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IEEE NEW SOUTH WALES SECTION
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Volume 41 Issue 2**July 2012****Contents**

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Editorial

Welcome to the July edition of Circuit. I am the new Circuit Editor of the IEEE NSW Section. I have taken over this role from Mark O' Mally, who is currently the Section Treasurer. This edition features some of the key achievements of the NSW Section and its affinity groups in the last quarter, and also highlights the planned activities scheduled for the latter half of this year.

I hope that you enjoy reading this edition as much as I did serving as its editor. If these articles and past editions have inspired you to consider sharing your experience with the society, contact me directly (prasant.misra@ieee.org) so that together we can create an interesting publication for the benefit of our members. Please join me in acknowledging the efforts of everyone responsible for the July edition of Circuit.



Prasant Misra prasant.misra@ieee.org
 Editor, Circuit Newsletter, NSW Section

1. Message from the Chair

This year has been a busy one for the NSW Section. I would like to thank the Section Committee members for their commitment and dedication to their work.

Most of all, the NSW Section will turn 40 on 16 August 2012. As such, a celebration night for all members will be held at Radisson Hotel & Suite. This evening is also dedicated to our honorable Fellow members and their partners. Further details and a booking slip can be found on page 13. Please RSVP quickly to secure a place.

As usual, the highlight of the year is the 2012 Annual General Meeting (AGM) cum dinner for members and spouse/partner to meet and celebrate. The 2012 AGM and dinner will be held on 23 November 2012 at Radisson Hotel & Suite (see page 12 for booking slip and further details).

I would also like to draw your attention to the following events that are in the pipeline:

- With the leadership of Stefan Mozar, we have been successful in our bid with Region 10 to host the IEEE TENCON Fall 2013 in the first half of 2013.
- Ali Hellany, NSW Section Student Activities Chair who is also the Australia Council Student Activities Chair, will formalize the 2012 Australia Postgraduate and Undergraduate Student Paper competition for all the university students in Australia.
- Graeme Gwilliam, NSW Section Life Member Chair, is working with Teacher-In-Service Program (TISP) HQ team in organizing the TISP workshop in Sydney in the first half of 2013. At this stage, we want to ensure that the TISP is accredited by the NSW Institute of Teachers



Eddie Fong eddiefong@ieee.org
 Chair, NSW Section

2. News in Brief

2.1 “40 Year” Celebration & Fellow Member Night

The NSW Section will be hosting an event to celebrate the 40th anniversary of the IEEE NSW Section along with the Fellow Member Night. It will be held at the Radisson Hotel & Suites, 72 Liverpool Street Sydney NSW on **16 August 2012**.

The event is free to all members and their partners who RSVP before 3 August 2012. However, in the case where members RSVP but do not turn up for the event, they will be charged \$60 per person.

Further information (including a map pointing to nearby parking) can be found on the booking slip on page 13.

2.2 AGM and Annual Dinner

The NSW Section Annual General Meeting (AGM) will be held at the Radisson Hotel & Suites, 72 Liverpool Street Sydney NSW on **23 November 2012**.

Chapter and Affinity Group AGM's start at 6pm, followed by the Section AGM at 7pm. A delectable seafood buffet will follow after the conclusion of the NSW Section AGM at approximately 8pm. There is also an option to order vegetarian food, which will be served separately on request. The NSW Section will be covering the cost of the dinner. Please remember to RSVP before 9 November 2012.

In addition, members interested in staying overnight at the hotel on their own expense can avail the benefit of special accommodation room rates.

Studio Guest Rooms	\$225
Studio Queen Rooms	\$245
One Bedroom Suite	\$270
Two Bedroom Suite	\$395

For room reservations, members can directly call the hotel at 8268 8887 or email at reservations@radisson-sydney.com.au.

Further information (including a map pointing to nearby parking) can be found on the booking slip on page 12 of the newsletter.

2.3 NSW Committee Nominations

In my role as the NSW Section Nomination Committee (SNC) Chair, with the support of Bruce Poon, Trevor Bird and Past Chair Graeme Gwilliam, we will be sending this month a “*Call for Nominations*” email for the four key positions of Chair, Vice Chair, Secretary and Treasurer to every member with an email address. All members are entitled to use the Nomination Forms printed on page 15, and to cast a vote for these key positions. The SNC will select from all submissions a minimum of 2 but not more than 3 candidates for each elected office. Nominations for non-elected positions e.g., Committee member, Newsletter Editor, Webmaster, Conference Coordinator, Historian, Professional Activities, Fellow Search, Awards & Recognition, Nominations Chair/member, Chair Life Members Affinity Group, Corresponding Member, Student activities, together with the nominations for elected positions will be verified by the SNC to check the candidates' eligibility and willingness to serve as a volunteer. A slate of candidates will be submitted at the Section Committee's September meeting for ratification. The slate of candidates for elected and non-elected office will be emailed to all members no later than 5 October 2012. Section members will be voting via the Internet using the very secure IEEE Vtools program. The voting will close midnight on 16 November 2012 - one week before the AGM where the results for all positions will be announced.

There will be no paper ballots, so members will need to use their IEEE Web account. We have some members who have an account but have forgotten their ID and password. There are other members who have never registered so they will need to setup an IEEE web account. The registration takes less than 5 minutes by using your preferred search engine (for example Google) where you need to input the words “*IEEE web account*” and then select from the list of websites “*Web Account – IEEE*”.



John Robinson j.l.robinson@ieee.org
Nominations Chair, NSW Section

2.4 Obituary Eudo Carlile (George) Fox

George Fox, renowned professional electrical engineer in the Australian Electrical Industry passed away on 7 June 2012 (aged 98). He never fully retired holding to the end three Company Directorships whose activities include power plant repair and automatic fare collection. A family man, he is survived by his wife Joan of 63 years, daughters Sally, Debby, son Robert and six grandchildren. His sporting passion was golf and was a member at Avondale Golf Club where a wake was held after a Memorial Service with standing room only at Pymble Uniting Church on 14 June 2012.



