtual Engineering Library - Sustainability Knowledge Network

K-12 Pipeline - Outreach Activities, Ballroom 2 (15:30 - 17:00)

Chair: Lesley Jolly

Deborah **Crossing**
Engineers Australia
Outreach Activities - Engineers Australia

Sheryl **Sorby**
Michigan Technological University
Working with K-12 Partners to Improve Understanding of Engineering Programs

Michael **Myers**
Concentric
Re-Engineering Australia - Where do we start? How do we start?

Transformation of Disciplines, Ballroom 3 (15:30 - 17:00)

Chair: Joe Tront

Cynthia **Mitchell**

Institute for Sustainable Futures

Engineering Change Towards Sustainable Futures

Kamyar **Haghighi**

Purdue University

Birth of a New Discipline

Daniel **Tan**

Nanyang Technological University

The edveNTures of eLearning in NTU: A Case Study

17:00 - 17:30 Refreshments

17:30 - 19:00 International Exchange Session 1

Themed Postcard Presentations

Cluster A1 - Globalisation Perspectives, Ballroom 1 (17:30 - 18:00)

Mario **Gomez-Mejia** , Rafael **Quevedo-Camacho** , Juan Manuel **Ramírez-Cortés**

Asociacion Nacional de Facultades y Escuelas de In

The Ibero-American Engineer: An ASIBEI Project on Global Education

Hong **Zhao** , Yong **Jin**

Tsinghua University

Engineering Education in China - Opportunities and Challenges

Yongmei **Yuan** , Kairong **Su**

Chongqing University of Posts and Telecommunications

A Comparison of the Evaluation in East and West : The Humanism and Scientific in the Engineering Education

Direk **Lavansiri** , Sucharit **Koontanakulvong**

Chulalongkorn University

Road to Internationalization of Faculty of Engineering Chulalongkorn University

Zhang **Sujiang**

School of Continuing Education of Zhejiang University

Experience of Continuing Engineering Education in China : Retrospect and Prospect

Cluster A2 - K-12 Curriculum Issues, Ballroom 2 (17:30 - 18:00)

Pete **Hylton** , Wendy **Otoupal**

Indiana University Purdue University, Indianapolis

Coupling Math and Engineering Concepts in a K-12 Classroom Environment

Pete **Hylton** , Wendy **Otoupal**

Indiana University Purdue University, Indianapolis

Early Introduction of Environmental Engineering and Sustainable Design Philosophies in the K-12 Classroom

Tony L **Mitchell** , Laura **Bottomley** , Angelitha L **Daniel** , Karen **Hollebrands** , Kay **Leager**

North Carolina State University

A Comprehensive Model for Ensuring K – 12 Students are Mathematically Prepared and Keenly Acclimated to enter Engineering Disciplines

Rosalind **Hale** , Renee **Akbar** , John **Fulwiler** , William **Jordan** , Ramona **Travis**
Xavier University of Louisiana
Using a Pre-Service Teacher Institute to Improve the Science and Mathematics Skills of Future Teachers

Tiia **Rüütmann**
Tallinn University of Technology
Technical Teacher Training for Vocational Schools in Estonia

Cluster A3 - Transformation - Partnerships, Ballroom 3 (17:30 - 18:00)

Vincent **Drneovich**
Purdue University
The Senior Design Process at Purdue University

Carmo **D'Cruz** , Mihalios **Halkides**
Florida Institute of Technology
SCION - Space Coast Innovation Outreach Network

Yong **Xu** , Chunshi **Fan** , Yuelun **Fang**
Shanghai Baosteel Group Co
To Establish Sustainable Cooperative Partnership between Enterprises and Universities

Mariano **Savelski** , C. **Slater** , Stephanie **Farrell** , Robert **Hesketh** , James **Newell**
Rowan University
A Synergistic Interaction between Industry and Academia with a Focus on Engineering Undergraduate Education

Juan **Lucena** , Elizabeth **Bauer** , Joan **Gosink** , Barbara **Moskal** , David **Muñoz**
Colorado School of Mines
Understanding Student and Faculty Attitudes with respect to Service Learning: Lessons from the Humanitarian Engineering Program

Cluster B1 - Globalisation - Curricula, Ballroom 1 (18:00 - 18:30)

Gary **Downey** , Juan **Lucena** , Barbara **Moskal**
Colorado School of Mines
Engineering Cultures: Expanding the Engineering Method for Global Problem Solvers

Keith **Schimmel** , Shamsuddin **Ilias** , Franklin **King** , A.K.M. Abdul **Quader**
North Carolina A&T State University
Partnership with Bangladesh University of Engineering & Technology in Pollution Prevention Curriculum Development and Research

Reynaldo **Vea** , Jose **Cruz**
Mapua Institute of Technology
Continuous Quality Improvement: Key to the Globalization of Engineering Education

Megat Johari **Megat Mohd Noor** , Abang Abdullah **Abang Ali** , Azlan **Abdul Aziz**, Mohd Saleh **Jaafar**
Universiti Putra Malaysia
Developing A Malaysian Outcome-Based Engineering Education Model

Abdulaziz **Bubshait** , Mohammed **Jalaluddin**
King Fahd University of Petroleum and Minerals
Globalization and Engineering Education: The Case of Construction Engineering & Management Department, KFUPM, Saudi Arabia

Cluster B2 - K-12 Competitions, Ballroom 2 (18:00 - 18:30)

Keshav **Varde** , Louis **Tsui**
University of Michigan-Dearborn
Development and Implementation of a Structured Outreach Program in IT for Middle and High School Students

Kevin **Schmaltz** , Stacy **Wilson**
Western Kentucky University
The Kentucky Bluegrass Robotic Championship: An Affordable K-12 Outreach Program

Scott **Starks** , Sally **Blake** , Eric **MacDonald**
University of Texas-El Paso
Stimulating Pre-College Interest in Science, Engineering and Mathematics through Space-Oriented Activities

Catherine **Skokan** , Jennifer **Tafoya** , Barbara **Moskal** , Que **Nguyen**
Colorado School of Mines
K-12 Outreach in an Engineering Intensive University

James **Rogers** , Stephen **Cobb**
Murray State University
The Regional Moonbuggy Competition: A Unique, Large-Scale Outreach Program to High Schools

Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3 (18:00 - 18:30)

Nadia **Craig** , Michelle **Maher** , Wally **Peters** , Veronica **Addison**
University of South Carolina
Integrating Complex Systems Study into the Freshmen Mechanical Engineering Experience

Stephen **Cobb** , James **Rogers**
Murray State University
Interdisciplinary Engineering via Engineering Physics: The Best of Both Worlds

Sarah **Henrickson** , Joseph **Bonventre** , Heather **Gunter**
Harvard University
Novel Capillary Filtration Module Bridges Biomedical Sciences and Engineering to improve Interdisciplinary Education

P.K. **Imbrie** , Kamyar **Haghighi**
Purdue University
Creating a Model Multidisciplinary Engineering Program

Ajit **Kelkar** , Kenneth **Murray** , Narayanaswami **Radhakrishnan**
North Carolina A&T State University
Learning across the Boundaries between Engineering, Science, Technology and Business

Cluster C1 - Assessment, Ballroom 1 (18:30 - 19:00)

Tim **McLernon** , David **Hughes**
University of Ulster-Jordanstown
Roadworks on the Learning Highway: The UK Experience of Assessment.

Fong **Mak** , Stephen **Frezza**
Gannon University
Using Student Learning Outcomes Assessment to Assure EC2000 Program Effectiveness

Matthew **Ohland** , Richard M. **Felder** , Rufus **Carter** , Cynthia J. **Finelli** , Douglas G. **Schmucker** , Richard A. **Layton** , Lisa F. **Bullard** , Misty L. **Loughry**
Clemson University
Developing A Peer Evaluation Instrument that is Simple, Reliable, And Valid

Jefferey **Froyd**
Texas A&M University
Assessing and Developing Capabilities to analyze Broader Contexts for Engineering Practice

Jefferey **Froyd** , Jo **Howze** , Kristi **Shryock** , Andrew **Conkey** , Arun **Srinivasa** , Donald **Maxwell** , Rita **Caso** , Egidio **Marotta**
Texas A&M University
A Project-based Approach for First-year Engineering Courses

Cluster C2 - K-12 Preparation, Ballroom 2 (18:30 - 19:00)

Yong **Xu** , Lijuang **Zhang**
Shanghai Baosteel Group Co
Enterprise --- The Garden of Middle School Students Receiving Science Education

Muhammad **Kehnemouyi** , Gilad **Sharon** , Jane **Storck**
Montgomery College
Bringing Engineering to High School Honor Students (College Institute)

