

news from

ENGINEERING WA

ENGINEERS AUSTRALIA WA DIVISION NEWSLETTER FEBRUARY 2011

Robotics Fair gives glimpse into the future

The new engineering pavilion at Curtin University played host to Curtin Robofair on 4 December 2010, allowing visitors to interact with a diverse collection of robotics and related industries, community groups, education institutions, student projects, and retailers.

The event also included the iNexus National Robotics Competition for tertiary students.

Working in teams, the Robotics Competition required students to combine a manually controlled robot and two autonomous robots to locate and rescue blocks from a grid arena.

Swinburne University, Curtin University and Edith Cowan University emerged as the top three teams, with one member of each team winning a ticket to the iNexus international grand final in Mumbai in 2011.

Equally as impressive as the students' efforts in the Robotics Competition was the level of broader support for the Curtin Robofair.

Attendees included The Perth Artifactory – a communal hackerspace/workshop for dedicated technology enthusiasts, the WA Police TRG Robot Squad, and the WA Science Fiction Club.

"The exchange between the diverse range of industry, school and community



Students set up their Robot before it attempts to locate and rescue blocks from the grid arena at the iNexus National Robotics Competition held during Curtin Robofair 2010

groups - all with a common, if sometimes ambiguous, theme of robotics bonding them - was inspiring and informative," said Tim Keely, Deputy Marketing Manager at the Faculty of Science and Engineering, Curtin University.

Curtin Robofair is largely a student-team run event, with volunteer groups from the Curtin Business School, Curtin Robotics Club, Faculty of Science and Engineering and the Indian Institute of Technology (IIT),

all working together to achieve a common goal.

This interdisciplinary, interfaculty and international experience is one that significantly builds students' abilities to function in contemporary business and industry environments.

For more information visit:
www.curtinrobofair.com

→ 2011 year
of
humanitarian
engineering

Engineers Australia is proud to announce that 2011 is the Year of Humanitarian Engineering – a year in which we will recognise the role of engineering in improving quality of life and disaster recovery.

To learn more and get involved go to makeitso.org.au/humanitarian

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→ 2011 year of humanitarian engineering

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712 Murray Street, West Perth WA 6005
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Tim Davies tdavies@engineersaustralia.org.au



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Tours commence at water recycling plant



Wanneroo Senior High School students tour the Visitor Centre, lead by Water Corporation's Education Officer Tanya Burnett.

The Water Corporation has begun tours of its newly constructed Advanced Water Recycling Plant and Visitor Centre in Craigie.

The facility has been built for the Groundwater Replenishment Trial which began recharging recycled water into groundwater in November 2010.

The Trial will build knowledge of the technical, health, environmental and social aspects associated with groundwater replenishment.

Water Corporation Chief Executive Officer, Sue Murphy, said the Visitor Centre will play a key role in helping the community grasp the concepts of water recycling in a local context.

"The Trial is very much a community focussed project," said Mrs Murphy.

"The Visitor Centre will provide the public

with an opportunity to tour the facility and learn more about groundwater replenishment, the recycling process and how this can help address the challenges of our drying climate."

Mrs Murphy said visitors would be taken on the water cycle journey through the use of interpretive walkways and film and learn how groundwater replenishment can play a role in sustaining Perth's water supplies.

"We invite anyone who has an interest in our water future to visit the facility and see it for themselves," she said.

For more information or to book a tour phone 9420 2655 or email groundwater.replenishment@watercorporation.com.au

For more information on the Trial or to fill out an online booking form visit www.watercorporation.com.au/G/gwr.cfm

Assetivity celebrates 10 years, BRW Fast100



(L-R) Sandy Dunn, Director, Assetivity, Steve Emery, Assetivity and Duncan Barton, Rio Tinto

Management Consultant firm Assetivity recently held a function to celebrate its 10th Anniversary and 32nd place in BRW magazine's 2010 Fast100 Awards, which recognise Australia's fastest growing companies, based on growth rates achieved over the preceding three years.

This is the fourth time that Assetivity has been the recipient of a BRW Fast100 award.

Clients from across WA joined the Assetivity team to celebrate, at their new offices, in Como, in December 2010.

From the President

Celebrating engineering excellence

Professor Mark Bush FIEAust CPEng

Engineers Australia will shortly be calling for nominations for the 2011 WA Engineering Excellence Awards, with a breakfast launch of the program to take place in late February. This awards program "encourages and celebrates engineering excellence by identifying, recognising and promoting excellence in the science and practice of engineering". There certainly is a lot of excellence out there, and it deserves to be recognised and celebrated.