Late George Fox

For over 75 years he was an active volunteer for Engineers Australia. Recently he was responsible for organizing a series of Joint Institution lectures including the Three Gorges Dam a hydroelectric dam that tames the Yangtze River in Hubei province, China. The Three Gorges Dam is the world's largest measured by its capacity rated 22,500 MW. This lecture attracted one of our largest audiences. Another lecture on the Global warming issue had George sharing his views as a sceptic. George was a Board Member of The Lavoisier Group created in March 2000. The founding members were concerned about politicians and senior government officials developing policy on the scientific assumptions made in the 1997 Kyoto Protocol.

He was educated (1927-1931) at the elite The Kings School, Parramatta. He received Bachelor degrees in Mechanical & Electrical Engineering at Sydney University (1932-1936). In 1937, he moved to London for Post Graduate training in Heavy Electrical Plant, Manufacture & Power Station operation.

Prior to the outbreak of WW2 in 1939, he returned to Australia and joined Tooths Brewery as second engineer. In 1940, he enlisted in the Australian Army R.A.E.M.E. He held the rank of Captain in A.I.F. Armoured Division. In 1944, he went to the USA & UK to study tank design.

In 1945, he joined The English Electric Company. In 1949, he married Joan Menzies. In 1955, he was promoted General Manager for India. In 1959, he moved back to Melbourne as Managing Director until 1970. Company employees called him by his initials ECF.

In 1973, George established his own consulting company and started dealing with electric arc furnaces, water screening equipment, submersible pumps, cast coil transformers, replacement turbine blades & automatic fare collection (Cubic Transportation Systems).

From 1968-1996, he was a Member of the Standards Australia Executive. In 1997, he was appointed Member of the Order of Australia.



John Robinson jl.robinson@ieee.org

2.5 Awards

At the Engineers Australia Annual Electrical College's Awards Dinner on 1 June 2012, Dr. Trevor Bird was awarded the M. A. Sargent Medal for his outstanding contributions to Electrical Engineering. The presenter was Dr. Michael Anthony Sargent in whose honour the medal is named. The awards dinner and presentations took place at the Amora Hotel Jamison Street Sydney, and were attended by over 140 members and guests. Awards sponsors include NHP and EESA.



Dr. Trevor Bird receiving the M. A. Sargent Medal

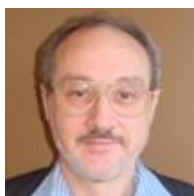
Dr. Bird received his degrees, Masters and PhD from Melbourne University. He carried out postdoctoral research at the University of London followed by five years of lecturing in Electrical Engineering at James Cook University. After working in the UK for Plessey

Radar, he joined CSIRO in 1984 where he rose to the position of Chief Research Scientist of the ICT Centre. Dr. Bird retired from CSIRO last year, and is currently an Adjunct Professor at Macquarie University and post-retirement CSIRO ICT Research Fellow. Dr. Bird is a fellow of IEEE, IET, Engineers Australia and the Australian Academy of Technological Sciences. He has received numerous awards and medals, including EA Professional Engineer of the Year (2003), IEEE Millennium Medal (2000), Centenary Medal for Telecommunications (2003), John Madsen Medal (four times) and the CSIRO Medal (1990) amongst others.

Dr. Bird's services to IEEE and the NSW Section have been extensive and over a long period of time, continuing to this day and into the future. He has served as AP/MTT Chapter Chair, CIRCUIT Editor, NSW Section Vice Chair (2000) and NSW Section Chair in 2001-2002. His services include IEEE Distinguished Lecturer, Associate Editor and Chief Editor of the IEEE Transactions on Antennas and Propagation, and Member of the Antennas and Propagation Society Administrative Committee. In 2011, he was elected President Elect of the IEEE Antennas and Propagation Society.

On behalf of the IEEE NSW Section, I would like to congratulate Dr. Bird on receiving this award, and thank him for his contributions to IEEE and the NSW Section. I wish him, his wife Val, and their children all the best for the future. I would also like to wish him well in his future role as President of the IEEE Antennas and Propagation Society.

At the same dinner Dr. Robert Barr was presented with the Engineers Australia 2012 Professional Engineer of the Year Award. Dr. Barr is the national president of the Electric Energy Society of Australia (EESA), a Visiting Fellow at the University of Wollongong and an IEEE Member. The NSW Section congratulates Dr. Barr on his award and wishes him every success in the future.



Tony Zaglas antonyz@ieee.org
IEEE NSW Section Secretary

2.6 Australian Engineering Week (AEW)

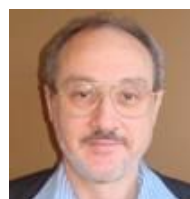
Australian Engineering Week (AEW) is a national series of events to promote Engineering to school age students and the community. It will be held between the 6th and the 12th of August 2012. AEW also includes some pre and post AEW events. The AEW Poster is attached to this month's CIRCUIT (page 16).

The official launch: HARRICKS ADDRESS will be held between 5:30pm and 8:00pm on Monday 6 August 2012 at the Theatre, NSW Parliament House, 6 Macquarie Street, Sydney. The subject of the address will be "The Hon Frank Sartor AO" and conducted as an interview by Dr. Andrew Botros covering topics such as policy, governance, planning and infrastructure as well as the role of Engineering in all the foregoing.

For more details on AEW and a complete list of events, please refer to the following websites:

- <http://www.makeitso.org.au/australian-engineering-week/sydney>
- <http://www.engineersaustralia.org.au/sydney-division/australian-engineering-week>.

Registrations for events can be made via the above mentioned web pages.



Tony Zaglas antonyz@ieee.org
IEEE NSW Section Secretary

2.7 IEEE TENCON Fall 2013: "Call for Papers" Coming Soon

IEEE TENCON Fall 2013 is being organized by the IEEE NSW Section. It is the premier international technical conference of IEEE Region 10. TENCON provides an important forum for researchers, engineers, academics and graduate students to network and discuss new ideas and developments in emerging areas of electrical and electronic engineering, computer science and related fields. The "call for paper" for IEEE TENCON Fall 2013 will be released soon.

2.8 IEEE Macquarie University Student Branch Updates

IEEE Macquarie University Student Branch has started its first branch activity for the year 2012 by organizing a department welcome for undergraduate students on 29 March 2012. The main aim of the event was to provide an overview to the department and IEEE, while welcoming the undergraduates to the department. This event was well attended with over 60 attendees including undergraduate students, department staff and IEEE members.

