

# Engineering Tasmania

August 2009



ENGINEERS AUSTRALIA  
Tasmania Division

Newsletter of Engineers Australia, Tas Division - Royal Engineers Building, 2 Davey Street Hobart  
Telephone (03) 6234 2228, Fax (03) 6234 2216 or E-mail tasmania@engineersaustralia.org.au

## IN THIS ISSUE

Excellence Award Winners  
President's Report  
New & Upgrading Members  
Women in Engineering Pages  
Young Engineers Pages  
UTAS - The Great Gasbe  
Science & Engineering  
Challenge Report  
Meeting Notices  
August/September Calendar

*We would like to  
thank our  
2009 Engineering  
Excellence Awards  
Sponsors*

### PLATINUM SPONSOR



Hydro Tasmania  
the renewable energy business

### GOLD SPONSOR



THREE PLUS  
Reputation + Brand + Relationships

### SILVER SPONSOR



TRANSEND

BRONZE  
SPONSORS



## EXCELLENCE AWARD WINNERS

**"Innovative Method of Identifying  
Dangerous Electrical Conditions in  
Residences and Small Businesses"**  
Aurora Energy



**"Lake Margaret Hilltop Pipeline Replacement"**  
Johnstone McGee & Gandy,  
Hydro Tasmania, Hazell Bros Group



**"World Class Hydro Machine Operation"**  
Hydro Tasmania, Alstom Moonah



# HIGHLY COMMENDED WINNERS

## “A Vertical Residential Lift”

*The Residential Lift Company*

## “Meander Dam Construction Project”

*McConnell Dowell, Hydro Tasmania Consulting,  
Tasmanian Rivers & Water Supply Commission*

## “High Level Services Gantry”

*Tasmanian Consulting Service,  
Simplot Australia, DPM Engineering*

## “East Tamar Highway Rail Bridge Damage, Repair & Replacement”

*Pitt & Sherry, VEC Civil Engineering*

## “Integrated Substation Security System”

*Transend Networks Pty Ltd, BAE Systems*

## “Tamar Valley Power Station: An Illustration of Engineering Challenge & Effective Management”

*AETV Power, Babcock & Brown Power*

## “Hydro Tasmania Consulting Office, Cambridge Park”

*Johnstone McGee & Gandy, Hydro Tasmania Consulting*

### EDUCATIONAL AWARD

**Martin Stalker  
Education Dept**

for

**The Engineering  
Initiative Program**

**Engineers Australia  
in conjunction with  
Hydro Tasmania**

### SPECIAL COMMENDATION

**Clarence City Council  
UNSW-WRL  
SGS Economics & Planning**

for

**Innovative timely response to sea level rise & its  
contribution to sustainability of coastal communities**



## PRESIDENT'S REPORT

I have spent most of the month overseas, hence my report is somewhat limited in terms of Engineers Australia activities. In sitting here thinking about what I can offer in terms of the past month, the first thing that comes to mind is the contribution of our Division Director Geoff Harper. Geoff has been with Engineers Australia for 25 years as of last month. In these times, 25 years with the one organisation is somewhat unusual. The Division Committee were keen to note Geoff's reaching 25 years even though he had kept it very quiet. I think that anyone who has dealt with Geoff will appreciate his passion for EA and the tireless contribution he makes in order for the Tasmanian Division to operate as successfully as it does.

This years Engineering Excellence Awards have been very successful with 18 entries. The range of projects is quite diverse which is reflective of the nature of engineering in Tasmania. It allows us to showcase engineering projects from across the State. Congratulations to the winners which I will focus on in the September newsletter as at the time of writing my article I was unaware of the outcome.

Many thanks for our Sponsors for their generous support of the Awards.

At our last Committee meeting we were advised that the Young Engineers Committee is seeking new members to assist in the planning of events. This is a great opportunity for younger members of the profession to become involved in EA whilst also improving networks and having some fun in doing so. Should you feel that this is something you would like to become involved in then please contact Catherine at the Division Office and she will put you in touch with James Porter.

As I said earlier, I spent a large portion of the month overseas. Some of this time was spent at Mitsubishi Heavy Industries (MHI) manufacturing plant at Takasago, Japan. The Takasago plant manufactures gas and steam turbines for the world market. Whilst my time there was generally focused on commercial matters, it provided me with an opportunity to contrast and compare Australian and Japanese engineering cultures and approaches. The primary difference I noted is the commitment to process, customer service and measurement. Whilst some of this difference may well be a function of the manufacturing environment at MHI, I observed that their commitment to quality goes well beyond what I have experienced in Australia or indeed any other country I have personally observed over the years. The quality process even extends to the gardens! Each planted tree seemed to have a check list of activities and confirmations. Maybe that explains the apparent precision and sense of everything being in harmony in the gardens.

Another interesting observation was the dedication of management to customer service. Whilst in the midst of some difficult negotiations, our negotiating team stepped outside to allow MHI's team time to consider their position in private. Normally we would have moved to another room but at the time all other rooms were in use. We were quite happy to stand outside and chat, however we were apparently observed doing so by one of MHI's Senior Executives. Without our knowing, the Senior Executive who had no role in the negotiations made the effort to find out who we were and who was responsible for the negotiations at MHI thus pointing out in no uncertain terms that this was not the way to treat guests. Whilst we were quite happy to wait outside, the fact that the senior executive made the effort to highlight his observation reflects their commitment to customer satisfaction. Having said that, I did feel a little sorry for the MHI team as there were approximately nine of them and only three of us and it did seem a bit strange when they being the bigger group, were forced to meet outside leaving three of us in a very large room.

