



Institute of Electrical and Electronics Engineers
Queensland Section Newsletter
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IEEE Queensland Section Newsletter

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Vice Chair

Dr. Vaughan Clarkson

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Mr. Andrew Thomas

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Dr. Amoakoh Gyasi Agyei

Immediate Past Chair

Dr. Renate Sitte

Full list of office bearers is available on page 10.

From the Editor

Welcome to the second IEEE Queensland Section Newsletter for 2006. The aim of this newsletter is to provide a means of updating Section members with news and information of ongoing activities in Queensland. I have planned for three issues of the newsletter this year. The first issue has received several positive feedback. I hope you find this issue equally useful and informative.

In this issue, you will find updates on the activities of our technical chapters. On page 4, you will find a report about the inaugural function of our GOLD chapter. Recent graduates are welcome to join and participate in the chapter's activities.

I welcome any comments or suggestions for improvements. Selected comments and suggestions may be considered to be published in the next issue. If you have a word or two to share with us, please e-mail me at: yp.ong@ieee.org. Please keep your message short and concise, and within 100 words. In your e-mail, please include your full name and membership number.

Last but not least, the section's website is being constantly updated by our webmaster to provide you with the latest updates on the section's events and activities. So, don't forget to check the site for latest information.

Yong Peng Ong
Newsletter Editor, IEEE Qld Section

Find out about **Conference on Mechatronics and Machine Vision in Practice** on page 7.

From the Chair, IEEE Queensland Section

Dear IEEE Queensland Section members

On behalf of the Queensland Section Committee I would like to welcome you to IEEE activities for the second half of 2006. Recently we had our first affinity group meeting of Graduates Of the Last Decade (GOLD). This was a great start to form a GOLD affinity group in the Queensland Section. IEEE Queensland Section has funded the Section Secretary Mr Andrew Thomas to attend the IEEE Region 10 Gold and Student Congress in China to gain experience from activities in our region.



I am happy to advise you that the committee is working hard to implement a number of new initiatives. Accordingly, a number of vacant positions in the committee have now been filled. Congratulations to our new committee members: - Dr Andrew Bradley (Professional Activities Coordinator), Dr. Tony Ahfock (Educational Activities Coordinator), Dr John Williams and Mr. Simon Ellis (Chair and Vice Chair respectively of the Computer Chapter).

A number of IEEE Chapters of Technical Societies are in the process of organising distinguished lectures and seminars for the members of Queensland Section. Please keep yourself updated with your Chapter activities and your participation will help make IEEE more dynamic. You will always find detailed information about the scheduled events in our newsletters and website (www.ieee.org/go/qld). Once again, your participation in your local chapter can make a big difference, please contact your Chapter Chair for further information.

A number of membership drive functions will be arranged in the Queensland university campuses in the near future to encourage new student members to join the IEEE. Information for this year's IEEE thesis prizes (for undergraduate students) will be advertised soon. Your section committee is currently preparing for a unique AGM with a keynote lecture from a distinguished academic from USA. We shall update you soon through the newsletter and future announcements.

I am looking forward to working with all of you throughout the rest of the year.

Professor Tapan Kumar Saha
Chair IEEE Queensland Section

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FROM THE VICE-CHAIR

I just wanted to let you know some preliminary information about this year's Annual General Meeting. Please mark your diaries for the evening of Friday, 15th December. This year, the IEEE Queensland Section is going to try to raise the profile of the AGM and give members an incentive for coming along.

First, we're going a little up-market. We're going to combine the AGM with a dinner and an after-dinner talk. The venue will be the magnificent Customs House, that icon of Brisbane's colonial heritage, on the river at the end of Queen St. We have reserved the Lady Thies room for the AGM and the Art Gallery for the dinner and talk.



Second, we're delighted and honoured to have engaged the services of Prof. Robert Calderbank as our after-dinner speaker. Prof. Calderbank is Professor of Electrical Engineering, Mathematics and Applied & Computational Mathematics at Princeton University. Prior to that, he was Vice-President for Information Sciences Research at AT&T Labs and remains an AT&T Fellow. He is also a Fellow of the IEEE and has had a long history of distinguished service for the IEEE, which was recognised by an IEEE Millennium Medal. He has made numerous, highly significant contributions to the fields of coding and information theory and, while at Bell Labs, was part of a team that discovered space-time coding, a key enabling technology in next-generation broadband wireless communications.

It won't be necessary to come to the AGM beforehand in order to enjoy the dinner and talk but we would certainly like to encourage your participation.