In the month of April, the student branch organized three activities including an IEEE distinguished lecture from Professor Sembiam R. Renagrajan on Design, Analysis, and Applications of waveguide-Fed Slot

Arrays on 2 April 2012. This distinguished lecture was a joint activity with IEEE NSW AP/MTT chapter and Macquarie Engineering colloquia lecture series. Other activities in April included a LEGO training workshop on 20 April 2012 and HFSS workshop on 23 April 2012 for postgraduate students. The purpose of the LEGO workshop was to train the postgraduate students to conduct high school LEGO activities as a part of Macquarie Experience outreach program. HFSS workshop provided new postgraduate students a great training opportunity. Both workshops were conducted in computer laboratories at the Department of Electronic Engineering in Macquarie University



Photos of IEEE student branch activities organized by the MQ student branch. From top left to bottom right: HFSS workshop, IEEE distinguished lecture From Prof. Renagarajan, Department welcome, joint lecture from Dr. Ashwin, LEGO workshop, Testing LEGO robots for final competition

In May, another IEEE joint lecture was organized by MQ student branch. A/Prof. Ashwin Iyer from University Alberta, Canada presented his work on Transmission-Line Metamaterials and the Development of the Free-Space Metamaterial 'Superlens'. The main aim of these joint activities is to foster the collaboration with different chapters and provide opportunities for IEEE members to network with overseas visitors.

Further information on MQ IEEE student branch activities can be found at the following website:

<http://engineering.mq.edu.au/~ieeesb>



Dushmantha Thalakituna
Chair, IEEE MQ Student Branch

2.9 IEEE University of Sydney Branch Updates

Following the success of the monthly seminars, the University of Sydney branch of IEEE will kick off Australian Engineering Week with a free talk on 8 August 2012 (6pm) on "The Secrets of the Innovative Mind". Please join us at the University as the speaker, Dr. Ehssan Sakhaee, takes you through an exploration of the essence of innovation and creativity; a topic that holds particular relevance to the students and young engineers of today. Throughout the talk, Dr. Sakhaee will explore the creative mindsets of notable individuals (from Gandhi to Steve Jobs) and examine how you, as an engineer, can utilize these traits to enhance one's personal and professional life.

For additional details about the talk and registration details, please visit: <http://ee.usyd.edu.au/ieee/events>
<http://www.makeitso.org.au/australian-engineering-week/event/secrets-innovative-mind>

Nejla Ghaboosi
Chair, IEEE USYD Student Branch

2.10 IEEE University of New South Wales Branch Updates

The "iToF Competition and Exhibition 2012" will be organized in October of this year by the IEEE Student Branch at The University of New South Wales. The aim of this event is to facilitate industry involvement with our coursework and research students and to foster this interaction.

The IEEE UNSW Student Branch has organized this competition for the past three years. Following the success of the last year's event and the positive feedback, this year's iToF will also be expanded to include all universities in NSW, aiming to draw participation from not only postgraduates but also from undergraduates and early-career researchers. Hence, this year's competition and exhibition will be a one-spot opportunity for companies to know about the most talented students and might help them to hire the best graduates from NSW.

There will be three main tracks, and additional 6 sub-categories for one of the tracks:

- Track-1: Project Demo for undergraduates
- Track-2: Posters for postgraduates:
 - Category 1: Energy and green environment
 - Category 2: Improving quality of life
 - Category 3: Fast, reliable and secure
 - Category 4: Towards miniaturization
 - Category 5: Connecting & Entertaining the world
 - Category 6: Automation and adaptation
- Track-3: Exhibit for early-career researchers

The winner of each category will receive a cash prize and a certificate. All participants shall be acknowledged for their involvement by a participation certificate. Furthermore, there will be NO registration or participation fees for this event. The "*call for submission*" for iToF 2012 will be released soon. Please consider submitting and encourage this student activity.

To know more about IEEE UNSW Student Branch, please visit: <http://www.cse.unsw.edu.au/~ieee/>



Prasant Misra prasant.misra@ieee.org
Mentor, IEEE UNSW Student Branch

2.11 Free E-books for IEEE Members

IEEE-USA, as a special benefit to IEEE members, is giving away a free e-book in June and July.

"Launching Your Career Book 1: How to Find Your Perfect Job" is the June giveaway. This e-book will help you define your personal, long-term career goals and provide a practical roadmap to assist in finding your ideal job. Author Abby Vogel Robinson provides tools and assessments to enable you to evaluate your personality and aspirations, find a great company to work for, choose the best position for you and build your network. Your career decisions will play a major role in determining your income, community status, circle of friends, choice of a spouse - and even your identity and sense of self-worth. It will also help you choose wisely and carefully and get you started toward personal and professional fulfillment.

"Launching Your Career Book 1: How to Find Your Perfect Job" can be downloaded for free (IEEE members only) at:

<http://www.ieeeusa.org/communications/ebooks/files/28ias2c29/LaunchingYourCareer-FindingPerfectJob.pdf>.

The non-member price is \$5.99.

In July, IEEE-USA's free e-book will be "Personal Positioning for Engineers." This publication is designed to help you learn more about employment options available to engineers. You will also learn how to position yourself for success by choosing the right options for you.

"The key to succeeding is to understand yourself, how you respond to change and what level of risk you can deal with," author Paul Kostek writes. This e-book will be available for members to download for free in July.

2.12 Members

As at 30 June 2012, we had a total of 2,638 active members (including affiliates). Compared to same time last year, this represents an increase of 168 members.

We had 136 students take up the free student membership offer for 2012. From 1 March to 30 June 2012, we had 5 enquiries for senior membership, of which 4 have submitted their applications for processing and 1 has already been approved.

For members who are qualified to be senior members, I would like to urge you to upgrade to senior members in order to boost the status of our section. To upgrade to senior member, you will require three referees. However, if you are being nominated by the section, you only require two referees.