I have participated in the judging of the awards several times over the years. Although it is a relatively onerous job I always look forward to seeing a cross-section of the outstanding engineering work being carried out in WA. I am always astounded by the variety of activity across the State and the enthusiasm of the engineers and teams involved.

The 2010 award outcomes were particularly noteworthy. Pritchard Francis was the overall winner of the Western Division round for their Condor Tower project. The project also won the national Sir William Hudson Award, being assessed as the best example of engineering excellence nominated across Australia in 2010.

Condor Tower exemplified leading engineering innovation by adding 18 storeys to an existing 10 storey abandoned and damaged building. The project demonstrated how obsolete but sound structures may be recycled and transformed.

Pritchard Francis undertook a parallel research program to understand how adjacent old and new concrete structures interact and share load. Both the local and the national judges saw this project as an outstanding example of innovative Australian engineering which is truly world class.

In my experience, all the nominated projects and products are excellent, reflecting the extraordinary quality of work being conducted in WA. This makes the task of selecting a winner all the more difficult. In making that selection, the judges look for characteristics that mark a project as exceptional. It is a nice problem to have to face: Looking for the exceptional amongst the excellent.

The judging is undertaken by panels of peers mostly from the engineering profession, but also with representatives of allied professions and the community. Judging is conducted rigorously and professionally. A Chair of Judges attends all presentations and deliberations to ensure consistency in standards across the panels.

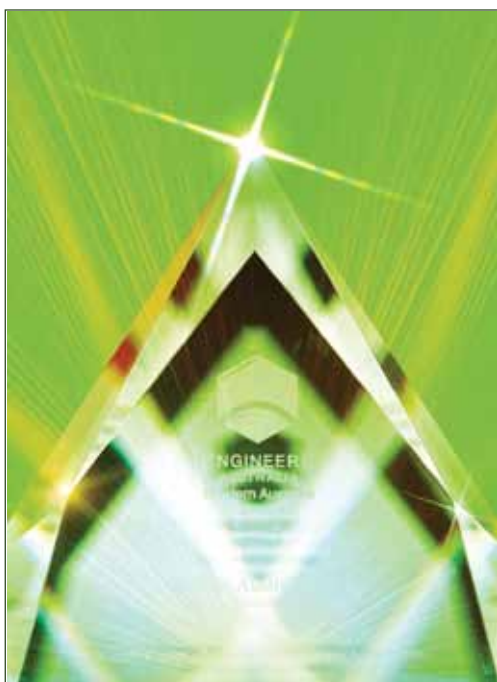
All the nominations, award winning or not, receive significant publicity and recognition. The awards also provide peer recognition of engineering excellence, raise the profile of the profession and of local engineering, and highlight the contribution of engineers to the economy, to the community and to the environment and the awards dinner is just great fun!

Nominations can be made under a variety

of categories, covering small to large endeavours, and products to projects. Awards in the past have been given for a wide range of activities that include everything from the design, production and marketing of an innovative device to the management and delivery of a large of engineering project. Details of the categories and other submission information will be available through the Western Division website and other publicity material.

Let's try to repeat the double award experience of Pritchard Francis by identifying another project in 2011 that not only leads the Western Division but also represents the best in the country, and possibly the world. The Division office will be more than happy to assist by providing advice to help with the preparation of the submission.

I would like to conclude by noting that a significant fraction of submissions relate to Civil Engineering projects. However, the WA Branch of the College of Civil Engineers has been fairly quiet over the last several years. As you will see elsewhere in this newsletter, a group of keen members is attempting to reactivate the branch. There truly is excellent civil engineering being conducted in WA – please support the College by volunteering some of your time to help organise CPD and other activities to ensure that this excellence is nurtured and propagated.



CALL FOR ENTRIES

2011 WA ENGINEERING EXCELLENCE AWARDS

The WA Engineering Excellence Awards are the highlight of our professional calendar, designed to recognise, celebrate and promote achievement and innovation by the engineering profession across Western Australia.

KEY DATES

- Lodgement of Entry Form & Entry Fee - Monday 18 April 2011
- Lodgement of Award Submissions - Wednesday 15 June 2011
- Attend an interview with judges - August 2011
- Awards Cocktail Party - Friday 9 September 2011
- Awards Dinner - Saturday 17 September 2011

For more information visit www.engineersaustralia.org.au/wa

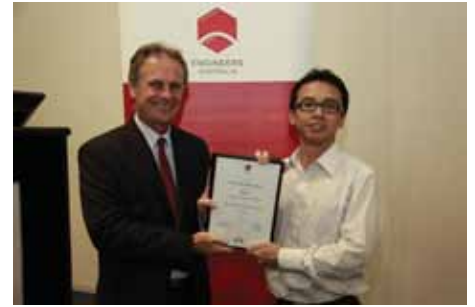
Members admitted to Chartered Status

On 29 November 2010, members who had recently been appointed with Chartered Status were presented with their certificates by then WA Division President, Professor Tony Lucey FIEAust.

