



The Institute of Electrical and Electronics Engineers, Inc.

VOLUME 45 Issue 3

October 2018

Secretariat

AUSTRALIAN PROFESSIONAL CENTRE
PO Box 576
CROWS NEST NSW 1585
Tel: +61 2 94318600

IEEE NEW SOUTH WALES SECTION
ARBN 078 576 495 ABN 34 078 576 495

Editor: Bill Sloman
e-mail: bill.sloman@ieee.org
Web page:
<http://sites.ieee.org/nsw/>

Contents:

Pages 2-3	Chairman's message
Page 4	2018 AGM and Annual Dinner
Page 5	IEEE Tale 2018 - incipient conference
Page 6	Unite 2018 - mid-year get-together
Page 7	Women in Engineering Leadership summit in Brisbane
Page 8	IEEE Xtreme
Page 9	Strategic plan progress
Pages 10-11	John Lowe Robinson obituary
Pages 12-13	Instrumentation and Measurement workshop at Macquarie
Pages 14-15	TENSMP 2018
Page 16	AS/NZS 3000:2018 and NSW Service and Installation Rules July 2018.
Page 17	Joint Institutions Lecture, 13 September 2018
Page 18-19	Region 10 awards, David Tien as a Region 10 outstanding volunteer
Page 20	The Social Implications of technology, and STEM education
Page 21-30	New and upgraded Members of the NSW branch of the IEEE - at last.
Pages 31-2	Call for papers for ICST 2019 at Macquarie
Page 33	If you want this on paper by post, and aren't already getting it that way.

Editorial:

This is the twelfth newsletter I've edited. This one is being edited with a recently downloaded copy of Libre Office – 6.0.6.2 - which still doesn't necessarily mean that I'll be able to process .docx submissions – if they come in as .docx, they may get translated to .doc.

We need a new secretary and a new treasurer. As assistant treasurer I'm the candidate of last resort for the treasurer job, but I hope we can get somebody else to learn how to work the system

Members to are encouraged to consider nominating for service on the Section Committee as well as for elected office – it's the only sure way of stopping the committee from trying to get you to do something else that you might fancy even less.

Chairman's Message

October brings the final edition of Circuit for the year, and the preparations begin for the 2018 Section AGM to be held on Wednesday the 21st of Nov 2018. This will be held at Rydges Sydney Central with details outlined on page 5.

I am proud to say that it has been a very busy year with the section committee members working hard to organise many events and opportunities. By the middle of September, our members had the opportunity to engage in over 50 events (5.5 events per month on average) with a greater diversity in topics and location than ever before. By engaging in such events, IEEE members get value from their IEEE membership.

In particular, the highlight event since the last Circuit issue was UNITE2018 that brought together a lot of our membership for a great night of networking. More information and some photos can be found on page 6..

Empowering female leadership is critical to encouraging women to enter and stay in the technical disciplines around the world. Humanity will benefit if women and men can exploit their particular talents to the full. With this in mind the IEEE NSW Section has become a supporter and financial sponsor of the IEEE WIE Leadership Summit being held in Brisbane in November. This is an inexpensive event bringing together men and women to enhance their leadership skills.

It is supported by many brilliant minds including Margaret Sheil AO, Anne Kealley, Anna-Maria Arabia, Julie Martin, Jyoti Sharma and Chennupati Jagadish, AC. NSW members like Naila Mukhtar are helping make this event possible. We have sponsored NSW members to attend the event and the delegates selected include Meriam Gay Bautista, Catherine Nicholson, Naomi Stringer and Ibrahim Ibrahim. For more information about this event please see page 7.

October also brings one of the best competitions that IEEE organises for students, IEEE Xtreme. This is a 24-hour team based programming and problem solving competition aimed at pushing students - undergraduates and postgraduates - to their limits.

We had a group of first year students come 32nd in the world last year. Participation in events like this looks good the CV and I encourage all students to participate. If you are a student join in. Academics should recommend the competition to students. More information about the competition can be found on page 8..

Our student network continues to grow. In September we revived a student branch committee at the University of Sydney and July-August saw the creation of a number of technical student branch chapters at Macquarie University. Such engagement is helpful for student members and vital to the future of the NSW Section. I encourage students from universities without a student branch to contact us about forming one. That sort of activity looks good on your CV, and you will exercise organisational and leadership skills that aren't taught in your university degree courses.

We had a good number of submissions for our inaugural IEEE NSW Section Outstanding Volunteer Awards. We will be announcing the winners at our section AGM.

Many of the initiatives undertaken throughout the year have been driven by our strategic plan aimed at reviewing and improving the section structure, membership value, and community and technical contribution. Over the last eight months the section committee has made progress on refining and approving the plan but there's lots of work still to do. What has been done is set out on page 9.

In December we are hosting TALE2018 an engineering, technology and education conference focused on engineering the next generation of learning. TALE2018 has received the biggest number of submissions in TALE history and delegates will be exposed to a diverse range of leading academics from throughout R10 and beyond. Participants will be exposed to innovative teaching practice, diverse uses of technology in the classroom, professional development opportunities and great keynote speeches and panel sessions. An industry day is also available for members that would like to engage and reach out to academics who are passionate about improving education. See page 5 for more details.