Teri Reed **Rhoads** , Susan **Walden** , Teri **Murphy** , Mark **Nanny** , Mary **O'Hair**
The University of Oklahoma
After the Funding: Sustaining an NSF GK-12 Outreach Initiative

Kenneth **Reid** , Charles **Feldhaus**
Indiana University Purdue University, Indianapolis
Articulation Agreements with High Schools implementing Project Lead The Way

Keith **Williamson** , Sharon **Waters** , Hassan **Ndahi** , Laura **Nelson**
Tidewater Community College
Facing the Realities of "High-Stakes" Testing while keeping Science and Engineering Outreach Alive

Cluster C3 - Transformation - Curricula, Ballroom 3 (18:30 - 19:00)

Yuko **Hoshino** , Wayne **Sanders**
Rose Hulman Institute of Technology
Harmonious Combination of Tradition and Innovation – Making a Connection between Liberal Arts and Technical Courses, and East and West

Carmo **D'Cruz** , Muzaffar **Shaikh** , Wade H. **Shaw**
Florida Institute of Technology
Engineering Entrepreneurship Courses Enhance Engineering Management Program at Florida Tech

Mary **Raber** , Sheryl **Sorby**
Michigan Technological University
Learning Across Boundaries through Michigan Technological University's Enterprise Program

Han **Zhixin** , Yang **Ping**
Lanzhou University of Science and Technology
Structuring the Course and Experimental System of the Mechanical Engineering Based on the Main Thread of Robotics and Relevant Disciplines

Yang **Ping** , Han **Zhixin**
Lanzhou University of Science and Technology
Discussing Undergraduate Educational Methods of Mechanical Engineering in the Communication Times

19:00 - 19:20 **Refreshments**

Posters (19:00 - 19:20)

Phillip **Wankat** , Ken **Brannan**
Purdue University
Survey of First-Year Programs

Armando **Aguilar** , Fernando **Altamirano** , Juan **Contreras** , Frida **León**
Universidad Nacional Autonoma de Mexico
Towards a Responsible Engineering: The Incorporation of the Environmental Sciences Study in the Engineering Education.

19:20 - 21:00 **International Exchange Session 2**

Themed Postcard Presentations

Cluster D1 - Skills, Ballroom 1 (19:20 - 19:50)

Stefanus **Muryanto** , Sussatryo **Hadi**
UNTAG University, Dept Chem Eng
Concept Mapping: An Interesting and Useful Learning Tool for Chemical Engineering Entrepreneurship Classes

James **Newell** , Kevin **Dahm** , Brain **Lefebvre** , Heidi **Newell**
Rowan University
Impact of Structured Writing and Awareness of Cognition on Effective Teaming

Ximei **Zhang** , Shuang **Li**
Northeastern University
An Exploration of the Ways to Foster Innovative Talents of Science and Technology on Higher Engineering Education

Eric **Anderson**
Carnegie Mellon University
Visualization as a Means to Critical and Creative Thinking

Leonid **Preiser**
National University
Concept Mapping as a Form of Knowledge Assessment and Instruction in the Domain of Information Systems

Cluster D2 - Labs and Tools 1, Ballroom 2 (19:20 - 19:50)

H. Joel **Lenoir**
Western Kentucky University
A Combined Vibrations and Controls Course for Mechanical Engineering

Matthew **Ohland** , Benjamin L. **Sill** , Elizabeth A. **Stephan**
Clemson University
Adapting Engineering Laboratories to Enhance Learning using Real-Time Sensors

Matthew **Ohland** , Elizabeth A. **Stephan**
Clemson University
Using Real-Time Sensors in the Engineering Classroom: The Ongoing Development of an Engineering Education Experiment

Keith **Schimmel** , Abolghasem **Shahbazi** , Dana **Warren** , Jianzhong **Lou**
North Carolina A&T State University
Using Biodegradable Polymer Experiments to examine Structure-Function Relationships

Bruce **Mutter** , Robert **Riggins**
Bluefield State College
A Method for Integrating Vision and Laser Range Measurements in Autonomous Ground Robotic Vehicles

Cluster D3 - New Approaches, Ballroom 3 (19:20 - 19:50)

Patricia **Laughlin** , James **Garrett**

Carnegie Mellon University

Today's Engineering Education at Carnegie Mellon - Innovative yet Reflective of our History

Sushil **Chaturvedi** , Osman **Akan**

Old Dominion University

Transforming Engineering Curricula through Web-Based Interactive Visualization and Simulation Modules

Ing-Chang **Jong**

University of Arkansas

From Conventional Method to Virtual Work Method in Statics: Three Major Steps and One Guiding Strategy

Aiman **Kuzmar**

Pennsylvania State University, Fayette Campus

Student's Ownership of Class Project Improves Learning

Aiman **Kuzmar**

Pennsylvania State University, Fayette Campus

Undergraduate Research Collaboration between Penn State Main Campus and one of Its Remote Campuses

Cluster E1 - Professional Attributes, Ballroom 1 (19:50 - 20:25)

Jessa **Kreiner** , Chandra **Putcha**

California State University-Fullerton

Ethical And Professional Issues Facing Engineers In Global Settings

Jessa **Kreiner** , Chandra **Putcha** , Anila **Putcha-Bhagavatula** , Ravi

Bhagavatula

California State University-Fullerton

Development of a Method to Test Adequacy of Existing Personality Tests for a Career in Engineering

Yuko **Hoshino**

Kanazawa Institute of Technology

One Condition for Successful Global Engineers: Teaching How to Make Peace with Differences

Michael **Gregg**

VA Polytechnic Inst. & State University

Green Engineering: A Multidisciplinary Engineering Approach

Ron **Ward**

University of New South Wales

A Record of Publication

Barbara Bernal **Thomas**

Southern Polytechnic State University

Reviews of Curriculum Guides for Professional Software Engineers

Cluster E2 - Online, Ballroom 2 (19:50 - 20:25)

Yolanda **Guran-Postlethwaite** , Dorina **Cornea-Hasegan**

Oregon Institute of Technology

Sharing Laboratory Education through the WEB

Clement **Matasane** , Mohamed **Khan**
University of Johannesburg
Technology Implementation in Learning And Teaching: - Towards an Effective Strategy for Virtual Laboratory Learning

Bruce **Mutter** , Don **Bury**
Bluefield State College
Implementation of a Web-Based Curriculum in Architectural Engineering Technology

Bruce **Mutter** , Alvin **Lester**
Bluefield State College
Development of a Web-based Curriculum in Civil Engineering Technology

Sarma **Pisupati** , Brian H. **Victor** , Mark **Deluca** , Martin J. **Gutowski** , Wendy L. **Mahan**
Pennsylvania State University, University Park
Impact of Innovative and Highly Interactive Online Activities on Energy Efficiency Education

Leonid **Preiser**
National University
Integrating Web-Based Technologies and Knowledge Management Concepts in a Novel Online Model for Modern Education

Cluster E3 - Learning, Ballroom 3 (19:50 - 20:25)

Jung **Oh**
Kansas State University-Salina
Connecting Learning with Students' Interests and Daily Lives with Project Assignment: "It is My Project."

Kazuya **Takemata** , Toshiyuki **Yamamoto** , Masakatsu **Matsuishi**
Kanazawa Institute of Technology
A Peer-to-Peer and Instructor-to-Students Interactive Learning Process in Engineering Design Courses Enhanced by an e-Learning System

Albert **McHenry**
Arizona State University, Polytechnic Campus
Constructivism: The Learning Theory that Supports Competency Development of Engineers for Engineering Practice and Technology Leadership through Graduate Education

James **Rogers** , J. Ricky **Cox**
Murray State University
In Defense of Lecture: Using Technology Inside and Outside the Classroom

Nadia **Craig** , Lorelee **Donath** , Michael **Matthews** , Nancy **Thompson**
University of South Carolina
Incorporating Complexity into Undergraduate Engineering Development through the Research Communications Studio

Pj **Radcliffe**
RMIT University
Solving the Education-Research Tension

Cluster F1 - Graduate Programs, Ballroom 1 (20:25 - 21:00)

Wayne **Whiteman**

Georgia Institute of Technology

How Long Does it Take to Earn a Ph.D. In Engineering: A Case Study

Keith **Schimmel** , Harmohindar **Singh** , Guoqing **Tang** , Godfrey **Uzochukwu** , Valmi **Sousa** ,
Abolghasem **Shahbazi** , Derrek **Dunn** , Vereda **King** , Kenneth **Murray** , Stephanie **Luster-**
Teasley , Stephen **McCary-Henderson** , G.B. **Reddy**

North Carolina A&T State University

*Graduate Learning at the Interface of Science, Engineering, and Business – The Energy and
Environmental Studies Program at North Carolina Agricultural and Technical State University*

