



ENGINEERS
AUSTRALIA

Newsletter of the Newcastle
Division of Engineers Australia

March 2011

→ 2011 year of humanitarian engineering

ENGINEERING NEWCASTLE

Presidents Column

The month of February saw the announcement that our Chief Executive Officer Peter Taylor will be retiring later this year. On behalf of the Newcastle Division I would like to pass on our well wishes to Peter and commend his leadership in taking the organisation through some great challenges and pioneering important changes for our organisation.

All of our branches and groups have commenced their activities for the year with very positive responses. Whilst in an engineering practice committee meeting last month with all the Chairs of our branches and groups I was most impressed by their enthusiasm and commitment in providing for our

members, remembering that they are all volunteers. It is never to late to get involved with our branches and groups. It's a great way to network and contribute to our profession so I encourage you to get along to some of their meetings or get in contact with the Chairs about suggested activities. One of Newcastle Division's big events this year will be the regional convention to be held September 16-18 in Armidale, please make a note in your diaries. We are well underway in locking in key note speakers and identifying papers that will be presented.

Our successfully run mentor program will have its mentee recruitment at the

University this month followed by its annual launch in April where mentees are assigned mentor engineers.

There is still time if you are wanting to get involved in the program as either a mentee or mentor, please contact the office to do so.

Remember to keep yourself updated with what events are on through our website and "what's on" newsletter.

Paul Reynolds, MIEAust,
Division President 2011



Presentation on FTTP (Fibre to the Premise) Technology – 7th February 2011

Geof Heydon provided a very interesting presentation on FTTP Technology, NBN Network and its expected usage and impact. Geof is the VP of Strategy, Marketing and Communications and Director of Digital Economies, Alcatel-Lucent Australia, and with over four decades of telecommunications experience.

The NBN is a wholesale open-access ubiquitous network that will provide FTTP to 93% of premises, with radio

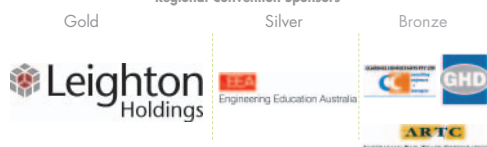
and Satellite to the remaining. The FTTP network is built using 2.5Gbit/s GPON (Gigabit Passive Optical Network) Technology to support 32 premises. Additional devices using different wavelengths (such as 10Gbit/s XG-PON) can also be added later to further increase transmission rates on a single fibre. A selection of applications was discussed, however due to the rapid growth in technology many are yet to be discovered. The allegory of

roadway development was used, e.g. a century ago it would not have been possible to predict the range of usages for the motor vehicle and how business models are built on having a reliable road network. Data transmission growth has been exponential over the past 4 decades and forecast to continue driven by these applications.

**Electrical Branch Chairman:
Cameron Shortland
Comments by Neill Thompson**

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PRESIDENT: Paul Reynolds • DIRECTOR: Helen Link

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Engineers Australia CPD compliant research and skills development opportunity

Beyond Zero Emissions (BZE) is a leading not-for-profit research and education organisation which has a strategic partnership with the University of Melbourne Energy Research Institute to deliver the Zero Carbon Australia (ZCA) research project.

Early last decade Engineers Australia released three ground breaking reports on Sustainable Energy in Electricity Generation, Building and Construction, and Transport. BZE's ZCA project follows on from these reports demonstrating how we can meet our total national energy needs with zero emissions. The ZCA project consists of 5 plans, Stationary Energy (v1.0 now released), Buildings, Transport, Industrial Processes and Land Use. Each plan is a detailed and costed technical report giving one scenario for the complete decarbonisation of that particular sector using current commercially available technology. This unique project is a collaboration between many engineering and technical experts volunteering their time. For example, the award winning Stationary Energy Plan v1.0 developed a 100% renewable electricity grid and outlined how the transition could take place. This plan

showed that Australia's economy can be repowered with a mix of 60% baseload solar – molten salt power towers, 40% wind power – Enercon E-126 7.5MWe wind turbines and a significant transmission upgrade that was reviewed by SKM. The plan has received endorsements from technical experts and has been launched to sell-out crowds around Australia.

The ZCA plan is helping to shift the debate on renewable energy in this country. It has set a benchmark for research into climate change solutions and is busting myths about the desirability, economic impact and technical limitations of renewable energy.

Beyond Zero Emissions is now looking for additional volunteers to work on the plans (including version 2.0 of the Stationary Energy Plan), and financial donations to enable the plans to be completed.

Members of the Engineering Team are encouraged to satisfy part of their ongoing Continuing Professional Development (CPD) requirements by volunteering to work with Beyond Zero Emissions on the Zero Carbon Australia Project. Many aspects of volunteering can contribute to your

CPD record in accordance with the EA CPD Policy for different CPD Types and Conditions (type IV (private study), type VI (preparation and presentation of material) and type VII (structured activity)). Volunteer activities that are available are diverse and include primary and secondary research, report development, engineering reviews, technical presentations and industry liaison.

