



The Institute of Electrical and Electronics Engineers, Inc.

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Secretariat

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IEEE NEW SOUTH WALES SECTION
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Contents:

page 2	Editorial, VTC conference, Teacher/Student Support Program, Volunteer Award
Page 3	New IEEE Fellows,
Page 4	Australian Engineering Week 2015, Communications, Signal Processing and Ocean Engineering, new BT/CE Chapter?
Page 5	ICT 2015, IEEE Conferences on Dielectrics, Power Electronics, and Sensorless Drives
Page 6	Sydney University Annual Student Research Conference, Life Members Affinity Group
page 7	Society on the Social Implications of Technology,
page 8	Education Society
page 9	Distinguished lecture on magnetic resonance imaging at Macquarie University
page 10	iToF 2014
pages 11-14	Power and Energy systems
page 15	New Vehicular Technology chapter
Page 16	IEEE Panel of Conference Organisers (POCO), Glasgow August 2015
Page 17	NSW IEEE elected officers for 2015
Pages 18-19	2014 IEEE NSW AGM
Pages 20-23	New and upgraded members.
Page 24	Free student memberships of the IEEE, and/or the Signal Processing Society,
Page 25	A brief and – we hope – comprehensive list of events for the next few months

Editorial: John Aitken has given up the job of Circuit editor due to pressure of – paying – work and I've taken it on. He had Adobe Pro (which somebody paid for) and I've got Libre Office 4.3, which is free, so the presentation is going to be simpler and a lot less colourful. Contributions in .doc format if possible. The .docx format mostly works, but Microsoft is trying to undermine Libre Office, so this may not last.

On a happier note James Patrick of Cochlear became an Officer in the general division of the Order of Australia in the 2015 Australia Day honours list. He's not a member of the IEEE, but he's definitely one of our kind of people, and we are happy to join in the congratulations. See page 20 at

<https://www.gg.gov.au/sites/default/files/files/honours/ad/ad2015/Media%20Notes%20-%20AO.pdf>

Vehicular Technology Conference 2017 Spring in Sydney

A successful bid has been made to bring the Vehicular Technology Conference (VTC) to Sydney in 2017. VTC is a highly successful IEEE conference run twice a year. VTC 2017-Spring will take place on 21-24 May 2017. It will be organised with the support of the newly formed Vehicular Technology Society Chapter in NSW (see page 11 of this newsletter).

Contact Professor Eryk Dutkiewicz, eryk.dutkiewicz@mq.edu.au.

Teacher/Student Support Programme (TSSP).

The NSW Section is continuing in 2015 to provide human and other resources to primary and high school students and teachers to assist in them having a better understanding of the STEM group of subjects. If successful, we might even get some good engineers in the future.

In November 2014, 2 workshops were conducted at the annual IIATE Conference in Sydney. During 2015 we are planning to establish the register of IEEE members who are interested in this programme, and willing to provide some time and effort assisting local primary and high school teachers (who are not engineers or scientists) have a better understanding of the Science, Technology, Engineering and Mathematics (STEM) subjects that they are now required to teach as a part of the ongoing developing National Curriculum.

This can be provided either by conducting workshops (for teachers only) or by assisting teachers in the classroom, and dealing directly with students. The latter can be both enlightening and gratifying as we 'oldies' come to grips with the values that the youth of to-day hold important.

If you are interested in further information please contact

Graeme Gwilliam

TSSP Coordinator

gb.gwilliam@ieee.org

Awards and Recognition

Graeme Gwilliam has been awarded the Region 10 Outstanding Volunteer Award for 2014.



Dr Gwilliam has continued his volunteer work on the Section Committee, PES and Life Members, he is currently serving on the IEEE NSW Section Nominations Committee and as TSSP Co-ordinator, Educational Activities Chair and Fellow Search Chair. His award will be collected by Section Chair Dr David Tien at the Region 10 Meeting in Dhaka, Bangladesh and will be officially presented to Dr Gwilliam at the 2015 AGM.

New IEEE Fellows in 2015



IEEE NSW Section Past Secretary and SP/COM/OE Chapter Chair Prof Iain Collings has been elected an IEEE Fellow for 2015. Prof Collings is Head of the Engineering Department at Macquarie University and was elected Fellow for his contributions to multiple user and multiple antenna wireless communication systems.



IEEE Consumer Electronics Society Past President and Past Computer Chapter Chair Stefan Mozar has been elected an IEEE Fellow for 2015. Stefan Mozar was awarded the IEEE Millennium Medal in 2000 and the IEEE Leadership Award in 2006. Stefan is Vice President Conferences and a member of the Board of Directors of the IEEE Product Safety Engineering Society and was elected an IEEE Fellow for development of safety solutions for electronic equipment.



SMC Chapter Vice Chair Prof Dacheng Tao from UTS has been elected an IEEE Fellow for 2015. Prof Tao is Professor of Computer Science with the Centre for Quantum Computation & Intelligent Systems and the Faculty of Engineering and Information Technology in the University of Technology, Sydney. Prof Tao was elected to the grade of Fellow for his contributions to pattern recognition and visual analytics.



Dr David S Taubman was elected Fellow for his contributions to image and video communications. Dr Taubman is a Senior Lecturer in Telecommunications at the University of New South Wales and Associate Editor of IEEE Transactions on Image



Prof Marcela Bilek was elected to the grade of Fellow for contributions to the science and application of plasma processes for materials modification and synthesis. Prof Bilek heads the Applied and Plasma Physics Research Group at the University of Sydney.



Ass Prof Wei Zhang was elected to the grade of Fellow for contributions to cognitive radio communications. Ass Prof Zhang works at the University of New South Wales School of Electrical Engineering and Telecommunications and is Editor of several IEEE Communications Society publications.

The NSW Section of the IEEE congratulates Profs Bilek, Collings, Tao and Wei, Dr Taubman and Stefan Mozar for their achievement.

Contributed by Anthony Zaglas, Awards and Recognition Chair.

Australian Engineering Week 2015

Australian Engineering Week(AEW) will be held between 3 and 9 August 2015. Major Events include the Harrick's Address, Forum, Great Engineering Challenge, Bridge Building Competition, Site Visits, WIE Gala Dinner, as well Events at several Universities and other venues.

AEW is intended to promote Engineering to school age students and to the community in general. Should you be interested in supporting or sponsoring AEW or participating with specific Events or Site Visits please contact Jenny Ha at JHa@engineersaustralia.org.au or Tony Zaglas at antonyz@ieee.org.