Tanya **Vernon**

Curtin University of Technology

*Access, Reward and Penalty: The Art of Supervision at the (Post)graduate Level, a Case Study
of an Electrical Engineering Laboratory*

Dianne **Wiley** , Pamela **Mort**

University of New South Wales

*Inducting our PhD Students: Changing the Research Culture and Improving the Student
Experience.*

Tijjani **Mohammed** , Biwu **Yang**

East Carolina University

Issues in Hands-On Online Graduate Programs in Information Technology

Bruce **Mutter** , Don **Bury**

Bluefield State College

*The Architectural Engineering Technology Applied Research Assistant Program at the Bluefield
State College Center for Applied Research and Technology*

Cluster F2 - Labs and Tools 2, Ballroom 2 (20:25 - 21:00)

Joseph **Tront**

Virginia Institute of Technology (Virginia Tech)

Using Tablet PCs in Engineering Education

Cajetan **Akujuobi** , Shumon **Alam** , Matthew **Sadiku**

Prairie View A&M University

*Development, Training and Implementation of Test Automation for ADSL Interoperability and
Reliability Studies*

John **Schmeelk**

Virginia Commonwealth University

Guided Tour of Generalized Functions in Signal Processing

Samuel **Lakeou**

University of the District of Columbia

Flexible Prototype Board Design for ADC/DAC Control: Application to Mini-Projects

Robert **Ryan** , Stewart **Prince**

California State University, Northridge

*Development of Engineering Case Studies for Integrating Finite Element Analysis into a
Mechanical Engineering Curriculum*

Swami **Karunamoorthy**

Saint Louis University

Design of Experiments in Undergraduate Laboratory Education

Cluster F3 - Curriculum, Ballroom 3 (20:25 - 21:00)

Pj **Radcliffe**

RMIT University

Software Engineering - A Career Path in Transformation

Nadia **Craig** , Michelle **Maher** , Wally **Peters** , Veronica **Addison**

University of South Carolina

Benchmarking the Integration of Complex Systems Study in American and Australian Mechanical Engineering Programs

Lise **Kofoed** , Anna Marie **Fisker**

Aalborg University

Changing Curriculum Bit by Bit

Ronald **Barr** , Sean **Brophy** , Robert **Freeman** , Marcus **Pandy** , Anthony **Petrosino** , Robert **Roselli**

University of Texas at Austin

The VaNTH Biomechanics Learning Modules

Herbert **Yeung**

University of Technology, Sydney

Embedded Development Being Future for Software Engineering

Akram **Al-Rawi** , Faouzi **Bouslama** , Azzedine **Lansari**

Zayed University

Integrating Certifications into Information Systems Curricula

Wednesday, September 28, 2005

08:00 - 09:00 **Delegate / Attendee Registration, Foyer, Star City**

09:00 - 10:30 **Breakout Session 2**

Globalisation, Ballroom 1 (09:00 - 10:30)

Chair: Elizabeth Godfrey

Pradipta **Banerji**

IIT Bombay

Globalisation and Engineering Education: An Indian Perspective

John **Ingleson**

University of New South Wales

The Globalisation of Universities

Luiz **Scarvada**

Pontifical Catholic University of Rio de Janeiro

Engineer of the Americas: A Professional for the Western Hemisphere

K-12 Preparing Teachers, Ballroom 2 (09:00 - 10:30)

Chair: Catherine Skokan

William **Lawson**

Sinclair Knight Merz

Generational Change and Engineering Education

O Hayden **Griffin Jr**

Virginia Tech

The Virginia Tech Education-Engineering Collaborative: A Partnership for Cultural Change

Greg **Millican**

The Engineering Link Group

From Bolt-on to Built-in: Putting Teachers in Touch with Engineering and Practical Science

Transformational Change in Academic Organisations, Ballroom 3 (09:00 - 10:30)

Chair: Joe Tront

John **Rickard**

Central Queensland University

The Transformed University

Timothy **Anderson**

University of Florida

Experiences of a Multi-Institutional Coalition on Transformational Change in Undergraduate Engineering Education

Cheryl **Paten** , Nick **Palousis** , Karlson 'Charlie' **Hargroves** , Michael **Smith**

The Natural Edge Project

Making the Profitable Transition Towards Sustainable Business Practice

10:30 - 11:00 **Morning Tea / Coffee Break**

11:00 - 12:30 **Breakout Session 3**

Globalisation, Ballroom 1 (11:00 - 12:30)

Chair: David Radcliffe

Wayne **Johnson**

Hewlett Packard

Industry as a Catalyst for Innovation in Education.

Rafael **Quevedo-Camacho**

Asociacion National de Facultades y Escuelas de In

The ASIBEI and the Ibero-American Engineer

K-12 Student Learning, Ballroom 2 (11:00 - 12:30)

Chair: Matt Ohland

Sean **Brophy**

Purdue University

Preparing Learners to be Flexibly Adaptive in Novel Situations

Kendall **Starkweather**

International Technology Education Association

A K-12 Engineering Pipeline Model based upon Standards for Technological Literacy

Janice **Earle**

National Science Foundation

The National Science Foundation's investments in assessing Student Learning: What have we learned?

Transformational Change in Curricula, Ballroom 3 (11:00 - 12:30)

Chair: Gunilla Burrowes

Howard **Rollins Jr**

Georgia Institute of Technology

The International Plan: Global Competence for Undergraduates in Engineering

Roger **Hadgraft**

RMIT University

Integrating Engineering Education – Key Attributes of a Problem-based Learning Environment

Anette **Kolmos**

Aalborg University

Transformation of Problem Based Learning in Engineering Education

12:30 - 14:00 **Luncheon**

13:00 - 14:00 **AaeE Annual General Meeting**

14:30 - 17:00 **International Federation of Engineering Education Societies Meeting (by invitation), Quarry Room**

14:00 - 15:30 **Focus on Australasia Session 1**

Themed Postcard Presentations

Cluster P1 - Globalisation - Engagement, Ballroom 1 (14:00 - 14:30)

Devi **Saini**

University of Wollongong

Globalization of Engineering Education via Virtual University

William **Lawrance** , Clive **Maynard**

Curtin University

Internationalising the Engineering Faculty at Curtin University: A Scheme to Promote Overseas Staff-Student Exchanges

Ron **Ayers**

University of Southern Queensland

Use of Online Discussion Groups to increase Student Understanding of Global Social and Technical Issues

S Mahfuz **Aziz**

University of South Australia

Internationalisation as a Change Dynamic in Engineering Education: Issues and Challenges

Cluster P2 - K-12 - Outreach Programs, Ballroom 2 (14:00 - 14:30)

Oliver **Kennedy** , Robert **Wheway**

University of Wollongong

Using the Formula SAE Competition to Promote Engineering in High Schools

Paul **Richards** , Llewellyn **Mann** , Greg **Millican**

The Engineering Link Group

Future Engineers Australia Management Project: Turning High School Students into Engineering Entrepreneurs

Greg **Millican** , Paul **Richards** , Llewellyn **Mann**

The Engineering Link Group

The Engineering Link Project: Learning about Engineering by Becoming an Engineer

Robert **Wheway** , Michael **Yastreboff** , Andrew **Spence**

University of Wollongong

Creating and Maintaining an Interest in Engineering in High Schools through a Year 11 Engineering Report Competition

David **Jorgensen** , Ian **Devenish**

Central Queensland University

Selling Engineering - A Role Model Program

Cluster P3 - Transformation - Attributes, Ballroom 3 (14:00 - 14:30)

Susan Joan **Gribble** , David **Scott**

Curtin University of Technology

Reviewing and Reforming a Traditional Engineering Course

Roger **Hadgraft** , Margaret **Jollands** , Liam **Ward** , Ian **Grundy**

RMIT University

Student Engagement in Project-Based Courses in First Year Chemical Engineering at RMIT University

Bruce **Moulton** , David **Lowe**
University of Technology, Sydney
Engineering Students' Perceptions of the Importance of Personal Abilities in Relation to Career Performance, and their Perceptions of the Extent to which their Courses Focus on Personal Abilities

Sally **Male** , Elaine **Chapman**
University of Western Australia
Assessing the Generic Competencies of Engineering Graduates: Preliminary Report from an Ongoing Research Program

Jane **Sargison** , Peter **Tatham** , Ingrid **Apsitis**
University of Tasmania
Introducing Students to ePortfolio to Record Generic Attributes

Cluster Q1 - Globalisation - Curricula, Ballroom 1 (14:30 - 15:00)

Joachim **Walther** , Llewellyn **Mann** , David **Radcliffe**
University of Queensland
Global Engineering Education: Australia and the Bologna Process

David **Thorpe** , Tony **Ahfock**
University of Southern Queensland
Internationalisation of Technology and Society Course at University of Southern Queensland