Another observation was the

commitment to cleanliness in the factory. I have seen similar albeit smaller factories in the US and Australia and have to say there is a stark difference between the MHI plant and any other heavy engineering manufacturing plants that I have observed elsewhere. I have also often heard that Asian operations don't treat personal safety as seriously as western countries. I can certainly say that this is not the case with regard to my experiences in Japan. As with every culture, you find differences which can at times be frustrating given your own culture however when it comes to living "quality", certainly MHI and the Japanese in general seem to have mastered the concept.

The other point of interest to note during my time overseas was associated with meeting our insurance underwriters and brokers in London. Whilst as a former partner in an engineering consulting practice, I am aware of the role that the insurance industry plays in engineering, this was my first direct experience with the people that actually underwrite the risks. From this I gained a much better understanding of what really matters for the insurer and the very tight knit community that is the insurance underwriters. Given that insurance premiums can represent a relatively large proportion of fixed costs for an engineering consulting business I thought it might be worth passing on some of my observations. Firstly, engineers and managers with project management experience are at a considerable advantage due to the need to understand and manage risk. The ability to talk the language, explain your processes and demonstrate your commitment to risk management can ensure that the underwriter leaves with a feeling that your business is a good investment. This in turn should lead to lower premiums. I also observed the cyclical nature of the insurance industry, an appreciation that I did not previously have. This in turn can also assist in predicting future charges and deciding on the length of your program. The final observation was the importance of face to face meetings. Whilst this is not practical for smaller businesses, taking the opportunity to meet with visiting underwriters may represent good value for money if you have a good story to tell.

**Mike Brewster, FIEAust CPEng**

# UPGRADING MEMBER



**NEIL WAINMAN**  
**OMIEAust**

After a career in the RAAF, trades and mining industries working in Australia and overseas, at the age of 45 a change of profession was a necessity. I graduated in 2002 after two years full time study at the TAFE Burnie Campus which gained me an Advanced Diploma Engineering (Civil and Mechanical), with the Peacock Darcey & Anderson award for excellence in civil engineering in the first year and the Engineers Australia Award in my final year.

I started work for Peacock Darcey & Anderson Pty Ltd (PDA) in 2002 as a casual survey assistant, learning the basics of surveying and subdivision design. My key responsibilities are party leader on detail survey teams, the design of roads, pavement design, preparation of design plans and as constructed plans and the supervision of construction and contract preparation and administration. Stormwater drainage, sewerage and water supply design for residential and rural subdivisions using Geocomp, Land Desktop Development, Geocivil and Autocad. Stormwater and sewerage calculations are achieved using spreadsheets and the Drains software.

Since starting with PDA, reporting to the CPEng I have been responsible the design of urban and rural residential subdivisions throughout northern Tasmania. Some of the subdivisions I have been involved in have included a 100 lot subdivision in Turners Beach which required the stormwater analysis of the existing infrastructure south of the

highway and subsequently the design of a new stormwater main over 1km in length, the design of a multi staged urban development in Ulverstone of over 300 lots, which required the design of a series of detention basins as well as temporary water pumping stations until a new reservoir and pump station are required and multi staged urban developments in Burnie Port Sorrel and Shearwater.

In 2007 I transferred to our Launceston office of Campbell Smith Phelps Pedley (CSPP). Whilst there I worked on a number of different subdivisions, giving me the opportunity to work with different councils and the different standards they adopt.

In 2008 I transferred back to the Burnie Office and am continuing with developing my experience and knowledge.

## CONGRATULATIONS/ WELCOME

**Members joining, rejoining  
or upgrading**

### MEMBERS

Noe Escobar, MIEAust  
Neil Wainman, OMIEAust

### GRADUATES

Ning Apikhantikul, GradIEAust  
Benjamin French, GradIEAust  
Christopher Jackson, GradIEAust  
Daniel Longey, GradIEAust  
Mark Madura, GradIEAust  
Kym Petersen, GradIEAust  
Wing Sun Yap, GradIEAust

### STUDENTS

(StudIEAust)

Allan Collins  
Beren Grosser  
Naomi Wilkinson

The Board of the Electrical College is now seeking nominations for the following awards:

### **M A Sargent Medal 2010**

### **National Professional Electrical Engineer of the Year 2010**

### **Graduate Electrical Power Engineer of the Year**

**2009**

**(there will be a later call  
for nominations for the  
2010 award)**

In brief, the M A Sargent Medal award aims to recognise career achievements. The National Professional Electrical Engineer of the Year award is an annual award for an outstanding senior electrical engineer who would be expected to be at (or near) the peak of his or her career, providing a role model for others. The Graduate Electrical Power Engineer of the Year award recognises excellent professional work during the six years following graduation.

Further details including nomination forms can be downloaded from:

[http://www.engineersaustralia.org.au/learned-groups/colleges/electrical-college/awards-and-competitions/awards-and-competitions\\_home.cfm](http://www.engineersaustralia.org.au/learned-groups/colleges/electrical-college/awards-and-competitions/awards-and-competitions_home.cfm)

**All nominations must be received by COB 31 August 2009.**

Further information available from 02-6270 6569 or via [electricalcollege@engineersaustralia.org.au](mailto:electricalcollege@engineersaustralia.org.au)

## Rod McGee Medal Student Award

Applications are now being accepted for the Rod McGee Medal which is open to undergraduate students in their final year of Civil engineering.