Seating will be limited to 70 or so you'll need to be quick, once tickets become available. Please check the IEEE Qld Section's website regularly and watch the newsletter for further announcements.

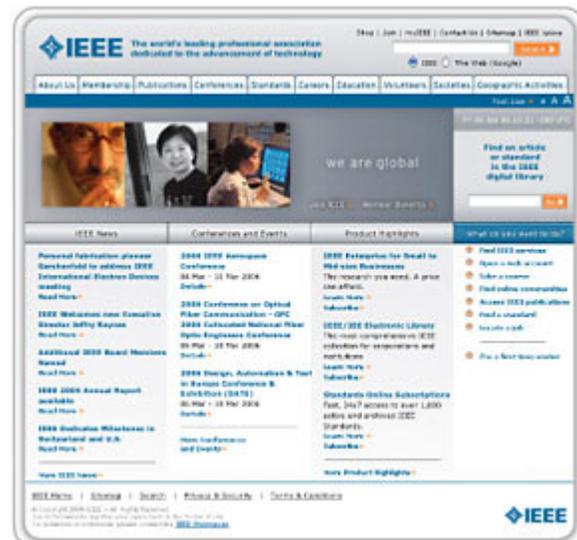
Dr. Vaughan Clarkson
Vice Chair IEEE Queensland Section

The New IEEE Website

The new IEEE website is easier than ever to access everything you need from IEEE. Inside, you will find reorganized information and a consistent style – along with everything you already expect to find at IEEE.org.

This new site is the product of extensive user testing and feedback, plus the most current web standards and best practices.

[Adapted from <http://www.ieee.org/>]



From the Secretary

Dear Queensland Section IEEE Members,

As mentioned in the previous issue of the newsletter, the first Queensland Section GOLD (Graduates of the Last Decade) function was held on 28th April. For those who do not know, GOLD is an IEEE affinity group and if you have graduated with your bachelor degree (and are a member of IEEE) within the last decade, you are automatically a GOLD member. The purpose of GOLD is to connect young professionals in the fields of engineering and IT to help facilitate the advancement of their careers within their chosen areas. This social function was well attended, with a number of Queensland Section members expressing interest in the goals of GOLD, and the prospect of activities being planned under the GOLD framework. As a result, a petition was signed on the night, with 12 signatories, which enables the formation of a GOLD affinity group within the Queensland Section.

This petition has been sent to the IEEE headquarters and the Queensland Section is waiting on the formal confirmation. However, when the final confirmation is received, a nomination and election process will be organised to elect the GOLD affinity group committee in the Queensland Section, so now is the time to think about whether you would like to be a part of this newly formed initiative. Also, while ideas for initial activities are being considered, new ideas for activities are always welcome, so if you think of an activity that will help the professional development of GOLD members, please don't hesitate to let me know. I look forward to hearing from you soon.

Photos from the GOLD function:



Best Regards,

Andrew Thomas
Secretary IEEE Queensland Section

From the Chair of the Computational Intelligence Chapter

Our chapter continues to have regular local activities that are well supported by the members. We are fortunate to have many very committed members. The teleconferencing meetings through the AccessGrid facility have been very successful in sustaining a sense of community of among geographically disperse membership. We have now surveyed most of the Computational Intelligence work in which our chapter members are involved, and I believe we are now much more aware of what we are doing as a professional community. In our last AccessGrid gathering we held a brainstorming session on future local activities moderated by Marcus Gallagher (UQ). The main outcome of this session was that we should now proceed into the future by showcasing the work done by postgraduate students in Queensland in the area of Computational Intelligence. It was agreed that the way to do this should be a one-day AccessGrid workshop where mainly postgraduate students report on their ongoing research. This event has been tentatively scheduled for 26 September 2006. All postgraduate students in the area, members and non-members, are invited to participate.

Another upcoming issue is the election for chapter office holders. Officers serve for two years. At least we need to appoint a vice-chair. We may also appoint a secretary, a treasurer and officers for other duties as required. To facilitate continuity the elections follow a staggered scheme where only the vice-chair is elected. The vice-chair becomes chair when the term the chair ends. Effectively this means a four year term for the chair. In order to get the scheme started I should have called an election for vice-chair early into my foundation office period. This has been delayed for several reasons, and it is now time to get the scheme rolling. My term as chair ends by the end of 2006. The vice-chair become chair should arrange an election around mid-year 2007 for the next vice-chair. I propose that we elect an vice chair at our September gathering, and herewith I call for nominations. I will post a list of candidates, and their short CV and statement, on our chapter web site by the end of August. You may nominate any chapter member or you may nominate yourself. Send nominations to me.

