



Celebrating 125 Years
of Engineering the Future



The Institute of Electrical and Electronics Engineers, Inc.

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IEEE NEW SOUTH WALES SECTION
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Editorial

This edition we welcome a new Chair, celebrate the IEEE 125th year anniversary and as usual report on the many and varied Chapter activities for the past quarter.

As mentioned above, this year IEEE turns 125. During those 125 years countless technological breakthroughs have been made by Australian researchers which have positively changed the way we live. In future editions of Circuit I plan to acknowledge some of those breakthroughs and also profile individuals and companies that are currently working on new and innovative technology. If you are an Australian researcher or organisation working on such technology I would be grateful to hear from you.

As usual, in our July edition we call for IEEE NSW Section Committee nominations. There is no better way to be involved with your local Section than to be a committee member and I actively encourage you to nominate for a Committee position using the form attached with this newsletter.

Finally, in doing our bit for a cleaner and greener environment, the Committee has agreed that all future editions of Circuit (including the July edition) will sent by e-mail only. To ensure that future editions are received, now might be a good time to visit the IEEE membership page to check that your details are current (<http://www.ieee.org/membership/coa.xml>).

If you do not have access to e-mail and require Circuit to continue being posted to you, please complete and return the form attached on page 8.



Mark O'Mally mark.omally@ieee.org
Editor, Circuit Newsletter, NSW Section

1. Message from the Chair

During the Annual General Meeting of 2008 I was honoured to be elected as Chair of the IEEE NSW Section. I would like to take this opportunity to thank members for their support of this vital organisation and pledge to carry out my duties to the best of my abilities. One of my top priorities is to enhance the service for all of our members to ensure you gain maximum benefit from your IEEE membership.

As a personal introduction, before being elected into this position, I worked with IEEE for over 20 years and served as Chair and Vice-Chair in Singapore where I was heavily involved in activities and events in the Asia Pacific. I received my Undergraduate, Master's and Ph.D. degrees in Computer Science, Pure Mathematics and Electrical Engineering from Manchuria, Chinese Science Academy, the Ohio State University, and the University of Sydney, respectively. I have been teaching for 28 years at tertiary institutions in different parts of the world - Ohio State University, University of Sydney, Singapore and most currently, Charles Sturt University (CSU). My interests are in the areas of geographical information systems, image and signal processing, telecommunications, education theory, biomedical engineering and modern politics.

Currently I am teaching project management and computer science at CSU and also serve as the Secretary of National Tertiary Education Union, CSU Branch.

Serving Members

One of the main purposes of IEEE is to provide a platform for academics and engineers in tertiary institutions, government agencies and industry to meet, exchange ideas, and establish professional networks. I believe that in order to achieve the recognition we deserve, engineers, computer scientists, IT professionals and academics have to go beyond narrowly defined subject areas and constantly acquire a global technical and social perspective.

Current Initiatives

Currently there are over two thousand members in NSW and many would like to see enhanced service and benefits for members. As the Chair of IEEE NSW, I am committed to setting up structures which serve all IEEE members. Since taking over the Chair in January 2009, I have proposed and set up several structures for enhancing member benefits and services and take this opportunity to call for expressions of interest from you to join our efforts. Some of the structures we are looking at developing include:

- *Industry and Government Liaison Initiative*

The majority of our members are working in industry. Efforts have been undertaken by IEEE NSW to serve those members to gain both government and industry support for education and research activities. The outcome of these activities has been positive, resulting in the willingness of several government agencies and industry bodies to provide expertise, assistance and sponsorship for future activities.

- *ARC Linkage Liaison Committee*

The Australian Research Council's Linkage Scheme funds research conducted by researchers at higher education organisations such as universities in partnership with businesses, community organisations and/or government organisations. The linkage scheme requires a relatively small cash commitment from industry partners. However, researchers at universities find it difficult to clearly identify the needs of industry and government agencies, and at the same time, some industry partners are unaware of the fact that the cash funding made available by the government can assist them to hire high quality researchers to work on their projects. To solve this problem, an ARC Linkage Liaison Committee has been established to help match university researchers with industry and government partners to obtain this funding for joint research.