Devi **Saini**
University of Wollongong
Internationalization of Higher Education and Research in Manufacturing in Asian Region

Rodney **Stewart**
School of Engineering, Griffith University, School of Engineering
International Student Learning in an Engineering Management Coursework Masters Thesis Context

David **Veal** , Grupreet **Kohli** , Stanislaw **Maj**
Edith Cowan University
Cisco Based Curricula in University Units

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University of Queensland
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Kenneth **Pope** , Eddie **Fabijan**
Australian Science and Mathematics School
Electronics, Robotics and Engineering at the Australian Science and Mathematics School

Keith **Godfrey**
Murdoch University
Cross-curricular Electronics in High Schools

Aaron **Blicblau**
Swinburne University of Technology
Transiting from School Science to Real Engineering by Employing Materials Science and Engineering Concepts within the School Programme

David **Dowling** , Lorelle **Burton**
University of Southern Queensland
The End of the Pipeline: Profiling Commencing Students to ease their Transition into an Engineering School

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University of Queensland
Design Management in a Construction Company

Friso **De Boer** , Mirjam **Jonkman** , Lorien **Martin** , Nicola **Pirchard** , Robert **Wheway** , Robert **Wolff**
Charles Darwin University
Innovation and Design, a Technical Subject for all University Students

Hong **Guan** , Sanaul **Chowdhury** , Jeung-Hwan **Doh**
Griffith University
Integrated Design Project - An Integration of Fundamental Engineering Courses

Vincent **Gomes**
University of Sydney
Product Engineering in Chemical Engineering Curriculum

Carl **Reidsema**
University of New South Wales
Fostering Creative Problem Solving and Collaborative Skills Through Impromptu Design in Engineering Design Courses

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Queensland University of Technology
Engineering Drawing as a Global Language for Engineers

Andrei **Kotousov**
University of Adelaide
Use of Web Based Technical Data and Information in Higher Education: Potential Benefits and Major Concerns

Lucy **Peachey** , Leith **Woodall**
University of Queensland Library
Evolution of the Digital Library: Making Access Seamless

Sead **Spuzic** , Clement **Stevens** , Kazem **Abhary** , Neda **Fabris** , Fons **Nouwens** , John **Rice**
University of South Australia *
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John **Long** , Kirren **Hartas**
Deakin University
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Deakin University
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Stuart **Palmer** , Sharyn **Bray**
Deakin University
Assessing the Likely Impact of Mandatory Residential Sessions for Engineering and Technology Students

David **Cropley** , Elena **Sitnikova**
University of South Australia
Teaching and Learning in Engineering Education: Constructive Alignment

Som **Naidu** , Samuel **Yuen** , Jayantha **Kodikara**
University of Melbourne
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Tom **Bammann** , Lindsay **Doherty** , Rebecca **Jones** , Susan **Pearce** , Rohin **Wood**
The University of Adelaide
Interactive Learning - Is It Working?

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University of Adelaide
Embedding Sustainability in Civil and Environmental Engineering Courses

Llewellyn **Mann** , David **Radcliffe** , Joachim **Walther**
University of Queensland
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Friso **De Boer** , Mirjam **Jonkman**
Charles Darwin University
Biomedical Engineering, Co-education of Biomedical Science and Engineering Students

Robert **McLaughlan** , Jim **Roach** , Ruth **Soetendorp** , Bill **Childs** , Catherine **Killen**
University of Technology Sydney
Engineering Enterprise through IP Education: What is needed?

Paul **Wellington**
Monash University
Leading Engineers into the Twenty First Century

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University of Sydney
Revising the Civil Engineering Curriculum at The University of Sydney

Graham **Moore**
University of Melbourne
Xlr8tr: Learning about Spreadsheet Tools for Environmental Engineering Students

Keith **Godfrey**
Murdoch University
Introduction to Engineering Concepts - a Broader First Year Course

Xiheng **Hu**
University of Sydney
Compartmentalisation of an Electrical Engineering Course for Non-Electrical Engineering Students

Robin **Ford** , Tracie **Barber**
University of New South Wales
Sustainability of Teaching Initiatives

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Yasir **Al-Abdeli** , Frank **Bullen**

University of Tasmania

A Coherent-Tactile Approach to Teaching Manufacturing Engineering

Janis **Swan** , Robert **Torrens**

University of Waikato

Project Management: Learning by Doing

Daniel **McGill** , Jocelyn **Armarego** , Lynne **Fowler**

Murdoch University

Orienting Students to Studio Learning

Gary **Rasmussen** , Les **Dawes** , Martin **Murray**

Queensland University of Technology

Student Experiential Learning

Yasir **Al-Abdeli** , Frank **Bullen**

University of Tasmania

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Queensland University of Technology

Reflections on Changing the Culture of Engineering Education at QUT

Heather **Stonyer**

Auckland University of Technology

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Vladis **Kosse** , Ramasamy Iyer **Mahalinga Iyer**

Queensland University of Technology

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Curtin University of Technology

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Holger **Maier** , Judi **Baron**

University of Adelaide

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David **Jorgensen** , Steven **Senini**

Central Queensland University

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Faculty of Engineering and Surveying

Assessing Individual Student Performance in a Team-based Engineering Problem Solving Course

Bernardo **León de la Barra** , Kate **McPherson** , Perfecto **Reguera**

University of Tasmania and University of Leon, Spain

Maintaining Academic Standards and Encouraging Active Involvement in Engineering Courses: The Role of Formative Assessment

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University of Queensland
Assessing The Effectiveness Of New Teaching Methods In Engineering Education

David **Cropley** , Bill **Daniels**
University of South Australia
Improving Postgraduate Education

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Wageeh **Boles** , Doug **Hargreaves** , Hilary **Beck**
Queensland University of Technology
Deploying Bloom's Taxonomy in a Work Integrated Learning Environment

Roger **Hadgraft** , David **Oxley** , John **Brumley** , Jennifer **Goricanec**
RMIT University
Problematic Project Work in a First Year Course – Sustainability for Civil/Infrastructure and Environmental Engineers

Daniel **McGill**
Murdoch University
EngFocus: Engineering Alternative Entry Program for non-TEE Students at Rockingham

Stuart **Palmer**
Deakin University
Review of First-year Engineering and Technology Units Based on Student Unit Evaluations

Chris **Ryan** , Robert **Bishop**
Western Institute of Technology at Taranaki
Curriculum Alignment between High School and Engineering Industry Training

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David **Veal** , Stanislaw **Maj**
Edith Cowan University
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Aaron **Blicblau** , Hannes **Van Der Walt**
Swinburne University of Technology
Breaking the Boundaries in Engineering Education by incorporating Interdisciplinary and Inter-Gender Interaction in Final Year Projects

Wairimu P **Mburu** , Xiheng **Hu**
University of Sydney
Female Engineering Students: Career Motivation and their Learning Experience

Julie **Mills** , Rhonda **Sharp** , Suzanne **Franzway** , Judith **Gill**
University of South Australia
Education Beyond Technical Competence: Gender Issues in the Working Lives of Engineers

Robert **Wheway** , Andrea **Schäfer**
University of Wollongong
Diversity in Engineering: A New Approach and Awareness as a First Step to Change

Cluster U1 - Labs and Tools, Ballroom 1 (16:50 - 17:30)

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Curtin University of Technology

The Application of EXCEL in Teaching Finite Element Analysis to Final Year Engineering Students.

George **Banky**

Swinburne University of Technology

Using Circuit Simulator Software in the Study of Electronic Circuit Behaviour

Dikai **Liu** , Steve **Murray** , Kenneth **Choy** , V **Lasky**

University of Technology, Sydney - Faculty of Engineering

A Remote PLC System for e-Learning

Mark **Beckerleg** , John **Collins**

Auckland University of Technology

Using Standardised Hardware Modules to Implement Complex Design Projects for Teaching Embedded Systems

Ramasamy Iyer **Mahalinga Iyer**

Queensland University of Technology

Use of Non-Immersive Virtual Reality in Mechanical Engineering Laboratory

John **Collins** , Mark **Beckerleg**

Auckland University of Technology

A Structure Diagram Design Tool for Teaching Embedded Systems Software Design

Cluster U2 - Curriculum, Ballroom 2 (16:50 - 17:30)

Colin **Kestell** , Colin **Hansen**

University of Adelaide

The Introduction of New Engineering Programs. A Curse or a Necessity?