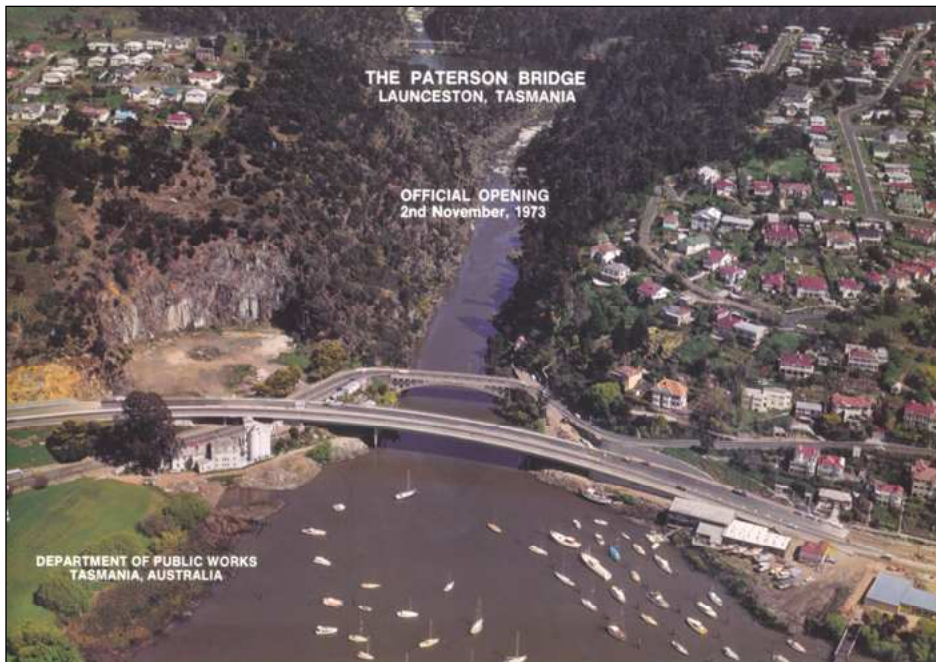
**The closing date for nominations is 21 August 2009**

Nomination forms are available at [www.engineersaustralia.org.au/rodmcgee](http://www.engineersaustralia.org.au/rodmcgee)


# MAKE IT SO I CAN MAKE MY OWN REAL BIKE OR CAR WITH BLOCKS

Make it so. With these three words we will show all Australians that the engineering team make things happen. The Make it so campaign aims to change the way Australians think and talk about engineering.

Visit [Makeitso.org.au](http://Makeitso.org.au), join our campaign, and Make it so.



**THE ROD MCGEE MEDAL 2009**



ENGINEERS AUSTRALIA INVITES APPLICATIONS FOR THE ROD MCGEE MEDAL 2009.


The Medal recognises and encourages civil engineering students to engage in career opportunities in public works engineering.

**CLOSING DATE FOR ENTRIES:**  
21 AUGUST 2009

The prize includes an engraved medallion and a \$2,000 cheque.

FULL INFORMATION AND RULES AVAILABLE FROM  
[www.engineersaustralia.org.au/rodmcgee](http://www.engineersaustralia.org.au/rodmcgee)

Proudly sponsored by



ENGINEERS AUSTRALIA 90th ANNIVERSARY  
**Looking forward. Looking back.**

## Engineers Australia 90th Anniversary

In keeping with the Engineers Australia 90th Anniversary celebrations this year, Engineering Tasmania will be featuring historical engineering imagery allowing us a glimpse into our past .....

The photo above taken by Vern Reid shows two bridges across the Launceston Gorge and illustrates the development in bridge design since the erection in 1876 of the Kings Bridge seen in the background. That bridge was fabricated in wrought iron in the UK and served both Trevallyn and the West Tamar traffic. When a second lane was needed in 1904, Salisbury's Foundry in Launceston fabricated an identical span in stronger material. The two-lane structure also carried a tram line to Trevallyn.

The Paterson Bridge in the foreground is for West Tamar highway traffic alone. It consists of steel box girders supporting a concrete deck on a curved alignment. Originally planned to be two lanes only, with perhaps several decades before a second carriageway was built, public agitation demanded that the dual carriageways be completed together. The two lanes on the downstream side were opened in March 1973 and the second carriageway followed in November 1973.



Vanessa King, MIEAust

# WOMEN IN ENGINEERING

Women in Engineering, Tasmania

**Attract. Support. Develop. Celebrate.**

Our mission is to increase the participation of women in the engineering profession and allow our member's aspirations to flourish.

## Events

We are very busy – spreading the word about engineering as a career for women!

### Engineering Week

#### Port Dalrymple

Amanda, Meredith, Cass and Fiona will speak with the girls at Port Dalrymple High School on Friday, 7 August (remember – the ones working on the F1 car challenge that we profiled some months ago).

#### AMC Lunch

Amanda, Meredith, Cass and Fiona will host a lunch for women engineers & engineering students at the AMC on Friday, 7 August. RSVP via email to [wietas@gmail.com](mailto:wietas@gmail.com)

#### Northern Dinner

WIE in conjunction with the Northern Committee and Northern YEAT Committee are planning to hold an informal dinner (all invited) on Friday, 7 August – contact us at [wietas@gmail.com](mailto:wietas@gmail.com) for details if you are interested. It's the same night as the Excellence Awards in Hobart: for those who can't get to Hobart, you can still have a "engie" night!