IEEE Communications, Signal Processing and Ocean Engineering



The 2nd Meeting of the IEEE Joint Chapter Communications, Signal Processing and Ocean Engineering was held at the IEAust facility in Chatswood. At this meeting there were two presentations – one to John Robinson Life Member and Antony Zaglas, SM for their long term participation and support of chapter activity. The certificate from the Signal Processing Chapter was awarded to them by Dr Brian Ferguson SM, Past Chair of the Chapter for the significant contribution to a successful year 2014.

Formation of NSW Consumer Electronics, Broadcast Technology, and Product Safety Engineering Society Joint Chapter

If you are interested in having regular activities in NSW relating to consumer electronics, broadcast technology, or safety engineering please support the formation of a NSW joint Chapter. We have more than enough members from these Societies in NSW to form a joint Chapter. To help with the Chapter formation, please contact Charlotte Kobert (IEEE CE Society Admin Manager) and provide your name, contact details (e-mail, phone number), and your IEEE Member number. Charlotte is based in the USA and can be contacted at ckobert@zbzoom.net.

We need 12 voting members from any of these three societies to sign a petition for the Chapter formation. So please state in your e-mail that you support the NSW joint CE, BT, and PSES Chapter formation. If you are interested in helping on the CE Society committee, please indicate this in your e-mail. Activities planned include Distinguished Lecturer talks, conferences, and workshops amongst others. If you have any questions about the NSW joint chapter formation, please contact either Colin or Stefan, or direct your questions to Charlotte Kobert, Our contact details are:

For Stefan Mozar – s.mozar@ieee.org

For Colin Elston- talbingo@optusnet.com.au

For Charlotte Kobert – ckobert@zbzoom.net

The 22nd International Conference on Telecommunications ICT 2015

The the conference committee of the 22nd International Conference on Telecommunications (ICT 2015) have announced that registration is now open for the conference.

Early-bird rates are available until 13 March 2015. Don't miss out on the opportunity to register at the early-bird rate. The on-line registration portal can be accessed through this link

: <http://www.engineersaustralia.org.au/ict2015-conference>

The TPC Co-chairs of ICT 2015 are Prof. Abbas Jamalipour (Uni Sydney) and Prof. Shahrokh Valaee (Uni Toronto). The conference will feature a number of interesting and timely keynote speeches, special sessions and tutorials.



IEEE Conference on Dielectric Materials

The 11th – 2015 – IEEE International Conference on the Properties and Applications of Dielectric Materials (ICPADM) is taking place in Sydney on the 19th to 22nd July 2015.

The Co-chairs of ICPADM 2015 are Professors Toan Phung and Trevor Blackburn of the University of New South Wales. For more detail, see the conference website

<http://www.icpadm2015.org/>

IEEE Conference on Power Electronics and Drive Systems (PEDS 2015)

The 11th IEEE International Conference on Power Electronics and Drive Systems(PEDS 2015) will be held at the Sydney Hilton between 9 and 12 June 2015. The Conference is biannual and is an important conference on power electronics and drive systems and will include tutorial sessions as well as Paper Presentations.

Don Mahinda Vilathgamuwa and King J. Tseng are the general chairs.

IEEE Conference on Sensorless Control for electrical Drives (SLED2015)

The 6th IEEE International Symposium on Sensorless Control for Electrical Drives (SLED2015) will be held at the University of New South Wales(Kensington Campus) on 7th and 8th of June 2015. See

<http://sites.ieee.org/sled2015/>

Fez Rahman is the general chair.

Sydney University 6th Annual Student Research Conference.

On 19 November 2014 Tony Zaglas and Bruce Poon attended the Sydney University 6th Annual Student Research Conference. The Conference is intended to showcase research being done by the Faculties of Engineering, Project Management and IT as well as promote links with professional organisations. The Conference sponsors included IChemE, Engineers Australia, Thales and IEEE NSW Section.

Prof John Patterson, Associate Dean Research, opened the Conference, and Prof Mikhail Prokopenko gave the Keynote.

IEEE NSW Section sponsored two prizes, one for the School of Electrical and Information Engineering and another for the School of Information Technologies.

The winners of the IEEE prizes were invited to the NSW Section AGM and Dinner where the IEEE Certificates and prizes were presented by Dr David Tien, Section Chair.

In all there were eleven prizes totalling more than \$4000 across all categories.



Dr. Tien presenting prize to Roman Marchant at AGM



Tony Zaglas presenting Invitation and Certificate to Aroba Khan at the Conference

I wish to thank Sydney University for organising the Conference as well as all the staff for their hard work and all the sponsors for their support.

Contributed by Antony Zaglas antonyz@ieee.org, Awards & Recognition Chair, NSW Section

Life Members Affinity Group

The NSW Section has a Life Members Affinity Group whose organising committee would like suggestions on how to make this group relevant to the needs of its members.

Also the committee is seeking volunteers to assist in the planning of activities.

Please contact Colin Elston (talbingo@optusnet.com.au).

Society on the Social Implications of Technology (SSIT)

The Society on Social Implications of Technology (SSIT) of the Institute of Electrical and Electronics Engineers (IEEE) is concerned with how technology impacts the world, and with how the application of technology can improve the world. SSIT focuses on issues such as: humanitarian engineering; environmental issues including climate change, green technologies, and sustainable design; privacy and security; other economic, health, and safety implications of technology; engineering ethics and professional responsibility; engineering education including k-12 and engineering education in social implications of technology; history of technology; public policy related to engineering, technology and science; health and healthcare technologies and impact; reliable energy and social issues related to energy, and social issues of information technology and telecommunications.

Activities include:

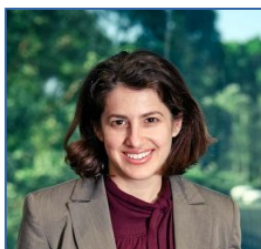
- IEEE Technology and Society Magazine, an award-winning journal containing both peer-reviewed and general interest articles.
- The International Symposium on Technology and Society (ISTAS), held annually. Support and sponsorship of additional conferences.[Nov 11 & 12, 2015 Dublin Ireland]
- An active network of SSIT chapters spanning the globe.
- Awarding of the periodic IEEE Carl Barus Award for Outstanding Service in the Public Interest.
- A Guest Lecturer program on critical topics of interest.
- Online discussion of social impacts of technology through forums, website, blogs, and social media. In Australia, you can follow www.thesocialinterface.com.
- Support for members who speak, publish and advocate on SSIT topics within the Society or as participants in other IEEE societies and professional activities.

