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NEWSLETTER

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Message from the Chair IEEE Queensland Section

Dr Abbas Bigdeli

Email: abbas.bigdeli@ieee.org

This is our second edition of the newsletter for 2010. As I reported to you in the previous newsletter, this year marks the **25th anniversary of our Section** which was celebrated by receiving a special banner from IEEE President Elect, Dr. Moshe Kam at the Region 10 meeting in Cebu, Philippines back in the February.

We also had another occasion to celebrate since I wrote to you in our last newsletter. It is with great pleasure to inform you that we now have a new affinity group formed in our Section: **Women In Engineering (WIE)**. Forming WIE affinity group has been on our wish list for the past several years and this year I was privileged to have the extraordinary support from our Vice Chair, Roelof and our interim WIE Chair, Sandra Mau, who championed the petition to form the new affinity group. So I must congratulate them both for successfully forming our newest affinity group. I had the honour to attend the launch event at QUT in July where we had an exceptional speaker for the event. I invite you to read the report from our interim WIE Chair in this newsletter.

I am pleased to report that most of our technical chapters have held several events through the year to date and even more are planned for the remaining months of 2010. I invite you to see the details of the upcoming events in this newsletter. You will always find detailed information about the scheduled events in our newsletters and our brand new website (www.ieee.org/queensland).

Section Committee Changes

Mr Roelof Swanepoel

Vice-Chair, IEEE Queensland Section

Email: roelofs@ieee.org

There have been a number of changes to the Queensland Section committee since the last newsletter.

Our previous Secretary, Bart Sedgwick, has relocated internationally. We wish him the very best with his ventures, and thank him for contributions made to the section during his tenure! Jasmine Banks has also resigned as counsellor for the QUT Student Branch.

We would like to welcome the following new members (in no particular order):

Mandar Gujrathi - Secretary

Jan McSweeney - Educational Activities Chair

Steven Lawrance - Student Activities Chair

Farhad Dadgostar - Professional Activities Chair

Jacob Coetzee - Student Branch Counsellor (QUT)

As of 8 June 2010, Queensland Section also has a Women In Engineering (WIE) Affinity Group (see elsewhere in this newsletter for more information). The inaugural WIE committee members are:

Sandra Mau - Chair

Jasmine Banks - Vice Chair

The Section thanks these members for volunteering their time and expertise, and wishes them all the best in their roles!

Notice of 2010 Annual General Meeting and Dinner Lecture

Queensland Section's Annual General Meeting and Dinner will be held on the evening of **Thursday 25 November 2010**. Like the 2009 function, the event will again be held at the **University of Queensland Club, located on Staff House road, University of Queensland, St. Lucia**. Unlike in previous years, the AGM and Dinner will be held separately. More details will be forthcoming on this split.

IEEE members and their partners are welcome to attend both the AGM and dinner. Information on times, guest speakers and menus for the dinner will be provided at a later stage. Provisional pricing is as follows:

IEEE Members (full and student): \$40

Non members attending with members: \$70

Building on the changes made to the function format in 2009, this year's event will be open for attendance by members of other industry groups, making it a good networking opportunity. **Definitely diarise this date!**

Should there be any queries (specifically about industry group attendance) before further information is made available, please contact the Vice-Chair, Roelof Swanepoel, at roelofs@ieee.org.

Student Thesis Prize 2010

It is that time of the year again for our student members in Queensland!

The IEEE Queensland Section administers two annual thesis prizes for undergraduate students in Queensland universities: the **IEEE Student Thesis Prize** and the **ICPADM-Mat Darveniza IEEE Student Prize**. The former is open to students in all fields of Electrical Engineering and Information Technology, while the latter is restricted to thesis topics in the field of Power Engineering.

Eligibility for entry in the thesis competition, are as follows:

- The student must hold current IEEE student membership.
- The thesis must be submitted in the final year of study.
- For the ICPADM-Mat Darveniza IEEE Student Prize, the thesis must be adjudged to be in the field of Power Engineering.

The prize winners will receive a special certificate endorsed by the chairman of the IEEE Queensland Section, as well as a cheque for \$500. The prize also includes tickets to the annual Section dinner on 25 November 2010, where the award will be presented.

The thesis entries will be collected by IEEE student branch counsellors from 1 - 8 November 2010. After this, selection of winners will take place, and winners will be notified by Friday 19 November.