#### Burnie Careers Day

Meredith and Fiona will be speaking at the Careers Day at Burnie TAFE on Saturday, 8 August.

### Progress on Engineering and Girls at School

We're talking to three schools this term: Huonville High, St Mary's College and Dominic College.

The Huonville High presentation was held on 15 July 2009: Vanessa King and Meredith McQueen did a great job (if we say so ourselves!). We spoke to ~110 Year 7 & 8 students – boys and girls – and gave them an overview of what engineers do & the opportunities involved. There were lots of questions afterwards, which is always a good sign!

We also spoke with 8 girls from Year 9 & 10 who were specifically selected by the school as being interested in maths & science. With this smaller, slightly older group, we were able to have a more focused session, which was also valuable.



Vanessa (left) & Meredith with students from Huonville High

### Upcoming UTas Hobart Lunch

Refer to advertisement on the next page of this newsletter for further details.

## News

### CEW Scholarship Winners

The winners of the CEW/WIE Scholarship have been announced. They are:

- Elizabeth Brown, Director Education Training and Research, Engineers Without Borders, Brisbane.
- Michelle Shi-Verdaasdonk, Program Module Team Leader, Chassis Engineering, Ford Motor Company, Victoria.
- Sam Knight, Steelworks Co-generation Transition Manager, BlueScope Steel, Wollongong, NSW
- Dr Katie Third, Process Design and Sustainability Lead, W2W Alliance, Sinclair, Knight, Merz, Perth.
- Finalises in the Victoria/Tasmania Region were:
- Vicki Edwards Project Engineer, Monash CityLink West-Hate Upgrade Project, VicRoads, Melbourne.
- Kim Farrant Business Development Manager, Net Balance Management, Melbourne
- Georgina Mahony Project Manager, MR3 Melbourne Rail Franchise, Aurecon Australia Pty. Ltd., Melbourne

C'mon Tassie women, get those applications in next time!!

### 2009 Employer of Choice for Women List

The Federal Government's Equal Opportunity for Women in the Workplace Agency (EOWA) has released a list of organisations that have been recognised as an Employer of Choice for Women. The 2009 EOWA Employer of Choice for Women (EOCFW) list features 111 organisations ranging in size and spanning across all industries. To be recognised as an EOWA Employer of Choice for Women, employers are required to meet stringent criteria. More details at [www.eowa.gov.au/EOWA\\_Employer\\_of\\_Choice\\_for\\_Women/2009/Media\\_Page.asp](http://www.eowa.gov.au/EOWA_Employer_of_Choice_for_Women/2009/Media_Page.asp)

Of the 111 organisations, the engineering ones were:

#### Construction

- Boral Limited

#### Electricity Gas Water Supply

- United Water International Pty Ltd

#### Manufacturing

- Brady Australia Pty Ltd
- Estee Lauder Pty Ltd
- John Wiley & Sons Australia Ltd
- Kimberly-Clark Australia Pty Ltd
- The Shell Company of Australia Pty Ltd

#### Mining

- Alcoa of Australia Limited
- Chevron Australia Pty Ltd
- Energy Resources of Australia Ltd
- ExxonMobil Australia Group of Companies
- Rio Tinto Alcan Limited

No consultants. No other utilities.

All the big law & accounting firms, banks etc seemed to be represented. Also many businesses in healthcare, secondary & tertiary education.

Maybe that's why women aren't doing engineering – maybe engineering employers are not interested in being “employers of choice”. Those businesses are missing out on some very talented people . . .

The 2010 application form is due out soon - [http://www.eowa.gov.au/EOWA\\_Employer\\_of\\_Choice\\_for\\_Women.asp](http://www.eowa.gov.au/EOWA_Employer_of_Choice_for_Women.asp). Maybe your business should apply ???

WIE Tasmania is  
sponsored by GHD



CLIENTS|PEOPLE|PERFORMANCE



## FEMALE ENGINEERING STUDENTS!

### WOMEN IN ENGINEERING

## INVITES ALL FEMALE STAFF AND STUDENTS TO...

# LUNCH!

**What:** Lunch with Practising Engineers from the Tasmanian Women in Engineering Group

**When:** Tuesday, 25 August 2009

**Time:** 12:00 noon – 1:00pm

**Where:** The Staff Room  
School of Engineering  
Sandy Bay Campus

**Cost:** **FREE !**

**RSVP:** Meredith McQueen by  
Friday, 21 August 2009  
Tel: 6234 3217

[meredith.mcqueen@pda.com.au](mailto:meredith.mcqueen@pda.com.au)

#### WIE Committee Members:

Amanda Halley, Vanessa King, Meredith McQueen, Fiona Evershed, Erin Driscoll, Cassandra Blazely and Nyssa Muir

Email: [wietas@gmail.com](mailto:wietas@gmail.com)

# YOUNG ENGINEERS



*James Porter, GradIEAust  
Chair*

new minds.  
*new ideas.*

Anyone who regularly undertakes an out of hours recreation such as a sport or membership of a club will no doubt be aching for the daylight hours to once again extend either side of our busy working day, and most importantly, bring with it some warm sunshine goodness! I was lucky enough to recently travel to the United States to present at a major research conference in the turbomachinery field, and in doing so benefited from some stifling northern hemisphere summer warmth!