The SSIT Australia Chapter is a joint chapter with the IEEE Australian Sections of Victoria (VIC), Australian Capital Territory (ACT), New South Wales (NSW), Queensland (QLD), South Australia (SA), and Western Australia (WA). It was established in Victoria in 2005, and expanded to cover other states in 2006. We are looking to become fully national with the inclusion of the Northern Australia Section in 2015.

Membership in SSIT is open to all IEEE members and student members. Affiliation with SSIT with all benefits except voting rights is available to persons who are not members of IEEE. For more information about joining SSIT, or to receive information about SSIT events, please contact the Chair of SSIT Australia Chapter, Lyria Bennett Moses (lyria@unsw.edu.au). You can also follow us on Twitter at @ssit_au or join our Linked-in group "IEEE SSIT Australia Chapter" at <https://www.linkedin.com/groups?home=&gid=1843561>.

Our current committee is as follows (we are always looking for more volunteers, so please contact Lyria (lyria@unsw.edu.au) if you would like to become more involved.

- Chair: Lyria Bennett Moses, Associate Professor in the Faculty of Law, University of New South Wales (UNSW) Australia
- Immediate Past Chair: Philip Hall, Principal Fellow, The University of Melbourne
- Secretary/Treasurer: Michael Rigby, PhD Candidate, The University of Melbourne
- NSW Coordinator: John Lewis, PhD Candidate, UNSW Australia
- VIC Coordinator: Michael Arnold, Senior Lecturer of Social Studies of Technology, The University of Melbourne



Contributed by Lyria Bennett Moses, Associate Professor in the Faculty of Law, University of New South Wales (UNSW) Australia

Education Society

Chapter Update

The chapter ended 2014 with a 40% increase in members, a chapter website, and a LinkedIn group. The new year has seen the chapter form a new subcommittee focused on Women in Engineering Education (WiEE). This is being led by Azadeh Safari. This year the chapter is planning a number of events to highlight the benefits of engineering education research, and membership to the society.

To keep up with the latest local discussions on engineering education, join the chapters LinkedIn group: <https://www.linkedin.com/groups/IEEE-NSW-Education-Chapter-6791976>

Great Opportunity Available – Engineering Education Winter School

The chapter has formed an alliance with the Australasian Association of Engineering Education (AAEE) to offer members a great opportunity to participate in an engineering education winter school. This is an immersive experience, bringing together engineering education researchers to learn about:

- Designing and undertaking effective education research projects
- Evaluating teaching and curriculum
- Positioning evaluation and research activities in light of current trends
- Appreciating and responding to national and local grant opportunities
- Building collaborative research partnerships across Australia and beyond

The five day winter school will be held at the University of Wollongong from the 6th to the 10th of July 2015. The Winter School will be facilitated by experts in engineering education research in Australasia, including Dr Lesley Jolly from Strategic Partnerships, Dr Matt Eliot from CQU, and Dr Llew Mann from Swinburne University of Technology. All facilitators have extensive experience in supporting academics and PhD students to develop their skills in education research.

Fees for the five days (including instruction, materials, and daytime catering): \$500 for PhD students (who are not full-time academics) and \$800 for academic staff. As an added bonus, for the first time ever IEEE NSW Education Chapter members may receive a \$200 rebate. Up to five rebates are available on a first come, first served basis. More information is available from the chapters website:

<http://sites.ieee.org/nsw/education-chapter-ed/>

For IEEE members, the cost of adding the education society is US\$20, and for students it is US\$10.

Sasha Nikolic

Chair, IEEE NSW Education Chapter





Department of Engineering, Macquarie University
IEEE Macquarie University Student Branch/MTT-S Chapter
IEEE NSW AP/MTT Joint Chapter

IEEE MTT-S Distinguished Lecture by
Professor Robert H. Caverly

Biography at <http://rcaverly.ece.villanova.edu/rcaverly/Biograph.htm>

Date : Tuesday, 24 March 2015
Time : 1:00 pm to 2:00 pm
Location : Building E6A, Room 102
Macquarie University NSW 2109

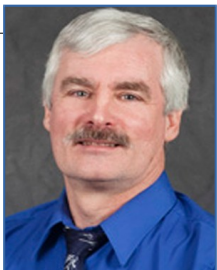
Further Information:

Professor Karu Esselle (karu.esselle@mq.edu.au)

Contact: Muhammad Usman Afzal (muhamamd.afzal@mq.edu.au)

RF Aspects of Magnetic Resonance Imaging

Magnetic Resonance Imaging (MRI) scanners are an important diagnostic tool for the medical practitioner. MRI provides a non-invasive means of obtaining high contrast images of soft tissues and to obtain real-time images of the cardiovascular system and other dynamic changes in the human body. MRI scanners rely heavily on a number of topical areas of interest to Electrical Engineers: image processing, high speed computing and RF (radio frequency) systems and components. This presentation will focus on some of the RF aspects of the MR process and MR scanners. A primer on the physical phenomenon behind magnetic resonance will start the presentation and include a discussion of the origin of the MR signal. The need for the high static magnetic field (B_0), the use of gradient coils for MR signal location, simple RF pulse sequences and how they are used in image construction will be covered. This MR image construction process and the control of the various steps that manipulate the atomic nuclei to generate the final MR diagnostic image put demanding constraints on RF equipment capabilities and these will be discussed, along with a high-level overview of the various components making up conventional MRI systems. This high-level overview will include a look at various examples of transmit and receive RF systems and examples of transmit and receive coils that make up MR scanners and system diagrams for both the RF transmit and receive paths. The talk will then narrow in scope to look at how these RF coils are modeled and controlled in both transmit and receive states and how these components are used for transmit/receive switching and patient and equipment protection.



Hosted by:

Department of Engineering Macquarie University
IEEE NSW AP/MTT Joint Chapter
IEEE Student Branch at Macquarie University
IEEE MTT-S Student Chapter at Macquarie University

IEEE Technologies of the Future 2014

The IEEE Technologies of the Future (iToF) Competition and Exhibition is an event dedicated to foster industry involvement and interaction amongst coursework/research students of the Faculty of Engineering from all universities in NSW. It is a one-spot opportunity for companies to get to know about the most talented students and to help them to hire the best graduates in NSW.

Last year's iToF – the sixth – was held on 5th November 2014 at University of New South Wales, Kensington Campus. The event was sponsored by DOLBY, NICTA, Edugate, IEEE NSW Section and UNSW Engineering. The competition had two tracks.

