

# CHEMICAL ENGINEERING FEBRUARY 2009 IN AUSTRALIA

Produced by Engineers Media, Engineers Australia's publishing company, for the IChemE in Australia and the Chemical College of Engineers Australia. The statements made or opinions expressed in this magazine do not necessarily reflect the views of Engineers Australia or the Institution of Chemical Engineers in Australia.

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## ICHEME

## New chairman of IChemE in Australia

Professor Max Lu, head of the ARC Centre for Functional Nanomaterials and Pro-Vice-Chancellor for Research Linkages at the University of Queensland, is the new chairman of IChemE in Australia. He took over the role from Russell Scott in January.

For his one-year term he has five key aims:

- further enhance industry/academia engagement and collaboration in chemical engineering innovation and education
- assist in IChemE's internationalisation drive in the Asia Pacific region
- initiate and complete a publication chronicling the developments of chemical engineering in Australia
- continue and complete IChemE's roadmap projects on energy and water
- improve the services for members through activities at the state division level.

He said in his role as pro-vice-chancellor, he would naturally like to promote more academia-industry collaborations, adding that there is much room for improvement in Australia, where interactions are at a formative stage compared with North America and Europe.

"An example in chemical engineering is the number of funded chairs from industry. There are proportionally fewer in Australia than in the UK and US. I'm hoping to see more industry chairs."

He said better collaboration is particularly important during times of economic downturn. "We need to work with industry more during these challenging times. We don't want more money, that's unrealistic – but companies need to stay involved in educational programs because they will be



Professor Max Lu ... "I will work very hard to improve our membership activities."

best placed to capture the most talented graduates when the economy improves."

He also urged members who might be affected by the downturn to retain their membership. "It's imperative that anyone who loses their job remains a member of IChemE and stays in touch with the profession. They will benefit from our organised events and gain new skills and knowledge, which will help them secure jobs, if not better jobs, in the future.

"Anyone considering cancelling membership should make contact so that we can discuss their situation and see how we can best help them."

Lu also believes his Chinese background will be useful in helping IChemE expand its membership numbers in the Asia-Pacific region. "I have my own personal network in Singapore, Malaysia and China and I'm confident I can help further

IChemE's global vision."

As for capturing the history of chemical engineering in Australia, he intends to partner IChemE in Australia with Engineers Australia to produce and publish the book *Chemical engineering – the Australian History and Perspective*.

"It's a record of the development of Australia's chemical engineering profession – its industries and academic programs."

He is mindful that this project must be carried forward swiftly. "We have to do it this year because many of the senior retired chemical engineers are now in their late 70s and early 80s. They are keen to see the history documented before memory fades away. They have the time to do it but we need to provide the resources."

During his chairmanship IChemE in Australia has also been charged with completing IChemE's energy and water roadmaps. "We presented the drafts at Chemeca 2008 and they were well received; the feedback was useful for perfecting the final versions. We hope to draw them to a close by the end of this year."

Commenting on the year ahead, he said: "I take this role very seriously and will work very hard to improve our membership activities. I'm very proud for the opportunity to serve our members and the profession."

*This story is adapted from an article in the February 2009 issue of tce.*

## New deputy of IChemE in Australia

Noel Williams, the president of Dow Chemicals for South East Asia and Australia/New Zealand), is the new deputy chair of the board of IChemE in Australia. He will take over the chairman-

ship in January 2010 and for the first time his term will be for two years.

Williams graduated in chemical engineering from the University of Queensland in 1974.

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## ICHEME

### IChemE Council election 2009

Corporate members of IChemE are invited to elect a new council member. Next month they will receive emailed voting papers (and hard copies for those without email addresses) for the elected position vacant in 2009. The voting papers will outline how to lodge a vote.

The new councillor will be one of four councillors elected by corporate members. Each year one of these councillors is elected for a four-year term.

This year there are two candidates for the vacancy. They are:

- Assoc Professor David Shallcross, University of Melbourne
- Professor Martyn Poliakoff, University of Nottingham.

The closing date for election is 24 April 2009. For further information contact [dbrown@icheme.org](mailto:dbrown@icheme.org).

The council is the international governing body of the Institution of Chemical Engineers. Its members are Trustees for the Charity. It currently comprises 13 members (see table), excluding IChemE executive staff, who look after the interests of members and the profession. It meets six times a year (face to face, with some joining the meeting via teleconference).