- *Continuing Education IT Accreditation Initiative*

Efforts are being made by the IEEE NSW to set up a Continuing Education Committee to bring experts from industry and academia to offer technical courses to the general public.

- *Conference Liaison Committee*

The aim of the Conference Liaison Committee is to co-ordinate the IEEE conferences hosted in NSW and to negotiate discounts for the members of NSW Section.

Final Words

If you are interested in participating in and contributing to the initiatives mentioned above, please do not hesitate to contact me. I am looking forward to meeting you some time during the year.



David Tien dtien@csu.edu.au
Chair, NSW Section

2. News in Brief

2.1 Optus National Management Centre (NMC) Industry Visit

The purpose of the Optus NMC Visit on 16 April 2009 was to promote the Optus Centralised NMC to professionals associated with the IEEE, IET and Engineers Australia.

The Optus NMC visit was conducted within the Optus NMC Meeting Room. Eddie Fong commenced the session at 2:30pm by thanking the visitors for taking time to attend on behalf of Optus, the Joint Institutions (IEEE, IET and Engineers Australia) and as the Chair of the Joint Institutions Activities Committee, Vice Chair of IEEE NSW Section. Eddie provided some background on the new operating center before handing over to Eric Albina. Eric started the information session by showing a brief video clip of the Network Management Centre and the Optus Network. After the video clip, the NMC Meeting Room blinds were opened and Eric gave a comprehensive explanation of the NMC groups, their functions and discussed the layout of the NMC including the desk setup, alarm platforms and the video wall. This was followed by a question and answer session.

If you would like to assist in the formation and development of the IEEE WiE group, I would be eager to hear from you.



Members attending Optus Industry Visit

More than 23 members ended up attending highlighting the interest in such visits. If you think IEEE members would benefit from a visit to your company, please contact the Editor.



Eddie Fong eddiefong@ieee.org
Chair, Professional Services & Joint Institutions

2.2 NSW IEEE 125th Anniversary

The IEEE 125th Anniversary is being held on 7 August 2009. The attached flyer provides detailed information on the event as well as a booking slip - RSVP 17 July 2009. We look forward to seeing you there!

2.3 Women in Engineering (WiE)

I have found it very challenging to set up an IEEE NSW Women in Engineering group. The main reason being there are many non-IEEE engineering groups around NSW, such as those formed by Engineers Australia and UTS as well as other universities.

In my endeavour to find interest from non IEEE female members I met with the Director of Women in Engineering at UTS. She said she would be interested to come for a meeting, however due to a very heavy workload this semester I have had little time for community engagements. Next semester, however, I will be on research leave and aim to call for a gathering to form the NSW IEEE WiE group.

The objectives of NSW IEEE WiE will be:

- to encourage young female students to study engineering;
- to offer support to female engineers in time of crisis;
- to encourage female engineers to take up postgraduate study; and
- to have some "fun" time social gatherings.



Kim Chin Kim.Chin@acu.edu.au
Group Leader, Women in Engineering (WiE)

2.4 Life Members Affinity Group

On 7 May 2009, the Life Members Group successfully presented, under the popular 2009 Lecture Joint Electrical Institutions Program, a lecture by Dr Phil Watts, a well known Forensic Psychologist from Perth. Phil followed on from his visit to Sydney last year by providing us with an entertaining presentation with video clips on how to develop one's skills to survive cross examination in court.

Phil has written a book "Surviving the Witness Box: Expert Opinion in Court" (ISBN:9780975604229) and after the lecture many of the participants purchased signed copies. If you missed this opportunity the book can be purchased by writing to: Ogilvie Publishing, PO Box 1084, Canning Bridge, 6153.