Elizabeth **Godfrey** , Rainer **Seidel**

University of Auckland

Project and Team based Learning - an Integrated Approach to Engineering Education

Oliver **Kennedy** , Robert **Wheway**

University of Wollongong

Promoting Interdisciplinary Learning in a Practical Environment Using the Formula SAE Competition

Catherine **Killen** , Mike **Ford**

University of Technology, Sydney

Innovation in Cross-Faculty Education – Engineering and Science

Milan **Simic**

RMIT University - SIEBS

An Approach in Mechatronics Teaching

Jocelyne **Poirier**

Queensland University of Technology

Connecting to Great Minds: an Information Literacy Framework for Final Year Students

Cluster U3 - Transformation - Learning & Skills, Ballroom 3 (16:50 - 17:30)

Steve **Kuo**

University of Technology, Sydney

Large Group Cooperative Learning for Engineering Students

Vincent **Gomes**

University of Sydney

Problem Based Learning in a New Chemical Engineering Curriculum

Betty **Jacobs** , Anne **Gardner**

University of Technology, Sydney

Go And See And Touch And Feel - An Introductory Case Study for Civil Engineering Students

Iouri **Belski**

RMIT University

Improving the Skills of Engineers in Systematic Thinking

Tim **Wilkinson**

University of Sydney

A Staggered Approach to Developing Report Writing Skills within the Civil Engineering Discipline

Roy **Ferguson** , Heiko **Rudolph** , Suresh **Venkatachalaiah**

RMIT University

Drop and Drag - Graphical User Interface Programming to Create Enthusiasm in First Year Programming.

18:45 - 22:00 **Harbour Cruise**

(ticketed event, not included in registration)

Thursday, September 29, 2005

08:00 - 09:00 **Delegate / Attendee Registration - Foyer, Star City**

09:00 - 10:30 **Breakout Session 4**

Globalisation, Ballroom 1 (09:00 - 10:30)

Chair: Wageeh Boles

Tuan Duong **Hoang**

University of New South Wales

Engineering Education: Australian and Japanese Cases

John **Raine**

Massey University

Design-Led Engineering Education, Industry Links and Product Innovation - a Global Imperative

Shouwen **Yu**

Tsinghua University

Engineering Education in a Time of Rapid Change

K-12 Competitions, Ballroom 2 (09:00 - 10:00)

Chair: Bob Wheway

Phillip **Wankat**

Purdue University

Survey of K-12 Engineering-oriented Student Competitions

Steven **Kryger**

EngQuest

Engineering Quest: A Case Study

Stephen **Fityus**

University of Newcastle

Promoting Vocations in Engineering amongst Secondary School Students

Transformational Change in Accreditation, Ballroom 3 (09:00 - 10:30)

Chair: Gunilla Burrowes

George **Peterson**

ABET

Accreditation of Engineering Programs

Alfredo **Soeiro**

University of Porto

European Experience in Engineering Education and in Accreditation

Alan **Bradley**

Engineers Australia

Transforming the Engineering Education process within the Australian Context

10:30 - 11:00 **Morning Tea / Coffee Break**

11:00 - 12:30 **Breakout Session 5**

Globalisation, Ballroom 1 (11:00 - 12:30)

Chair: Roger Hadgraft

Masataka **Tanigaki**

Kyoto University

Introduction of Accreditation System and the Challenge of Engineering Education in Japan

Hussain **Al-Madani**

University of Bahrain

Engineering Education in the Arab World

Elizabeth **Godfrey**

University of Auckland

Engineering Students and International Exchanges: Why so few?

K-12 Policy Issues, Ballroom 2 (11:00 - 12:30)

Chair: David Dowling

Rodger **Bybee**

Biological Sciences Curriculum Study

Achieving Higher Levels of Technological Literacy: A Strategic Perspective for K-12 Education

Jim **Davies**

Australian Science and Mathematics School

'Get Real': Innovative Schooling: Australian Science and Mathematics School

Teri Reed **Rhoads**

The University of Oklahoma

After the Funding: Sustaining Outreach Initiatives

Preparing Engineers of a Trans-Disciplinary World, Ballroom 3 (11:00 - 12:30)

Chair: Gunilla Borrowes

William **Oakes**

Purdue University

Using Service-Learning to Prepare Engineers for a Trans-Disciplinary World

Anna **Carew**

University of Wollongong

Enabling Transdisciplinary Engineering Practice through Targeted Problem-Based Learning

Wilfried **Elspass**

ETH Zürich

Design Education through Multi-disciplinary Collaboration in an Enhanced Learning Environment

12:30 - 14:00 **Luncheon**

14:00 – 15:00 **Rapporteur and Closing Session**

Chairs: Jim Melsa and David Radcliffe

Key Issues from Globalisation of Engineering Education

Rod **Chaplin** (UNSW)

Key Issues from K-12 Pipeline

P.K. **Imbrie**

Purdue University

Key Issues from Transformation of the Profession

Joseph **Tront** (Virginia Tech) and Gunilla **Burrowes** (University of Newcastle)

GCEE 2005 Close and Welcome to Brasil 2006

15:00 – 15:30 **Afternoon Tea / Coffee Break**

15:30 – 17:00 **AaeE Executive Meeting, Board Room**

18:30 – 22:00 **Colloquium Banquet and AaeE Awards**

Roger **Trundle**

Thiess Pty Ltd

Industry-University Partnerships

Friday, September 30, 2005

09:00 – 16:00 **Australian Council of Engineering Deans meeting, Quarry Room**

International Deans are invited to attend from 10:30 to 1pm including luncheon

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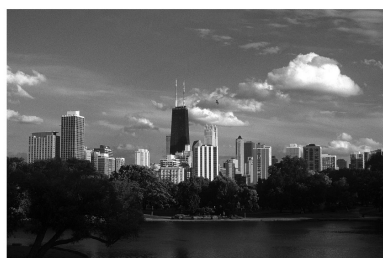
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Carmo	D'Cruz	SCION - Space Coast Innovation ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
		Engineering Entrepreneurship C ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Friso	De Boer	Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
		Biomedical Engineering, Co-edu ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
Mark	Deluca	Impact of Innovative and Highl ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Ian	Devenish	Selling Engineering - A Role M ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
Jeung-Hwan	Doh	Integrated Design Project - An ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Lindsay	Doherty	Interactive Learning - Is It W ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Loralee	Donath	Incorporating Complexity into ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
David	Dowling	The End of the Pipeline: Profi ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Gary	Downey	Engineering Cultures: Expandin ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
Vincent	Drnevich	The Senior Design Process at P ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Derrek	Dunn	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Janice	Earle	The National Science Foundatio ...	28/09, 11:00: K-12 Student Learning, Ballroom 2
Wilfried	Elspass	Design Education through Multi ...	29/09, 11:00: Preparing Engineers of a Trans-Disciplinary World, BRm 3
Eddie	Fabijan	Electronics, Robotics and Engi ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Neda	Fabris	Contribution to Cross-discipli ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Paul	Fahey	Assessing Individual Student P ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Chunshi	Fan	To Establish Sustainable Coope ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3

Yuelun	Fang	To Establish Sustainable Coope ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Stephanie	Farrell	A Synergistic Interaction betw ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Richard M.	Felder	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Charles	Feldhaus	Articulation Agreements with H ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Clive	Ferguson	Improving On- And Off-Campus S ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Roy	Ferguson	Drop and Drag - Graphical User ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, Brm 3
Cynthia J.	Finelli	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Anna Marie	Fisker	Changing Curriculum Bit by Bit	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Stephen	Fityus	Promoting Vocations in Enginee ...	29/09, 09:00: K-12 Competitions, Ballroom 2
Mike	Ford	Innovation in Cross-Faculty Ed ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Robin	Ford	Sustainability of Teaching Ini ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
Lynne	Fowler	Orienting Students to Studio L ...	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
Suzanne	Franzway	Education Beyond Technical Com ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Robert	Freeman	The VaNTH Biomechanics Learnin ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Stephen	Frezza	Using Student Learning Outcome ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Jefferey	Froyd	Assessing and Developing Capab ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
		A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
John	Fulwiler	Using a Pre-Service Teacher In ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Anne	Gardner	Go And See And Touch And Feel ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, BRm 3
James	Garrett	Today's Engineering Education ...	27/09, 19:20: Cluster D3 - New Approaches, Ballroom 3
Judith	Gill	Education Beyond Technical Com ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Elizabeth	Godfrey	Project and Team based Learnin ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
		Engineering Students and Inter ...	29/09, 11:00: Globalisation, Ballroom 1
Keith	Godfrey	Introduction to Engineering Co ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
		Cross-curricular Electronics i ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Vincent	Gomes	Product Engineering in Chemica ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
		Problem Based Learning in a Ne ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, BRm 3
Mario	Gomez-Mejia	The Ibero-American Engineer: A ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Merrilyn	Goos	Maths in School and Community ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Jennifer	Goricanec	Problematic Project Work in a ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
Joan	Gosink	Understanding Student and Facu ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Michael	Gregg	Green Engineering: A Multidisc ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
Susan Joan	Gribble	Reviewing and Reforming a Trad ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
O Hayden	Griffin Jr	The Viginia Tech Education-Eng ...	28/09, 09:00: K-12 Preparing Teachers, Ballroom 2
Ian	Grundy	Student Engagement in Project- ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm
Hong	Guan	Integrated Design Project - An ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Heather	Gunter	Novel Capillary Filtration Mod ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, BRm 3
Yolanda	Guran-Postlethwaite	Sharing Laboratory Education t ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Martin J.	Gutowski	Impact of Innovative and Highl ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Roger	Hadgraft	Student Engagement in Project- ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
		Problematic Project Work in a ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
		Integrating Engineering Educat ...	28/09, 11:00: Transformational Change in Curricula, Ballroom 3
Sussatryo	Hadi	Concept Mapping: An Interestin ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Kamyar	Haghighi	Creating a Model Multidiscipli ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, BRm 3
		Birth of a New Discipline	27/09, 15:30: Transformation of Disciplines, Ballroom 3
Rosalind	Hale	Using a Pre-Service Teacher In ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Mihalis	Halkides	SCION - Space Coast Innovation ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Wayne	Hall	Improving On- And Off-Campus S ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Colin	Hansen	The Introduction of New Engine ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Doug	Hargreaves	Deploying Bloom's Taxonomy in ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
		Reflections on Changing the Cu ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Karlson 'Charlie'	Hargroves	Sudan Virtual Engineering Libr ...	27/09, 15:30: Globalisation, Ballroom 1
		Making the Profitable Transiti ...	28/09, 09:00: Transformational Change in Academic Organisations, BRm 3
Kirren	Hartas	An AC Signal-Generator and PC- ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Sarah	Henrickson	Novel Capillary Filtration Mod ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, BRm 3
Robert	Hesketh	A Synergistic Interaction betw ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Tuan Duong	Hoang	Engineering Education: Austral ...	29/09, 11:00: Globalisation, Ballroom 1
Karen	Hollebrands	A Comprehensive Model for Ensu ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2