Track 1: Project Demonstration

Track 2: Poster Presentation

Signal Processing, Imaging and Embedded Systems (SPI)

Network Security (NS)

Physical Modelling and Simulation (PMS)

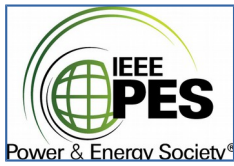
Total 24 submissions were accepted - 5 projects for demonstration and 19 posters. Each track/sub-track had at least 5 submissions and was judged by 3 judges. The judges came from the School of Electrical Engineering, Computer Science & Engineering, Mathematics from UNSW and from industry with the representatives of the sponsors. Each submission was evaluated for manuscript/poster design, technical content and presentation. The winners of each track of the iToF 2014 were awarded a cash prize of \$500 and a winner's certificate. Each participant also received a certificate of participation. IEEE Branch thanked the judges with a certificate of appreciation and a souvenir of being part of the judging committee.

The event started with an opening ceremony, introduced by the IEEE Student branch Chair, Ghulam Murtaza. He was followed by Dr. Graham Davies, Dean of Faculty of Engineering at UNSW, who gave the keynote address.

The judges and visitors spent an hour going around the posters and project exhibitions. The day closed with the prize distribution ceremony, held at around 4 PM.

The winners of the demonstration track, Mr. Girish Revadigar and Ms. Chitra Javali were awarded the DOLBY prize, handed over by Mr. David Mcgrath. Dr. Haris Aziz, NICTA, awarded the poster session NS sub-track prize to Mr. Eisa Zarepour, Rami El Naboulsi from Edugate awarded the SPI sub-track prize to Mr. Nicholas Cummins. Antony Zaglas of IEEE NSW Section handed over the PMS prize to the winner, Mr. Rachpon Kalra. The event ended with the IEEE Student branch Counsellor, Dr. Elias Aboutanios, thanking sponsors, participants, judges and executive committee for making the event successful.





POWER & ENERGY SOCIETY CHAPTER UPDATE

Office Bearers for 2015

At the PES NSW Chapter AGM held on 21 November 2014, the following people were elected as office bearers for 2015.

Chair:	Ray Brown
Vice Chair:	Dan Candotti
Secretary / Treasurer:	Dr Georgios Konstantinou
General Committee:	John Aitken
	Prof. Joe Dong
	Mohamad Nassereddine
	A/Prof. David Dorrell
	Dr Haiyan (Helen) Lu

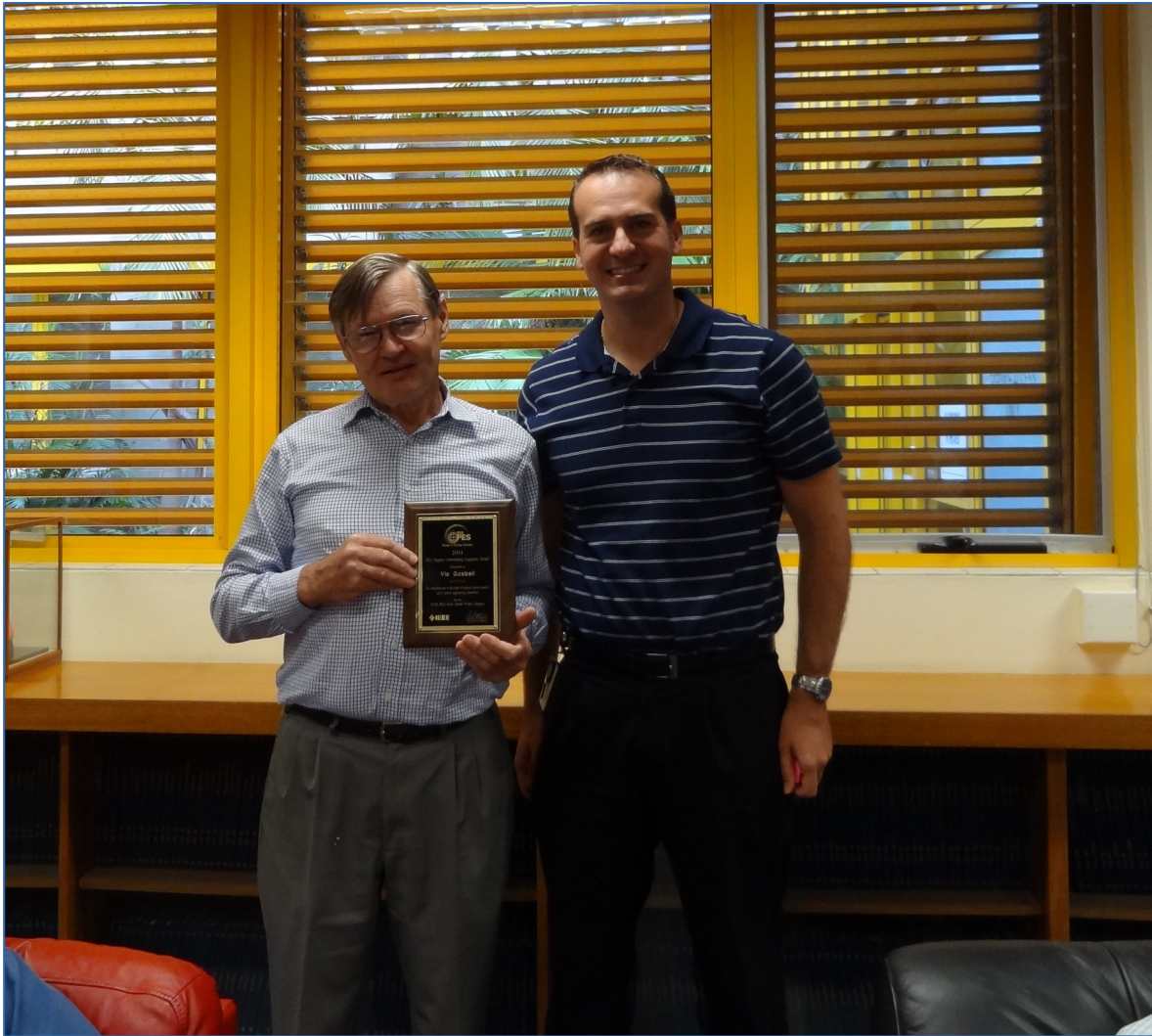
Outstanding Engineer Award 2014

The PES NSW Chapter Outstanding Engineer Award was announced at the IEEE NSW Section AGM on 21 November 2014. The recipient is Emeritus Professor Vic Gosbell of the University of Wollongong (retired), for "contributions to the field of electric power quality and to power engineering education".