The IChemE Council	
IChemE President	Elected by Council
Deputy President	Elected by Council
Honorary Treasurer	Elected by Council
6 members	4 of whom are elected by corporate members of IChemE: 1 elected each year to serve for 4-year term.
1 Past President	Co-opted
Chair of IChemE in Australia who is a Vice President on Council	Co-opted
Vice President, Qualifications Policy	Co-opted
Vice President, Technical Policy	Co-opted

### 30,000 members expected by end of 2009

The IChemE is on course to recruit its 30,000th member in 2009, after a year of growth, according to IChemE chief executive Dr David Brown.

Last year the IChemE achieved a 3.5% year-on-year increase, finishing the year with some 29,000 members. Membership levels have grown every year since 2003, and have risen by 15% in the last five years.

The IChemE retains a strong UK presence but year-on-year membership growth

in Australia (11%), Malaysia (25.8%) and Singapore (13.5%) reflects its increasingly international portfolio of activities and status as a global organisation.

“We anticipate significant development in China and India in the next three to five years, alongside further membership growth, not only in the UK, Australia, Malaysia and Singapore, but also North America and Europe,” said Brown.

IChemE highlights in 2008 include

the continued success of the Accredited Company Training Scheme; the impact of *whynotchemeng* and a record intake of chemical engineering students at UK universities; the successful extension of the Institution's training solutions to Australia; collaboration with the Indian Institute of Chemical Engineers; IChemE's sustained success in books, contract and journal publishing; and the introduction of the *Dhirubhai Ambani Award for outstanding chemical engineering innovation for the resource-poor people* at the 2008 IChemE Awards for Innovation and Excellence.



in Australia

#### Board

**Max Lu** (chair)  
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**Vik Kortian**  
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 (Roadmap Project)

Executive Director

**Jan Althorp**

Suite 11– 2/488 Bourke St, Melbourne, 3000  
 phone 03 9642 4494 fax 03 9642 4495  
[jalthorp@icheme.org](mailto:jalthorp@icheme.org)



ENGINEERS AUSTRALIA

College of Chemical Engineers Board

**Elizabeth Harangozo**  
 (chair and Council nominee)  
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**John Waanders** (immediate past  
 chair and Newcastle representative)  
**Brian O'Neill** (South Australia)  
**Zvonko Pregelj** (Queensland)

**Patrick McMullan** (Council  
 nominee and NCF&E chair)  
**Ian Ackland** (Sydney)  
**Lindsay Wheeler** (Victoria)  
**Andre Jemison** (Young Engineers)  
**Maree Lang** (Council nominee)  
**Georgina Wright** (Women in  
 Engineering)  
**Iven Mareels** (Corresponding)

College contact

**Bill Chaffey**

11 National Circuit, Barton ACT 2600  
 phone 02 6270 6558 email [bchaffey@engineersaustralia.org.au](mailto:bchaffey@engineersaustralia.org.au)

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## ICHEME

### Impressions from India

*In September 2008, IChemE in conjunction with the Indian Institute of Chemical Engineers (IChE) gave five IChemE student members the opportunity to visit India and attend the Schemcon08 conference. Ben Drew, who is studying chemical engineering at the University of New South Wales, won a place on the scheme. Following is his account of his experiences during his visit.*

India is less than half of Australia's land mass but holds 60 times Australia's population. Its demand for natural resources is huge.

We visited many sites including the Indian Oil Refinery in Panipat, Inswift Laboratories in Chandigarh, and campuses of

both IIT Delhi and NIT Jalandhar.

I also had the opportunity to present at the Schemcon conference, meet professional Indian engineers from industry and academia and discuss university life and chemical engineering in general with like-minded people from around the world.

The site visit to the Indian Oil refinery in Panipat blew my mind. Last year I completed a six month placement at an oil refinery in Australia, with some 200 or so people on site each day. The Indian Oil refinery has 35,000 people working on site each day.

Safety was an interesting talking point at the refinery and we found that personal safety was not as high a priority as it is in Australia.

At the conference we were given the opportunity to meet some of India's leading chem-

ical engineers from industry and academia. Most exciting was the fact that these representatives were interested in our opinions on global chemical engineering issues such as climate change and alternative fuels. To have the opportunity to voice our thoughts to such a professional audience was both challenging and fulfilling.

Despite the cultural differences a common trait between chemical engineering students from across the world is that our degree is a challenge. We all must manage study, amongst trying to be involved in extracurricular activities and have a social life at the same time.

I was relieved to hear that it's not uncommon for chemical engineering students to be pulling all nighters, cramming for exams and handing assignments in just in time. But they all recognised the benefits which include great job prospects, good problem solving skills and time management.

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### New IChemE courses catalogue now available

IChemE's new courses catalogue is available now in print and e-format.

The directory includes details on IChemE's range of training courses, including in-company training and e-learning.

The catalogue of quality assured training courses for 2009 includes over 70 courses, taking place throughout the UK and internationally.

