

news from

ENGINEERING WA

ENGINEERS AUSTRALIA WA DIVISION NEWSLETTER JANUARY 2012

Engineers feature in WA Science Awards

Professor David White of The UWA Oceans Institute has been named Early Career Scientist of the Year for Western Australia.

Professor White, who is based at the Centre for Offshore Foundation Studies at UWA, is a geotechnical engineer working on research involving offshore structures such as pipelines and oil and gas structures.

The award was announced in Perth on 8 December.

"I'm very pleased for my research to be recognised in this way," Professor White said from the United Kingdom, where he is on study leave.

"Geotechnical engineering is one of UWA's strongest disciplines, and I hope this award will draw attention to the positive impact that our research has on the oil and gas industry in WA.

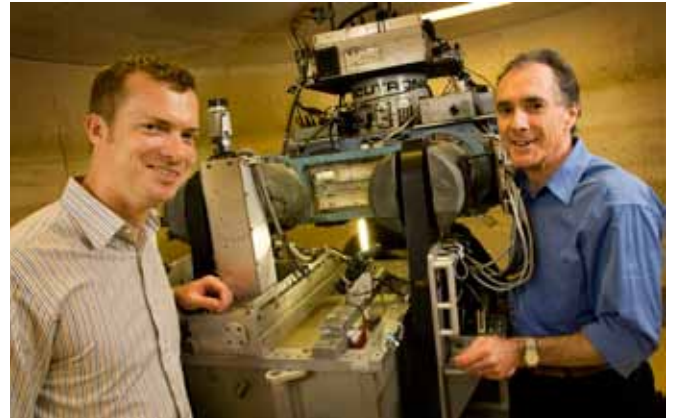
"The seabed around Australia presents unique engineering challenges to the oil and gas industry and when I moved to Australia five years ago I was attracted by the opportunity to conduct research that would be eagerly adopted by the industry.

"The experimental research that I conduct is very much a team effort, and this award is also recognition of the world-leading capabilities at the Centre for Offshore Foundation Systems, including our geotechnical centrifuge facilities and the new 'O-tube' cyclone simulator." The work of another leading engineer was also acknowledged at the WA Science Awards in December.

Winthrop Professor Mark Randolph, a colleague of Professor White's, was a finalist in the Scientist of the Year category.

The efforts of Professors White and Randolph continue the prominent role of engineers in the WA Science Awards.

By Tony Malkovic



Professor David White (left) and Winthrop Professor Mark Randolph FIEAust CPEng, of UWA's Centre for Offshore Foundation Studies and UWA Oceans Institute.

Train topic wins Blakey Award

Being able to communicate well in front of an audience was recently worth \$2,000 to young mechanical engineer John Bills.

That's how much John received when he won the final of the O.F. Blakey award at the annual dinner of Engineers Australia on 8 December.

John, who recently graduated from Curtin University, spoke on reducing inter-wagon forces in

heavy haul trains. He competed against Glenn Donaldson, an engineer with Main Roads WA, and Amanda Pryce, a structural engineer with Aurecon.

The award commemorates Professor O. F. Blakey, the first Professor of Civil Engineering at the University of Western Australia. The competition emphasises communication skills for engineers and requires them to speak on an engineering topic.

By Tony Malkovic



(l-r) The final three...O.F. Blakey finalists Glenn Donaldson MIEAust, Amanda Pryce MIEAust, and winner John Bills StudIEAust

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Western Australia Division

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2012 YEAR OF **THE REGIONAL ENGINEERING TEAM**
REGIONAL AUSTRALIA: THE HEART OF ENGINEERING

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Produced By
 Engineers Australia WA Division
 712 Murray Street, West Perth WA 6005
 Phone: (08) 9321 3340
 Web: www.engineersaustralia.org.au/wa
 Content was correct at time of printing.
 Advertising & Editorial:
nangelucci@engineersaustralia.org.au

Printed by Focus Press using sustainable methods including:

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- Certified Quality System 9001:2000

Paper: From plantation forest managed, grown and produced under EMS ISO 14001

Spaghetti Bridge Champ

Each year the Midwest Group of Engineers Australia runs a Spaghetti Bridge competition for local school children (years 3 to 8).

The Grand Final for 2011 was held at Stirling Centre on Saturday December 3.

Each Bridge must span 500mm and weigh a maximum of 250 grams (half a pack of Spaghetti) including Glue. The bridges are then loaded by pouring sand into a bucket suspended from the bridge.