Chartered Status certifies that you practice in a competent, independent and ethical manner; and indicates you are a leader in your field.



Tiew Tuan Ting MIEAust CPEng



Ivan Lim MIEAust CPEng



Rudie Crous MIEAust CPEng



Colin Dickson MIEAust CPEng



Yap Soon Yee MIEAust CPEng



Paul Dragovic MIEAust CPEng



Colin Powers MIEAust CPEng



Shawn Fernando MIEAust CPEng

PDP - Providing the right solution at Pritchard Francis

It is estimated the sum of human knowledge doubles every 5 to 6 years - so how can we keep up to date?

Pritchard Francis has always prioritised training in the workplace to maintain relevance in the engineering profession. It provides a proactive working environment that emphasises internal, external and on the job training of all staff.

It has long operated a Graduate Development Program and views the Professional Development Program with Engineers Australia as a vital extension of its commitment to training staff. Focused on Graduate Engineers, Pritchard Francis expects the program to benefit individual graduates and the practice as a whole, ensuring Graduate Engineers are provided every opportunity to achieve their full potential. This will ultimately

produce a mutual benefit to the individual participants and the firm as a whole, strengthening the firm and the service provided to our clients.

Given the current environment, it is vital that employers promote and develop young engineers, assisting wherever possible to expedite the development from Graduate, to Engineer, to Chartered Engineer.

The formalisation of a Professional Development Program will ensure that when a Pritchard Francis Graduate Engineer has met the career requirements to attain Chartered status they are recognised promptly.

In conjunction with Engineers Australia, and with a strong commitment to training staff, Pritchard Francis strives to develop individuals into engineering professionals



Arthur Psaltis, Managing Director, Pritchard Francis, with some of his team, and Janice Lake and Alex Sparvell from Engineers Australia

with a strong technical background, high moral and ethical standards and a high degree of confidence to practice in their chosen profession.

This initiative is another way Pritchard Francis is 'providing the right solution'.

A career of changing things for the better

Chris Fitzhardinge is one of the most well-known engineers in Western Australia.

What's not so well known, though, is his love of riding motorcycles, his passion for researching history and performing onstage, and the fact that he's descended from several of Europe's royal families.

A former president of the WA Division of Engineers Australia, he's been on numerous high-powered boards and committees over the years that have managed projects and changed the face of WA.

A civil engineering graduate from The University of WA, his work has involved guiding major projects such as running the Ord River Scheme, being inaugural chair of the \$3 billion Square Kilometre Array radio telescope project, and resourcing the Harbour City Project that rejuvenated Bunbury.

And as the current Director of the South West Group, he represents a group of six local authorities with common issues such as infrastructure and tourism and representing their interests in WA and federally.

Chris basically made the decision to be an engineer as a 10-year-old growing up in South Perth/Como in the 1950s, when he saw engineers constructing the nearby landmark Narrows Bridge and Kwinana Freeway that linked Perth.

"We were able to see firsthand the impact of engineering, and it was impressive," he recalls.

Chris says an engineering leader who inspired him early in his career was Ken Kelsall, who worked at the Public Works Department and is a former EA Division Chairman.

"Ken was a real character, because he could see how engineering could be applied to non-traditional areas, had excellent communication skills and had a love of history," says Chris. "His gentle, informed and engaged approach to leadership was a style I respected."

Outside of work, Chris has an interest and fascination with trying to understand the past.

"I have a passion for history – both for engineering and European history," he says. "Understanding the challenges people have faced in the past is a good way of determining how to face challenges into the future."



His own family history is been a rich source of stories – and even royal connections.

"I'm a descendant of a number of European kings," he says. "I know 9,000 of my ancestors, I'm a descendent of Charlemagne, the Medici family, Charles I and II, and the Scottish kings Malcolm Canmore and Kenneth MacAlpin.

Chris has a library of some 2,000 books on history, genealogy and politics, and is in the process of documenting history himself – a collection of 1,000 profiles of Australian engineering leaders that he's coordinating for the centenary of Engineers Australia in 2019.