Prof Gosbell will be well known to many in the industry, particularly for his work in the field of power quality at the Australian Power Quality and Reliability Centre at the University of Wollongong. He has for many years been involved in the Australian Standards committee for power quality.



Ray Brown is the Chair of the NSW Chapter of the Power and Energy Supply Section. His e-mail address is ray_brown@ieee.org.



Emeritus Professor Gosbell is presented with the IEEE PES NSW Chapter Outstanding Engineer Award for 2014 by Sasha Nikolic, chair of the IEEE NSW Education Chapter.

Free Student Membership

IEEE Student Members who have not previously been Power & Energy Society members can join for free for the first year. This offer is open until 15 August 2015.

Senior Membership

The PES NSW Chapter nominated seven candidates for Senior Membership in 2014 and all seven were successful. We will be looking to nominate further members in 2015.

IEEE Senior Membership is open to members who have been in professional practice for at least 10 years, with at least 5 years of significant performance. There is no requirement to have been involved in academic research or to have published papers or the like. There is no cost or any additional on-going fees.

Application for Senior Membership is via an on-line process and there is a requirement for three references from IEEE Senior Members. This can be a problem for some potential applicants. If this is the case, please contact the PES NSW Chapter at nsw.pes@ieee.org, preferably attaching a copy of your resume. We can arrange for references from PES Senior Members and also for nomination by the IEEE NSW Section. All eligible members are encouraged to apply.

The Power and Energy Technology Systems Open Access Journal

The Power and Energy Technology Systems Journal is now accepting submissions.

<http://ieee-pes.org/p-e-magazine-submission-information>

This new open access journal is intended to be a technical journal containing practice-oriented articles focusing on all power and energy topics.

Excellent Turnout for Lecture on Utility Scale Solar PV

As part of the Joint Electrical Institutions (IEEE, EA and IET) lecture series and organised by the IEEE PES, Chris Wilson of First Solar gave a presentation on *Utility-Scale Solar PV: Grid Integration Challenges and Opportunities*. The presentation was given on 12 February 2015 at Engineers Australia at Chatswood. The presentation attracted approximately 110 attendees, one of the best turnouts for such an event in recent years.

First Solar is presently constructing the largest solar farm in the southern hemisphere, the 102 MW Nyngan Solar Farm.

AUPEC 2015 – Wollongong

The Australasian University Power Engineering Conference (AUPEC 2015) will be held at the Novotel Wollongong Northbeach from 27 September to 30 September 2015. This long-running conference is hosted in 2015 by the Australian Power Quality & Reliability Centre and the University of Wollongong and is technically co-sponsored by the IEEE PES. Two tutorials will be held on Sunday 27 September, on the themes of renewable energy and power quality. The paper submission process closes on 30 April 2015.

ISGT Asia 2015 - Bangkok

The IEEE Innovative Smart Grid Technologies Asia Conference (ISGT Asia 2015) will be hosted by the Thailand PES Chapter in Bangkok from 4-6 November 2015, with tutorials on 3 November. Paper submission is due by 15 May 2015.

APPEEC 2015 – Brisbane

The Seventh Annual IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC 2015) will be hosted by the PES Queensland Chapter and will be held in Brisbane on 15-18 November 2015. The 2013 and 2014 conferences were both held in Hong Kong.

POWERCON 2016 to be Held in Wollongong

The University of Wollongong has been successful in their bid to host the IEEE PES International Conference on Power Systems Technology (POWERCON) in 2016. This conference is held every two years in the Asia-Pacific Region, alternating between locations inside and outside of China. The 2014 conference was held in Chengdu, China, with the 2012 event being held in Auckland, New Zealand.

At this stage it is expected that POWERCON 2016 will be held in September or October 2016.

SmartGridComm 2016 - Sydney

The Seventh IEEE International Conference on Smart Grid Communications 2016 will be held in Sydney. The IEEE Communications Society is the technical and financial sponsor of the conference. The conference is expected to attract 300 engineers and academics over three days. The University of Sydney had a key role in preparing the bid to host the conference.

CIGRE Conference on Integration of Distributed Energy Resources

The IEEE PES Queensland Chapter, with assistance from the PES NSW Chapter, are technically co-sponsoring the CIGRE Conference on the Integration of Distributed Energy Resources (CIDER 2015). This conference will be held in Brisbane at the Hotel Jen on 19-20 August 2015. More information is available from <http://cigreaustralia.org.au/cigre-events/cider15/>

CIGRE Call for Papers 2016

Submission of synopses of papers for the CIGRE 2016 Session, to be held in Paris on 21-26 August 2016, are due by 1 May 2015. Synopses are to be submitted in electronic format at

<mailto:anc@cigreaustralia.org.au> **CIGRE Technical Brochures Issued**

The following technical brochures have recently been issued by CIGRE:

- .TB 595 Fingerprinting of Polymeric Insulating Materials for Outdoor Use
- .TB 596 Guidelines for Power Quality Monitoring - Measurement Locations, Processing and Presentation of Data
- .TB 597 Transmission Asset Risk Management - Progress in Application
- .TB 598 Guidelines for the Management of Risk Associated with Severe Climatic Events and Climate Change on Overhead Lines
- .TB 599 Education, Qualification and Continuing Professional Development of Engineers in Protection and Control
- .TB 600 Protection of High Voltage Power Network Control Electronics against Intentional Electromagnetic Interference (EMI)
- .TB 601 Guide for Thermal Rating Calculations of Overhead Lines
- .TB 602 Tools for Simulation of the Internal Arc Effects in HV and MV Switchgear
- .TB 603 Application and Management of Cybersecurity Measures for Protection and Control Systems
- .TB 604 Guide for the Development of Models for HVDC Converters in a HVDC Grid
- .TB 605 Feasibility of a Common, Dry Type Plug-in Interface for GIS and Power cables Above 52 kV
- .TB 606 Upgrading and Upgrading Existing Cable Systems
- .TB 607 Contracts for Outsourcing Utility Maintenance Work
- .TB 608 Lessons Learnt from Recent Emergencies and Blackout Incidents

CIGRE Publication are available at www.e-cigre.org

IEEE NSW VTS Chapter

The IEEE New South Wales Section (NSW) Vehicular Technology Society (VTS) Chapter was formed on 3 February 2015.

The IEEE Vehicular Technology Society concerns itself with land, airborne and maritime mobile services; portable commercial and citizen's communications services; vehicular electrotechnology, equipment and systems of the automotive industry; traction power, signals, communications and control systems for mass transit and railroads. With the emergence of self-driving cars, and lately, drones, vehicular technology is experiencing a revolution.