2009 sees the launch of chemical engineering for non-chemical engineers and HAZOP study for team leaders and team courses in Australia.

Download the e-catalogue at [www.icheme.org/publications](http://www.icheme.org/publications) or request a print copy by contacting [courses@icheme.org](mailto:courses@icheme.org).



# CHEMICAL ENGINEERING

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## SUSTAINABILITY

### Risk assessment for sustainability

by Ian Powrie and Brian O'Neill

The increasing demand on businesses and other organisations for sustainable development poses the challenge of preparing strategic risk profiles that somehow measure the impact of sustainable operations on the overall value of an organisation.

Sustainability should be viewed as a long-term continuous improvement process, marked by milestones and evolving objectives. As such, the directly attributable financial returns will be difficult not only to calculate but also to communicate.

Given the breadth of issues to be considered, in a strategy which deals with all the risks associated with sustainability, the lack of a single representative variable makes interpretation of progress difficult. Compound this situation with the absence of a defined financial formula to measure returns from any investment towards a goal of sustainable development, then clearly new methods are required if future value is to be established.

Two approaches suggest themselves with respect to measuring results, either an intuitive or a modelled process.

The intuitive approach is based on experience and the analysis of multi-iterations of

economic, environmental and social learning. The main change to the intuitive approach is to broaden the formal analysis of inputs to specifically cover environmental, social and governance issues, at the same time as the economic effects, and to include these same factors in the establishment of objectives and measurement/reporting of results.

The modelling approach might take the form of statistical, mathematical or accounting equations. It is made more complex by a lack of a consistent metrics, rectification or adjustments for real data with long-term planning horizons and the sheer logistics of providing an audit trail through many data bases, such as environmental footprints, input-output analysis and in general existing models which capture the results and risks from all functions of business from capital investments to social welfare.

Against these imposts, when considered from an SME perspective, the methodology lends itself to a single investment, with costs reduced to annual data updates. Even the costs of the model building can be shared with supply and distribution chains, clusters

and those willing to share joint economic learning.

Each of the models will provide input to the overall All Risks Strategy of the business.

Since they use different metrics, then in order to achieve a single outcome measure the succeeding step is to use a theorem to establish the probability of a given level of risk using the original metric.

The final step is to characterise, undertake sensitivity analysis and weight the different outcomes and establish probabilities.

The calculated risk factor can then be used in combination with a normal financial valuation in an algorithm to provide a unique, objective and replicable All Risks valuation for the company. The process itself will be susceptible for due diligence.

*PhD student Ian Powrie and Associate Professor Brian O'Neill from the School of Chemical Engineering at the University of Adelaide are developing a risk strategy for sustainable development for the Australian wine industry. O'Neill is also the South Australian representative on Engineers Australia's Chemical College Board.*

## HAZOP COURSES

### Orica – 2009 Course Schedule

	Sydney	Brisbane	Melbourne	Adelaide	Perth
Basic HAZOP	6 & 7 May	26 & 27 May	17 & 18 Mar	19 & 20 May	12 & 13 May
	16 & 17 Sept	10 & 11 Nov	18 & 19 Aug	22 & 23 Sept	24 & 25 Nov
HAZOP Leader	13 & 14 May	28 & 29 May	19 & 20 Mar	21 & 22 May	14 & 15 May
	23 & 24 Sept	12 & 13 Nov	20 & 21 Aug	24 & 25 Sept	26 & 27 Nov

These popular and highly respected 2 day courses are now in their 19th year. If desired, courses can be run in-house and customised to meet your requirements. For further information please contact:

Brisbane/Perth: Dean Shewring (02) 9913 7284, Sydney: Karin Nilsson (02) 9985 1056

Melbourne/Adelaide: Myrna Hepburn (03) 9527 1037

**CHEMECA  
2009**

*Celebrating 40 Years*

**Engineering  
our Future:  
Are We Up to  
the Challenge?**

[www.chemeca2009.com](http://www.chemeca2009.com)

**27 - 30 September 2009**  
Burswood Entertainment Complex, Perth, Western Australia

## First Announcement & Call for Abstracts

### Invitation

On behalf of the Organising Committee, it is my pleasure to invite you to join us at Chemeca 2009 in Perth.

Our world is full of challenges and new challenges emerge every day. Some are potential threats to our continued existence. Some are amazing opportunities to improve our world and fulfil a profound purpose and some are small enough to affect local communities or individuals. In all cases, Engineers of all disciplines have the capability and the duty to contribute to sustainable solutions. Chemeca 2009 "Engineering our Future: Are We Up to the Challenge?" will provide an opportunity for presentations from both academia and industry, facilitating the meaningful exchange of innovative ideas amongst the chemical engineering community and inspiring all participants to contribute to the future.