He believes that engineering leaders can play a transformational role in their communities.

For instance, when he was the CEO of the South West Development Commission in the early 1990s, he played a major part in attracting funding for the half-billion dollar Harbour City project that re-invigorated Bunbury.

"It revolved around developing engineering infrastructure," Chris explains. "That was the key to getting the support of the Federal Government, and taking it from being a housing and marina-related project to being an infrastructure project."

Chris believes in being part of the community, and even though he was busy with work, he still found time to be involved in amateur acting and various theatre groups. And he was front-page material, with the local Bunbury paper featuring him and fellow cast members on page one when he had the starring role of Ben Rumson in the musical *Paint Your Wagon*.

Chris says the most important lesson he's learned in business and engineering is to be decisive.

"It's to be able to make a decision, to be in a position – to fail fast if necessary. It's to be well informed and then to be decisive," he says. "Because many difficult decisions are 50-50 decisions and you discover whether you've made the right or wrong decision very quickly."

He says you can create leadership in others by helping develop their judgement: "You need to be in a position where they are confident to make decisions, that they can understand the decision making processes and understand how to influence."

And his advice to students contemplating a career in engineering is to grab the opportunity with both hands.

"It's a fantastic career, it's got unlimited opportunity, you can go anywhere with it," he says. "It can develop your leadership skills, it can develop your decision-making skills. You can change the landscape in the projects you undertake and manage, it's such a broad area."

So what does he see as the next big challenge as a leader in the engineering profession?

"It's looking at infrastructure planning for the longer term," he explains. "We have more infrastructure demands than we have funding. So what we need to do is set up processes where industry and the community can become engaged with governments in planning for the longer term."

By Tony Malkovic

Special Notices

Calling all WA Civil Engineers!

After several years of hiatus, the WA Branch of the College of Civil Engineers is gearing up for 2011. New Branch committee positions are available so please indicate your wish to participate and we can progress to organise a first meeting of the committee for 2011.

If you are interested in attending and getting involved by organising CPD sessions, please email the WA Civil College Representative Alice Cargeeg (alice.cargeeg@mrwa.wa.gov.au) or Barry Tonkin (barry.tonkin@hotmail.com) to advise your commitment.

This is the Year of Humanitarian Engineering and topics suggested so far relate to that area (and inviting guest speakers to speak on YoHE issues). The College will seek to have Professor Tony Wong (Civil Engineer of the Year 2010) tour as an eminent speaker and share his knowledge, stories and experiences.

Initially a Civil Branch committee will focus on getting relevant CPD sessions up and running and source suggestions of session ideas and people to deliver the CPD messages.

CPD is your responsibility...

Continuing Professional Development (CPD) helps you maintain up-to-date technical skills and knowledge of processes, technology and legislation. It is an essential part of your career development and is necessary for you to attain and maintain your Chartered Status.

We'd like to remind you that recording your CPD is your responsibility.

Engineers Australia's preferred method for recording of your CPD activities is our online recording system. You do not have to use this facility although you are encouraged to do so.

If you want to use your own spreadsheet or word template you must ensure that adequate information, especially a breakdown of the hours into the three categories, and a statement on what knowledge you received from the activity, is included in your own format listing.

More information about CPD, and access to the online recording facility, is available on the website www.engineersaustralia.org.au/cpd

Advertising in Engineering WA

The Engineering WA publication is delivered monthly in hard copy to the mailboxes of over 7,800 members and key industry stakeholders.

A limited number of advertisements are available each month. For further information, contact Tim Davies, Marketing & Communications Manager, Engineers Australia WA Division E: tdavies@engineersaustralia.org.au P: (08) 9321 3340.

Material Deadlines and Delivery Dates are as indicated below.

Issue	Material Deaadline	Delivery Date
January	10 December	20 January
February	19 January	17 February
March	16 February	17 March
April	16 March	14 April
May	20 April	19 May
June	25 May	23 June
July	22 June	21 July
August	20 July	18 August
September	17 August	15 September
October	14 September	13 October
November	12 October	10 November
December	16 November	15 December

WA Membership figures

WA membership of Engineers Australia continues to grow at a healthy rate. Figures indicated below are as of 1 January 2011.

Total Membership

12,394

Annual Growth in Total Membership

6.3%

Qualified Members
(Graduate level or higher)

8,292

Annual Growth in Qualified Members

5.3%

Student Members

4,102

Annual Growth in Student Members

8.4%

Call for Exhibitors

Face to Face Expo for Young Engineers

Saturday 2 April 2011
Robinson Pavilion,
Claremont Showgrounds

By participating in the Face to Face Expo for Young Engineers 2011, your company has the chance to inspire and gain the trust of enthusiastic and motivated students and begin the dialogue necessary to attract the right people. In 2010, over 910 student engineers were introduced to some 73 organisations involved in a diversity of engineering activities undertaken within and outside this state.