The purpose of the IEEE NSW VTS Chapter is to foster the fast growing interests in Autonomous Vehicles, UAVs, Vehicular Communications, Networks, Management, and Security in New South Wales region. By forming this chapter, these interests and activities can be coordinated.

The Chapter will organise technical activities, possibly in collaboration with other IEEE chapters and organisations, in the form of workshops, seminars, distinguished lecturer tours, and demonstrations. These interactive events will facilitate connections and collaborations among VTS members and beyond, and increase the membership of the VTS in NSW.

The IEEE NSW VTS Chapter inaugural meeting was held on 19 February 2015 in CSIRO. Chapter committee was formed with Prof Ren Ping Liu of CSIRO as Chair, Prof Eryk Dutkiewicz of Macquarie University as Vice Chair, Prof Abbas Jamalipour as Treasurer, Dr Wei Ni of CSIRO as Secretary, and A/Prof Jamil Khan of University of Newcastle as Membership. During the meeting, NSW VTS members discussed Chapter plans on technical meetings and activities, as well as coordinating with other Chapters. Among the first set of activities, Prof Dutkiewicz announced the successful bid for the IEEE VTC-Spring 2017 Sydney, and called for supports from Chapter members.



Ren Ping Liu

IEEE NSW VTS Chapter Chair

POCO 2015 GLASGOW

The IEEE Panel of Conference Organisers (POCO) will be held in Glasgow, Scotland from 16-18 August 2015. This annual event aims to provide organisers of IEEE conferences with information they will need in organising a conference and on IEEE procedures. POCO also provides an opportunity for delegates to talk with other IEEE participants and with IEEE staff and officials.

The 2014 event in Singapore attracted 176 people from 29 countries, including 60 from Singapore. The conference included sessions on sponsorship and MOUs, technical program, publications, finances, new style events, hotel accommodation arrangements, venue locations and much more.

The IEEE NSW Section has resolved to provide financial assistance up to a maximum of \$1500 to one suitably qualified member to attend POCO 2015. Applications are to be sent to ray_brown@ieee.org (ray underscore brown) before the **closing date of 17 April 2015** and should provide:

- a short summary of the member and why they are qualified to attend POCO;
- information on their service to the IEEE (particularly the NSW Section); and
- information on their past and future work in organising conferences.

Applications are open to IEEE NSW Section members who have not previously been financially supported to attend POCO. Reimbursement of costs (supported by receipts) up to the value of \$1500 will be made after an article providing a summary of POCO 2015 and the main points learnt is provided for publication in *Circuit*. The winning applicant will be chosen by a committee appointed by the IEEE NSW Section Chair.

More information on POCO 2015 is available at <http://sites.ieee.org/poco2015/>



IEEE NSW Section 2015 Executive election

The IEEE NSW Section 2015 Executive election was conducted using the electronic vTools voting system. The results of the election were announced at the 2014 AGM on 21 November 2014 and are as follows:

Section Chair - Dr David Tien

Section Vice Chair - Prof Karu Esselle

Section Secretary – Dr Dushmantha Thalakituna

Section Treasurer – Dr John Ypsilantis

Assistant Secretary – Colin Elston

The voter participation was however disappointing at about 3.8% of the qualified voters choose to vote, this being down on 2013(8.3%). I would like to ask all Members to assist the Section and their Chapters by participating in all future elections. Doing so raises our profile and helps provide a voice in Region 10 and IEEE.

The Australia Council elections resulted in the following being elected:

Prof Tapan Saha Chair(QLD)

A Prof Mohan Jacob Vice Chair(NA)

Dr Zia Ahmed Secretary(SA)

Martin Leaver Treasurer(ACT)

A Prof Lance Fung Immediate Past Chair(WA)

Please visit the IEEE NSW Section web page for details of all Committee Officers and positions at <http://sites.ieee.org/nsw/>

I would like to congratulate the winners and thank all outgoing officers for their contributions and service. I would again like to ask members to please consider Nominating for service on the Section Committee as well as for elected office.



John Robinson jl.robinson@ieee.org

Chair Nominations, NSW Section

2014 AGM and Annual Dinner

The NSW Section Annual General Meeting (AGM) was held at the Sydney Hilton Hotel on Friday 21 November 2014.

Chapter and Affinity Group AGM's started at 6:00pm and the Section AGM started at 7:00pm. More than 50 Members attended the NSW Section AGM.

The annual dinner was held at the Athenian Restaurant in Barack St Sydney with more than 80 Members and Guests present.



Nominations Chair John Robinson Announcing Election Results



Past Chair Prof Trevor Bird FIEEE Addressing AGM

At the AGM Ray Brown, PES Chair announced the PES Outstanding Engineer Award for Prof Vic Gosbell for his services to Power Quality.



PES Chair Ray Brown Announcing PES Outstanding Engineer Award for Prof Vic Gosbell



Chair Dr David Tien Addressing the AGM

Macquarie University IEEE Student Branch was awarded first place in the Australia Council Outstanding Student Branch competition for 2013. Dr Ali Hellany Student Activities announced the Award and Congratulated Prof Karu Esselle, Macquarie University Student Branch Counsellor, Student Branch Chair Syed Abbas and the Student Branch Committee.



***Dr Ali Hellany announcing Macquarie University as
Winners of the Australia Council Outstanding Student Branch Competition 2013***

New and Upgraded Members 1st July 2014 to 28th February 2015

New and Upgraded Fellows

Marcela M Bilek	Iain B Collings	Stefan G Mozar	Dacheng Tao
David S Taubman	Wei Zhang		

See page 3 for more detail on the new Fellows. We have 30 in total in NSW

New and Upgraded Life Fellows

Trevor S Bird	Graeme L James	Dean J Patterson	Muhammed F Rahman
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These are four of the ten we have in NSW.

New and Upgraded Senior Members

Raymond Chiong	Philip P De Chazal	Stephen V Hanly	Dikai Liu
Herbert Francis Mailey	Ashok Manglick	Mike McGuire	Ganesh R Naik
Wei Ni	Brett M Ninness	Barry G Quinn	Ping Yu
Antony C Zaglas	Tanveer A Zia		

We have 212 senior members in NSW

New and Upgraded Life Senior Members

Trevor R Blackburn	Selliah Ganeswaran	Stephen T Kuehn	Warren G Pakchung
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We have 18 life senior members in NSW.