For more details on eligibility and process, please refer to the Student Prize page on the Queensland Section homepage: <http://ieee.org/queensland/>

Should there be any queries, please contact the following IEEE Queensland Section committee members:

Steven Lawrance (Student Activities Chair) : stl@ieee.org

Roelof Swanepoel (Section Vice-chair): roelofs@ieee.org

QUT Student Branch Update

Dr Jasmine Banks

Immediate Past QUT Student Branch Counsellor

Email: j.banks@qut.edu.au

A membership drive event was held on Fri 16 April 2010. Sam Wallace, an IEEE member, came along and talked about the benefits that IEEE membership has brought to his career. A record of 29 new members signed up on the day.

We also held the traditional raffle, with prizes of a USB hub calculator, and an IEEE cap. The event concluded with general networking and lunch.

Please contact us if you are interested in being part of the team and taking an active role in the IEEE QUT Student Branch. The Office bearers in 2010 are:

Chair: Jishu Das Gupta (j.dasgupta@qut.edu.au)

Vice Chair: Chris de Vries (cdevries@ieee.org)

Secretary: Kwok On So (k.so@connect.qut.edu.au)

Treasurer: Ian Pettet (ian.pettet@connect.qut.edu.au)

Webmaster: Hani Al Zaid (halzaid@isi.qut.edu.au)

QUT Student Branch Counsellor:

Dr. Jasmine Banks (jbanks@ieee.org)

Student Branch Counsellor Jasmine Banks will be stepping down from this role in July 2010, and the position will be taken over by Dr. Jacob Coetzee, Senior Lecturer at QUT. Welcome Jacob!



IEEE member Sam Wallace talking to the audience.

UQ Student Branch Update

Prof. Vaughan Clarkson

UQ Student Branch Counsellor

Email: v.clarkson@uq.edu.au

Previous Event: Lunch, St Lucia Campus

The University of Queensland Student Branch held a successful pizza lunch at the St. Lucia campus on Friday, 6th August. The Student Branch Chair, Nikky Holmes, the Computer Chapter Chair, Philip Machanick, and I briefly addressed the group, outlining the benefits of IEEE membership, Society and Affinity Group membership, and plans for future activities. There were about forty students in attendance. Once again, it was a successful recruitment exercise, with nine new student members signing up.

Student Power & Energy Chapter

An exciting new development for the Student Branch is the formation of a Student Branch Power & Energy Chapter following a successful petition. The interim Chair is Alexandra Price. Alex has been investigating options for chapter activities in Semester 2 and we look forward to some announcements soon.



Students enjoy a pizza lunch at the UQ Student Branch function on Friday, 6th August

GOLD Affinity Group Update

Mr Roelof Swanepoel
Chair, GOLD Affinity Group

Email: roelofs@ieee.org

Previous Events

The Queensland Section GOLD Affinity Group has had a very productive 2010 so far, with a number of co-hosted activities in the section.

With the help of our section's Professional Development chair (Farhad Dadgostar), GOLD and Engineers Australia ITEE branch co-hosted Mr Lachlan James from NICTA-QRL for a talk on *Venture Capital and Capital Fund Raising* on 24 June at the Hawken Auditorium in Brisbane. Mr James has a broad background spanning engineering, law and business. This, and his engaging style of presentation, made for a very interactive and informative evening indeed! Instead of presenting a pre-prepared list of topics, he took topics and questions directly from the audience of 25 people, and drew on his background to build the presentation around these items. The consensus afterwards was that this approach had definitely hit the mark.



Mr Lachlan James of NICTA-QRL presenting to IEEE and Engineers Australia members at Engineering House



Mr James explaining how venture capitalists invest in ventures



From left: Roelof Swanepoel (GOLD Chair), Farhad Dadgostar (Professional Activities Chair), Lachlan James (speaker), Robert Ellen (GOLD and EA-ITEE Vice-Chair), Brian O'Neill (EA-ITEE Chair)

The venture capital seminar was followed by a talk on 21 July by Dr Paul Darwen from James Cook University on *Commercialization of Research*. This function was co-branded by GOLD, and was held on the JCU premises in the Brisbane CBD. While it is generally accepted that start-ups don't fail because of inferior technology, but rather the people, Dr Darwen's presentation focussed on what areas of research have better odds of surviving in the marketplace once commercialised. This talk was the first in a series on related topics to be hosted by JCU, so watch this spot for future information!

