

Engineer of the Year Awards to honour the state's best

Engineers Australia's Engineer of the Year Awards will be once again be honouring members who have demonstrated great achievement and leadership within the engineering profession.

In 2011, new national criteria have been established for the Awards including:

1. Engineering competence
2. Demonstrated leadership skills (including leadership of teams)
3. Positive/notable outcomes from their performance
4. Creativity/innovation
5. Community service to industry, the profession and/or society

Nominees/nominators will be asked to address the criteria via an online nomination form, with submissions due by Friday 8 July.

The Awards are open at both Engineer and Young Engineer level (35 years of age or under at 31 December 2011) across the occupational categories of Officer, Technologist and Professional Engineer.

Winners of the WA stage of the Awards will be recognised at the WA Engineering Excellence Awards Dinner on Saturday 17 September and are eligible for entry into the National Awards.



Pictured above: Allan Claydon MIEAust CPEng (Left) and Graham Currie GradIEAust (right) were the recipients of the 2010 WA Engineer of the Year and WA Young Professional Engineer of the Year respectively. Nominations are now open for the 2011 Awards.

In 2010, Allan Claydon, Director of Services and Works at the City of Mandurah, won the Engineer of the Year Award in recognition of his leadership and professionalism, and a lifelong commitment to local government engineering.

Graham Currie, a civil engineer with Lowes Churchill & Associates in Bunbury, received

the Young Professional Engineer of the Year Award as a result of his efforts to inspire the next generation of engineers and a commitment to volunteering within the South West community.

For more information, and to nominate for the 2011 Awards, visit: www.engineersaustralia.org.au/wa/awards

Expo attracts more than 1,000 engineering students

Vacation work and employment post-university were top of the agenda for engineering students attending the Face to Face Expo on Saturday 2nd April.

More than 1,000 students met 'face to face' with representatives from over 70 organisations across a multitude of sectors that employ engineers in Western Australia.

The Face to Face Expo is hosted by Engineers Australia each year, and is free for all members.

As another service to student members, Engineers Australia produces annually the Vacation Work and Graduate Employment Handbook, which has the details of organisations in Western Australia that are

able to provide vacation work, graduate employment, or both.

Members of Engineers Australia can access this Handbook via the Career Planning and Advice section of the Engineers Australia web site. You will be required to log in to access this section of the web site.

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In this issue

Engineer of the Year Awards to honour the state's best	1
News	2
From the President	3
News	4
Profile	5
Special Notices.....	6
Events.....	7
Dates for your Diary	8

→ 2011 year of humanitarian engineering

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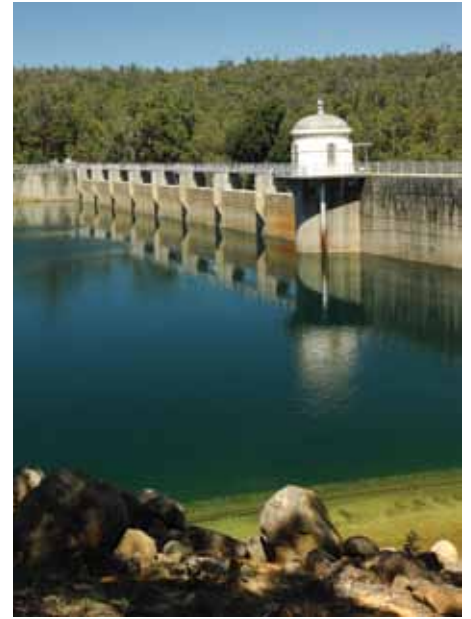
First public private partnership for WA water industry

An international consortium comprising the Royal Bank of Scotland, Acciona Agua, United Utilities and Brookfield Multiplex will undertake a major project in Perth which represents the first fully fledged public private partnership in the Western Australian water industry.

State Water Minister Bill Marmion announced in February that Helena Water was the preferred consortium to fund, design, build and operate the new Mundaring water treatment plant, a pump station and associated pipelines. He said the decision to allow full private industry involvement in a big water supply project was a logical addition to the Water Corporation's well established alliance partnerships.