New and Upgraded Members

Saeed Afshar	M J E Alam	Pasquale Aliberti	Jeff I Allom
Samiul Amin	Naveed Asghar	Man Ho Au	Mohsen Bakouri
Allen M Benter	Moshiur Rahman Bhuiyan	Bert van der Broek	Andrew Budihardjo
Karen Leanne Cambrell	Igor Chernishov	Laurie A Chisholm	Jen Jen Chung
Charles E Crick	James Davies	Xiaoli Deng	Antoine Francois Desmet
Alex Dong	Anthony Fowler	Brendan John Foxlee	Niki Erina Frampton
Emma Friesen	Olsen E. E. Garland	Garth N Gum Gee	Raoul Golan
Lingkan Gong	Michael Goorevich	Hemantha Gunasinghe	Brett Andrew Hallen
Wibowo Hardjawana	Stephen Anthony Haysman	Wasantha K Hendeniya	Alfredo Huete

Md. Tanvir Ishtaique ul Huque	Phuoc Tai Huynh	Rafiqul Islam	Saber Jafarizadeh
David W Jarrett	Nina V Juliadotter	Jonathan Kelly	Muhammad Arif Khan
Reduan Hasan Khan	Evgeny Kuxa	Weihua Li	Paul Evan Lillington
Wei Liu	Guodong Long	Marcin Lubonski	Jun Ma
Iain F Macgill	GeoffreyRoss Mackellar	David Mahoney	Robert William Makepeace
David Marpaung	David Lawrence Marsh	Timothy Marshall	Tania McGregor
Stephen J McIntosh	Alan McNamara	Paul T McNamara	Lashika Janith Medagoda
Alexandre Mendes	Christopher Mario Mendes	Graham Gordon Mills	Stephen J Moore
Nesae Mouzehkesh	James Cooper Munro	Surya Nepal	Vahid Nobakhti
Anthony Gerard Nolan	Rony Novianto	John O'Neill	Mostafa Rahimian Omam
Lionel Ott	Alex Pavlov	Evan Paul Penglis	Mahardhika Pratama
Rhys Preston	Jala Rampaul	Marcus Alexander Raty	David John Reilly
Mischa Reznik	Michael Timothy Scholes	Bryan Kevin Schwitter	James Robert Scott
Lei Shang	Lesley Stanger	Wei Sun	Brett A Swanson
Ryan J. R. Thompson	Andrew Thoms	Thuy Linh Tran	Michael Troup
Ivor Tsang	Hoang Duong Tuan	John C Turner	David Vaile
Giuseppe Venuti	Guishi Wang	Zachary David Ward	Thomas White
Chamith Wijenayake	Derek Chi Kian Wong	Stewart Worrall	Craig Wright
Xiaofeng Wu	James Xi	Yi Da Xu	Yang Yu
Mohsen Zamani			

We have 1453 regular members in NSW.

New And Upgraded Life Members

Raymond F Butler	Norman J Davis	Shek H Fat	Martin Friedgut
Robert W Holgate	J R Dixon Hughes	Philip J McKerrow	Geoffre T Poulton
B R Rumbold	Adrian J Schmidt	Robert G Wallace	Geoffrey B Young

We have 66 Life Members in NSW

New And Upgraded Graduate Student Members

Dinuka Abeywardena	Nurul Izzah Md. Afandi	Ahmad S. S. Ahmadyar	Alaa Md. Al-kaysi
Asish Zac Alex	Ayoola Ayodele	Roky Baidya	Merin Bineesh
Daniel Bongiorno	Adrian Bradd	Leonardo Callegaro	Lachlan Chartier

Wei-Hua Chen	Rosheila Darus	Changxing Ding	Jacob Donley
Zheyuan Du	Van Huan Duong	Homa Edalatifard	M. S. G. Esfahani
Nicholas Fraser	Libin George	Hassan Habibi Gharakheili	Ravi Glasser-Vora
Mingming Gong	Angela Gormley	V. Nazarzehi Had	Noman Haider
Jason Hambly	Patrick Hamid	Maryam Hasheminamin	Mahdi Hassan
Tingting He	Nina Homainejad	Neda Hosseini	Ecaterina Marion Howard
Artemij Iberzanov	Md. A Ikram	Atif Iqbal	Md. Jahedul Islam
Shama Naz Islam	Asanga Priyankara Jayawardana	Sanjay Jha	Marcel Julliard
Anup Kale	Przemyslaw L. Kaminski	Patrick Kasi	Joel Thomas Kennedy
Jung-Ha Kim	Hyong Sik Kim	Donna Kocherry	Weicong Kong
Pradha Lakhera	Ali Lalbakhsh	Liyuan Li	Qing Li
Yuanxun Liao	Kai Chin Lim	Xiaojing Liu	Tongliang Liu
Siqi Liu	Hadi Lomei	Graeme W Lowe	Anna Lyons
Md. Atef Ali Rajab Madni	Matthew Majewski	Md. Maroufi	David Mathieu
Daniel Stephen Matichuk	Martin McGrane	Sally McKinnon	Shaghayegh S. Nabavi
Tahereh Noohi	Shirui Pan	Rohit Balasaheb Patil	Edwin Peters
David Kwong Phoon	Mohammadreza Pourakbar	Sivarajah Prasanth	Sonki Prasetya
Himath Priyananda	Maoying Qiao	Rishi Ramakrishnan	Hansika Rathnayake
Elizabeth L. Ratnam	Andrew Reynolds	Michael Reznik	Daniel Ninio Roxby
Azadeh Safari	Syamantak Saha	Robert Shuhdi	Salama Balakrishna Sarm
Michael Seymour	Zeeshan Azmat Shaikh	Lei Shi	Yan Maraden Sinaga
Daobilige Su	Andrian Sue	Zhuo Sun	Liye Sun
Li Sun	Chandra Thapa	Badari N.Thyamagondlu	Ziyuan Tong
Vinh Tran	Faisel Tubbal	Cristian Rafael Vallejo	Ruxin Wang
Yijia Wang	He Wang	Shuo Wang	Yan Wang
Wei Wang	Robert E.D. Webster	Brett M. Wilson	Kanzhi Wu
Weijie Xu	Bing Xu	Chih-Yu (John) Yang	Jing Yue

We have 276 Graduate Student Members in NSW.