Energy Australia donated their auditorium on George Street and over 70 IEEE, Engineers Australia and IET members emailed RSVPs, which greatly assisted us with the smooth running of this event. Many thanks are offered to life members "Zac" R. Zakarevicius and Graeme Gwilliam, who assisted me with the running of the lecture. Thanks also to Tony Zaglas, who organised for some excellent light refreshments and Olivia Robinson who dealt with the processing of the RSVPs. After the meeting seven IEEE members joined Phil for dinner at Cello's Restaurant, Castlereagh Boutique Hotel.



Attentive Audience at Phil Watts' Lecture

The next Life Members meeting will be held at the 125th Anniversary dinner. In David Burger's absence, Zac has kindly offered to present on the history of the IEEE, starting with the AIEE (American Institute of Electrical Engineers) which was founded in 1884. For a taste test you might like to visit our history webpage which details the growth and globalisation of the organisation over the last 46 years: <http://www.ieee125.org/about/history.html>.

We have invited one of our longer serving members in New South Wales, Mr. Phil Dulhunty, a very well known entrepreneur in Australia's Electrical Industry, to speak at the dinner. Phil was awarded the James N. Kirby awarded presented by the IET during 2008. This should be a wonderful event not to be missed. Tickets can be ordered on the attached form.



John L Robinson jl.robinson@ieee.org
Chair, Life Members Affinity Group

2.5 First Inaugural UNSW Postgraduate Poster Competition - 7 August 2009

IEEE UNSW Student Branch is holding its first iToF (IEEE Technology Of the Future) poster competition this August. The aim of the poster competition is to give postgraduate engineering students the chance to present their research or thesis not only to the university community, but also to active research organisations in related areas.

The competition consists of the following six themes, and there is a \$300 industry sponsored prize per theme:

1. Energy and green environment
2. Improving quality of life
3. Fast, reliable and secure
4. Towards miniaturisation
5. Entertaining the world
6. Automation and adaptation

Should you require more information on the Poster Competition or wish to attend, please contact us on ieee@cse.unsw.edu.au.



Sara Hakami sara.hakami@ieee.org
UNSW Student Branch

2.6 Bits and Pieces

The Journal of Applied Research in E-learning has been established to address the paucity of research publication avenues with a particular emphasis on e-learning in organisational and workplace settings. It is a fully online journal, and an official publication of the E-learning Network of Australasia (EINet), Australia's only national e-learning association.

The journal's Web site is now live at <http://journal.elnet.com.au/impact/>. All those with an interest in workplace/organisational (e-)learning, training/development, human performance technology / performance improvement, knowledge management, adult/vocational education and cognate areas are invited to register for a free account at <http://journal.elnet.com.au/index.php/impact/user/register>, to enable them to view open access content on the site when it becomes available, and allow them to receive notifications of newly-published issues.

2.7 Welcome to our New and Upgraded Members

From February to May 2009, we have the following new and upgraded members:

Senior Member Grade

David J Moss
Arjun B Mehta
Joe F Chicharo
David T Johnson
Craig T Jin
John Plaice
Mr Yang Wang
Eduardo M Nebot
Scott Humphreys
Dah Chuan Lu
Peter J Schreier
Yonghui Li
Seung Jin Lee

2.7 Welcome to our New and Upgraded Members (cont.)

Member Grade

Paul V Hathaway
Philip A Cooney
Stephen Bignucolo
Parui S Chandra
David W Moore
V M Tohadze
Ross W Mark
Teddy S Jayadiwangsa
Ian J Carpenter
Phuoc Van Do
Sri Parameswaran
Trevor A Smith
Oscar R Pizarro
Andrew J Kleinert
Peter M Conolly
Stephanie I Preston
David A Coward
Colin G Elston
Renato Knox
Peter L Storey
Say H Khor
W Keerthipala
Stephen J Moore
Paul J McMahan
M A Ott
C I Blake
Allan Reid
Salvatore Mattera
G Wilson
S Bahlendran
Barry F Finlay
Hoang Duong Tuan
Kannan Balakrishnan
Jahan C Peiris
M P Goldsworthy
T Kathirgamingam
Manish Rastogi
Branislav Hredzak
Michael H Biber
Keith D Cohen
Xiaogang Zhang
Jol Valentine
Nathaniel Oliver Lewis
Pejman Mansouri
Murat Berk Uenlue
Daniel John Lavis
Marie Tiang
Xiaofeng Wu
S Kalyanasundaram
Satyam Roy
David Crosby
Jason Caruana
Douglas E O'hara