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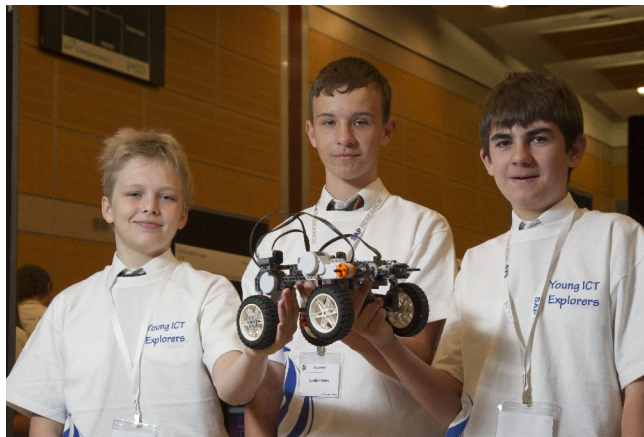
GOLD update continued...

Young ICT Explorers

On Saturday 7 August, the inaugural Young ICT Explorers event, sponsored by the University of Queensland, NICTA-QRL and SAP Research, was held on the UQ campus. This is a science fair type event, targeted at school children, focussing specifically on the areas of ICT (Information and Communications Technology). There were learners presenting their projects from all over Queensland, including a team from Cairns. The projects were of consistently high quality, which made judging a tough (but rewarding!) task. GOLD is proud to have supported this effort by volunteering 3 judges, and hope to continue support for this function in future!



Contestant, Teacher and Volunteer participants in the Young ICT Explorers competition at UQ Centre



A team of Young ICT Explorers contestants

Student Transition and Elevation Plan Event

GOLD is planning a STEP (Student Transition and Elevation Plan) event on the evening of **24 November 2010 at Staff Club on the UQ St Lucia campus**. If you are a final year student in engineering, and an IEEE member (or if you know one), keep your ear on the ground for forthcoming information on this event – it promises to be good one!

Keeping In The Loop

We want to thank those of you that have contributed so far, and encourage the rest to join us for the remainder of 2010! To be kept in the loop on activities, or provide ideas for same, contact Roelof Swanepoel (roelofs@ieee.org) or Robert Ellen (rellen@ieee.org). We are also available on Facebook and LinkedIn – just do a search for Queensland GOLD.

Women In Engineering (WIE) Affinity Group Update

Ms Sandra Mau
Chair, WIE Affinity Group

Email: sandra.mau@ieee.org

Inaugural WIE Event

The inaugural event of IEEE Queensland's Women in Engineering (WIE) affinity group was a great success! Despite the rain, over 30 engineers and aspiring young leaders came to hear guest speaker Else Shepherd, Chairwoman of Powerlink, share her experiences and words of wisdom, followed by networking over refreshments.



Else Shepherd, Chairwoman of Powerlink discusses her experiences in engineering with IEEE members and guests at QUT



Guests of the WIE launch network before Ms Shepherd's talk

At the event, we also announced the winners of our WIE Special Launch Offer so far -- For the first 10 members to sign up for WIE from 16th of May to end of this year, the Queensland Section will subsidise their WIE member dues for 2010. The winners were awarded with their reimbursement and a WIE prize pack. (Note that WIE is free for Students, Graduate Students and Life Members, but they still receive a prize pack.) The winners were:

- Anne Lyons
- Raheleh Eslampanah
- Dipal Shah
- Mary Tom
- Sharmin Choudhury

For those winners whom were unable to attend the event and for future winners taking up this offer before end of this year, we encourage you to pick up your prize at the next event or contact sandra.mau@ieee.org to make separate arrangements.

The attendees had a good time and made new contacts. They also helped by letting us know what types of events they would be most interested in attending. If you are interested in having your say as well, please fill out our online survey:

<http://www.surveymonkey.com/s/HNZDDGG>

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WIE update continued...

More about WIE

IEEE Women in Engineering (WIE) is the largest international professional organization dedicated to promoting women engineers and scientists. The mission of IEEE WIE is to inspire, engage, encourage, and empower women worldwide. The IEEE Queensland Section has formed this WIE affinity group to encourage networking at a local level. Whether you would like to meet other like-minded people, attend professional development workshops, or just be informed of the latest news, WIE has something to offer you.

Aerospace and Electronic Systems Chapter Update

Mr John Davies

Secretary, Aerospace and Electronic Systems Chapter

Upcoming Event

The AESS Chapter will be hosting a seminar on Mission Planning, to be held on the evening of 27 October 2010.