A big thank you to all who have participated so far.

Joaquin Sitte
Foundation Chair CIS Queensland Chapter

IEEE Quick Facts

- ☑ more than 365,000 members, including 68,000 students, in over 150 countries.
 - ☑ 311 sections in ten geographic regions worldwide.
 - ☑ about 1,570 chapters that unite local members with similar technical interests.
 - ☑ more than 1,430 student branches at colleges and universities in 80 countries.
 - ☑ 39 societies and 5 technical councils representing the wide range of technical interests.
 - ☑ 128 transactions, journals and magazines.
 - ☑ more than 300 conferences worldwide each year.
 - ☑ about 900 active IEEE standards and more than 400 in development.
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From the incoming Chair of the IEEE Computer Society, Queensland Chapter

First of all, thank you to those who took part in the recent election for the position of Computer Society Chair. As the successful candidate from that election, I look forward to working constructively with the membership and the IEEE Queensland committee.

My goal for the next two years is to strengthen the linkages between our three main constituent groups - industry practitioners, university academics and students.

In addition to rejuvenating the Computer Society seminar series, we are also looking into less formal gatherings, such as panel discussions or meet-and-greet events, to promote interaction among the membership.

I'd also like to hear from you - what do you want from your Computer Society? Please feel free to email me at jwilliams@itee.uq.edu.au with any comments, suggestions or concerns, and stay tuned for announcements of Computer Society events in the near future.

John Williams
IEEE Qld Computer Society Chair
Research Fellow, School of ITEE
The University of Queensland

The IEEE Annual Election

Annually, the IEEE members are requested to participate in the IEEE elections. This is your opportunity to provide input to determine who will serve on the IEEE Board of Directors, Regional Activities Board, Technical Activities Board, IEEE-USA Board and the Standards Association Board. The ballots for the IEEE Annual Election will be mailed on or before 1 September to all eligible IEEE voting members.

Get to know the platforms of Lew Terman and John Vig, candidates for 2007 IEEE President-Elect. A list of ten questions and the candidates' answers can be found on the web at <http://www.ieee.org/elections>. You can also check the link on that page for "Annual Election Candidates" for the most accurate and up-to-date information on all candidates and election categories.

Joint Chapter Control Systems/Robotics & Automation

A number of events are currently in planning for the remainder of 2006

Topic: The Technical Challenges of an Automated Telescope Observatory

Date: Monday, September 11, 2006

Location: Hawken Auditorium

Time: 5:30pm for a 6:15pm presentation

The Telescopes In Education program is one response to regenerating excitement in science, engineering and technology for school children. The program is designed to facilitate authentic science engagement through astronomical experimentation using a number of internet controlled telescopes around the world. These telescope observatories are often in remote locations (the closest is at Nanango in Queensland) with very limited (if any) human supervision. Completely autonomous telescope observatories pose a number of challenges in consideration of reliability, robustness and protection of investment from weather related damage (sun, wind and rain). Associate Professor Duncan Campbell, Andrew Keir (Project Coordinator) and some of the award winning students will present the technical challenges, and solutions to these challenges, in automating a remotely controlled telescope observatory which accommodates up to five telescopes. Such challenges include robust supervisory control of the observatory services and that of the telescopes themselves. Use is made of supervisory embedded controllers, proprietary network protocols and sustainable operations through power outages. Further information regarding the Australian arm of the Telescopes In Education program can be found at <http://www.bee.qut.edu.au/research/projects/ntqo/>

**The Thirteenth Annual Conference on
Mechatronics and Machine Vision in Practice**

December 5-7 Toowoomba

Call for papers: abstracts due May 1st 2006 (Now closed)

However full papers can still be submitted until the end of July

(Please forward papers to johnbill@usq.edu.au)

Papers will be reviewed to a standard that meets the DEST E1 criterion.

The topics of the conference are defined in its title, Mechatronics and Machine Vision in Practice- and the emphasis is on practical applications. Special encouragement is given to applications of robotics and machine vision in agriculture.

A book of selected papers (probably well over half) will be published by springer after the conference. Some of the papers from the 2004 and 2005 conferences will also be considered for inclusion.

Proposals for tutorial sessions (up to 1hr max) that can be included in the book are welcome.