I returned from the trip with increased motivation for my research, and a few good ideas from observations of what others around the world were up to (or not up to); ticking almost all the boxes for desirable conference outcomes. The trip also allowed for a few days of touring in the US and Erin and I were fortunate to score a mattress on the floor of my cousin's apartment in the Upper East Side of Manhattan, New York City. We loved it, all the action, the shops, the people, the cleanliness, Central Park, and the Statue of Liberty. As I wandered around with my engineering eye open it impressed upon me just how marvellous the engineering of so many iconic buildings and constructions has been over the years, and how at the cutting edge of technology these engineers were in their time.

A prime example is the grand tower of New York – the Empire State Building. The result of a race between two leading businessmen to see who could build the tallest tower (the other being the Chrysler Building). It was an incredible feat of swift design, logistics, and construction.



*The grand tower of New York -  
the Empire State Building*

It took just 3 weeks for the plans to be drawn, and construction began on 17 March 1930 at a rate of 4 ½ stories per week. 60,000 tons of steel was brought in from the steel mills in Pennsylvania, 310 miles away, by train, barges and trucks. By 21 July they were working on the 40<sup>th</sup> floor and by 3 October, 88 floors had been completed. Even by today's standards, that is speedy. To achieve this rapid formation, new innovations in construction and assembly methods were devised and implemented with precision.

An equally impressive construction in NYC is that of the Brooklyn Bridge, spanning the East River and carrying traffic since its completion in 1883, some 13 years after construction began. A recent documentary series 'Seven Wonders of the Industrialised World' showcased the extraordinary construction methods and challenges faced, which included underwater blasting as the towers were progressively built on top of the working men. At the time of its opening, the bridge was 50% longer than any other before it and has become a treasured landmark in the United States.

Perhaps not on par in terms of ground-breaking engineering, but impressive nonetheless, are the creations of the Las Vegas strip; 3 miles or so of sparkles, grandeur, music and extravagance! An Egyptian pyramid, the New York skyline, an Eiffel Tower, an indoor system of Venetian canals complete with gondola rides, not to mention the largest bronze sculpture in the Western hemisphere (the MGM Grand Lion), and the tallest observation tower in the United States. The engineering involved in creating such a sight is certainly remarkable! The feature that grabbed me most, though, being a fan of fluids engineering, were the Fountains of Bellagio.



*The impressive Fountains of Bellagio  
in Las Vegas*

Put simply, they are a display of water jets choreographed to a range of soundtracks. Words and even videos simply cannot convey how magical and impressive the 1000 jets and 4000 lights are in combination, shooting water to a variety of heights, swaying to the rhythm of the music, and providing a truly breathtaking experience. A look at the WET Design website reveals the extraordinary engineering and technology behind the display.

As a young engineer it is exciting to think of the possibilities ahead, the projects you might be involved in, and the great achievements you will realise in the next 20-30 years. And those projects are not only overseas, but right here on our own little island.

There are many great engineers around us, and we have the important task of soaking up as much knowledge and experience as we can and then using that to develop new ideas and new solutions. With a commitment to excellence, and a definite focus and passion, the achievement of something great will follow, as has been demonstrated by those remarkable engineers before us.



Speaking of great engineers, **Thursday, 3 September** sees our **2008 National Young Engineer of the Year, Vaughn Grey**, coming to **Hobart** to share his many experiences to date in his career, including significant involvement with Engineers Without

Borders, and a range of projects relating to provision of infrastructure and skills to poverty stricken areas through implementation of clever engineering.

Vaughn's career to date demonstrates that excellence in engineering can take a range of forms and is not limited to building the tallest building or the longest bridge.

I encourage you to come along to Vaughn's talk and start to open your eyes to the sheer magnificence of all that engineers have and can achieve. I guarantee you will come away inspired and excited about being a young engineer, and find a renewed appreciation for the fantastic array of possibilities ahead of you.

James Porter, GradIEAust

It's your  
**CPD:** understand it...  
do it...  
record it...

..... visit [www.engineersaustralia.org.au/cpd](http://www.engineersaustralia.org.au/cpd)



new minds.

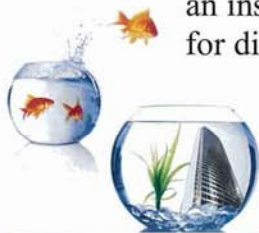
*new ideas.*

# Vaughn Grey

## National Young Professional Engineer of the Year



Come and listen to the adventures of an inspiring young professional and catch up with colleagues at our cocktail style function on 3 September. Vaughn has had a diverse career to date, and his intriguing story will provide an insight into the impact our combined skills can have on the quality of life for disadvantaged communities, locally and abroad. A talk not to be missed.