Topic:

Mission Planning Systems for Military Aircraft - Systems integration risks, certification and challenges

Presenter:

Mr Phillip Griggs, Sigma Bravo

Details will be advised by E-Notice closer to the event date.

Computer Society Chapter Update

Dr Philip Machanick

Chair, Computer Chapter

Email: philip.machanick@gmail.com

Previous Events

David Dart, who heads the R&D department for NOJA Power, a company doing some interesting embedded work for power grid infrastructure management, presented an IEEE Computer Society seminar on 27 July 2010, at the University of Queensland, St Lucia campus. The talk titled *Leading edge design solutions used to create the first arc fault contained solid dielectric 38kV pole mounted switchgear* covered some interesting ground in the industrialization of a product that has to operate in an unusually harsh environment. Use of computer-based modelling was a significant factor in reducing design and testing costs.

On the 9 September Dr John Williams, Founder and CEO of PetaLogix presented to both IEEE and Engineers Australia on the topic of *Embedded Linux on Programmable FPGAs for Fun and Profit* at Engineering House in the Brisbane CBD. John discussed the history, current state of the art and future of the embedding GNU/Linux operating system on Field Programmable Gate Array technology and talked about a real-world example of this configuration in the solving of a image processing problem.

Chapter Update

Philip Machanick (Chair), Jianming Yong (Vice-Chair) and Mike Robinson (Secretary) met on Saturday 24 July 2010 to discuss how to raise the profile of IEEE Computer Society in Queensland. Steps under consideration include finding a wider range of speakers for seminars, and finding common ground with other societies. Please send suggestions to Philip Machanick (philip.machanick@gmail.com).

Engineering in Medicine and Biology Society Chapter Update

Dr Mohan Karunanithi
Chair, EMBS Chapter

Email: Mohan.Karunanithi@CSIRO.AU

International Conference on Complex Medical Engineering

The IEEE QLD EMBS chapter was part of the organising committee and contributed as a financial sponsor for the 5th IEEE International Conference on Complex Medical Engineering (CME), held at the Gold Coast, Australia 13-15 July 2010. The number of attendants to the 2010 IEEE CME Conference was between 65 and 70. The IEEE EMBS QLD raised \$1000 to contribute towards the conference: \$500 from IEEE QLD section and \$500 from CSIRO for Student and best paper awards.

As part of the IEEE QLD section, the IEEE QLD EMBS chapter was able to host a workshop on "ICT Innovation in Health Care Technology in Queensland" on the 15th July 2010. This was a specialised workshop to highlight some innovative healthcare research and development projects being conducted in Queensland. The topics covered in the workshop were intended to give a perspective of applications towards their various sectors of healthcare services, which a patient would follow his journey through the health care system. Hence, the workshop covered topics from the alleviation of a crowded Emergency department to severe heart failure patients using artificial heart in an acute care hospital interventional procedure to the post-cardiac failure management via ICT based home cardiac rehabilitation to ICT innovation in mental health that would serve aged care. The workshop had 25-30 attendants. It stood out among the conference because of the broader covering of the innovative application to healthcare services.

Microwave Theory & Techniques / Antennas & Propagation Chapter Update

Dr. Karla Ziri-Castro
Chair, Microwave Theory & Techniques / Antennas & Propagation Chapter

Email: karla.ziricastro@qut.edu.au

Seminars and Distinguished Lecture Series

The MTT/A&P chapter is organizing technical seminars and distinguished lectures for the coming months. The date and time for the next seminars in the series will be announced by e-notices.

Major developments, such as the National Broadband Network, make this a very exciting time. In the chapter, we are looking to provide a forum for discussion of relevant topics in the area of microwave techniques as well as antennas and propagation. If there is a topic on which you would like to see a public event, or to which you would like to contribute, please contact us at: karla.ziricastro@qut.edu.au

The next event on the Seminars and Distinguished Lectures Program is:

Lunch with Dr. Richard Taylor: Microwave products using High Temperature Superconductors and new ceramics

Dr Richard Taylor is Founder and a former Director and Chief Technical Officer of Microwave and Materials Designs Pty Ltd, now Mesaplex Pty Ltd. The company was formed in 2002 to exploit the unique properties of High Temperature Superconductors (HTS) and other metamaterials to develop microwave products for mobile wireless systems. Since HTS operates at temperatures below 90K, products incorporating HTS must include a cryogenic cooling system.