Alliances have undertaken a number of major projects, including construction and operation of Perth's two major seawater desalination plants, the second of which will come on line later this year.

The Mundaring plant is due to be commissioned in 2013. Helena Water will then run it for 35 years, after which it will be handed back to the Water Corporation in full operating condition.



Pictured above: Mundaring Weir

The plant is a key component of the Corporation's Mundaring Weir Water Supply Improvement Project which will meet increasing water demands and greatly improve water quality.

The weir supplies the historic Goldfields and Agricultural Water Supply Scheme which was originally built more than 100 years ago, including the 560-kilometres long Goldfields pipeline, and now supplies water to more than 33,000 households as well as mines, farms and other enterprises.

Discussion on women in engineering, skills shortages

The interactive panel, 'Women in Engineering, superseding skill shortages: 21st century strategies', formed part of the program at the International Conference on Women in Science and Engineering held in Perth in late March.

Women in Engineering Vice Chair, Dr Carla Boehl, pictured below with other Panelists, facilitated the discussion.

The Conference was hosted By IEEE WISE (Women in Science and Engineering).



Participants at the International Conference on Women in Science and Engineering included Bella Law, Prof Ramalatha Marimuthu, Dr Carla Boehl, Dianne Murray, Teresa Murphy and Dr Yvonne Power.

From the President

Engineers Without Borders

Professor Mark Bush FIEAust CPEng

Although this Australian based organisation is correctly known as Engineers Without Borders (EWB), I am tempted to borrow from the well-known name of the older parallel organisation developed by a group of French medical professionals and to write instead: *Ingénieurs Sans Frontières*. I have always liked the French word for engineer, being closer to the Latin root that has also given us modern words such as ingenious and ingenuity.

The application of engineering skills to assist developing communities certainly does require ingenuity. The conditions are usually challenging, the skills of the local community often underdeveloped and infrastructure generally not at the assumed norm in a developed country. Complex, high maintenance or costly solutions are often not practical – the solutions must be appropriate to the local circumstances, which are quite variable. This is a challenge for any engineer – but a challenge that Engineers Without Borders strives to meet.

I have been mixing with and learning more about EWB quite a bit in the last few

months. I am struck by the enthusiasm of the people involved and inspired by their commitment to apply their professional skills to produce humanitarian outcomes. The outcomes are tremendously important to the recipients of course, but also extremely satisfying for the participants. They also develop knowledge, cultural understanding, communications and organisational skills that are valuable to both themselves and their employers.

EWB was established in 2003 by a group of engineers in Melbourne who wanted to use their skills to help communities in need. It has since grown into a national organisation with chapters in every state and territory. The organisation provides the framework to match volunteers' skills and knowledge with humanitarian problems, and to support them in tackling an enormous range of projects both worldwide and within Australia. It is also a vibrant community of like-minded people.

There are many ways that individuals and companies can assist EWB, including membership or partnership subscriptions, donations or becoming a volunteer. However, there is another form of support that is very important. This is the support of the employers of engineers and

associates who want to participate in EWB. It can take a variety of forms, including pro-bono

donations (eg allowing staff to spend some paid time each year working for EWB), providing flexibility for staff to take leave without pay, matching staff donations to EWB and supporting EWB activities within the company. We are currently collecting a range of stories about how organisations are supporting EWB and intend to condense them into a set of suggestions or models for other organisations to follow.

More information about EWB and its activities can be found at their website www.ewb.org.au. You will find examples of the many projects undertaken by EWB, the ways in which you can become involved and details of current opportunities for long-term and short-term placements.

I have recently joined EWB as a member to help support the organisation financially and in any other way I can. What about you?



→ 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 in Australia and abroad.

All statistics sourced from www.globalissues.org

It's up to us to engineer a better world.

makeitso.org.au/humanitarian



UWA engineering students' custom design installed at gym

Dreamfit Foundation's Dreamcatcher Program has fulfilled yet another Dream for people living with disabilities with the installation of the 'Wood Group Integrity Management (WGIM) GYMRAN' custom engineered gym equipment for people with disabilities at YMCA Morley Sport & Recreation Centre.