\*\* A registration form must be completed for attendance at this event.  
Download form at: <http://www.engineersaustralia.org.au/tasevents/>

When: 5.30-7.30pm  
Thursday, 3 September 2009  
Where: Old Woolstore Theatre, Hobart  
Bring: A friend  
Cost: \$10 (including food & drinks)  
**RSVP with registration form by Monday, 31 August** to [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)

# The Great GASBE



## THE GREAT GASBE

THE SCHOOL OF ENGINEERING WOULD LIKE TO THANK THE FOLLOWING  
MAJOR SPONSORS FOR THEIR GENEROUS DONATIONS TOWARDS OUR  
NEW MURAL

W A CROMARTY	\$1500
DEPT OF INFRASTRUCTURE, ENERGY & RESOURCES	\$1000
GHD PTY LTD	\$1000
POWERCOM GROUP PTY LTD	\$1000
SINCLAIR KNIGHT MERZ PTY LTD	\$1000
PITT & SHERRY	\$1000
TRANSEND NETWORKS PTY LTD	\$1000
AURORA ENERGY PTY LTD	\$1000
HYDRO TASMANIA	\$1000
MR RICK GUMLEY	\$1000
DR STEPHEN GUMLEY	\$1000

### SPONSORED NAMES

WARREN LEE	HEATH MACPHERSON	OLIVER HEYWARD
JOHN MACKAY	IAN COOPER	A R OLIVER
GRAEME GODDARD	OVE ARUP	ISAAC NEWTON
EDGAR HAERTEL	STEVE AVERY	RODNEY McGEE
DAVID JOHN MALE	REX WRIGHT WADSLEY	MARCEL DAYAN
IAN TULLOCH	J H BRODIE	LEN EDWARDS
GROTE REBER	GODFREY BURRELL	DR DAVE WOOD
MATTHEW AUSTEN	WILLIAM CROMARTY	RICHARD GRANT
PAUL DANGERFIELD	BRUCE INNOCENT	TIMOTHY JACKSON
ANDREW LING	WARWICK REED	TONY RYAN
BRYNNE TANTON	JOHN TANTON	ALAN LORIMER
PETER WATT	JOHN CRUICKSHANK	ALLEN D KNOTT
SIR ALLAN KNIGHT	DR SERGIO GUIDICI	
CAILLIN EASTWOOD-SUTHERLAND		
ISAMBARD KINGDOM BRUNEL		

IF YOU WOULD LIKE TO MAKE A DONATION OR BUY A NAME PLEASE  
CONTACT: [Jean.Weeding@utas.edu.au](mailto:Jean.Weeding@utas.edu.au) or phone (03) 6226 7868



**THE SCHOOL OF ENGINEERING**  
**ON THE OCCASION OF ITS**  
**50<sup>TH</sup> ANNIVERSARY ON THE SANDY BAY CAMPUS**

**INVITES YOU TO**  
**OUR CELEBRATIONS**

**FRIDAY, 4 SEPTEMBER 2009**

**GENERAL OPEN DAY FROM 10.00AM**  
**GUIDED TOURS OF THE FACILITIES**

**10.30AM**            **OPENING OF THE NEW LABORATORY**  
**FOR RENEWABLE ENERGY**

**4.00PM**            **UNVEILING OF THE TOM SAMEK MURAL**  
**&**  
**COMMEMORATIVE BUILDING PLAQUE**

**FOLLOWED BY A RECEPTION**  
**AT LAZENBYS BISTRO**



# SCIENCE & ENGINEERING CHALLENGE



The Challenge has again proved very successful with 5 heats held during July in Hobart, Launceston & Burnie. The results from each day are shown below with the winning school from each day and the three highest scoring second placed schools now to participate in the **State Super Challenge on Wednesday 12 August at the Moonah National Fitness Centre in Gormanston Road**. The winning team will represent Tasmania in the National Grand Challenge on 21-22 October in Bendigo.

Thank you to our major sponsors, the **Minister for Education, David Bartlett** and the **University of Tasmania** in making the Challenge possible in Tasmania. We also thank the many volunteers from Rotary and Engineers Australia by assisting with setting up and supervising the activities.

## LAUNCESTON

## HOBART

## BURNIE

DAY 1		DAY 2		DAY 1		DAY 2			
<i>Launceston Christian</i>	1,847.4	<i>Riverside</i>	1,750.2	<i>Taroona</i>	1,757.9	<i>Calvin</i>	1,814.7	<i>Reece</i>	1,793.5
St. Patrick's	1,595.6	<i>Exeter</i>	1,683.6	<i>Mount Carmel</i>	1,741.4	<i>Collegiate</i>	1,768.8	Burnie	1,661.2
Launceston Grammar	1,540.6	Prospect	1,618.3	St. Virgil's	1,595.5	New Town	1,744.5	Wynard	1,616.1
Queechy	1,416.4	Lillydale	1,520.7	St. Mary's	1,587.4	Huonville	1,682.7	Devonport	1,615.4
		Brooks	1,427.1	Emmanuel	1,562.5	Kingston	1,602.5	Latrobe	1,558.2
				Tasman	1,510.7	Friends	1,431.6	Parklands	1,355.5
				Dominic College	1,444.8	Rose Bay	1,430.3		
						Hutchins	1,325.0		



## HYDRO TASMANIA'S ASSET REFURBISHMENT PROGRAM

**DATE:** Tuesday, 25 August 2009

**TIME:** 6.00pm

**PLACE:** Engineering Lecture Theatre  
University of Tasmania,  
Sandy Bay



**ANDREW DILGER, MIEAust CPEng**  
**DAVID VAN EMMERIK**

Hydro Tasmania has been implementing an asset refurbishment program to secure future revenue and manage key asset risks.

The Gordon, Poatina and Tungatinah Power Stations form part of this program of works. The Project Managers for each of these projects will discuss the key features of each station refurbishment in a photographic rich presentation. The philosophy behind the overall asset refurbishment program will also be presented.