EA National Deputy President, Professor David Hood, who was involved in the earlier EA Reports has contributed to BZE, and helped arrange the ZCA Brisbane Launch: "The BZE ZCA Projects offer great opportunities for engineering team members to learn about renewable energy, add value to the project, and meet their CPD obligations." Hood says.

For more information on the Zero Carbon Australia Project
<http://zerocarbonplan.org>

To contribute to the project as a volunteer
<http://www.zerocarbonplan.org/contribute>

To donate to enable the project
<http://zerocarbonplan.org/donate>

ENGINEERING PRACTICE/CIVIL PRESENTATION by Harry Poulos

Professor Harry Poulos presented an excellent technical presentation entitled 'A Framework for Forensic Foundation Engineering' to a packed audience of Civil, Structural and Geotechnical engineers at the Parry Street auditorium on Wed 16 February.

Professor Poulos discussed a framework for approaching the forensic investigation of geotechnical failures of building foundations. Professor Poulos then proceeded to demonstrate the application of the methodology by working through the investigations he had undertaken personally to unravel the cause of several intriguing international building

failures. Professor Poulos wound up his presentation by providing comments on the cause of some well known international structural/geotechnical failures, details and photographs of which had been widely circulated via the internet. Post presentation Q&A discussion with the audience covered a wide variety of geotechnical forensic issues and demonstrated the appreciation that the audience had for such an eminent member of the profession.

The evening was a joint presentation of EA, ASCE and AGS and was kindly sponsored by Coffey Geotechnics.



Jason Lee, Principal, Coffey Geotechnics (left) and Prof Harry Poulos

Rob Barker
Chair, Civil/Structural Branch
Committee



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Award of Merit – Local Acknowledgment

Mr Bill Jordan

Engineering Heritage Australia established in 2003 an award called the Award of Merit for Engineering Heritage. This award compliments the Monash Medal, which is an award for "outstanding achievement in Engineering Heritage".

The Award of Merit is intended as a means of recognising and showing appreciation to members of engineering heritage groups who

make significant contributions and give outstanding service, often over many years through:

- Raising awareness of engineering heritage within the profession and/or the community;
- Promotion of engineering heritage conservation within the profession and/or the community;
- Recording and documentation of engineering heritage works;
- Activity relating or leading to, the

conservation of works of engineering heritage;

- Such other contributions to the cause of engineering heritage conservation, considered by Engineering Heritage Australia worthy of recognition.

It was with great pleasure Paul Reynolds, Division President, was able to acknowledge and present Mr Bill Jordan with this honoured award.



l to r: Rod Caldwell, Chair of Heritage group; Bill Jordan; Paul Reynolds, Division President; Merv Lindsay, National President

2011 REGIONAL CONVENTION ARMIDALE 16th to 18th September

2011 Regional Convention - Armidale - 16th to 18th September

'Sustaining Our Regions: The Engineering Challenge'

Keynote speakers include Chris Davis from UTS and David Hood from MASCE

Currently calling for abstracts in the following streams:

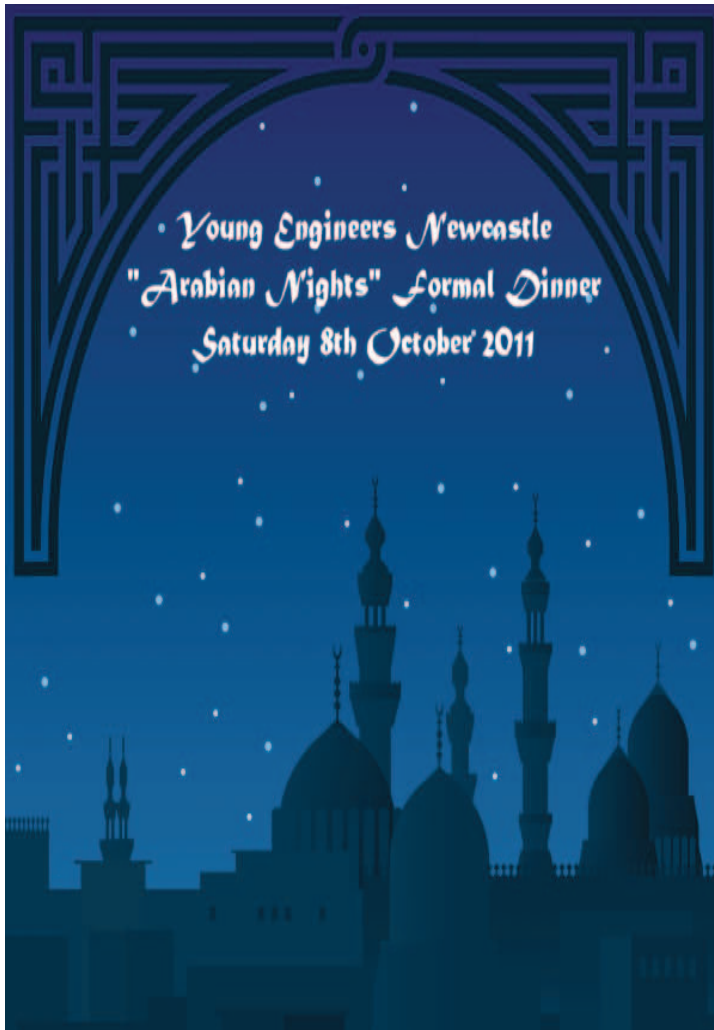
Agriculture	Mining
Food & Fibre	Regional Transport
Resource Management	Building
Environmental Management	Communications