When nominations opened for not-for-profit disability organisations to submit a representative to win a custom engineered Dream project, The Centre for Cerebral Palsy promptly nominated one of their enthusiastic clients eager to work out alongside able bodied members at his local gym.

Imran Ariff is a highly independent young man with cerebral palsy who enjoys a regular workout to strengthen his mind, body and soul whilst also providing him with the opportunity to mingle with likeminded people within his community.

"I am pleased to hear that my Dream gym is now in at the Morley Recreation Centre for me to use and share with the community," said Imran. "Having the equipment available for use by the whole community is a positive step towards developing a better understanding of those with special needs wanting to become active and significant members in their community."

Over 200 UWA engineering students

participate each year in specific design challenges that meet the needs of people living with disabilities. Each Dream project is supported by an industry sponsor providing financial assistance and industry mentors to guide them through the process of building their dream prototypes.

"WGIM staff are given the chance to be involved with a variety of community initiatives and have been thrilled with the chance to be involved with such a worthwhile project," stated Chris Saunders, Engineering Manager from WGIM. "The results have been outstanding!"

Dreamfit's project team provide inspiration, guidance, training and the Dreamplex workshop in Shenton Park where project bays allow students a place to share skills and ideas whilst building their products.

"As a final year engineering student seven years ago I was looking for a project that would make a difference and not just be some theoretical idea on paper," says Dreamfit's CEO, Darren Lomman.

"Being able to share my passion and inspire other people to do the same is a Dream come true for me!"

Details of the 2011 Dream Projects and opportunities for supporting Dreamfit's work within the community are available at www.dreamcatchercomp.com.au



Imran Ariff tests the newly installed equipment at the Morley Sport and Recreation Centre. The equipment was designed by UWA engineering students as part of the Dreamcatcher Program by Dreamfit Foundation.

Membership Update

Figures indicated below are as of 1st April 2011 for the WA Division of Engineers Australia:

Total Membership

13,222

Annual Growth in Total Membership

6.7%

Qualified Members
(Graduate level or higher)

8,504

Annual Growth in Qualified Members

5%

Student Members

4,718

Annual Growth in Student Members

10.1%

Mitchell Freeway Stage 1 National Engineering Landmark Award



On 18 March an interpretive panel was unveiled by the Governor of Western Australia, Dr Ken Michael, and the Managing Director of Main Roads WA, Mr Menno Hennevel, at the Narrows Interchange site, to commemorate the award by Engineering Heritage Australia to the Mitchell Freeway Stage 1.

The panel is situated on the walkway at the north abutment of the Narrows Bridge, upstream side.

Stressing the social justice side of engineering

Professor Caroline Baillie is trying to help engineers see their career in a different light – and help them tackle some of the big challenges in the world such as environmental issues and reducing poverty.

But to do that, she says they might need to look beyond the world of engineering.

“If we want try to understand the impact engineering has on society and how to solve some of these bigger issues then we really need to borrow from other disciplines like sociology, anthropology and so on,” she says.

Baillie is an engineer and materials scientist who’s worked in the United Kingdom, Canada and Australia. She’s also the inaugural Chair in Engineering Education at the University of Western Australia and runs a third-year unit called Engineering and Social Justice.

The unit explores the theme of social justice that is becoming a part of engineering practice.

And for the students taking the unit, an on-site visit might involve an art gallery rather than a construction site.

Which is what happened recently when students took in an exhibition at the Lawrence Wilson Gallery at UWA.

The exhibition featured works by several artists focusing on social justice issues and events outside the gaze of the media. It included images from the occupied West Bank; Curtin detention centre; and the story of Sidoarjo in East Java, where oil and gas drilling caused boiling mud and poisonous gases to erupt, destroying homes and devastating local villages.

“With something like that, the students get to see what ‘injustice’ means in relation to engineering so they can then come back to the classroom and say ‘We want to be different to that in the future,’” she says.

Baillie says there are specific skills engineers can learn from non-engineering disciplines.