Lin Chi Mak
Srikumar Venugopal
Justin L Fitzroy
Frances V Russell
Dan Azriel
Adrian Hobbs
Antonypillai J Francis
T Murugesu
Shahrukh I Islam
Daniel A Powell
Andrew J Aupek
Ben Leslie
James Goh
Bingxuan Xie
Steven Bleistein
Nicholas L Engel
Ross A Perusco
Heidi B Stratti
Ting Yu
Kostia A Robert
Paul G Fudge
Brenton D Thomas
Bin Cheng
P Paravithana
Finian Byrne
Chung Chan
Wai-lun A Woo
Wei Li
Kha H Ha
Adrian M Mediolli
Yian Sun
Jonathan David Point
Nick Sinnis
Crystal Huang
Marcin Kozik
Yue Yu
Decler Mendez Hague
Yading Li
Gregory Leigh Wright
Craig Hume
Steven Douglas Mitchell
Jimmy F Kharas
Wai Yat Wong
Chris Rizos
Martin Edward Gosnell
Robbie Burns
Natalie Zotelo
Graham J Meyerowitz
Garry Noel Taylor
David Keith Sweeting
Imran Saad Rabbani
David Claydon
Wei Wang
Sam Argyrakis

Carlo Larocca
Philip Chung
Alexander V Danilo
Thai M Huynh
Ivan Perez-Wurfl
David L Death
Dawit Seyoum
Akhtar A Pirwani
Mark V Bishop
Tony M Nygard
Narelle L Clark
Kankana Chakrabarty
David R Mcghee
Ben Barnes
David Napier
Boris Torban
Yuen Kuan Yong
Hoang Phung
Adrian Macarthur-King
Sivaram Hariharan
David J Griffiths
Christopher Mario Mendes
Andrew Litchfield
Oscar Perez Concha
Damian Edgardo Marelli
Reza Hashemi-Nezhad
Grant Alan Hampson
David T Bullock
Stuart Dale Jackson

Affiliate Grade

Priyabrata Hazra
Pravin M Prabhu
Robert A James
Jui Yi Wu
Ravi Chotalia
Toni Gluseski
Andrew J Robertson
Tianbing Xia
Rajiv Ranjan
Paulo Lourenco

Grad. Student Grade

Joao Carlos Aydos
Joshua Ross Wall
Sean E Luskey
Irwin Gan
Michael L Smith
Qestra Mulqueeny
Mo Li
Ioakim Marmaridis
Jon E Davis
Gilbert Verdian
Jose Alejandro Monroy

Kenneth Lam
Xin Zhao
Chung-How Poh
Scott N Penfold
Kumudu S Munasinghe
Hock Chuan Liew
Khaled Khankan
Fan Bai
Qim Yi Lee
Dayong Ye
Basem Suleiman
Mu Qi
Nishad Rasanjana Mendis
Daniel John Watman
Roba Abbas
Badrul H Mohammed
Stephen Joseph Dowdell
Boyang Hu
Juan Ostos
Amr Al Abed
Qianlu Lin
N R J Lawrance
Minsoo JANG
Phee Lep Yeoh
Abhaya Parthy
Neda Aboutorab
Nassir Fakhouri
Tuan Thanh Nguyen
Tawit Uthaicharoenpong
Nejla Ghaboosi
Les Bell
Lei Li
Leanne Ngo
Tahir Mehmood
Yiwei Liu
Fahd Alharbi
Thomas Saerbeck
Tadeusz Wysocki
Anas M Aloudat
J G Suwart

Associate Member

U M S Perera
Graeme R Ellis
Simon B Haselgrove
Asghar Tabatabaei
Tony Wilfred Wright
Alex Liang
Emanuel D G Gomes
Lin Chi Mak

Student Grade

Katherine E Cassidy
Robert J Weir

2.7 Welcome to our New and Upgraded Members (cont.)

Student Grade (cont.)