In order to secure your position of choice please contact BPA.
Phone: 08 9409 5143.

Lean Construction Conference

1st - 2nd March 2011, Perth

As WA Industry leaders, Woodside Energy Limited in conjunction with Engineers Australia and UWA Business School are co-hosting an event to explore the application of Lean to Major Projects Construction for WA. The primary driver for the conference is to increase the local construction industry productivity through the implementation of lean techniques and philosophies.

For more information and registration visit:
www.lean-construction.com.au

→ 2011 year of humanitarian engineering

→ breakfast launch

2011 Year of Humanitarian Engineering Breakfast Launch

Hosted by the Centre for Engineering Leadership and Management

Date: Thursday 10 March 2011
Time: 7.15 for 7.30am start - 9.15am
Venue: Perth Convention Exhibition Centre - Ballroom 2
Tickets: Members \$55.00 | Non-members \$77.00
Corporate Tables of 8 - \$440

Register your interest with Fiona Thorniley P: 08 9321 3340 or
E: celmwa@engineersaustralia.org.au



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www.watershedwines.com.au

Dates for your Diary

Date/Time	Host	Event & Venue	For more information
Thu 24 Feb 7:15 AM	Engineers Australia WA Division	2011 WA Engineering Excellence Awards Breakfast Launch	Contact: Sharleen Mantle P: 08 9321 3340
1 -2 Mar	Woodside Energy Limited, Engineers Australia, UWA Business School	Lean Construction Conference Perth, Western Australia	Web site: www.lean-construction.com.au
Thu 10 Mar 7:15 AM	Centre for Engineering Leadership and Management WA Chapter	2011 Year of Humanitarian Engineering Launch Perth Convention Exhibition Centre	Fiona Thorniley P: 08 9321 3340 or E: celmwa@engineersaustralia.org.au
Wed 16 Mar 5:30 PM	Engineers Australia	Chartered Status Workshop An Engineers Australia National Assessor delivers a free public workshop on the requirements and process involved in becoming a Chartered Member	Register online:: www.engineersaustralia.org.au/wa
Sat 2 Apr	Engineers Australia WA Division	Face to Face Expo for Young Engineers	Exhibitor Bookings: BPA Ph: 08 9409 5143
1 - 5 Aug	Engineers Australia	Australian Engineering Week	For more information: www.makeitso.org.au
Sat 17 Sep	Engineers Australia WA Division	2011 WA Engineering Excellence Awards Dinner	Contact: Sharleen Mantle P: 08 9321 3340
28 - 30 Sep	Engineers Australia's National Committee for Coastal and Ocean Engineering, PIANC, IPENZ and the NZ Coastal Society.	Coasts and Ports 2011 Coasts & Ports 2011 will bring together engineers, planners, scientists and researchers to focus on the technological, scientific, policy, planning and design issues related to our diverse and developing coasts.	Web site: www.coastsandports2011.com.au
5-7 Dec	Engineers Australia	Australasian Association for Engineering Education 2011 Conference Esplanade Hotel, Fremantle	Web site www.aeee.com.au/conferences/2011/

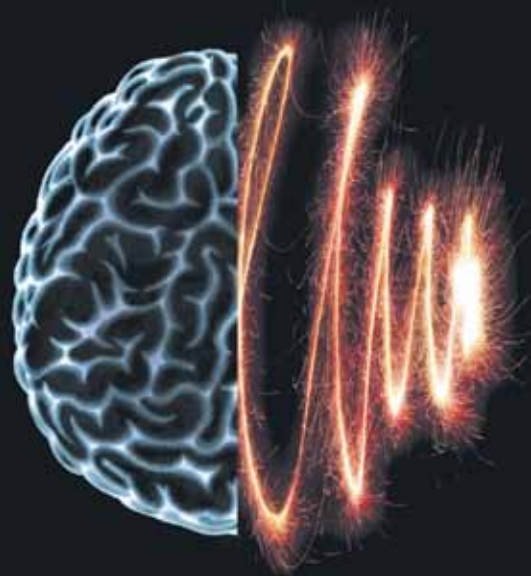
Some event dates and times are subject to change. Please check our website www.engineersaustralia.org.au/wa/events for up-to-date information



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