“In the social sciences, people are taught to do what we call ‘deconstruct’ which is to break things down or ask questions about the way we live and the way we think and to imagine a different way,” she says.

“But they’re not taught to create alternatives. So they might have great ideas about what’s wrong with the way we live,



Helping engineers tackle poverty and environmental issues ... Professor Caroline Baillie at the Waste for Life project in Argentina.

but not necessarily great ideas about what to do about it.

“Engineers, on the other hand are taught to solve problems. They’re taught to build things.

“So what we’re trying to do is give engineering students the skills, first of all, of questioning what currently happens; and then thinking about alternatives that can actually address some of these bigger, global challenges – and then put their brilliant problem-solving minds to that end.”

When it comes to seeing things from different perspectives and helping others, Baillie is a good example of an engineer who practises what she advocates.

For instance, she uses theatre to help people

appreciate more fully how engineering, science and society are intertwined. Which is what happened when she directed professional actors in the play *Copenhagen* a few years in Canada. The play explored the mysterious wartime meeting between two Nobel laureate physicists and how they viewed the role of scientists and nuclear weapons.

She also helped set up the non-profit Waste For Life program, a network of engineers, scientists, students and local communities working to tackle environmental problems and reduce poverty.

Its projects in Lesotho and Argentina help people recycle waste plastics into commercial goods such as wallets, watchbands and chairs.

By Tony Malkovic

Special Notices

Volunteers required for regional Science and Engineering Challenge

The Science & Engineering Challenge is a competition for year 9 high school students that aims to present engineering in an inspirational manner, excite the imagination of prospective students and provoke their interest through a variety of well designed tasks. Activities range from problem solving scenarios to designing and building projects. The program has received enormous encouragement from teachers with many indicating that the Challenge has been vital in engaging and inspiring students towards continuing their studies in Science.

The Science and Engineering Challenge will be visiting regional centres in Western Australia in June and volunteers are required to assist students with their tasks. This is a great way to inspire the next generation of engineers and scientists and volunteers always find it to be a very rewarding experience

2011 Regional Dates

Kalgoorlie - Monday 13 June

Geraldton - Friday 17 June

Bunbury - Tuesday 21 & Wednesday 22 June

Mount Barker - Friday 24 June

Kwinana - Wednesday 29 June



If you are able to assist, please contact:

Ryan Smith, Membership Marketing Coordinator, Engineers Australia WA Division

P: (08) 9321 3340 E: rsmith@engineersaustralia.org.au

Scientists in Schools Program seeks Engineers

Would you like a flexible and ongoing link with a school to inspire and educate the next generation in engineering? Scientists in Schools is a national program run by CSIRO Education in which a long-term partnership is formed between a scientific professional and a teacher for a totally flexible arrangement that suits both parties. There are many teachers in Perth and state-wide who have registered and are waiting to link to an engineer. You can choose a school which has already registered (see the map on our website) or specify your preferences. You can even link with a remote school.

There is no minimum time commitment; we organise and pay for your police check, match you with a school and provide ongoing support and resources. You and the teacher decide together on the activities and frequency of interaction which suit you both. Examples include mentoring students, promoting careers, hands-on classroom activities, science club, linking to current research, using existing outreach program material, or anything else you can think of. Even a few hours a term can have a dramatically positive impact for all involved. If you use maths in your everyday work you can also register for the sub-program Mathematicians in Schools.

Why not consider volunteering for this hugely rewarding program? For further information please visit our website www.scientistsinschools.edu.au where you can read about successful partnerships and also register or contact Kirstin van Dorp at sis.wa@csiro.au or 9215 0882 (Tuesdays & Wednesdays) to discuss further.