A guide to preparing your abstract can be obtained by contacting the office. Abstracts are to be submitted prior to 18th February 2011.

Current sponsors include Leighton Holdings, EEA, Clarence Consultants, ARTC and GHD. Sponsorship opportunities are still available - contact Helen Link on 4926 4440 or email: hlink@engineersaustralia.org.au

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Sydney		
7-8	June	Contract Management for Superintendents
9-10	June	Contract Supervisor's & Inspector's Course
Melbourne		
19-20	July	Contract Administration-Works
21-22	July	Contract Management for Superintendents
Sydney		
25-26	October	Contract Administration - Works
27-28	October	Advanced Contract Administration

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WANTED – CHEMICAL ENGINEERS

We are looking for enthusiastic chemical engineers to reform the Division's Chemical Engineering Branch. No experience required to be part of the committee but you do need to be a current financial member of Engineers Australia. If you are interested please contact the office on 49264440 or email your contact details to Jo, jpapanicolaou@engineersaustralia.org.au

Obituary Notice - "Vale Mary Ramstadius

Mary Ramstadius, wife of long serving Northern Rivers Group committee member Reg, passed away after a two year battle with cancer on 22 January. Mary was a stalwart of Northern Rivers group events, and even during her illness still attended some of the Northern Rivers Group meetings. One of Mary's proudest moments was when Reg was presented with the Engineers Australia Medal by Peter Cockbain (whom Reg and Mary had known for many years).

Our condolences to Reg and family. We will miss you at our meetings Mary."

Continuing Professional Development (CPD)

Engineers Australia Newcastle Division offers CPD in a number of streams, enabling members to undertake a variety of CPD providing them with the opportunity to gather skills and knowledge to assist in all aspects of their career. The streams we have identified are as outlined below.

Date	Time	Event	Venue
YEN			
25th March	TBC	Generation Exchange/Networking event	Lowlands Bowling Club
29th March	3.00pm	Workshop on Preparation of Application for Chartered Membership & Registration on NPER or NETR (CER Workshop)	Engineers Australia 122 Parry St, Newcastle West
April TBC	TBC	Resume Writing Course	
8th October		YEN Formal Dinner	

Division

16th- 18th September 2011 Regional Convention 2011 Armidale, NSW
'Sustaining Our Regions: The Engineering Challenge'

Regional Groups Eminent Speaker

26th March 6.00pm Dianne Boddy – 'Great Design Engineers = Great Achievers'
Awarded the 2010 AGM Michell Medal Coffs Harbour - Novotel Pacific Bay Resort

Electrical

23rd March 5.30pm "HVDC Light Power Grid of the Future"
For 6.00pm Presenter: Dr Robert Barr Engineers Australia
122 Parry St, Newcastle West

Central Coast

23rd March 5.30pm "The Landing" – the plan for the future of the Gosford water front
For 6.00pm Speaker: Mr Brett Phillips Gosford Golf Club
Racecourse Rd, Gosford

Women in Engineering

13th April 5.30pm Women of Inspiration – Kelly Jones
For 6.00pm Non-executive director, Red Cross Blood Service Engineers Australia
122 Parry St, Newcastle West

Newcastle Division Video and DVD Library - Earn CPD points

Don't forget, there are a number of presentations available in DVD or Video format that can be borrowed from Division Office 4926 4440. Each presentation counts toward your CPD points. The full listing of titles is currently being updated on our website, to view please visit:

www.engineersaustralia.org.au/newcastle

Recent additions to the library: FMECA in Action - Electrical Branch 11/08/2010
The Hunter Expressway - Civil/Structural Branch 25/08/2010

Engineers Australia Webcasts - ONLINE CPD

There are approximately 550 presentations available online covering a wide range of topics across all disciplines. Viewing these counts toward your CPD accruals - and you can do it from the comfort of your desk!

Online presentations are available for viewing at:

<http://www.engineersaustralia.org.au/search/events/mediavision>

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

All registration to events is now done online via www.engineersaustralia.org.au/newcastle

For further information relating to any of the above events please contact the Newcastle Division office at newcastle@engineersaustralia.org.au