What better place to be inspired than Perth? The capital of Western Australia is emerging as a vibrant and forward looking city. The resources boom has generated both opportunity and challenges and, without doubt, Perth is the place to be.

Join us for a program of presentations, conversations, debates and, above all, new inspiration.

Through your participation, let Chemeca 2009 be the catalyst that inspires us all to accept the challenge of "Engineering our Future".

**Thys Heyns**  
Conference Chair Chemeca 2009

### Organising Committee

Thys Heyns - Conference Chair  
Ming Ang - Co-Deputy Chair  
Claire Butler

Peter Hay

Roger Kelson

Jon Langford  
Yee-Kwong Leong  
Peter McEwen  
David Montgomery  
Peter Snowsill  
Moses Tade

### Important Dates

Abstract submission closed	Friday, 6 March 2009
Abstract notification to authors & request for papers	Friday, 3 April 2009
Paper submission deadline	Friday, 19 June 2009
Notification of review outcome & schedule notification	Friday, 3 July 2009
Early registration deadline	Friday, 31 July 2009
Final paper submissions	Friday, 14 August 2009
Accommodation deadline	Friday, 21 August 2009

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### Who should attend?

The Conference will interest all those who contribute to the advancement of technology and the process industries, including scientists, engineers, manufacturers, suppliers and service professionals.

### Why attend?

Chemeca 2009 will not only be a showcase for new knowledge but also a forum to discuss the latest development in current issues. It is an excellent opportunity to share innovation. The industry and academia leaders will present their visions for the future of our profession, especially in the Australasian context. Chemeca 2009 also provides the opportunity for the technology and service providers to promote their products and services to a learned audience. The diverse range of delegates and papers and presentations can inspire synergies and collaborations between academia and industry.



# CHEMECA 2009

Celebrating 40 Years

## Engineering our Future: Are We Up to the Challenge?

[www.chemeca2009.com](http://www.chemeca2009.com)

27 - 30 September 2009  
Burswood Entertainment Complex, Perth, Western Australia

### Call for Abstracts

If you wish to submit an abstract for consideration by the Technical Program Committee you must also intend to submit a full paper for peer review. You must also register to attend the Conference. Online submission is the only method of receipt of abstracts.

The Poster Sessions for Chemeca 09 will be integrated with the Oral Sessions, as a unique innovation for this conference. Extended abstracts are sufficient for a poster presentation however presenters are welcome to present a full paper if they wish (which will also be peer reviewed).

If you wish to present a paper or poster, please submit your abstract on-line at [www.chemeca2009.com](http://www.chemeca2009.com) no later than Friday, 6 March 2009.

### Presentation Format

The Program Committee reserves the right to decide the format of presentation on the basis of time and space available.

### Confirmation of Receipt of Abstract

Immediately following submission via [www.chemeca2009.com](http://www.chemeca2009.com) you will receive an electronic abstract receipt, including a submission reference number and confirmation of your personal password. These details should be used if you wish to edit your abstract up to and no later than the submission deadline **Friday, 6 March 2009**. No changes will be possible after this deadline. Submissions of abstracts will NOT be accepted after this date.

### Paper submissions

An invitation to submit a full paper will be issued once all abstracts have been reviewed. The deadline for receipt of full papers is **Friday, 19 June 2009**.

### Presentation Format

Papers may be accepted for oral or poster presentation. Industry participants have an option of preparing extended abstracts of a maximum of 3 page length once their abstracts are accepted. Such extended abstracts will be fast tracked for review. All other papers and those mainly from academic participants will be subject to full peer review by at least two anonymous reviewers. Peer reviewed papers will be accepted after the required revisions have been made and a rebuttal indicating the necessary changes made to the original version. High quality papers may be selected for publications as special issues in journals.

The Technical Program Committee reserves the right to decide the format of presentation on the basis of time and space available. Furthermore, the Technical Program Committee will like to stress that all poster papers and oral papers will enjoy the same status for this conference. Specifically, they will be fully peer reviewed as oral papers and they will be presented in an integrated model as one of the parallel sessions rather than being additive to the usual parallel sessions as for other conferences. Poster papers will be displayed on the days allotted to it and each presenter will have about 3 to 5 minutes (using 3 slides) to introduce their poster during the parallel sessions after which the delegates will formal view the posters, etc.