Song Gao	Wai King Yong
Mentari Djatmiko	Anthony Setiawan
Lars Narushevich	Jia Hao Liew
Hao Chen	Manosh Nilanka Fernando
M S H A Zawawi	Sam Shan Jiang
Kai Zou	James Charles Ducker
Tarik Hussein	Shengjie Shao
Joshua P Toomey	Mohammad Chouair
Shoeb Sarkar	Mark Laurence Humphery
	Emma Ram
	Chris Walsh

3. Chapter News

3.1 Joint OCEANS/Signal Processing and Communications Chapter

Last month OCEANS'10 Sydney was successfully launched in Bremen at OCEANS'09. During the launch our new conference logo, web promotional material, format of the technical program etc, was revealed. Gary Speechley (DSTO) and the PCO (ICMS Australasia) representative were in Bremen promoting the conference, which is to held at the Sydney Convention & Exhibition Centre, Darling Harbour 24 to 27 May 2010

Call for papers will very soon be announced on the Oceans '10 Conference web page:
<http://www.oceans10ieeesydney.org/>.

Brian Ferguson brian.ferguson@dsto.defence.gov.au
Local Organising Committee Chair, Oceans'10

3.2 Power & Energy Chapter

Prof Lalit Goel, the Region 10 PES Chapters Representative covering the south part of Region 10 has confirmed the distinguished lecturer Saifur Rahman will deliver lectures to Brisbane, Sydney, Perth and Singapore mid August. More detailed information will be emailed to Chapter members in July.

I have also been considering running a series of stationary battery seminars like the ones we did in the early nineties with Marco Migliaro, a former PES Distinguished Lecturer. I have been able to track Marco down since he left Florida Light & Power in 2003. He is running two jobs at the moment, namely his own consulting business ESA Consulting Engineers and CEO of IEEE-Industry Standards & Technology Organisation, a not-for-profit company headquartered at Piscataway. Marco has spent most of his time in the battery area with data centres, utilities and

petrochemical facilities. Marco has recently been working on recommending a battery for a totally green data centre, where virtually all equipment in the data centre will be supplied directly by DC, thus eliminating the need for inverters.

Traditionally membership numbers decline in February of each year mainly due to late renewals. However, it was pleasing to see our membership has grown from 128 in February 2009 to 141 in May 2009, a solid 10% growth.

Joint Electrical Engineering Institutions Lectures coming up include Transformer Design for a Greener Planet speaker Rob Milledge ABB Australia on 25th June and Innovations in Power Cable Design speaker from Olex Cables on 23 July. All lectures are held at the Engineers Australia's Harricks Auditorium in Chatswood.



John L Robinson jl.robinson@ieee.org
Chair, Power & Energy Chapter

3.3 Computer Chapter

After a couple of years of minimal activity, the Computer Chapter is being re-invigorated. A number of presentations will be held in the second half of 2009 at a venue to be confirmed in the near future.

The proposed presentations are:

Dr. Peter White, lecture Charles Sturt University, will present his research into Identity based Access Management. Dr. White's research proposes a framework and architecture for IDbAM.

Bruce Talbot, BST Tech Consulting Pty Ltd, will present research into the tagging of information. The research and development is predominantly in the military / defence space and is designed to protect highly classified information.

Bianca Wirth, Government Technologist Microsoft Australia, will present research into Green IT.

If you would like to suggest other presentation topics or participate in the organizing committee please contact me.