The school teams learn so much from the challenge and on the day the tension in the crowd rises with every cup of sand that is poured into the bucket as the crowd inches forward. When the bridge does fail a big round of cheering erupts.

We normally expect to see a good bridge carry between 2 and 6 kg before failing but this year, there was a number of bridges carrying in excess of 12 kg and an outstanding grade 4 student built a bridge that carried an astounding 16.85 kg. The Chairman of EA Midwest division David MacFarlane described this bridge as an elegant design, and believes engineering in the Midwest will be in safe hands in the future.

Tristan Batty (9 years old) a student at Mt Tarcoola Primary School, is the budding Engineer who took out first prize this year. Tristan won the competition last year with a bridge that carried 10.6 kg. He was very keen to beat that record this year.

By David MacFarlane OMIEAust



Tristan Batty with his winning bridge



Daniel Day from Rangeway Primary School with the Year 7 winning bridge. Other team members of this bridge are Jack Simon, Robert King and James King.

Call for Exhibitors

Face to Face Expo for Young Engineers

Saturday 24 March 2012
The Robinson Pavilion
Claremont Showgrounds

By participating in the Face to Face Expo for Young Engineers 2012, 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 2011, over 1,400 student engineers were introduced to some 70 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.



From the President

Welcome to New Division President

Barry Tonkin FIEAust CPEng

This is the first of 12 communication opportunities this year. I took over from Professor Mark Bush on 1 January 2012 and look forward to a year as Division President. I thank in advance all members of the Division Committee who will be helping me through 2012, our Director, Leanne Hardwicke and her team in West Perth and some of our Past Division Presidents who are all willing to advise me in 2012; particularly Professors Mark Bush and Tony Lucey; Ed Scull and Lorie Jones.

This year is about acknowledging regional engineering team-work and the people and activities that are regional. During the last four years I have been working on a fly in –fly out roster. With my Division Presidency this year, I found a role in Perth where I may do a better job of being your representative.

I was working for the West Australian Government Railways (Westrail) when I graduated in 1977 as a Civil Engineer and was posted to the Kalgoorlie District office as a Project Engineer. I joined the local Kalgoorlie Boulder group of “the Institution of Engineers” and attended a meeting in a back room of the Tower Motel in Maritana Street, mostly with other government engineers from the power station, water authority and main roads talking about the same sorts of things groups talk about now. Many engineers have spent time as I did in a range of regional towns around the country and as many again will have gone through an international route to join us here in Western Australia.

At Congress on Wednesday 22nd November, 2011 YORET was launched and some of the initiatives to be undertaken as part of 2012 - the Year of the Regional Engineering Team were announced.

YORET provides an opportunity to recognise and celebrate the contribution of the members who live and work in the heart of our land. The YORET’s theme is “Regional Engineering: The Heart of Australia”. Visit www.engineersaustralia.org.au/regional, for information about YORET activities.

These pages on the website will be updated regularly as the main way that YORET is to be promoted to regional members. The YORET has four broad aims:

- Generate an understanding of the value of the regional engineering team;
- Improve access to CPD for regionally based members;
- Promote equity for all members of Engineers Australia; and
- Increase awareness of engineering opportunities in regional areas.

Divisions are being requested to encourage formation of regional groups in areas where new groups could be formed or reformed. The website will feature an interactive map that will identify the active regional groups.

Two initiatives that are aimed for Divisions through the YORET are:

- Provision of \$500 to each Regional Group to enable them to undertake a specific activity that celebrates local achievements in regional engineering or discusses issues facing engineering team members in

pursuing their professions in the regions.

- Provision of \$1000 to the Division to assist rural and regional members attend the 2012 Engineering Leadership Conference in Adelaide in May/June.



The Engineers Australia magazine will profile rural and regional members over the next 12 months, and this will be promoted in our Division newsletters.

The 2012 Engineering Leadership Conference in Adelaide will feature a rural and regional stream. The WA CELM conference will be held in Bunbury in April/ May and will strongly promote regional engineering. The 2012 Engineering Excellence Awards will encourage regional engineering team members, as did the 2011 awards where the Bushlight regional project won a national Excellence Award. The Division newsletters will be profiling Regional groups and showcasing our events.

I will be encouraging Regional group chairs to participate in one or two Division meetings during the year, possibly by phone or video. During the year, I will be seeking to co-author this page with the Division and regional representatives. I look forward to meeting some of you in 2012 at one or many of the social and business functions.