Yuko	Hoshino	One Condition for Successful G ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
		Harmonious Combination of Trad ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Jo	Howze	A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Xiheng	Hu	Compartmentalisation of an Ele ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
		Female Engineering Students: C ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
David	Hughes	Roadworks on the Learning High ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Pete	Hylton	Coupling Math and Engineering ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
		Early Introduction of Environm ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Shamsuddin	Ilias	Partnership with Bangladesh Un ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
P.K.	Imbrie	Creating a Model Multidiscipli ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
		Rapporteur Report - K-12 Pipel ...	29/09, 14:15: Key Issues from K-12 Pipeline
John	Ingleson	The Globalisation of Universit ...	28/09, 09:00: Globalisation, Ballroom 1
Mohd Saleh	Jaafar	Developing A Malaysian Outcome ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
Betty	Jacobs	Go And See And Touch And Feel ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, Ballroom 3
Mohammed	Jalaluddin	Globalization and Engineering ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
Dong	Jeng	Assessing The Effectiveness Of ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Yong	Jin	Engineering Education in China ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Wayne	Johnson	Industry as a Catalyst for Inn ...	28/09, 11:00: Globalisation, Ballroom 1
Margaret	Jollands	Student Engagement in Project- ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, Brm3
Lesley	Jolly	Maths in School and Community ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
		Design Management in a Constru ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Rebecca	Jones	Interactive Learning - Is It W ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Trevor	Jones	Improving On- And Off-Campus S ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Russel	Jones	Building Engineering Capacity ...	27/09, 15:30: Globalisation, Ballroom 1
Ing-Chang	Jong	From Conventional Method to Vi ...	27/09, 19:20: Cluster D3 - New Approaches, Ballroom 3
Mirjam	Jonkman	Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
		Biomedical Engineering, Co-edu ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
William	Jordan	Using a Pre-Service Teacher In ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
David	Jorgensen	Selling Engineering - A Role M ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Confronting the Assessment Dem ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Swami	Karunamoorthy	Design of Experiments in Under ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
Muhammad	Kehnemouyi	Bringing Engineering to High S ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Ajit	Kelkar	Learning across the Boundaries ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
Oliver	Kennedy	Using the Formula SAE Competit ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Promoting Interdisciplinary Le ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Colin	Kestell	The Introduction of New Engine ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Mohamed	Khan	Technology Implementation in L ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Catherine	Killen	Innovation in Cross-Faculty Ed ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
		Engineering Enterprise through ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
Franklin	King	Partnership with Bangladesh Un ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
Vereda	King	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Jayantha	Kodikara	Collaborative Development of M ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Lise	Kofoed	Changing Curriculum Bit by Bit	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Grupreet	Kohli	Cisco Based Curricula in Unive ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Anette	Kolmos	Transformation of Problem Base ...	28/09, 11:00: Transformational Change in Curricula, Ballroom 3
Sucharit	Koontanakulvong	Road to Internationalization o ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Vladis	Kosse	Engineering Drawing as a Globa ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
		Crossing Boundaries of Discipl ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Andrei	Kotousov	Use of Web Based Technical Dat ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Jessa	Kreiner	Development of a Method to Tes ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
		Ethical And Professional Issue ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
Steven	Kryger	Engineering Quest: A Case Stu ...	29/09, 09:00: K-12 Competitions, Ballroom 2
Steve	Kuo	Large Group Cooperative Learni ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, Ballroom 3
Aiman	Kuzmar	Student's Ownership of Class P ...	27/09, 19:20: Cluster D3 - New Approaches, Ballroom 3
		Undergraduate Research Collabo ...	27/09, 19:20: Cluster D3 - New Approaches, Ballroom 3
Samuel	Lakeou	Flexible Prototype Board Desig ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
Azzedine	Lansari	Integrating Certifications int ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
V	Lasky	A Remote PLC System for e-Lear ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1

Patricia	Laughlin	Today's Engineering Education ...	27/09, 19:20: Cluster D3 - New Approaches, Ballroom 3
Direk	Lavansiri	Road to Internationalization o ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
William	Lawrance	Internationalising the Enginee ...	28/09, 14:00: Cluster P1 - Globalisation - Engagement, Ballroom 1
William	Lawson	Generational Change and Engine ...	28/09, 09:00: K-12 Preparing Teachers, Ballroom 2
Richard A.	Layton	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Kay	Leager	A Comprehensive Model for Ensu ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Brain	Lefebvre	Impact of Structured Writing a ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
H. Joel	Lenoir	A Combined Vibrations and Cont ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Frida	León	Towards a Responsible Engineer ...	27/09, 19:00: Posters
Bernardo	León de la Barra	Maintaining Academic Standards ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Alvin	Lester	Development of a Web-based Cur ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Ling	Li	Assessing The Effectiveness Of ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Shuang	Li	An Exploration of the Ways to ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Euan	Lindsay	Animatronic Puppets: A Case St ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Dikai	Liu	A Remote PLC System for e-Lear ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1
David	Lockington	Assessing The Effectiveness Of ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Jack	Lohmann	Developing a Research Journal ...	27/09, 12:00 : Luncheon + Presentation on Journal of Engineering Education
John	Long	An AC Signal-Generator and PC- ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Simon	Longstaff	Transformation of Disciplines	27/09, 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2
Jianzhong	Lou	Using Biodegradable Polymer Ex ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Misty L.	Loughry	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
David	Lowe	Engineering Students' Percepti ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
Juan	Lucena	Engineering Cultures: Expandin ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
		Understanding Student and Facu ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Stephanie	Luster-Teasley	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Eric	MacDonald	Stimulating Pre-College Intere ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Ramasamy Iyer	Mahalinga Iyer	Use of Non-Immersive Virtual R ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1
		Crossing Boundaries of Discipl ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Wendy L.	Mahan	Impact of Innovative and Highl ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Michelle	Maher	Benchmarking the Integration o ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
		Integrating Complex Systems St ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
Holger	Maier	Embedding Sustainability in Ci ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
		Developing Online Roleplay Sim ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Stanislaw	Maj	A New Visual Communication Sys ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
		Cisco Based Curricula in Unive ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Fong	Mak	Using Student Learning Outcome ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Sally	Male	Assessing the Generic Competen ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
Llewellyn	Mann	The Engineering Link Project: ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Future Engineers Australia Man ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Sustainable Design Practitione ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
		Global Engineering Education: ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Tony	Marjoram	Global Engineers and Sustainab ...	
Egidio	Marotta	A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Lorien	Martin	Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Clement	Matasane	Technology Implementation in L ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Masakatsu	Matsuishi	A Peer-to-Peer and Instructor- ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Michael	Matthews	Incorporating Complexity into ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Donald	Maxwell	A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Clive	Maynard	Internationalising the Enginee ...	28/09, 14:00: Cluster P1 - Globalisation - Engagement, Ballroom 1
Wairimu P	Mburu	Female Engineering Students: C ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Stephen	McCary-Henderson	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Daniel	McGill	EngFocus: Engineering Alternat ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
		Orienting Students to Studio L ...	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
Albert	McHenry	Constructivism: The Learning T ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Robert	Mclaughlan	Engineering Enterprise through ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
Tim	McLernon	Roadworks on the Learning High ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Kate	McPherson	Maintaining Academic Standards ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Megat Johari	Megat Mohd Noor	Developing A Malaysian Outcome ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1