Bruce Poon bruce.poon@ieee.org
Membership Development Chairman, IEEE NSW Section

2.13 Welcome to our New and Upgraded Members

Member

Md. Jainul Abedin
Yasser Ali Asiry
Man Ho Au
Pat Belcastro
David Elie Benchoam
Shuning Bian
Catherine Louise Chalmers
CheeMun Chong
Benjamin Adrian Coleman
Bruce Mervyn Devir
Adrian Dunn
Junbin Gao
Ronald Huby
Matthew Imhoff
Kevin Jacobs
Fumihisa Kimura
Stephen George Krouzecky
Jonathon Lavelle
Chong Kuen Lim
Toto Anton Liong
Hadi Mashinchi
Andrew Nisbet
Md. Vahid Nobakhti
Simon K Poon
Jesuraj Savarimuthu
Shane Schilter
Mitesh Solanki
Nathan Spencer
Atul Thapar
Mei Ling Tsang
Anthony Ujhazy
Chris Welsh
Daniel Wilson

Associate Member

P. Asawaphooreekom
Evan Conway
Christopher Hughes
Danie Janssen
Debabrata Kumar Karmokar
Sunil Krishnan
Juan Lorenzana
Brendan Oddo

Assoc. Member (Cont.)

Josiah Poon

Grad. Stud. Member
Syed Muzahir Abbas
Tim Adamson
Mohd Yazed Ahmad
Tuncay Akdeniz
Darren Gareth Alvares
Haleh Amintoosi
Khairul Anam
Peter Anderson
Mitra Bahadorian
Mohsen Bakouri
Haseeb Bokhari
Daniel Bongiorno
Yogita Gunwant Chapre
Shasha Cheng
Yan Cai
Marc Garry Carmichael
Diego Carrasco
Rohnil Chand
Md. M. A. Choudhury
Bryan Clarke
Hui Cui
Rashmil Dahanayake
Jeremy Davis
Javad Dodangeh
Pei Dong
Ifeanyi P Egwutuoha
Nagendar R. Elimineti
Jacob John Foley
Filippo Galgani
Anirudh Garg
Liang Gong
Xiaoqi Guo
Wenzhu Huang
Amgad George Habib
Aluysius Handojoseno
Yonathan Hendrawan
Mengyu Huang
Aftab Hussain
Steven Parker
Mian Shahzad Iqbal

Grad. Stud. Member (Cont.)

Astria Nur Irfansyah
Abdallah Kassir
Joel Thomas Kennedy
Anthony Knittel
Dana Sulistiyo Kusumo
Xinwang Liu
Yufeng Lai
Huijun Li
Kun Liu
Lingqiao Liu
Jayde Livingstone
Shiyang Lu
Li Ma
Gautam Manoharan
Ruixue Mao
Hooman Mardokhi
SayedHamed MoosaviRad
Amir Mujkanovic
Richa Nahata
Huy Hoang Nguyen
Linh Lan Nguyen
Mohammad Zavid Parvez
Banafsheh Pazokifard
Stephen Pham
Arash Pirzadeh
Pedram Pourashraf
Jing Qui
Md. Geaur Rahman
Harish Ramachandran
Md. Shamim Reza
Mohsen Rezvani
Timothy Ruckley
Saeid Sadeghi Lakelayeh
Bryan Kevin Schwitter
Bipul Sen
Nirmit H Shah
Lei Shang
Yanyan Shen
Hassan Shirzeh
Su Myat Min Shwe
Basem Suleiman
Geng Sun
Zuowei TANG
Barathkumar Vellingiri
Gabriel Viera

Grad Stud Member (Cont.)

Zhiheng Wang
Fanfan Wu
Chao Wang
Lijuan Wang
Shanshan Wang
Madawa Weerasinghe
Bo Wei
Joko Wijaya
Yixuan Xie
Bing Xu
Shihao Yan
Yixiu Yang
Chang Yu
Liming Zhan
Anhong Zhang
Lelin Zhang
Rui Zhang
Tong Zhang
Steven Zhu
Cristhian J. Z. Ortiz
Chao Zuo
Jayeta Biswas
Peng Gao
Yangbo Yu
Ying Zhang
Wei Zhao
Wenhua Zhou
Kaibin Zong

Student Member

Saeed Afshar
Mazen Al Ismail
Heidari Alireza
Khalid Aljaghtami
Ali Alkhalifah
Jonathan Andrews
Eric Guang Rui Ang
Martin Bajalan
Adam Black
Christopher G. Byrne
Alison Carden
Weisi Chen
Ernest Cheng
Nicholas Chetty
Alison Carden

Student Member (Cont.)

Weisi Chen
 Ernest Cheng
 Nicholas Chetty
 Michael Cocks
 Matthew Dylan Conley
 Cameron Scott Croker
 Ahmad El Saghir
 Almarza Farias
 Daniel Floyd
 Kirby Fu
 Jai Galliot
 John Garland
 Leonardo Gonzalez
 Stuart Gordon
 Mitchell Gulliver
 Lawrence Han
 Sadnam Hasan
 Raheel Maqsood Hashmi
 Kenneth Hee
 Beau Howard
 Yifei Huang
 Pititit Itsariyapinyo
 Daniel Jedrychowski
 Jonathan Kamarajan
 Mohammad KasebAhadi
 Mohammad Kasim
 Calla Klafas
 Phuc Ngoc Le
 Tsing Lee
 Ross Cho Chun Leon
 Weijie Lim
 Yi Lu
 T. Mohanarajah
 Hamed Monkaresi
 Samaneh Movassaghi
 Esther Maydred Nabitosi
 Alok Nabi
 Shreehari S. Nair
 Christopher Ngo
 Thien Huynh Nguyen
 William Xuan Nguyen
 Hao Ni
 Li Niu
 Stephen Justin Pratt
 Alex Probst J Probst

Student Member (Cont.)