For further information see the conference website: <http://www.m2vip.com>.

Topic: Robots and RT Systems in Human Environments

Date: 26th October 2006

Location: Hawken Auditorium

Speaker: **Professor Kazuhiro Kosuge** (Tohoku University, Japan)

More than 45 years have passed, since robots have been introduced for industrial applications as industrial robots. Robotics technology or RT, which has been matured enough to be applied to several systems in our daily life, is expected to be one of the key technologies for the aging society. In this presentation, we consider how the robotics technology has been and will be utilized in human environments. The word "robotics" means both the robot science and the robot engineering, although emphasis has been put on the scientific part in academia. Actually, the engineering part has also contributed a lot to produce many systems in our daily life. Recent home appliances, automobile technologies, power assisted devices, etc. will be introduced as examples of systems with robotics technology inside. These examples show how the robotics technology has brought us new attractive but relatively simple applications. The human-robot interaction is one of the key issues to bring the robotics technology into human environments further.

We introduce a mobile robot helper and distributed robot helpers as examples of human-robot interaction and coordination for handling an object. A walking helper and a wearable walking helper are introduced as robotic assistive devices. RT walker is introduced as an example of a passive realization of robotic walking assist systems. Finally, a dance partner robot, which plays a role of a female dancer, is introduced as a research platform for advanced human-robot interaction and coordination. The ballroom dance includes a lot of challenging problems. The dance is usually led by a male dancer, and a female dancer has to estimate the following step through the physical interaction with the male dancer in order to continue to dance. The dance partner robot has knowledge of a dance, estimates the next step led by a male dancer, and generates the step in coordination with the male dancer. The research on the dance partner robot will bring us new ideas of human-robot interaction and coordination. Some of the recent results will be introduced to show how the robotics for the dance partner robot is important for future robotic systems.

Call for Reviewers

Anyone who is interested in reviewing for the thirteenth annual Conference on Mechatronics and Machine Vision in Practice, please contact Prof. John Billingsley at johnbill@usq.edu.au. Additional reviewers will be welcome.

Congratulations to Assoc. Prof. Duncan Campbell (QUT) for his successful appointment to the position of vice-chair for the joint CSS/R&A chapter.

Special requests for specific seminar topics or speakers are also welcome. Please forward any requests to me at michael.lees@ieee.org.

Michael Lees**Chair Joint CSS/R&A Chapter IEEE Queensland Section**

From the Chair of the Power Engineering Society Chapter

1. New Vice Chair

The IEEE PES QLD Chapter announces its **new vice chair** – Dr Rajat Majumder. Dr Rajat Majumder finished his PhD in Jan 2006 from Control & Power research group at Imperial College London, UK. He has been working in power system stability related areas for the last 5 years. His research experience also includes working with ABB Corporate Research centre, Switzerland on FACTS controller design. He has published seven papers in highly reputed international journals (Transaction of IEEE and Proceedings of IEEE). He has been with UQ as a lecturer since February 2006. He has been providing services to this chapter as vice chair since June 2006.

2. IEEE PES DL Programs

The IEEE PES QLD Chapter had successfully organised two coming technical meetings as **IEEE Distinguished Lectures** by Dr. Sivaji Chakravorti, Professor of Electrical Engineering, Jadavpur University, Kolkata 700 032, India.

(1) IEEE DL program

Topic: **Transformer Fault Diagnosis**

Time: 1:00-2:00pm Monday 24 July 2006

Venue: General Purpose South Building, room GPS-420, The University of Queensland, St Lucia, QLD 4072

Entry: Free, all welcome

(2) IEEE DL seminar:

Time: 9:00 – 1:00pm, Tuesday 25 July

Program: 9am-10.30am: Topic: **Electric field analysis in HV systems**

10:30am-11:00am: Tea break

11am-1pm: Topic: **Modern tools for impulse fault diagnosis in transformers**

Venue: General Purpose South Building, room GPS-420, The University of Queensland, St Lucia, QLD 4072

Organisers: IEEE PES QLD Chapter and Energy Systems Research, School of Information Technology and Electrical Engineering, The University of Queensland.

Both events are very well attended and involved in-depth discussions. Attendees came from load power industry, universities and consulting firms. DL Prof Chakravorti had returned to India and was very satisfied with these events.

Dr Zhao Yang Dong

Chair of Power Engineering Society Chapter Queensland Section

Our section's webpage is available at <http://www.ieee.org/queensland>.



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