### Abstract Themes

Chemeca 2009 will showcase the latest knowledge in process engineering specifically covering the areas of:

- Bioprocessing and nanotechnology
- Environmental science and technology
- Fuels and energy
- Oil and gas
- Mineral processing and particle technology
- Modelling, simulations and control
- Industrial best practice and innovation
- Education, community and people

### Conference Office

ICMS Pty Ltd  
84 Queensbridge Street  
Southbank VIC 3006  
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E: [chemeca2009@icms.com.au](mailto:chemeca2009@icms.com.au)  
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### Sponsorship & Exhibition

Organisations are invited to participate as Sponsors and Exhibitors during the Chemeca 2009 Conference. The exhibition area will be located centrally to the session rooms and delegates will have ample opportunity to view all of the exhibits. Delegate morning teas, lunches and afternoon teas will be served within this area. Please contact ICMS Pty Ltd, the Conference Office, for a detailed prospectus.

# CHEMICAL ENGINEERING FEBRUARY 2009 IN AUSTRALIA

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## NEWS

### Drying chamber installed at pharmaceutical plant

A large drying chamber was lifted into a processing facility last month in Sydney. Pharmaceutical company Pharmaxis is constructing a new 7000m<sup>2</sup> processing facility and headquarters in Frenchs Forest.

The plant will be used to manufacture and package inhalation medication that removes mucus from the lungs of patients suffering respiratory problems.

Danish company GEA-Niro is supplying process equipment that will convert a liquid solution into a dry powder. The process uses compressed air to create a fine spray of particles which come into contact with hot, drying gas. Evaporation is instantaneous and a crust surface forms on the globule. The particles then undergo controlled retention before being discharged.

After the drying chamber was installed, GEA-Niro's Australian subsidiary GEA Process Engineering began detailed mechanical and electrical installation. The company's project manager Rudi Botha said: "Eighteen months of detailed design and fabrication are coming together in this dryer. Once the process equipment is in place we start commissioning followed by proving trials to an agreed validation protocol."

Hooker Cockram is the engineering, procurement and construction management contractor for the project.



A 160t crane is lifting a drying chamber into a pharmaceutical processing facility in Sydney.

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#### Albright's Chemical Engineering Handbook

Ed. Lyle Albright 2008 9780824753627 1592pp

Usual price: \$209.09 + GST = \$230

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With an emphasis on providing the practical information Chemical Engineers need to do their jobs, this new edition is a source of reliable up to date methods, applications and fundamental concepts. Each chapter provides a clear review of basic information, case examples and references on the subject.

**CONTENTS:** Physical and Chemical Properties; Mathematics in Chemical Engineering; Engineering Statistics; Thermodynamics of Fluid Phase and Chemical Equilibria; Fluid Flow; Heat Transfer; Radiation Heat Transfer; Mass Transfer; Industrial Mixing Technology; Liquid-Liquid Extraction; Chemical Reaction Engineering; Distillation; Absorption and Stripping; Adsorption; Process Control; Conceptual Process Design, Process Improvement, and Trouble Shooting; Chemical Process Safety; Environmental Engineering: A Review of Issues, Regulations, and Resources; Biochemical Engineering; Measuring Physical Properties; Selecting Materials of Construction (Steels and Other Metals); Solid/Liquid Separation; Drying: Principles and Practice; Dry Screening of Granular and Powder Materials; Conveying of Bulk Solids; Principles and Applications of Electrochemical Engineering; Patents and Intellectual Property; Communication; Ethical Concerns of Engineers.

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# CHEMICAL ENGINEERING FEBRUARY 2009 IN AUSTRALIA

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## OBITUARY

### Professor Stan Siemon – a discipline builder and a very nice person

by David Wood

Prof Stan Siemon passed away at his home in Melbourne on 12 February at the age of 93. His reputation in Australasia was one of an outstanding professor dedicated to establishing and consolidating chemical engineering in the region.

He was the Foundation Chair of chemical engineering at the University of Canterbury in Christchurch (1957) and likewise at the University of Melbourne (1965).

Prior to his appointment to Melbourne, the department was on the point of collapse with very few students, negligible research and under threat from a vice-chancellor who had no understanding of engineering as a university discipline.

Stan was a department head and later a dean who was feared by vice-chancellors

and deans alike.

He was not a world class researcher but a discipline builder. At the end of 1981 he left the department as a thriving teaching and research unit which, due to his inspiration, became the largest and the best department in Australasia.

Stan disliked university bureaucrats and fought to get what he felt was right for his department.

In 1969 under his guidance and perseverance the university opened its first all-purpose chemical engineering building.

As a credit to his ideas the building was structured so that it could be modified to suit change.

Inexpensive modifications occurred many times over the past 40 years with the

department moving from an undergraduate population of 11 students a year to over 120 students a year as well as a major growth in research centres.

Without his leadership there would be no chemical engineering departments at Canterbury and Melbourne universities.