Complete a 3 minute online survey for a chance to win an Ipad 2 worth \$579!

Engineers Australia is assisting national partner Bovill Risk & Insurance Consultants (BRIC) with research into what you think is important when choosing a professional indemnity insurance broker.

The survey responses will assist with strategic planning to ensure our national

partner continues to deliver the best possible service to you.

The survey should take less than 3 minutes to complete and can be accessed here: <http://www.surveymonkey.com/s/ZKS55PR>.

Competition closes 31st March 2012.

The Engineering WA publication is delivered monthly in hard copy to the mailboxes of over 8,000 members and key industry stakeholders.

A limited number of advertisements are available each month. For further information, contact Nikki Angelucci, Marketing & Communications Manager, Engineers Australia WA Division

E: nangelucci@engineersaustralia.org.au

P: (08) 9321 3340.

BRIC Bovill Risk & Insurance Consultants

Engineer Quick Chat

with Stephen Woodhouse MIEAust

Current job title and function?

I am a Director of WML Consultants, an independent, regionally based multi-disciplinary consultancy based in Bunbury. I manage the structural design within the company.

Why are you an engineer?

I have always had a fascination with how and why things work. Engineering is one long-lasting puzzle to solve for the infinitely curious.

What are you working on now?

We have a wide variety of work. The major structural projects we are currently working on are for mine sites, ranging from the far North East of the state to the South West. Our Civil group is designing upgrades of the Coalfields Highway and our Geotechnical Group is busy with tailings dam design around the state.

Most challenging or interesting project you've ever worked on?

I was appointed to carry out the structural appraisal of St Patrick's Cathedral following the severe storm in 2005.

The building was so badly damaged that I had no option but to recommend demolition.

The building meant a great deal to the community, was an icon on the city skyline and of course was the location of many significant personal events such as christenings and weddings for many people. This was not an easy decision to take and involved weeks of discussions and meetings.

The public wanted the original building repaired, so I was not popular and was widely criticized. I investigated numerous repair options and research into the remedial works undertaken on other historic structures. Unfortunately the risks were just too great and demolition was carried out. Sometimes, you have to make the hard choices.

Any advice for young engineers just starting their career?

Get as broad an experience as you can before you settle on a career path. Understand that every day is an opportunity to learn more and be a better engineer today than you were yesterday.

If you weren't an engineer, what do you think you would be doing?

I have always been envious of archaeologists. Being part detective, part discoverer and part historian seems like an interesting job to me.

If the whole world was listening, what would you say?

Every action you make, every decision you take, has consequences and impacts on the people around you and on the planet. Make sure your decisions do not have a negative effect on the earth or its occupants.

Before you make a decision ask yourself :

1. Am I making things better or worse ?
2. Can I do this a better way ?
3. Will the world be a better place for this decision ?
4. As my legacy, can I say that I have made the world a better place than if I had not been here?



ENGINEERS AUSTRALIA IS PLEASED TO ANNOUNCE

2012 AS THE YEAR OF THE REGIONAL ENGINEERING TEAM A YEAR WHICH WILL HIGHLIGHT REGIONAL AUSTRALIA AS THE HEART OF ENGINEERING.

2012 YEAR OF
THE REGIONAL ENGINEERING TEAM

REGIONAL AUSTRALIA : THE HEART OF ENGINEERING



ENGINEERS AUSTRALIA

FIND OUT MORE www.engineersaustralia.org.au/regional

WA engineers recognised for their outstanding efforts

The contributions of three outstanding WA engineers were officially recognised at the annual dinner of the WA Division of Engineers Australia held at UWA Club on 8 December.

Bob Broadway and John Ruprecht were awarded Engineers Australia medals, to recognise their meritorious service at a division level, and Ed Scull was elected an Honorary Fellow.

Other Honorary Fellows, including Dr John Wager, Dr Ken Michael, Dr Jim Gill, Bruce James and Ken Kelsall were also acknowledged, and presented their Honorary Fellow ties.

On an evening filled with engineering excellence, more certificates were presented as three Engineers Australia members were officially made Fellows. They were Balagopal Nair, Roy Forbes and Terence Wong.

As mentioned on page one of the newsletter, the OF Blakey medal was awarded to John Bills with his presentation entitled "Optimal Train Positioning".