Steven Woodhouse steven.woodhouse@ieee.org
Chair, Computer Chapter

4. Technical Meetings & Conferences

All members are cordially invited to attend these joint lectures with the Engineers Australia (EA), IEEE and IET. These joint lectures will be held at 6.00 pm (with light refreshments from 5:30pm) at the EA, 8 Thomas Street, Chatswood, NSW unless otherwise stated.

All members should check the latest updates of the Meetings & Conferences a couple of days prior to the actual date at the IEEE NSW News bulletins at: <http://www.google.com/calendar/embed?src=k3hz%40ieee.org&ctz=Australia/Sydney> and also the EA at http://www.engineersaustralia.org.au/events/events_home.cfm to prevent any potential disappointment due to last minute changes.

Date (2009)	Event/Meeting/Conference	Speaker	Host	Contact	Venue
25 June	Transformer Design for a Greener Planet	Rob Milledge - Technology Manager Power Transformers, ABB Australia	IET	Upali Mahaliyana	Electronic Flyer to be distributed providing more information
9 July	VOIP/SIP Protocol	Speaker from Alcatel Lucent	IEEE	Ian Collings	EA Auditorium
23 July	Innovations in Power Cable Design		IET	Upali Mahaliyana	EA Auditorium
2 – 8 August	Engineering Week			Eddie	Electronic Flyer to be distributed providing more information
13 August	Platform for Intelligent Network Communications (PINC)	The Energy Australia PINC control network for SCADA Protection & Corporate	IEEE	Ian Collings	EA Auditorium
27 August	Control System for the Process Industry		IET	Upali Mahaliyana	EA Auditorium
10 September	Technology past, present, future, for High Voltage Vacuum Switchgear	Kazuhiro Matsuo, Toshiba	EA	Mark Edmunds	EA Auditorium
24 September	Infrastructure Development – Effect of electrical power failures in major centres		EA	Chris Skineer	EA Auditorium
8 October	Ultra-CMOS Manufacturing	Peregrine Semiconductor	EA	Peter Henderson	EA Auditorium
22 October	Engineering Solutions to Economic Downturn	TBA	EA		Electronic Flyer to be distributed providing more information

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Mark O'Mally +614 11026960 or mark.omally@ieee.org

5. New South Wales Section Committee Nomination for 2010

The Nominations Committee invites members to submit nominations for appointments for the 2010 NSW Section Committee. Please complete and return the detachable form below by **30 August 2009**. The appointments for the NSW Section Executive Committee will be decided at the Annual General Meeting, to be held on 27 November 2009. The remaining Committee Members appointments will be decided in the first 2010 IEEE NSW Section Meeting on 1st February 2010.

The available appointments within the IEEE NSW Section are:

NSW Section Executive Committee – Chair, Vice Chair, Treasurer, Secretary Newsletter Circuit Editor Fellow Search Chair Membership Development Chair Professional Activities Chair Educational Activities Chair Student Activities Chair	GOLD Chair Awards and Recognition Chair Life Member Affinity Chair Nomination Chair Historian Chair Webmaster Conference Co-ordinator Chair Committee members
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Please detach-----

2010 Committee Member Nomination Form (Complete and return by 30/8/09)

Your Nomination (Name and appointment):

Your Name:..... Signature:.....

Member No:..... Member Grade:.....

Address:..... Postcode:.....

Tel: (H).....(W).....(M).....FAX.....

Email:

Kindly Post to: IEEE Committee, C/O AUSTRALIAN PROFESSIONAL CENTRE, PO Box 576. CROWS NEST NSW 1585
Or Fax: +61 2 94318677
Or E-mail: gb.qwilliam@ieee.org (please send scanned copy of completed form)

6. Continue to Receive Circuit by Post

Circuit is currently provided electronically from the IEEE NSW Section Website <http://ewh.ieee.org/r10/nsw>. Members will be notified by email when a new issue is posted on the Website. As mentioned in the Editorial, copies of **Circuit** will only be sent by paper mail on request. **If you require Circuit to be mailed to you, please complete the form below:**

Note: If you have previously returned this form, there is no need to send it again.

Please Detach-----

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