He was the first full time dean of engineering at the University of Melbourne and he set the trend for chemical engineers becoming deans.

Stan will be remembered as a discipline builder, a gentleman and a very nice person.

*Emeritus Professor David Wood is a former head of the Department of Chemical and Biomolecular Engineering and dean of engineering at the University of Melbourne.*



“ The operator of the future...is here now!”

Webinar: Tuesday 31 March 2009,  
15:00 Australian Eastern Daylight Time (AEDT)

Webinar presented by Arnold Oliver,  
superintendent process control, BHP Billiton  
Worsley Alumina Refinery

This web-based seminar organised by IChemE's Process Management & Control Subject Group, will explore the next level of enhancements that Worsley has implemented to support the operator in his situational awareness.

Tanya Graham, email: [tgraham@icheme.org](mailto:tgraham@icheme.org) or  
tel: +61 (0)3 9642 4494

**IChemE**  
Process Management & Control  
Subject Group

**ESD**  
**ESD Simulation Training**  
*Dynamic Simulation Training Specialists*

**TRAINING COURSES**

<i>Control Operation &amp; Design of Reciprocating Gas Compressors</i>	
15th – 16th June 2009	Brisbane
<i>Control &amp; Operation of Centrifugal Gas Compressors</i>	
17th – 19th June 2009	Brisbane
<i>Subsea Systems</i>	
22nd – 23rd June 2009	Perth
<i>Practical Aspects of Process Control &amp; Instrumentation</i>	
4th – 6th May 2009	Perth
<i>Mechanical Aspects of Centrifugal Gas Compressors</i>	
11th – 12th June 2009	Melbourne
<i>The Oil &amp; Gas Industry, A Non-Technical Overview</i>	
26th June 2009	Perth

For more information contact:  
Daren Reid, ESD Simulation Training Pty Ltd  
Tel: (08) 9355 5599  
Email: [daren.reid@esd-simulation.com](mailto:daren.reid@esd-simulation.com)

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# CHEMICAL ENGINEERING

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## EVENTS

### AUSTRALIA

**Seminars:** **Advanced slurry pumping and pipelines** (2 days) Brisbane 23 Mar, Perth 26 Mar; **Pump fundamentals** (2 days) Adelaide 10 Mar, Brisbane 17 Mar, Darwin 15 Jun, Melbourne 30 Mar, Perth 2 Jun, Sydney 23 Jun; **Liquid piping systems fundamentals** (2 days) Adelaide 12 Mar, Brisbane 19 Mar, Darwin 17 Jun, Melbourne 1 Apr, Perth 4 Jun, Sydney 25 Jun. *Inquiries:* Kasa Redberg 02 9868 1111, fax 02 8246 6387, email info@kasa.com.au, web www.kasa.com.au

**Seminars:** **Control operation and design of reciprocating gas compressors** (2 days) Brisbane 15 Jun; **Subsea systems** (2 days) Perth 23 Mar, 22 Jun; **Practical aspects of process control and instrumentation** (3 days) Perth 4 May; **Mechanical aspects of centrifugal gas compressors** (2 days) Melbourne 11 Jun, Perth 8 Oct; **The oil and gas industry: A nontechnical overview** (1 day) Perth 26 Jun; **Floating LNG – production storage offloading and regasification** (2 days) Perth 19 Oct; **Production process and emergency systems on oil and gas installations** (3 days) Perth 9 Nov; **Design & Operation of FPSOs** (3 days) Perth 16 Nov. *Inquiries:* Darren Reid 08 9355 5599, email daren.reid@esd-simulation.com

**Conference:** **Chemeca 2009** (4 days) Perth 27 Sep. *Inquiries:* web www.chemeca2009.com

**Conference:** **12th IUPAC international congress of pesticide chemistry** (5 days) Melbourne 4 Jul, 2010. *Inquiries:* Royal Australian Chemical Institute 03 9328 2033, fax 03 9328 2670, email iupacipc2010@raci.org.au, web www.raci.org.au/iupacipc2010

### OVERSEAS

**Conference:** **10th Florida heterocyclic conference** (4 days) Gainesville, US 8 Mar. *Inquiries:* Prof Alan Katritzky, +1 352 392 0554, fax +1 352 392 9199, email katritzky@chem.ufl.edu, web www.arkat-usa.org

**Conference:** **PolyChar 17 – world forum on advanced materials** (5 days) France 20 Apr. *Inquiries:* Allisson Saiter +33 2 32 95 50 86, fax +33 2 32 95 50 82, email allison.saiter@univ-rouen.fr, web www.polychar17.fr