Jean Michel	Globalization of Engineering E ...	27/09, 15:30: Globalisation, Ballroom 1
Greg Millican	From Bolt-on to Built-in: Putt ...	28/09, 09:00: K-12 Preparing Teachers, Ballroom 2
	The Engineering Link Project: ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
	Future Engineers Australia Man ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
Julie Mills	Education Beyond Technical Com ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Tony L Mitchell	A Comprehensive Model for Ensu ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Cynthia Mitchell	Engineering Change Towards Sus ...	27/09, 15:30: Transformation of Disciplines, Ballroom 3
Tijjani Mohammed	Issues in Hands-On Online Grad ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Graham Moore	Xlr8tr: Learning about Spreads ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
Pamela Mort	Inducting our PhD Students: Ch ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Barbara Moskal	K-12 Outreach in an Engineerin ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
	Engineering Cultures: Expandin ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
	Understanding Student and Facu ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Bruce Moulton	Engineering Students' Percepti ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
David Muñoz	Understanding Student and Facu ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Teri Murphy	After the Funding: Sustaining ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Kenneth Murray	Learning across the Boundaries ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Martin Murray	Student Experiential Learning	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
Steve Murray	A Remote PLC System for e-Lear ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1
Stefanus Muryanto	Concept Mapping: An Interestin ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Bruce Mutter	Development of a Web-based Cur ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
	The Architectural Engineering ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
	Implementation of a Web-Based ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
	A Method for Integrating Visio ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Michael Myers	Re-Engineering Australia - Whe ...	27/09, 15:30: K-12 Pipeline - Outreach Activities, Ballroom 2
Som Naidu	Collaborative Development of M ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Mark Nanny	After the Funding: Sustaining ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Hassan Ndahi	Facing the Realities of "High- ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Laura Nelson	Facing the Realities of "High- ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Heidi Newell	Impact of Structured Writing a ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
James Newell	A Synergistic Interaction betw ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
	Impact of Structured Writing a ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Que Nguyen	K-12 Outreach in an Engineerin ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Fons Nouwens	Contribution to Cross-discipli ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Michael Nycyk	Design Management in a Constru ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
William Oakes	Using Service-Learning to Prep ...	29/09, 11:00: Preparing Engineers of a Trans-Disciplinary World, BRm3
Jung Oh	Connecting Learning with Stude ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Mary O'Hair	After the Funding: Sustaining ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Matthew Ohland	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
	Using Real-Time Sensors in the ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
	Adapting Engineering Laborator ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Barbara Olds	Opportunities and Challenges i ...	27/09, 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2
Wendy Otoupal	Coupling Math and Engineering ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
	Early Introduction of Environm ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
David Oxley	Problematic Project Work in a ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
Stuart Palmer	Review of First-year Engineeri ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
	Assessing the Likely Impact of ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
	Improving On- And Off-Campus S ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Nick Palousis	Making the Profitable Transiti ...	28/09, 09:00: Transformational Change in Academic Organisations, BRm 3
Marcus Pandy	The VaNTH Biomechanics Learnin ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Cheryl Paten	Making the Profitable Transiti ...	28/09, 09:00: Transformational Change in Academic Organisations, BRm 3
Lucy Peachey	Evolution of the Digital Libra ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Susan Pearce	Interactive Learning - Is It W ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Wally Peters	Benchmarking the Integration o ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
	Integrating Complex Systems St ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
George Peterson	Accreditation of Engineering P ...	29/09, 09:00: Transformational Change in Accreditation, Ballroom 3

Anthony	Petrosino	The VaNTH Biomechanics Learnin ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Yang	Ping	Discussing Undergraduate Educa ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
		Structuring the Course and Exp ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Nicola	Pirchard	Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Sarma	Pisupati	Impact of Innovative and Highl ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Jocelyne	Poirier	Connecting to Great Minds: an ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Kenneth	Pope	Electronics, Robotics and Engi ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Leonid	Preiser	Integrating Web-Based Technolo ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
		Concept Mapping as a Form of K ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Stewart	Prince	Development of Engineering Cas ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1
Greg	Pritchard	Animatronic Puppets: A Case St ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Chandra	Putcha	Development of a Method to Tes ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
		Ethical And Professional Issue ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
	Putcha-		
Anila	Bhagavatula	Development of a Method to Tes ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
A.K.M. Abdul	Quader	Partnership with Bangladesh Un ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
Rafael	Quevedo-Camacho	The Ibero-American Engineer: A ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
		The ASIBEI and the Ibero-Ameri ...	28/09, 11:00: Globalisation, Ballroom 1
Mary	Raber	Learning Across Boundaries thr ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
David	Radcliffe	Design Management in a Constru ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
		Sustainable Design Practitione ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
		Global Engineering Education: ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Pj	Radcliffe	Solving the Education-Research ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
		Software Engineering - A Caree ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Narayanaswami	Radhakrishnan	Learning across the Boundaries ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, BRm 3
John	Raine	Design-Led Engineering Educati ...	29/09, 09:00: Globalisation, Ballroom 1
Juan Manuel	Ramírez-Cortés	The Ibero-American Engineer: A ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Gary	Rasmussen	Student Experiential Learning	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
G.B.	Reddy	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Perfecto	Reguera	Maintaining Academic Standards ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Kenneth	Reid	Articulation Agreements with H ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Carl	Reidsema	Fostering Creative Problem Sol ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Teri Reed	Rhoads	After the Funding: Sustaining ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
		After the Funding: Sustaining ...	29/09, 11:00: K-12 Policy Issues, Ballroom 2
John	Rice	Contribution to Cross-discipli ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Paul	Richards	The Engineering Link Project: ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Future Engineers Australia Man ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
John	Rickard	The Transformed University	28/09, 09:00: Transformational Change in Academic Organisations, BRm 3
Robert	Riggins	A Method for Integrating Visio ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Jim	Roach	Engineering Enterprise through ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
James	Rogers	Interdisciplinary Engineering ...	27/09, 18:00: Cluster B3 - Transformation - Interdisciplinarity, Ballroom 3
		The Regional Moonbuggy Competi ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
		In Defense of Lecture: Using T ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Howard	Rollins Jr	The International Plan: Globa ...	28/09, 11:00: Transformational Change in Curricula, Ballroom 3
Robert	Roselli	The VaNTH Biomechanics Learnin ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Heiko	Rudolph	Drop and Drag - Graphical User ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, Ballroom 3
Tiia	Rüütmann	Technical Teacher Training for ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Chris	Ryan	Curriculum Alignment between H ...	28/09, 16:20: Cluster T2 - Transitions, Ballroom 2
Robert	Ryan	Development of Engineering Cas ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
Matthew	Sadiku	Development, Training and Impl ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
Devi	Saini	Internationalization of Higher ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
		Globalization of Engineering E ...	28/09, 14:00: Cluster P1 - Globalisation - Engagement, Ballroom 1
Wayne	Sanders	Harmonious Combination of Trad ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Jane	Sargison	Introducing Students to ePortf ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
Mariano	Savelski	A Synergistic Interaction betw ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Luiz	Scarvada	Engineer of the Americas: A Pr ...	28/09, 09:00: Globalisation, Ballroom 1
Andrea	Schäfer	Diversity in Engineering: A Ne ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Keith	Schimmel	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1