**RSVP:** Catherine Reading on  
6234 2228 or  
[creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)

**THIS MEETING WARRANTS  
1.5 HRS CPD**

# NORTH WEST GROUP

**DATE:** Wednesday, 5 August 2009  
**TIME:** 5.30pm Assemble for pre dinner drinks  
6.00pm Dinner  
7:00pm Presentation  
8:30pm Close  
**PLACE:** Ulverstone Civic Centre



## "Engineering challenges in design and construction of maintenance free industrial and mining structures"

Slawek Misiun will talk about corrosion problems for industrial and mining structures. This talk is targeted towards engineering design and construction, and shows how we can reduce maintenance cost and risk associated with corrosion for industrial and mining structures. The presentation is based on "hands on" case studies, dealing with common site problems, due to poor design and construction. It will also cover examples of excellent design engineering work, and show how to avoid costly maintenance and repair site work by following a few simple structural engineering rules and principles .

### Slawek Misiun

Slawek graduated from Gdansk Technical University in 1986, with a degree in Structural Engineering, and worked as a site engineer and design engineer, before moving to Australia in 1994. He obtained a Graduate Diploma in Municipal Engineering from the University of South Australia in 1996 and moved to Tasmania, working as a Structural Engineer. In 2003 he moved to Perth in Western Australia, working on industrial and mining projects. In 2004 he established his own consulting practice – Alpha Consulting Engineers and Managers, and he works as a sub-consultant for companies i.e. Rio Tinto, Newcrest, Western Power , Ausenco , Minara, Mancala.

**Meal Cost:** \$15 Members and partners and \$25 Non Members. **Attendance for the presentation only is free of charge at 7.00pm**

**RSVP:** Chris Martin on 6423 6588 by Monday, 3 August [chris@csetas.com.au](mailto:chris@csetas.com.au)

**THIS MEETING WARRANTS 1.5 HOURS CPD**

# NORTHERN GROUP

**DATE:** Thursday, 20 August 2009  
**TIME:** 5-30 pm Networking  
over drinks and finger food  
6-00 pm Meeting  
7-30 pm Finish  
**VENUE:** Tamar Yacht Club  
Park Street, Launceston

## "FACILITATING SUSTAINABLE AGRICULTURAL DEVELOPMENT"

### GREG STANFORD

Technical Manager & Deputy CEO  
Tasmanian Irrigation Development Board

The Tasmanian Irrigation Development Board is actively identifying and assessing the state's key irrigation assets to dramatically increase Tasmania's agricultural output to meet national and international demand.

Tasmania is in the enviable position of receiving 12% of the nation's rainfall on only 1% of Australia's land mass. The challenge to the board is to sustainably capture some of the run-off and use it for irrigation.

Some 12 projects are listed located in the North, NE, Midlands and South East with a total estimated cost of over \$300 million.

Greg's presentation will not only address the issues considered in determining the irrigation schemes, but will also highlight the engineering challenges peculiar to each scheme.

**RSVP:** Chris Luck by Friday, 14 August 2009 on 0417 349 688 or [cluck@pittsh.com.au](mailto:cluck@pittsh.com.au)

**THIS MEETING WARRANTS  
1.5HRS CPD**

**27 & 28 August 2009  
Salamanca Inn, Hobart**



# Managing Self and Leading Teams

This **two day** course is about gaining an understanding of your management style and behaviours in order to effectively manage others.

It takes participants through the performance management cycle, providing practical solutions to managing and leading people in a diverse workplace. It outlines the importance of communication and leadership skills in building and sustaining relationships and provides opportunities to practice giving immediate and ongoing feedback.

A particular focus on case studies, examples and scenarios to enhance learning.

**Target Audience** ➤ This course is for those who are managing teams, colleagues and stakeholders and want to gain a better understanding of themselves as a manager and practical solutions to managing others.

## ➤ Course Outline

### Introduction

Overview of the purpose and outcomes of program; pre-program work and expectations; building on the strengths of participants.

### Leading others

What is management and leadership; characteristics of effective leaders and managers; expectations of you as a manager and leader; the challenges of working within line management; effective delegation

### Role of the manager in setting clear expectations

The performance management cycle; expectations within the performance management cycle; how the workplace reflects covert expectations- workplace culture; articulating our expectations about the workplace – defining how to reinforce and how to change; working with an ongoing team, establishing team culture in a new team

### Effectively providing feedback

The feedback model – role of manager in providing feedback; acknowledgement and recognition; importance of ongoing and immediate feedback; a model for providing corrective feedback; the impact of emotions on the feedback process; a model for managing emotions when clarifying expectations

### Motivation

Role in motivating your teams; impact of own recognition needs on your style in providing feedback; motivating a diverse workplace, multigenerational.

### Adapting management style

Understanding management styles; situational leadership; understanding others needs and adapting your style to make the most of the relationships at work

### Managing yourself and your team

Getting the right amount of time with your team – working on the team versus on the business; resilience and coping- including having fun; a 'health check' for you and your team; dealing with stress; creating, monitoring and identifying changes

### Ongoing development of management expertise

Engaging your manager in supporting your development; preparing for a conversation/ presentation with your manager about your management style, learning's and ongoing development; the post- work process

## ➤ Course Objectives

At the end of the course participants will be able to:

- Understand the role and expectations of a manager and leader
- Recognise the challenges of working in line management and implement effective delegation techniques
- Understand the nature of workplace cultures and identify own team culture
- Implement tools and model for an ongoing performance management cycle
- Apply effective feedback techniques
- Implement strategies to build effective teams
- Apply basic coping strategies to manage stress in the workplace
- Implement an action plan to engage support with own manager for learning and ongoing development

**\$660 EA Members  
\$935 Non Members**

This program uses adult learning principles with a focus on case studies to enhance learning. It provides pre and post work resources to build on strengths identified by participants and to engage support from their manager for their ongoing development.