**Conference:** **Achema 2009** (5 days) Frankfurt 11 May. *Inquiries:* email achema@dechema.de, web www.achema.de

**Conference:** **2nd international conference on self-healing materials** (4 days) Chicago 29 Jun. *Inquiries:* Dr Solar Olugebefola +1 217 333 2578, fax +1 217 244 0181, email solar@illinois.edu, web conferences.beckman.uiuc.edu/ICSHM2009

**Conference:** **XVII international conference on chemical thermodynamics in Russia** (5 days) Moscow 29 Jun. *Inquiries:* Prof J D Tretjakov +7 8 495 939 2074, fax +7 8 495 939 0998, email rcct2009@kstu.ru, web rcct2009.kstu.ru

**Conference:** **19th IUPAC international symposium on ionic polymerization** (6 days) Krakow 26 Jul. *Inquiries:* Prof. Stanislaw Penczek +48 42 681 9815, fax +48 42 684 7126, email ip09@bilbo.cbmm.lodz.pl, web www.ip09.cbmm.lodz.pl

**Conference:** **Advances in emulsion polymerization and latex technology** (5 days) Davos, Switzerland 3 Aug. *Inquiries:* Dr John Schork +1 301 405 1074, email davoscourse@gmail.com, web www.davoscourse.com

**Conference:** **8th world congress of chemical engineering** (5 days) Montreal 23 Aug. *Inquiries:* www.wcce8.org

## ICHEME COURSE

### PROTECTING THE REPUTATION OF THE PROCESS INDUSTRIES

**Melbourne 6 March 2009, Sydney 11 March 2009**

*"It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you'll do things differently." – Warren Buffett*

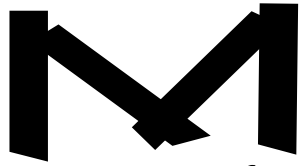
Managing the risks to a company's reputation is just as vital as managing any other, more tangible risk – but it needs careful effort over time, as well as good incident management. This half-day course will show you how – and how to gauge the benefits. You will look at what shapes reputation; examine some real examples (good and bad) of reputation management; and be introduced to some practical techniques for anticipating, assessing, managing and mitigating risks – techniques that one day could save your company a great deal.

**Who should attend?** Senior managers in the chemical and process industries who need to take view of all risks affecting the business both tangible and intangible. The course will be useful for site managers, and external relations, recruitment and HR managers as well as regulators, public officers and others interested in the process industries.

**Course director:** Dr David Brown is the chief executive of IChemE and an ardent advocate for the process industries and the professionals who work in them, both in his present role and previously as director of a leading international consultancy. He has consulted extensively on risk, reputation and corporate responsibility, for clients in the oil, nuclear, gas, chemicals, food and services sectors.

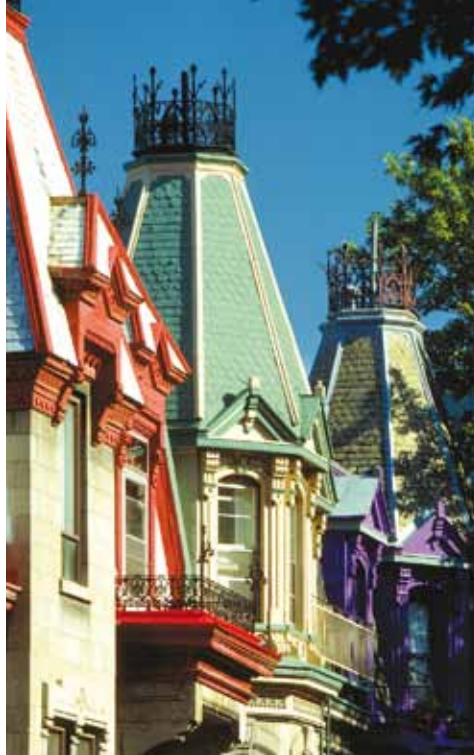
**Fees: IChemE members A\$180.00 incl GST, non-members A\$250.00 incl GST.**

**Book at austcourses@icheme.org, +61 (0)3 9642 4495**



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[www.wcce8.org](http://www.wcce8.org)



# CHEMICAL ENGINEERING FEBRUARY 2009 IN AUSTRALIA

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## NEW PRODUCTS

### Filter cartridges resist heat



*Teflex membrane filter cartridges are available in various lengths.*

Pentair Industrial has introduced Teflex series membrane filter cartridges, made from a combination of polypropylene and polytetrafluoroethylene (PTFE).

The cartridges' endcaps, centre cores and outer support cages are constructed of polypropylene for increased durability, while the PTFE membrane is there for particle retention. Rated to 0.1 micron – 0.8 micron, the filter cartridges are suitable for chemical, electronics, food and beverage applications.