2011 David Dewhurst Award - Nominations Now Open!

Each year the award is presented for outstanding service to the field of biomedical engineering. The Award is given to a member of the biomedical engineering team who has made a significant contribution to the discipline. For more information, including eligibility criteria or to nominate online please visit: www.engineersaustralia.org.au/biomedical/awards

2011 Chemical Engineering Awards of Excellence - Nominations Close 27 May!

The Australian and New Zealand Federation of Chemical Engineering is now seeking nominations for the 2011 Chemical Engineering Awards of Excellence. The awards provide a showcase for outstanding achievement in the field of chemical engineering. The federation has instituted these awards to help encourage and recognise excellence and to highlight the contribution made by Australian and New Zealand Chemical Engineers to the community. The Awards will be presented at Chemeca 2011. Applicants are sought from industry, academia and the public sector. To nominate please visit: www.engineersaustralia.org.au/chemical/awards



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www.makeitso.org.au/aew

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Dates for your Diary

Date/Time	Host	Event & Venue	For more information
Sat 28 May	Young Engineers WA	Young Professionals Ball Proceeds to EWB and Oxfam Hilton Hotel Perth	Register online: www.engineersaustralia.org.au/wa
Wed 15 Jun 6:00 PM	2020 DIRECTINVEST & Engineers Australia	How to be your own financial planner 2020 DIRECTINVEST Auditorium, Engineers Australia, 712 Murray Street	RSVP to 2020 DIRECTINVEST 1800 352 021 seminars@2020directinvest.com.au
Thu 16 Jun 5:30 PM	Engineers Australia	Chartered Status Workshop Free public workshop on the requirements and process involved in becoming a Chartered Member Auditorium, Engineers Australia, 712 Murray Street	Register online: www.engineersaustralia.org.au/wa
Mon 20 Jun 6:00 PM	Engineers Australia WA Division Structures Panel, The Institution of Structural Engineers and The Institution of Civil Engineers	Safety, Risk and Failure: The Management of Uncertainty Guest Presenter: John Carpenter BSc(Eng), CEng, FIStructE, FICE, CFIOSH, Consultant and Past Secretary, SCOSS Auditorium, Engineers Australia, 712 Murray Street,	Web site: www.engineersaustralia.org.au/wa
Tue 21 Jun 6:00 PM	Engineers Australia WA Division Structures Panel	Fire Safety of Concrete Buildings Guest Presenter: Dr Ian Bennetts, Principal Fire Risk Consultant, Noel Arnold & Associates Auditorium, Engineers Australia, 712 Murray Street	Web site: www.engineersaustralia.org.au/wa
Thu 28 Jul	Engineers Australia	Fellows Dinner Registration only open to 'Fellows' of Engineers Australia Hilton Hotel Perth	Contact: Fiona Thorniley P: 08 9321 3340
1 - 7 Aug	Engineers Australia	Australian Engineering Week	For more information: www.makeitso.org.au/aew
Sat 17 Sep	Engineers Australia WA Division	2011 WA Engineering Excellence Awards Dinner Perth Convention Exhibition Centre	Contact: Sharleen Mantle P: 08 9321 3340
5-7 Dec	Engineers Australia	Australasian Association for Engineering Education 2011 Conference Esplanade Hotel, Fremantle	Web site www.aeee.com.au/ conferences/2011/

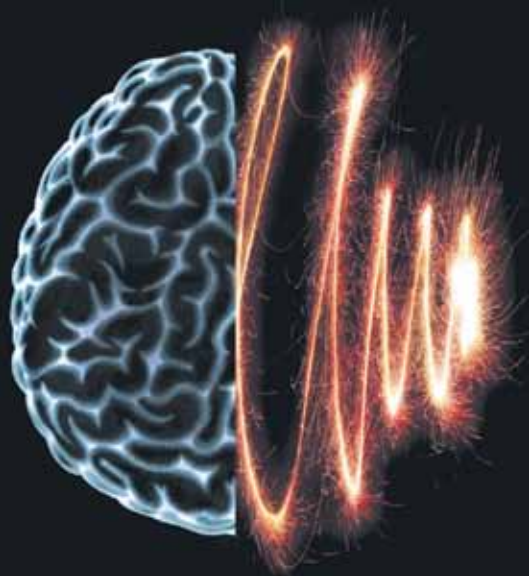
Some event dates and times are subject to change. Please check our website www.engineersaustralia.org.au/wa/events for up-to-date information



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