Md. Hafijur Rahman
 Pierce Rixon
 Benjamin Charles Roesler
 Bill Sami
 Xiran Shi
 Raghavendra B. Shrestha
 Adam Smallhorn
 Richard James Sofatzis
 Yin Song
 Darin South
 Wenxi Su
 Steven Chris Sultana
 Sayuri Tamura
 Seynthan Thanapalan
 Can Udomcharoenchaikit
 He Wang
 Ying Wang
 Mitch Wenke
 William Widjaja
 Matthew Marlon Williams
 Kevin Anthony Wong
 KE Xiao
 Ling Xue
 Bo Yang
 Zheng Yu
 Qiwei Zhai
 Yuanliang Zhou
 Eisa Zarepour
 Astrid Zeman
 Lai Zhang
 Mingzhi Zhang
 Xuemeng Zhang
 Dianbo Zhao
 Rui Xue

3. Chapter News**3.1 IEEE NSW AP/MTTs Chapter**

The IEEE NSW AP/MTTs Chapter has organized several activities in last few months. In total, we had three lectures by eminent speakers; the key highlights were two IEEE distinguished lectures and one lecture by an external speaker. The topics covered by the speakers highlighted the current trends in the fields of antennas, propagation and microwave research. All of these events were well attended by IEEE members, students and external visitors.



A/Prof. Ashwin K. Iyer's lecture

The first lecture was by Prof. Sembiam R. Rengarajan in the month of April 2012. He is a distinguished lecturer for the IEEE AP Society and a Fellow of IEEE (1994) and of the Electromagnetics Academy. He served as the Chair of the LA Chapter of IEEE Antennas and Propagation Society (1983-84), Chair of the San Fernando Valley Section of IEEE (1995), and as an Associate Editor of the IEEE Transactions on Antennas and Propagation (2000-2003). His experience includes periods at Bharat Electronics Ltd., India, Jet Propulsion Laboratory (JPL), Chalmers University of Technology, Sweden, US Air Force Research Laboratory, and Naval Research Lab., Washington, D.C. He is an expert in the field of antennas and propagation and he gave a talk on Design, Analysis, and Applications of Waveguide-Fed Slot Arrays.



Prof. Sembiam's lecture

Followed by this lecture, the second lecture was by a young and prominent researcher A/Prof. Ashwin K. Iyer, from University of Alberta, Canada. Dr. Ashwin completed his PhD in the year 2009, and joined the faculty of the University of Alberta Department of Electrical and Computer Engineering in the fall of

2009. In 2008, Dr. Ashwin was the recipient of the R.W.P. King Award, presented by the IEEE Antennas and Propagation Society to an author less than 36 years of age for the best paper published in the IEEE Transactions on Antennas and Propagation during the previous year. Dr Ashwin was awarded the Best Student Paper prize at the 2009 ANTEM/URSI student-paper competition as well as second place prizes in the student-paper competitions of both the 2002 and 2006 IEEE MTT-S International Microwave

Symposia, held in Seattle, WA in June, 2002, and San Francisco, CA in June, 2006, respectively. He gave a talk on Transmission-Line Metamaterials and the Development of the Free-Space Metamaterial 'Superlens'. In addition to the talk he spent time in discussion with student attendees sharing his technical and PhD experiences, which was very motivational and interactive

The third lecture was by another IEEE Distinguish Lecturer from AP society, Professor Kwok Wa Leung. He received the International Union of Radio Science (URSI) Young Scientists Awards in 1993 and 1995, awarded in Kyoto, Japan and St. Petersburg, Russia, respectively. He received Departmental Outstanding Teacher Awards in 2005, 2010, and 2011. He is a Fellow of IEEE and HKIE. Professor Leung was the Chairman of the IEEE AP/MTT Hong Kong Joint Chapter for the years of 2006 and 2007. He has been appointed as a Distinguished Lecturer by the IEEE Antennas and Propagation Society for 2012-2014. He gave an interesting talk on Transparent Antennas: From 2D to 3D. This activity was held in the month of June.



Yogesh Ranga yogeshwar.ranga@csiro.au
Secretary, IEEE NSW AP/MTT Chapter

3.2 Society on Social Implications of Technology (SSIT) Chapter

SSIT Australia continues to sponsor The Social Interface blog (www.thesocialinterface.com). We hope members of IEEE read it (you can subscribe by email), comment on topics of interest or even contribute a post. Recent discussions include security features of different smart phones, social media, and professional requirements and the sale of "second hand" MP3s.

We have also hosted a successful technical meeting at UNSW this year on the 17th of May with Stuart Smith talking about the use of videogame technology and the

potential of the new broadband network to deliver health outcomes, particularly in regional and rural Australia. For those who missed it, the slides will hopefully be up online soon.

We encourage all members of IEEE in all societies to also join SSIT (which you can do when you renew your annual membership).

Lyria Bennett Moses
Chair, IEEE NSW SSIT Chapter

3.3 IEEE NSW PES Chapter

3.3.1 "Down to Earth" Conference 2012

The IEEE NSW PES will be technical co-sponsors of this EA conference which will be held at the Crowne Plaza Hotel in the Hunter Valley on 9-11 October 2012.

This is the second time this conference has been held. The inaugural conference took place in Perth in 2010 and was very well attended. To maintain the momentum of a conference supporting earthing practitioners, it has been agreed that the conference will alternate between the East and West coast of Australia on a biennial basis.

The second DTEC will build on the successful first conference by providing an opportunity for:

- Earthing specialists to present their recent experiences and application of the latest advances
- Engineers to publish peer-reviewed technical papers in conjunction with Engineers Australia, IEEE Power and Energy Society (PES), and the Electric Energy Society of Australia (EESA)
- Asset owners, regulators, educators, and interested engineers to increase awareness of issues significant in the earthing field and to discuss how they are being handled
- Earthing practitioners, past earthing course attendees, and people new to the field to get together and share experiences
- Suppliers and consultants to showcase their capabilities and products.

The technical programme will consist of three components:

- Presentation of peer-reviewed technical papers addressing recent advances in earthing-related fields. Accepted papers will be published in the Conference Proceedings and listed in IEEE Explore
- Presentations using a less formal approach to cover recent experiences such as technically-challenging design applications of tools/methods,

reports on incidents of wider interest, provide updates of R & D projects and introduce new tools/materials with supporting analysis.

A full program schedule of presentations has been selected from the submitted papers and has been designed to cover a great diversity of content.