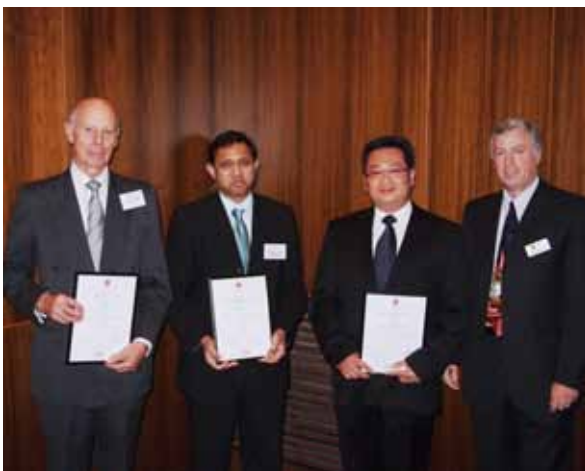
To wrap up the night, 2011 WA Division President Mark Bush gave his retiring address, speaking about his time in the Solomon Islands and his year as President.



(l-r) Images: WA Division medal winners Bob Broadway FIEAust CPEng and John Ruprecht FIEAust CPEng



(l-r) Ed Scull HonFIEAust accepts his award. John Bills StudIEAust with his OF Blakey medal



(l-r) Fellows Roy Forbes FIEAust CPEng, Balagopal Nair FIEAust and Terence Wong FIEAust CPEng with Prof. Mark Bush FIEAust CPEng



(l-r) Honorary Fellows with their ties. Jim Gill HonFIEAust, Bruce James HonFIEAust, Ken Michael HonFIEAust EngExec, John Wager HonFIEAust CPEng, Ken Kelsall HonFIEAust

Reminder to all members

Please take a minute to log onto the Engineers Australia website and confirm that your personal details are correct.

The information that you place in our system is used by our division office to ensure you are kept up to date on all proceedings and events.

You are able to easily update any personal information once you have logged in online. Please go to www.engineersaustralia.org.au

Important Notice

In May 2012, Engineers Australia WA Division will be converting to an electronic newsletter. This will increase readership and enable the division to re-allocate resources used on hard copy printing. To find out more, please contact the division office via email at: wa@engineersaustralia.org.au



FIRE UP

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dreamDAY celebrating inclusion

Celebrating United Nations' International Day of People with Disability, Dreamfit Foundation hosted its first free community event on Saturday 3 December at McCallum Park, Victoria Park.

dreamDAY was a unique event that celebrated ability and inclusion and was the official unveiling of 2011 Dreamfit projects including a modified hovercraft, land-sailing yachts, all-terrain vehicle, water ski boat, fishing and archery equipment and trimaran.

The collective effort of UWA engineering students and Perth's engineering industry sponsors and mentors, the local community was thrilled to be able to trial a range of activities that previously were unavailable to them.

Despite the heat of the day, hundreds of people turned out to check out over 50 activities spread along Perth's foreshore. From patting snakes and koalas to adrenalin filled rides on a ski boat, smiles were spotted across the park throughout the afternoon.

"A day like today can't happen without the support from local industry supporting both the development of the equipment and the event itself," said Darren Lomman, CEO Dreamfit Foundation.

"The WA engineering industry should be proud of their ongoing support and dedication to making the lives of people with disabilities that much more fulfilling and fun."

The 2011 Dreamfit projects and dreamDAY were proudly supported by Apache Energy, Arup, Calibre, Chevron, Hatch, Raytheon Australia, SKM, Wood Group Kenny & Wood Group Integrity Management.

Details and photos of the event are available at www.dreamday.org.au

dreamfit
FOUNDATION



Dreamfit student volunteer, Joseph Mahede, set up Mr Antonio Krsticevic MLA (Member for Carine) and his daughter, for a ride in the modified land yacht with the help of a member of the Sandgroper's Land Yacht Club.

Aviation – The Economic Impact

To wrap up a busy year, CELM invited guest speaker Geoffrey Thomas to present his views on aviation and its economic impact on Perth and the world. Geoffrey is Aviation Editor of “The West Australian” and Senior Editor of “Air Transport World”.

Geoffrey began his talk with images of planes from the 1950’s, describing characteristics of each aircraft and just how far the aviation industry has come in terms of design, fuel efficiency and reliability.

There has been a large decrease over the years in the cost to fly and competition between the airlines is fierce. Geoffrey explained why Air New Zealand are so highly regarded as the airline of choice for many, and how they have gone from the “airline of last resort” in 2001, to the winner of over 30 international awards last year and operating 84,000 flights a day.