Dr. Richard Taylor has been involved in the design of communications products since the mid 1980s and in superconductor technology for the past 10 years. He brings a wealth of theoretical and practical experience, plus a broad technological understanding of the process of R&D and commercialisation.

Dr Taylor will describe the growth of the multi-disciplinary team in the company and the back ground to the development of its unique microwave filters for mobile wireless telecommunications. He will present his views of in-house RF Design and mathematical modelling combined with experience in Material Sciences, that allowed him to introduce a range of innovative RF systems.

The event is scheduled for September. Date and venue will be advised via e-notice. Please stay tuned to your email for information on future events.

Power and Energy Society Chapter Update

Dr Mehdi Eghbal

Secretary, Power and Energy Chapter

Email: m.eghbal@uq.edu.au

Previous Events

The PES chapter has held four very successful events this year. These were:

How do we supply the world's energy needs? 21st June 2010

Speaker: Professor Derek Abbott, University of Adelaide

Grid Integration of Large-Scale Wind Generation 5th July 2010

Speaker: Professor Ian Hiskins, University of Michigan USA

Central Queensland University joined the seminar through video conference.



Professor Ian Hiskins



Professor Derek Abbott

IEEE Distinguished Lecture: Demand Side Management & Smart Grid 9th July 2010

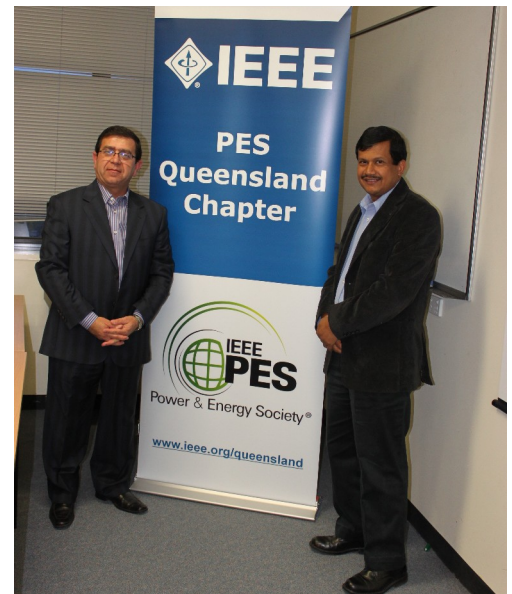
Speaker: Dr Bruno Meyer, RTE (the French Transmission System Operator), France

Demand Response Programs in Restructured Power Systems 24th August 2010

Speaker: Professor Mohsen Parsa Moghaddam, Tarbiat Modares University, Iran



PES Chapter Chair Prof Tapan Saha (right) introduces Dr Bruno Meyer



Professor Mohsen Parsa Moghaddam (left) with Prof Tapan Saha

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PES update continued...

Student Scholarship

IEEE Queensland section PES chapter has established a \$2000 travel prize for a student members to attend and present their papers at IEEE PES General Meeting conference in the US or Canada. This prize will be administered by the PES chapter of IEEE Queensland section and will be available for 5 years from 2010 – 2014. This year, PES chapter received 5 applications from the Queensland Section universities and the reviewer committee decided to share the prize equally between the two winners; Miss Mai Nguyen and Mr.Sudarshan Dahal. The winners received a \$1000 check during the IEEE seminar on 5th of July.

Membership Drive

The PES chapter held a membership drive event at Powerlink Queensland on 18 August. Powerlink operates and maintains Queensland's high voltage electricity transmission network and they employ a large number of electrical engineers.

Establishment of Student chapter of PES

The IEEE Student Branch Power & Energy Chapter was formed on 16 April 2010 as a result of a successful petition. Ms Alexandra Price has taken the role of Chair of the student Chapter for 2010.

Upcoming PES seminar

A seminar will be delivered on 16 September 2010 by Mr. Tim George, Executive General Manager of the Planning Department at the Australian Energy Market Operator (AEMO). This event will be held in conjunction with the IEEE Queensland Section Power and Energy Chapter and UQ student chapter.

An e-notice to the members will be issued in due course for confirmation.

Seminar details:

Date: 16 September 2010, Time: 3-4pm, Place: Hawken Engineering Building (50) Room N202. (Staff House Road, UQ St. Lucia Campus