To help those who are new to the earthing field but need to some technical background there will be a half day of tutorials by earthing experts. The tutorials have been designed to cater for delegates from a broad range of earthing practice. Partners are welcome and to ensure that they are well catered for there will be a tour of the award winning Hunter Valley Gardens and neighboring village and another to local boutique vineyards to sample the best food and wines of the area.

Further information, the paper program and registration forms are available at: www.dtec.org.au

3.3.2 ATPDraw Workshop at UNSW (6-7 September 2012)

UNSW and IEEE NSW PES are collaborating to repeat their course on ATPDraw again this year.

ATPDraw is a graphical preprocessor for the ATP version of the ElectroMagnetics Transients Program (EMTP). Since its development by Dommel and Meyer at the Bonneville Power Administration in the 1970s, EMTP and its Windows version ATP (Alternative Transients Program) have become arguably the most useful power system software available for transient analysis. Many commercial spinoffs of ATP have been developed but the basic ATP software and ATPDraw are available royalty-free in the public domain. ATPDraw allows the creation of system network models that can be constructed as any desired circuit configuration using predefined components from an extensive menu of about 65 standard electrical components and 25 program modules.

ATPDraw is most valuable to new users of ATP and allows a wide range of power system networks to be solved. It is not limited to transients but will enable load flow calculations, fault calculations and a range of other applications to be performed in conjunction with ATP.

The aim of this short course is to provide both the beginner and engineers with some experience of the use of ATP in solving transient problems and in performing insulation coordination determinations. The use of ATPDraw as the graphical pre-processor for ATP has simplified the analysis of transient problems greatly.

Those attendees who are not registered with the Australian EMTP-ATP group and do not have the ATP software will be able to register for free membership with the Australian EMTP-ATP group convenor, Dr. Toan Phung. They will then be able to download the latest version of ATP and ATPDraw for the course and for use later in their professional activities.

The course will be a practical hands-on exercise with attendees working through a number of specific case studies on their own computers.

Who Should Attend?

- Engineers wishing to perform transient analysis and simulation
- Engineers from the Transmission and Distribution sectors and from general industry
- Consultants
- Post-graduate students

Further details about the workshop are available from Trevor Blackburn at: t.blackburn@unsw.edu.au or Toan Phung at: t.phung@unsw.edu.au

Trevor Blackburn
Chair, IEEE NSW PES 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 http://www.engineersaustralia.org.au/events/events_home.cfm to prevent any potential disappointment due to last minute changes.

Date	Event/Meeting/Conference	Speaker	Host	Contact	Venue
12 July	Taggle wireless LAN (track cattle)	Mat Henderson	EA	Peter Hitchiner	EA Auditorium
26 July	Zero Carbon Energy Plant	Patrick Hearps	EA	Mai Yeung	EA Auditorium
23 August	Passive Sonar Signal Processing for Underwater Vehicles	Brian Fergusson	IEEE	G Town/ J Robinson	EA Auditorium
11 October	QR code & Geo-Location	Vincent Yu	IEEE	G Town	EA Auditorium

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5. IEEE NSW Section AGM and Dinner 2012

Date: Friday, 23 November 2012

Times: 6pm to 7pm Chapter and Affinity Group AGM's
 7pm to 8pm NSW Section AGM
 8pm to 11pm NSW Section Dinner

Venue: Radisson Hotel & Suites,
 72 Liverpool Street, Sydney, Australia
 web: <http://www.radisson.com/sydney-hotel-ns-2000/ausydney>
 phone: 8268 8887

Parking: see page 14 for map and directions

RSVP: Tuesday **9 November 2012**
 (Kindly e-mail the completed form to Eddie Fong: eddiefong@ieee.org or phone: 0413777511)

IEEE NSW Section will cover the cost of your dinner (partner included) for all registrations received before the RSVP date above. However, for those no show at the event, then \$80 per person will be charged to your credit card.

Reservation Form for IEEE NSW Section AGM & Dinner 2012

Name:

Attending: AGM Dinner..... (Yes/No as applicable)

Vegetarian: (Yes/No as applicable)

Tel:

Membership No.:

Partner Attending: (Yes/No as applicable)

Partner's Name:

Attending: AGM Dinner..... (Yes/No as applicable)

Vegetarian: (Yes/No as applicable)

Credit Card No.:

(This will be used if no show at the event)

6. "40 Year" Celebration & Fellow Member Night

Date: Thursday, 16 August 2012

Time: 6:30pm to 10pm

Venue: Radisson Hotel & Suites,
72 Liverpool Street Sydney, Australia
web: <http://www.radisson.com/sydney-hotel-ns-2000/ausydney>
phone: 8268 8887

Parking: see next page for map and directions

RSVP: Friday **3 August 2012**
(Kindly e-mail the completed form to Eddie Fong: eddiefong@ieee.org or phone: 0413777511)

IEEE NSW Section will cover the cost of your dinner (partner included) for all registrations received before the RSVP date above. However, for those no show at the event, then \$60 per person will be charged to your credit card.

Reservation Form for IEEE NSW Section 40 Year Celebration & Fellow Member Night

Name:

Vegetarian: (Yes/No as applicable)

Tel:

Membership No.:

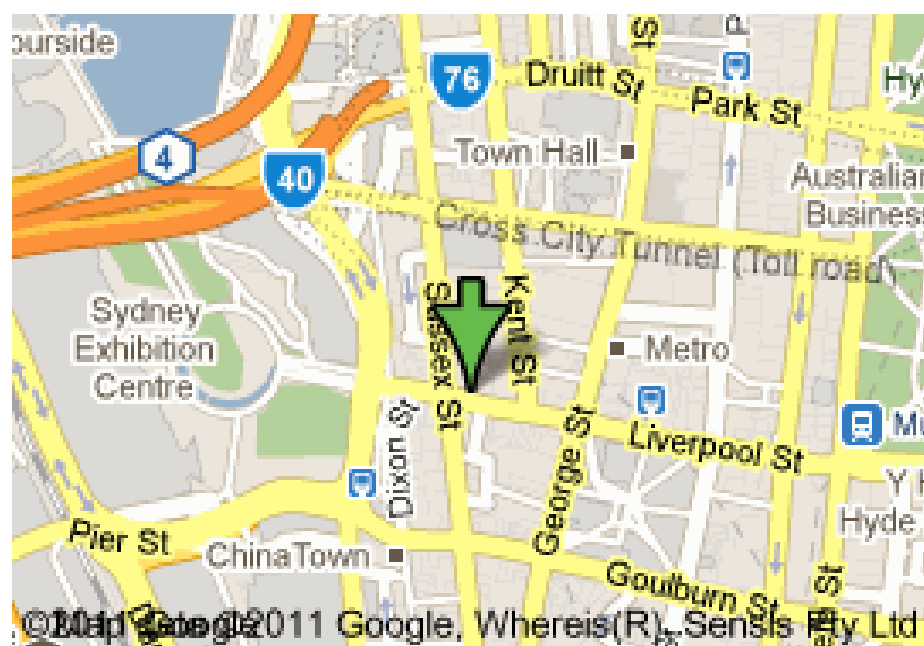
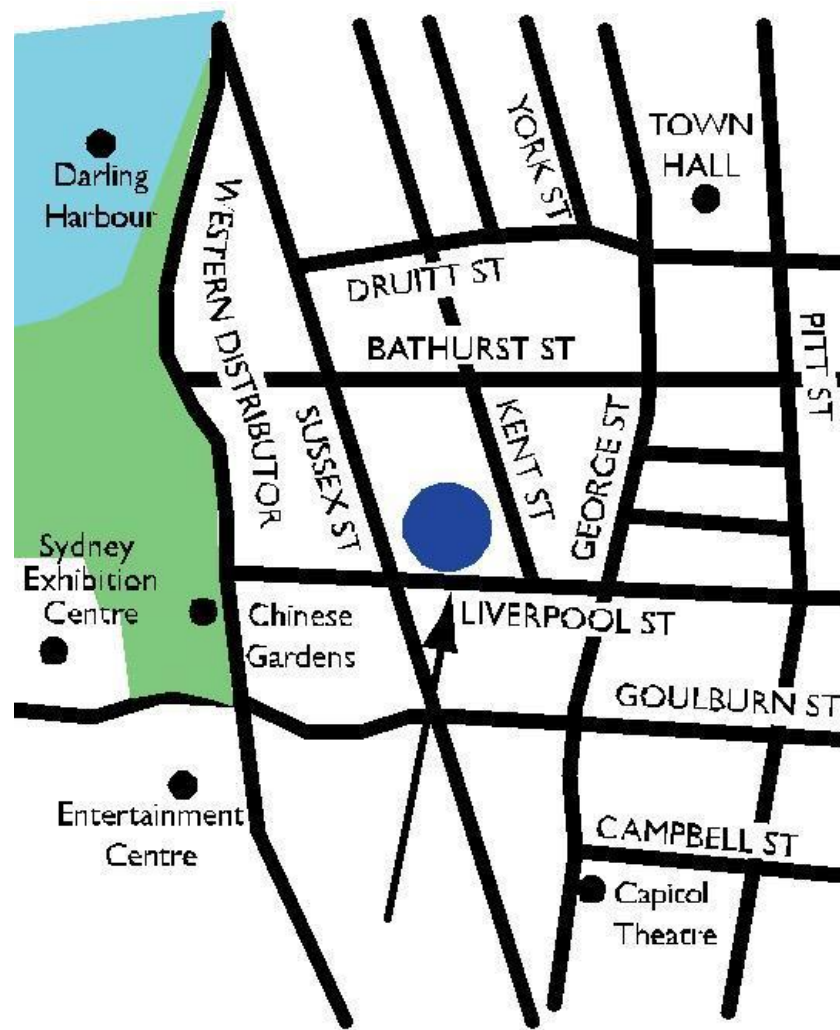
Partner Attending: (Yes/No as applicable)

Partner's Name:

Vegetarian: (Yes/No as applicable)

Credit Card No.:
(This will be used if no show at the event)

7. Map: Radisson Hotel & Suites, 72 Liverpool Street, Sydney



8. Nomination/Nominee Form for IEEE NSW Section Committee

The nomination/nominee form previously mentioned in Item No 2.3 should be e-mailed to John Robinson at jl.robinson@ieee.org or to the Secretariat PO Box 576, Crows Nest NSW 1585

Instructions:

Before completing the form and returning, review the following guidelines for nominating a volunteer Candidate:

(a) Nominators must contact their nominee before submitting the form and confirm their acceptance of the time & other commitments required for the position.

(b) Nominees must have had at least 2 years on the Committee to nominate for the key positions of Chair, Vice Chair, Treasurer and Secretary.

(c) Self nominations require the submission of additional information e.g. CV or SMIEEE referee.

(d) If you are nominating for more than one position, separate forms must be submitted.

(e) Any other queries should be emailed to jl.robinson@ieee.org or by phone 9418 8695.

Nominee Contact Information

Nominated Position:

First Name:

Surname:

IEEE Email or
other address

Address Line 1:

Address Line 2:

Post Code:

IEEE Member No:

Achievements:

.....

(For the past 10 years within and without IEEE)

Nominator Contact Information

First Name:

Surname:

IEEE Email or
other address

Address Line 1:

Address Line 2:

Post Code:

IEEE Member No:



MONDAY 6

SITE TOUR: Sydney Harbour Pylon
2.00pm Experience the history of the Sydney Harbour Bridge and view from Sydney's original lookout with this guided tour of the Pylon Museum.

Location: Sydney Harbour
Cost: \$12.00pp

Migrant Engineers Workshop
2.30pm A presentation will be conducted for overseas qualified engineers seeking employment. The objective is to provide skilled migrant engineers guidance and motivation to improve their chances of securing employment in the Australian engineering industry.

Location: UWS College, Westmead

LAUNCH EVENT: Harricks Address
5.30 for 6.00pm The 2012 Harricks Address explores Frank Sartor's career through engineering eyes, and discusses the intellectual influences in his political life. Delivered as an interview with Andrew Botros, the 2012 Harricks Address focuses on policy, governance, planning, infrastructure, visions for NSW, and ultimately, it examines the role of engineering in all of these matters of public importance.