The cartridges are designed to withstand high pressures and temperatures of up to 80°C. They can be sterilised or autoclaved.

They are available in a range of lengths. Custom configurations are also possible. [www.pentairindustrial.com](http://www.pentairindustrial.com).



*The Type 8056 sanitary mag flow meter is shown here without the optional display.*

### Meter controls flow

Bürkert has released the Type 8056 sanitary mag flow meter.

The device is rated as 3A and IP67. It is suitable for precise flow control and measurement of conductive liquids, and batching or dosing in food and beverage applications.

Stainless steel with a PTFE lining, the mag flow meter suits liquids with temperatures of between -20°C and 130°C, and pressures of up to 16,000kPa.

The meter is available with or without a display. Low flow and general purpose versions are also available.

[www.burkert.com.au](http://www.burkert.com.au)

### Safety harness for oil drill rigs

DBI-SALA has designed the ExoFit XP Derrickmans Harness for the oil drilling rig derrickman to perform monkey/tubing board and basket work.

The harness allows the worker to safely lean out from the work platform (monkey board) to reach the drill pipe in the centre of the derrick or mast. An optional belt with a large frontal pad provides extra comfort while positioning drilling pipes.

It also includes quick-connect buckles, removable washable padding, and reflective piping.

The harness meets the AS1891.1:2007 standard and is equipped with the i-Safe intelligent safety system. i-Safe uses RFID to track inspections, control inventory and manage information.



*The ExoFit XP Derrickmans Harness is designed for workers on oil drilling rigs.*

[www.capitalsafety.com](http://www.capitalsafety.com)

### Software helps manage process plant projects

Intergraph has released SPO Project Execution software for executing greenfield and brownfield processing plant projects by owner operators and project management contractors.

The program is designed to reduce the risk of plant engineering and design projects exceeding planned cost and

schedule. SPO Project Execution can be used for managing project changes, non-conformities and technical queries.

The software helps review project changes and technical queries where they do not conform to laws, regulations, corporate documents or project specifications.

It tags and links them to the affected parts of the plant.

The technical query process in SPO simplifies the administration and processing queries through flexible workflow templates and management reports.

[www.intergraph.com.au](http://www.intergraph.com.au)

# CHEMICAL ENGINEERING

## FEBRUARY 2009

### IN AUSTRALIA

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## NEW PRODUCTS



The IBC 2000i spill containment unit can fit a 1000L container.

### Polyethylene container prevents spills

Enware is introducing a portable intermediate bulk container spill containment unit to Australia.

The IBC 2000i is made from polyethylene and UV-stabilised resin. It measures 144cm in length and 142cm in width to fit 1000L dispensing units. It

has enough capacity for 1457L.

The unit is suitable for forklifts, shipping and storage.

The IBC 2000i meets EPA40 CFR 264.175 requirements.

The unit comes with 19L pail holder. [www.enware.com.au](http://www.enware.com.au)



The RN221N is a combined safety barrier and power supply.

### Combined loop power and safety barrier

Endress+Hauser has launched the RN221N combined active barrier and power supply. The SIL2 rated barrier provides galvanic isolation for the 4mA-20mA measured signal and can be powered by 20V-250V AC/DC.

The device is IEC-rated, indicating it does not produce sparks that can ignite explosive materials. This makes it suitable for use in hazardous areas.

Its front-mounted HART communication sockets allow the user to obtain information or reprogram the instrument without removing it or disconnecting the wires.

Measuring 22.5mm in width and equipped with a compact DIN rail mount, the device is designed to be easy to install.

[www.au.endress.com](http://www.au.endress.com)

### Measuring chlorides

Turck is offering capacitive sensor for level applications. The BCF10 sensor is designed to measure the level of solutions high in chloride, such as soaps and cleaners.

In applications where a detergent high in chlorides is used, it is typically stored in a plastic container. Over time, the detergent leaves a film on the inside wall of the container. If a standard capacitive sensor is used for level detection, it may detect this film even though the container is empty. The BCF circuit incorporates a compensating electrode configuration to measure the actual level of the liquid.

The BCF10 is a DC sensor with a 10mm sensing range.

[www.turck.com.au](http://www.turck.com.au)



The BCF10 sensor is designed to measure the levels of chloride solutions, such as soaps and detergents.

### Program for valves

Flowserve Corporation has released ValveSight asset management software for integrated control valves and automated quarter-turn valve packages.

The program is designed to reduce unexpected plant or process downtime by predicting potential failures and scheduling maintenance.

The software collects data from the valve, actuator, positioner, and control while the process is running and displays it on a graphical user interface. ValveSight can be connected to any FDT/DTM system.

[www.valvesight.com](http://www.valvesight.com)