New Student Members

Mohammed Ali AlGhamdi	Jackson Bleechmore	Joshua Brown	Yuan Chang
Tao Chen	Sebastian Oliphant Crago	Sepehr Damavandinejadmonfar	

Adel Farah	Daniel James George	Ly Van Kha Ha	Michael Kevin Haughey
William Thomas Holcombe	Nader Jafari	Dai Jia	Maria Kovaleva
Bin Liang	Kai Lin	Chengcheng Liu	Josh Manderson
Mahdi Moosazadeh	Alexander Edward Murphy	Sukhvir Singh Notra	Mark Anthony Pike
Pallab Kanti Podder	Mykyta Shulhin	James Raphael Myles Smith	Alonzo Daniel Sparkes
Carl Eric Svensson	Rajiv Wagle	Zeya Wang	Thomas Welsh
Stewart Wilson	Tom Wyatt	Gordon Yang	Farhad Yasir
Jiawei Zhang	Lou Zhao	Linfeng Zheng	

We have 61 Student Members in NSW

New and Upgraded Associate Members

Thomas James Allan Sarah Lawrie

There are 22 Associate Members of the NSW IEEE

New and Upgraded Affiliate Members

Anuprita S. K.S. Arora	Greg Bowring	Lauren Kark	Heba Khamis
Mohamed Abdalla Mabrok	Franz Thomas Maier	Mobeen Malik	Oscar Mayorca
Kenneth Walter McNamara	Louis Evan Melanie	Diep Ngoc Nguyen	Mark Staples
Hasalaka Waravita	Jaya Weerasinghe		

We have 22 Associate Members in the NSW IEEE

Bruce Poon – e-mail adsphere@optusnet.com.au – extracted this data from the IEEE's SAMIEEE database, which isn't easy. Converting what comes out into alphabetically ordered lists of names grouped by grades isn't easy either, not to mention remarkably tedious.



The NSW branch of the IEEE offers free membership of the IEEE – just for the first year – to all full-time students located in NSW, joining the IEEE, for the first time before 4:30pm on the 31st March 2015.

IEEE Limited Offer

If you are a 3rd, 4th year or a post-graduate

Student in 2015

The IEEE NSW Section will sponsor your student membership fee!

1. Go to the www.ieee.org/join and register as a Student Member.

2. Type in all your details. At the check-out process select

'Print & Mail/Fax order' instead of "Proceed to checkout" and – from the browser menu - print to .pdf



Ensure that your postal address and contact details will be valid for the next 12 months or more.

Instead of sending the form to IEEE HQ in the USA, e-mail the .pdf file to Dr. Ali Hellany, who is

the IEEE NSW Student Activities chair, at a.hellany@uws.edu.au

The name of the file should be "your name - IEEE NSW student membership offer.pdf" Add a .pdf of your student card – using the file name "your name.pdf".

This offer excludes membership of individual IEEE societies (such as the Signal Processing Society below) which may be acquired separately. Only a limited number of free student memberships are offered, and if you apply too late – even before 4:30pm on the 31st March 2015 - you may miss out.



FREE SPS STUDENT MEMBERSHIP FOR 2015

Start the semester off right! A Student membership to the [IEEE Signal Processing Society \(SPS\)](#) unlocks a wealth of opportunities, including:

- Deep **discounts** on conference registration fees;
- Eligibility to apply for **travel grants** to select SPS conferences;
- **Networking** and **job opportunities** at the ICASSP Student Career Luncheon;
- Eligibility to join the SP Cup **student competition** for a US\$5,000 grand prize;
- **Involvement** opportunities through more than 140 local SPS Chapters;
- A full list of benefits found at <http://signalprocessingsociety.org>.

Already an IEEE Student Member? Use code [SP15STUAD](#) at checkout!

New to IEEE? Become an IEEE Student member and take advantage of this offer! Use the code [SP15STUNW](#) at checkout with an IEEE Student membership in your cart!

Must be an active IEEE Student or Graduate Student member. This offer does not apply to SPS Students or Graduate Students renewing for 2015.

Comprehensive List of Events for the next few months

Many of these events have already been covered in this newsletter. Some haven't. Tony Zaglas has pulled together everything he knows about in what ought to be a pretty comprehensive table.

23 Mar 2015	RF Aspects of Magnetic Resonance Imaging	Prof Robert H. Caverly	IEEE	elias@ieee.org	UNSW
24 Mar 2015	RF Aspects of Magnetic Resonance Imaging	Prof Robert H. Caverly	IEEE	muhammad.afzal@mq.edu.au	Macq University
26 Mar 2015	Sydney Harbour Bridge Structural Health Monitoring	Peter Runcie, NICTA	IEEE	t.blackburn@unsw.edu.au	EA Chatswood
2 April 2015	5G, the nervous system of the digital society and economy	David Solarni		wei.ni@csiro.au	CSIRO Marsfield
9 Apr 2015	5G Wireless Networks	Prof Stephen Hanly, Macquarie University	EA	sherry.moghadassi@gmail.com	EA Chatswood
19-24 April 2015	ICASSP 2015(Conference)	http://icassp2015.org/	IEEE	icassp2015@arinex.com.au	C&EC Brisbane
27-28 April 2015	ICT 2015(Conference)	ICT 2015 Website	EA		Shangri-La Sydney
13-15 May 2015	TENSYP 2015(Symposium)	http://www.tensymp2015.org/	IEEE R10	http://www.tensymp2015.org/contact.php	Ahmedabad India
14 May 2015	TBA				EA Chatswood
28 May 2015	TBA				EA Chatswood
11 June 2015	Machine Learning Related Research	Mr Ronnie Taib, NICTA	EA	sherry.moghadassi@gmail.com	EA Chatswood
25 June 2015	TBA				EA Chatswood
7-8 June 2015	SLED 2015(Symposium)	http://sites.ieee.org/sled2015/	IEEE	http://sites.ieee.org/sled2015/contact/	UNSW
9 - 12 June 2015	PEDS 2015(Conference)	http://www.ieee-peds.org/	IEEE	http://www.rpsonline.com.sg/peds/contact.html	Hilton Sydney
1 - 5 July, 2015	ICITA 2015(Conference)	http://www.icita.org/	IEEE	Dr David Tien	Hilton Sydney
9 July, 2015	'Baseload' Renewable Power		IEEE	t.blackburn@unsw.edu.au	EA Chatswood
19-22 July, 2015	ICPADM 2015(Conference)	http://www.icpadm2015.org/		t.blackburn@unsw.edu.au	UNSW
23rd July 2015	The Square Kilometre Array (SKA)	Dr Carol Wilson, CSIRO	EA	sherry.moghadassi@gmail.com	EA Chatswood
3-9 Aug 2015	Australian Engineering Week	TBA	AEW	antonyz@ieee.org	Various

Circuit is currently provided electronically from the IEEE NSW Section web site
<http://ewh.ieee.org/r10/nsw>.

Members will be notified by email when a new issue is posted on the Website. Future copies of **Circuit** will only be sent by paper mail on request.

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