		Partnership with Bangladesh Un ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
		Using Biodegradable Polymer Ex ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Kevin	Schmaltz	The Kentucky Bluegrass Robotic ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
John	Schmeelk	Guided Tour of Generalized Fun ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
Douglas G.	Schmucker	Developing A Peer Evaluation I ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
David	Scott	Reviewing and Reforming a Trad ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
Rainer	Seidel	Project and Team based Learnin ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Steven	Senini	Confronting the Assessment Dem ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Abolghasem	Shahbazi	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
		Using Biodegradable Polymer Ex ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Muzaffar	Shaikh	Engineering Entrepreneurship C ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Gilad	Sharon	Bringing Engineering to High S ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Rhonda	Sharp	Education Beyond Technical Com ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Wade H.	Shaw	Engineering Entrepreneurship C ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
Kristi	Shryock	A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Benjamin L.	Sill	Adapting Engineering Laborator ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Milan	Simic	An Approach in Mechatronics Te ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
Harmohindar	Singh	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Elena	Sitnikova	Teaching and Learning in Engin ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Catherine	Skokan	K-12 Outreach in an Engineerin ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
C.	Slater	A Synergistic Interaction betw ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, Ballroom 3
Alex	Smith	Maths in School and Community ...	28/09, 14:30: Cluster Q2 - K-12 - Curricula, Ballroom 2
Michael	Smith	Making the Profitable Transiti ...	28/09, 09:00: Transformational Change in Academic Organisations, BRm 3
Alfredo	Soeiro	European Experience in Enginee ...	29/09, 09:00: Transformational Change in Accreditation, Ballroom 3
Ruth	Soetendorp	Engineering Enterprise through ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, Ballroom 3
Sheryl	Sorby	Learning Across Boundaries thr ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
		Working with K-12 Partners to ...	27/09, 15:30: K-12 Pipeline - Outreach Activities, Ballroom 2
Valmi	Sousa	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Andrew	Spence	Creating and Maintaining an In ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
Sead	Spuzic	Contribution to Cross-discipli ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Arun	Srinivasa	A Project-based Approach for F ...	27/09, 18:30: Cluster C1 - Assessment, Ballroom 1
Scott	Starks	Stimulating Pre-College Intere ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Kendall	Starkweather	A K-12 Engineering Pipeline Mo ...	28/09, 11:00: K-12 Student Learning, Ballroom 2
Elizabeth A.	Stephan	Using Real-Time Sensors in the ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
		Adapting Engineering Laborator ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Clement	Stevens	Contribution to Cross-discipli ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
Rodney	Stewart	International Student Learning ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Heather	Stonyer	Developing Engineering Educati ...	28/09, 15:50: Cluster S3 - Transformation - Inclusive Approaches, BRm 3
Jane	Storck	Bringing Engineering to High S ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Kairong	Su	A Comparison of the Evaluation ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Zhang	Sujiang	Experience of Continuing Engin ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Janis	Swan	Project Management: Learning b ...	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
Jennifer	Tafoya	K-12 Outreach in an Engineerin ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Kazuya	Takemata	A Peer-to-Peer and Instructor- ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Daniel	Tan	The edveNTUres of eLearning in ...	27/09, 15:30: Transformation of Disciplines, Ballroom 3
Guoqing	Tang	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Masataka	Tanigaki	Introduction of Accreditation ...	29/09, 09:00: Globalisation, Ballroom 1
Peter	Tatham	Introducing Students to ePortf ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, Ballroom 3
Low	Teck Seng	Pedagolical Imperatives in a ...	27/09, 13:00 : Plenary Session, Theme Keynotes, Ballrooms 1 & 2
Kian	Teh	The Application of EXCEL in Te ...	28/09, 16:50: Cluster U1 - Labs and Tools, Ballroom 1
Barbara Bernal	Thomas	Reviews of Curriculum Guides f ...	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
Nancy	Thompson	Incorporating Complexity into ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
David	Thorpe	Internationalisation of Techno ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Robert	Torrens	Project Management: Learning b ...	28/09, 15:50: Cluster S2 - Experiential Learning, Ballroom 2
Ramona	Travis	Using a Pre-Service Teacher In ...	27/09, 17:30: Cluster A2 - K-12 Curriculum Issues, Ballroom 2
Joseph	Tront	Using Tablet PCs in Engineerin ...	27/09, 20:25: Cluster F2 - Labs and Tools 2, Ballroom 2
		Rapporteur Report - Transforma ...	29/09, 14:30: Key Issues from Transformation of the Profession
Roger	Trundle	Industry-University Partnershi ...	29/09, 18:30 : Colloquium Banquet and AaeE Awards
Louis	Tsui	Development and Implementation ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2

Godfrey	Uzochukwu	Graduate Learning at the Inter ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Hannes	Van Der Walt	Breaking the Boundaries in Eng ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Keshav	Varde	Development and Implementation ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Reynaldo	Vea	Continuous Quality Improvement ...	27/09, 18:00: Cluster B1 - Globalisation - Curricula, Ballroom 1
David	Veal	A New Visual Communication Sys ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
		Cisco Based Curricula in Unive ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Suresh	Venkatachalaiah	Drop and Drag - Graphical User ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, BRm 3
Tanya	Vernon	Access, Reward and Penalty: Th ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Brian H.	Victor	Impact of Innovative and Highl ...	27/09, 19:50: Cluster E2 - Online, Ballroom 2
Susan	Walden	After the Funding: Sustaining ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Joachim	Walther	Sustainable Design Practitione ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, BRm 3
		Global Engineering Education: ...	28/09, 14:30: Cluster Q1 - Globalisation - Curricula, Ballroom 1
Phillip	Wankat	Survey of First-Year Programs	27/09, 19:00: Posters
		Survey of K-12 Engineering-ori ...	29/09, 09:00: K-12 Competitions, Ballroom 2
Liam	Ward	Student Engagement in Project- ...	28/09, 14:00: Cluster P3 - Transformation - Attributes, BRm 3
Ron	Ward	A Record of Publication	27/09, 19:50: Cluster E1 - Professional Attributes, Ballroom 1
Dana	Warren	Using Biodegradable Polymer Ex ...	27/09, 19:20: Cluster D2 - Labs and Tools 1, Ballroom 2
Sharon	Waters	Facing the Realities of "High- ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Paul	Wellington	Leading Engineers into the Twe ...	28/09, 15:00: Cluster R3 - Transformation - New Directions, BRm 3
Robert	Wheway	Creating and Maintaining an In ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Using the Formula SAE Competit ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
		Promoting Interdisciplinary Le ...	28/09, 16:50: Cluster U2 - Curriculum, Ballroom 2
		Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
		Diversity in Engineering: A Ne ...	28/09, 16:20: Cluster T3 - Transformation - Diversity, Ballroom 3
Wayne	Whiteman	How Long Does it Take to Earn ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Dianne	Wiley	Inducting our PhD Students: Ch ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Tim	Wilkinson	Revising the Civil Engineering ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
		A Staggered Approach to Develo ...	28/09, 16:50: Cluster U3 - Transformation - Learning & Skills, BRm 3
Keith	Williamson	Facing the Realities of "High- ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Stacy	Wilson	The Kentucky Bluegrass Robotic ...	27/09, 18:00: Cluster B2 - K-12 Competitions, Ballroom 2
Robert	Wolff	Innovation and Design, a Techn ...	28/09, 14:30: Cluster Q3 - Transformation - Design, Ballroom 3
Graeme	Wood	Revising the Civil Engineering ...	28/09, 15:50: Cluster S1 - Curriculum, Ballroom 1
Rohin	Wood	Interactive Learning - Is It W ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Leith	Woodall	Evolution of the Digital Libra ...	28/09, 15:00: Cluster R1 - Globalisation - Connecting, Ballroom 1
John	Worden	Assessing Individual Student P ...	28/09, 16:20: Cluster T1 - Assessment, Ballroom 1
Yong	Xu	To Establish Sustainable Coope ...	27/09, 17:30: Cluster A3 - Transformation - Partnerships, BRm` 3
		Enterprise --- The Garden of M ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Toshiyuki	Yamamoto	A Peer-to-Peer and Instructor- ...	27/09, 19:50: Cluster E3 - Learning, Ballroom 3
Biwu	Yang	Issues in Hands-On Online Grad ...	27/09, 20:25: Cluster F1 - Graduate Programs, Ballroom 1
Michael	Yastreboff	Creating and Maintaining an In ...	28/09, 14:00: Cluster P2 - K-12 - Outreach Programs, Ballroom 2
Herbert	Yeung	Embedded Development Being Fut ...	27/09, 20:25: Cluster F3 - Curriculum, Ballroom 3
Shouwen	Yu	Engineering Education in a Tim ...	29/09, 09:00: Globalisation, Ballroom 1
Yongmei	Yuan	A Comparison of the Evaluation ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Samuel	Yuen	Collaborative Development of M ...	28/09, 15:00: Cluster R2 - Learning Together, Ballroom 2
Lijuang	Zhang	Enterprise --- The Garden of M ...	27/09, 18:30: Cluster C2 - K-12 Preparation, Ballroom 2
Ximei	Zhang	An Exploration of the Ways to ...	27/09, 19:20: Cluster D1 - Skills, Ballroom 1
Hong	Zhao	Engineering Education in China ...	27/09, 17:30: Cluster A1 - Globalisation Perspectives, Ballroom 1
Han	Zhixin	Discussing Undergraduate Educa ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3
		Structuring the Course and Exp ...	27/09, 18:30: Cluster C3 - Transformation - Curricula, Ballroom 3