Geoffrey gave the audience an insight into the statistics regarding incoming and outgoing flights to and from Perth, delays that have resulted due to high capacity at peak times and why there is the need for another runway at Perth Airport before the planned date of 2026.

The level of interest in Geoffrey’s talk was clear as many questions were asked after the presentation and discussions began regarding the solution to the demands at Perth airport and the cost of a potential runway expansion.



CELM Chair Dave Moffin FIEAust CPEng, speaker Geoffrey Thomas and Greg Steinepreis from event sponsor, Squire Sanders

Watershed Premium Wines Members Only Offer

Watershed Premium Wines are pleased to offer Engineers Australia WA Division members a 25% reduction off Cellar Door prices with free delivery for case quantities only. To take advantage of this offer, just download the order form on the WA Division website under the resources section.

10 days in China – Three Gorges Dam visit

A proposed tour to China to visit the Three Gorges Dam, under the aegis of the Three Gorges Dam Corporation, plus tours to the Great Wall, the Forbidden City of Beijing and the Terracotta Warriors in Xian.

The proposed group will comprise of Engineers Australia members and Fellows of ATSE and their respective partners.

Proposed timing is early April 2012. Estimated cost in China is \$4000 per person. External travel and personal expenses are additional.

Expressions of interest required by 31 January 2012. Please email Fiona at fthorniley@engineersaustralia.org.au or telephone 08 9321 3340. Your information will be forwarded to the organisers of this tour.

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Dates for your Diary

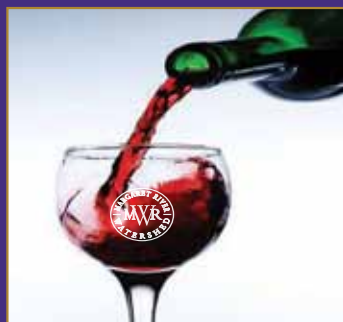
Date/Time	Host	Event & Venue	For more information
Thu 19 Jan 5.30 PM	Engineers Australia WA Division	Chartered Status Workshop An Engineers Australia National Assessor delivers a free public workshop on the requirements and process involved in becoming a Chartered Member in your occupational category. Auditorium, Engineers Australia, 712 Murray Street West Perth	Register online: www.engineersaustralia.org.au/wa/events
Mon 6 Feb 5.30 PM	The Electrical College of Engineers Australia	Eminent Speaker Series - Learning, Applying and Facilitating the Transfer of Electrical Engineering know-how in the Power Industry Auditorium, Engineers Australia, 712 Murray Street	For more information: www.engineersaustralia.org.au/wa/events
Tue 14 Feb & Wed 15 Feb	Australian Geomechanics Society WA Chapter	Laboratory Testing in Geotechnical Engineering The Western Australian Chapter of the Australian Geomechanics Society (AGS) provides notice of a course to be held on Laboratory Testing in Geotechnical Engineering. ELT2, Civil & Mechanical Engineering Building University of Western Australia, Crawley, WA	For more information: www.engineersaustralia.org.au/wa/events
Thu 16 Feb 5.30 PM	Engineers Australia WA Division	Chartered Status Workshop An Engineers Australia National Assessor delivers a free public workshop on the requirements and process involved in becoming a Chartered Member in your occupational category. Auditorium, Engineers Australia, 712 Murray Street West Perth	Register online: www.engineersaustralia.org.au/wa/events
Tue 28 Feb	Engineers Australia WA Division	2012 WA Engineering Excellence Awards Breakfast Launch	Contact: Division Office P: 08 9321 3340
Thu 15 Mar 5.30 PM	Engineers Australia WA Division	Chartered Status Workshop An Engineers Australia National Assessor delivers a free public workshop on the requirements and process involved in becoming a Chartered Member in your occupational category. Auditorium, Engineers Australia, 712 Murray Street West Perth	Register online: www.engineersaustralia.org.au/wa/events
Sat 24 Mar	Engineers Australia WA Division	Face to Face Expo for Young Engineers	For more information: www.engineersaustralia.org.au/wa

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

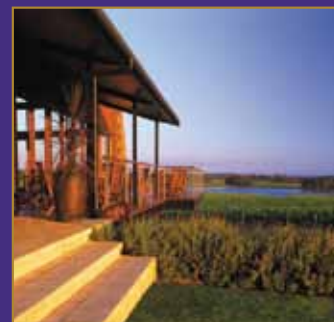
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