Speaker: Frank Sartor
Location: NSW Parliament House
Cost: \$25pp

Public Speaking Competition
5.30 for 6.00pm For Engineering Students currently enrolled at the University of Wollongong & Institute of Technology - Illawarra. Sign up now, gain some practical experience and be in the running to win some money.

Location: University of Wollongong, Northfields Avenue, Wollongong

TUESDAY 7

Great Engineering Challenge
8.30 for 9.00am High School Students compete in a full day of hands on Engineering Challenges.

Location: UNSW

Consult Australia Bridge Building Challenge
9.00am The Consult Australia Bridge Building Competition is an opportunity to educate the public about what engineers do in their community and help inspire students to take up engineering as a career choice. Engineering Undergraduate Students from universities across NSW will rise to the challenge to build the lightest bridge to carry a predetermined load with limited materials; the bridges will then be tested to breaking point.

Location: Martin Place, Sydney

SITE TOUR: ANSTO Discovery Tour
3.00pm A tour of Australian Nuclear Science and Technology Organisation offers a compelling insight into the role nuclear science, technology and engineering plays in the development of life-saving medicine, climate change research, materials engineering and national food security.

Location: Lucas Heights

SITE TOUR: Coal Services Mine Rescue Facility
3.15pm NSW has almost 90 years experience, assisting the mining industry to manage risk and operate safely. Mines Rescue's primary role is to provide underground incident response, an area where we excel, as a result of harnessing the expertise of decades of experience.

Location: Princes Highway, Woonona

The Next Step - Careers Presentation Sponsored by Hyder Consulting
5.00 for 5.30pm Want to make it big in the world of engineering? We have brought together some of the best in Engineering and HR to help answer some of your nagging questions about resume building, internships and interview skills.

Location: Engineers Australia, Chatswood

"Technology Trends - living in the wireless world"
6.00pm Dr Ian Oppermann, Director CSIRO ICT Centre Macquarie presents as part of the Engineering Week Lecture series

Location: Macquarie University

WEDNESDAY 8

Discover Engineering
9.00am This is a unique opportunity for students in Years 9, 10 or 11, who are interested in Engineering. The day includes hands on activities and guest speakers from within the Engineering profession.

Location: Port Kembla
Cost: \$20pp

FORUM: Adequate Infrastructure - Achievable Goal or Pipe Dream?
6.00 for 6.30pm The Forum will look at the identification, funding, approval and delivery of infrastructure projects in NSW. Panel members will include representatives from Infrastructure NSW, Planning NSW, Engineers Australia and APEMA.

Location: Museum of Sydney

Operational Issue: TransGrid's Western 500 kV Project
6.00 for 6.30pm start A presentation on Operational Issues Associated with TransGrid's Western 500 kV Project. Guest Speaker: Darren Spoor, Senior Engineer at TransGrid.

Location: University of Wollongong, Northfields Avenue, Wollongong

THURSDAY 9

Engineers Breakfast Sponsored by Engineering Education Australia
7.00am NBN Co will provide the infrastructure that will allow wholesale and retail service providers to deliver advanced broadband services to homes, schools and businesses with speeds of up to 100 megabits/second. How will this all be done?

Speaker: Gary McLaren - Chief Technical Officer, NBN Co.
Location: Museum of Contemporary Art
Cost: \$55pp

Regional Great Engineering Challenge
9.00am High School students will compete in a full day of hands on engineering challenges.

Location: Dubbo Sport World

SITE TOUR: Kurnell Desalination Plant
10.00am Learn about each stage of the desalination and water treatment process from start to finish. You'll also find out about the seawater intakes and outlets and a number of environmental considerations, including renewable energy that ensures the sustainability of the plant.

Location: Kurnell

SITE TOUR: Warragamba Dam
10.00am Overview of SCA's operations, tour of Warragamba Dam crest and spillway, and the Water for Life Exhibition.

Location: Warragamba

Cost: Please see website

SITE TOUR: University of Wollongong's SMART Building
5.00pm for 5.30pm start The SMART Infrastructure Facility is the National Centre for infrastructure solutions. SMART "Simulation, Modelling, Analysis, Research and Teaching".

Location: University of Wollongong, Northfields Avenue, Wollongong

Billicart Engineering
5.30pm for 6.00pm The design and construction of billicarts presents a number of interesting engineering challenges that will be addressed in this presentation. How do you achieve high speeds, on a limited amount of energy, with maximum efficiency while simultaneously allowing for safe operation? Find out here!

Location: Engineers Australia, Chatswood

FRIDAY 10

CPEng Workshop
9.30am Do you want to upgrade your professional status by becoming a Chartered Professional Engineer (CPEng)? Sydney Division of IEAust can help. We will be conducting a CPEng Workshop, so that in 3 hours you can accomplish the first draft stage of your application.

Location: Engineers Australia, Chatswood

SITE TOUR: ABC Ultimo
10.00am Learn what it takes to make TV and radio programmes with a behind-the-scenes look into one of the ABC's television and radio production facilities.

Location: Ultimo

Cost: \$10pp

Aurecon Bridge Building Competition
10.00am Can your school build the strongest bridge out of balsa wood, cardboard, string and glue? Would your students benefit from learning about engineering in a fun and practical way? Aurecon, an engineering, management and specialist technical services consultancy, is running a model bridge competition for year 8 and 9 school students throughout NSW and ACT. Cash prizes for winning schools and students. Numbers are strictly limited.

Location: Art Gallery of NSW

YEAS/EWB Trivia Night
7.00pm Do you want to show off your deep knowledge to your friends and be brainiest team on the night? Come in Fancy Dress and be a part of "Large Picture related to Trivia" 100% proceeds go to EWB.

Location: Paddington RSL
Cost: \$15pp or \$120 Table of 10

SATURDAY 11

Sydney Women in Engineering Winter Gala Dinner
6.00 for 6.30pm This black tie affair is a celebration of women in engineering and the closing event for the 2012 Engineers Australia Engineering Week festivities. A perfect opportunity to enjoy an elegant night out at the newly renovated Museum of Contemporary Art and a 3 course meal overlooking the night lights of Sydney Harbour.

Location: Museum of Contemporary Art

Cost: EA Member: \$100, Non EA member: \$120, Table of 10: \$1100



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