# CALENDAR 2009

## AUGUST

**Wednesday 5 - North West Group** - Engineering Challenges in Design & Construction of Maintenance Free Industrial & Mining Structures - Slawek Misiun (Alpha Consulting) - 5.30 for 6.00pm - Ulverstone Civic Centre - \$15 Members & Partners or \$25 Non Members - RSVP by 3 August to Chris Martin 6423 6588 or [chris@csetas.com.au](mailto:chris@csetas.com.au) (Refer to page 14)

**Friday 7 - Engineering Excellence Awards Gala Dinner - Black Tie** - 7.00 for 7.30pm - Wrest Point Convention Centre - \$90 per person or \$850 per Corporate table of 10 - To register please contact Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au)

**Thursday 20 - Northern Group** - Facilitating Sustainable Agricultural Development - Greg Stanford (Tas Irrigation Development Board) - 5.30 for 6.00pm - Tamar Yacht Club, Park Street, Launceston - RSVP to Chris Luck 6323 1926 or [cluck@pittsh.com.au](mailto:cluck@pittsh.com.au) (Refer to page 14)

**Tuesday 25 - Hydro Tasmania's Asset Refurbishment Program** - Andrew Dilger & David Van Emmerik - 6.00pm - Engineering Lecture Theatre, University of Tasmania, Sandy Bay Campus - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 13)

**Tuesday 25 - Women in Engineering - Lunch at the University of Tasmania, Hobart Campus** - 12.00noon to 1.00pm - Staff Room of the School of Engineering - **NO COST** - RSVP by 21 August to Meredith McQueen on 6234 3217 or [meredith.mcqueen@pda.com.au](mailto:meredith.mcqueen@pda.com.au) (Refer to page 7)

**Thursday 27 & Friday 28 - EEA TWO DAY SHORT COURSE - Managing Self & Leading Teams** - Grace O'Malley - 8.30am to 5.00pm each day - **HOBART** - \$660 (Members) - \$935.00 (Non Members) - Salamanca Inn - To register visit [www.engineersaustralia.org.au/tasevents/](http://www.engineersaustralia.org.au/tasevents/) (Refer to page 15)

## SEPTEMBER

**Thursday 3 - Joint Young Engineers & Young Professionals Network - Meet Vaughn Grey, EA's 2008 Young Professional Engineer of the Year** - 5.30 to 7.00pm - Old Woolstore Theatre, 1 Macquarie Street, Hobart - \$10 per person - RSVP to Catherine Reading 6234 2228 or [creading@engineersaustralia.org.au](mailto:creading@engineersaustralia.org.au) (Refer to page 9)

**Thursday 17 - Northern Group** - Learning from Storm Chasers - Prof Chris Letchford (Head of School of Engineering, UTas) - 5.30 for 6.00pm - Tamar Yacht Club, Park Street, Launceston - RSVP to Chris Luck 6323 1926 or [cluck@pittsh.com.au](mailto:cluck@pittsh.com.au) (Refer to this page)

## NORTHERN GROUP

**DATE:** Thursday, 17 September 2009

**TIME:** 5-30 pm Networking over drinks & finger food  
6-00 pm Meeting  
7-30 pm Finish

**VENUE:** Tamar Yacht Club  
Park Street, Launceston



### “LEARNING FROM STORM CHASERS”

**PROF CHRIS LETCHFORD, FIEAust CPEng**  
Head of School of Engineering, UTAS

Chris Letchford spent 8 years in the Wind Science and Engineering Research Center at Texas Tech University prior to taking up his position as Head of the School of Engineering at the University of Tasmania in June 2007.

In Texas, he lead physical modelling research of severe wind storms, participated in storm chasing and documented damage from hurricanes and tornadoes. The presentation will provide an overview of severe weather types, discuss where wind load codes need to be modified and provide some salient lessons from hurricane and tornado damage, particularly as regards to debris flight and impact.

### Contract Management Training

August - October 2009

COURSES PROVIDE CPD CONSISTENT WITH ENGINEERS AUSTRALIA GUIDELINES

Discounts apply to members of Engineers Australia

AUGUST		
18	Hobart	Contract Management Fundamentals
19-20	Hobart	Contract Supervisor's & Inspector's Course
21	Hobart	Advanced Contract Management
SEPTEMBER		
8-9	Melbourne	Contract Administration - Works
10-11	Melbourne	Advanced Contract Administration
OCTOBER		
27-28	Sydney	Advanced Contract Management for Superintendents
29	Sydney	Decision Making & Writing for Superintendents

MORE PUBLIC COURSES AVAILABLE AUSTRALIA WIDE

CONTRACT CONTROL INTERNATIONAL

P: (07) 3236 1936    [www.ccintl.com.au](http://www.ccintl.com.au)    E: [training@ccintl.com.au](mailto:training@ccintl.com.au)