Other upcoming major events in NSW in 2018 include the 2018 Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC) and the 2018 International Telecommunication Networks and Applications Conference all being held in November. In addition the 26th International Conference on Systems Engineering will be held first time in Sydney, Australia, at the Sydney University of Technology from the 18th to the 20th December this year. The abstract deadline is the 18th October 2018.

Universities in NSW are looking for IEEE industry members to volunteer some of their time to reach out to students and talk to them about real world engineering/technology jobs, experiences and skills.

The IEEE Student Branches are also looking for IEEE industry members to explain the benefits of IEEE membership and how to make the most of such membership. If you have a story to tell and would like to engage with students please register your interest and availability. Your knowledge and time would be greatly appreciated. Register at:

<https://www.surveymonkey.com/r/IEEEIndustryMembersSupportingNSWUniversities>

Communication is important and for this reason we have diversified the notification of section events. We have set up Section LinkedIn and Facebook pages, switched to a bulletin styled monthly e-notice and we have upgraded the Section Website. There is no excuse for missing out on our great events!

Once again, value comes from engaging with the IEEE.

Make the most of your IEEE membership today!

I wish you all the best for the rest of 2018 and hope to meet you at one of our events, especially at our AGM in November.

Sasha Nikolic, Chair, IEEE NSW Section



2018 NSW Section AGM and Annual Dinner



New South Wales Section



Description

All members of the NSW Section of the IEEE are invited to the 2018 Annual General Meeting at Rydges Sydney Central.

Chapter meetings start at 6 pm. The AGM begins at 6:45 pm and will be followed by an international buffet dinner with vegetarian and halal options. Please register here for the AGM (which is of course free).

We also invite you to stay for the optional AGM dinner, for which there is a very modest charge of \$6 (the value of the buffet dinner is \$55).

FAQs

Are there ID or minimum age requirements to enter the event?

The AGM and dinner are for IEEE NSW Section members and their partners.

What are my transport/parking options for getting to and from the event?

Rydges Sydney Central is conveniently located within a four minute walk from Central Station (Elizabeth St Entrance/Exit) as well as the Central Bus Stands located on Eddy Avenue. Parking is available at the hotel and at Goulburn Street Car Park.

What's the refund policy?

We will refund your payment if you cancel your registration before 6 pm on 14 November.

Do I have to bring my printed ticket to the event?

Your registration ticket should be presented on the night, together with an IEEE membership card (not required for the accompanying partners).

Register at:

<https://www.eventbrite.com.au/e/ieee-nsw-section-annual-general-meeting-dinner-tickets-50116278137>

IEEE TALE 2018



TALE is the IEEE Education Society's flagship Asia-Pacific (IEEE Region 10) conference, catering to researchers and practitioners with an interest in science, technology, engineering and mathematics (STEM) education – with a particular emphasis on electrical and electronic engineering, telecommunications, computer engineering, computer science and allied disciplines – as well as those interested in the innovative use of digital technologies for learning, teaching and assessment in any discipline. We also invite industry to showcase technologies and provide feedback on capability and future needs of graduates.

The theme of this year's conference is Engineering Next-Generation Learning.

This year's tracks include:

1. Engineering Education
2. Computing & IT Education
3. STEM Education (K-12)
4. Technology-Enhanced Learning
5. Online & Flexible Learning
6. Laboratory Learning (All forms - F2F and Online)
7. Workplace & Industry-Based Learning
8. Community-Based & Informal Learning
9. International & Transnational Education
10. Equity, Diversity & Widening Participation
11. Engineering of Technologies for Learning: An Emerging Discipline (org. w/ IEEE ICICLE)
12. X-Reality & Immersive Learning Environments
13. Big Data Analytics & Machine Learning in Education

Dr Bror Saxberg (Chan-Zuckerberg Initiative), Professor Gregor Kennedy (Univ. of Melbourne), Emeritus Professor James Trevelyan (Univ. of Western Aust.) and Ms Susan Zhang (ByteDance) will give keynotes at TALE 2018.

Registration is NOW Open. Early-bird finishes on the 8th of October

More information <https://tale2018.org>

IEEE UNITE 2018

Our inaugural IEEE UNITE2018 event was held on the 10th of August and united 165 IEEE Members (Student, Young Professional, Women In Engineering, Life Members, Academia & Industry etc.) in one place with a free dinner and loads of activities focussed on networking and making the most of the IEEE.

Participants discovered the latest trends and opportunities provided by the various IEEE societies, and discussed membership elevation options, and more!

We also had a good list of companies exhibiting including Rhode & Schwarz, National Instruments, Irina Rabeja Electronics & Computers Consultancy, TechnologyCare, and LATs (Learning About Technology for a better Society).

We plan on repeating this event in 2019.



WIE International Leadership Summit



The WIE International Leadership Summit will be held in Brisbane from the 26th to 27th of November 2018.

The summit was launched as a part of IEEE WIE's portfolio of global initiatives that focus on Inspiration, Leadership, Empowerment and Entrepreneurship mid to senior women in technology.

The summit provide opportunities for networking, mentorship, and collaboration.

This is a very low cost event bringing together males and females to enhance leadership skills, supported by many brilliant minds including Margaret Sheil AO, Anne Kealley, Anna-Maria Arabia, Julie Martin, Jyoti Sharma and Chennupati Jagadish, AC.

Registration is NOW Open. Early-bird finishes on the 10th of October

For more information: <http://sites.ieee.org/wieils-aus-2018/>

IEEE Xtreme

How They Became Australia's 1st and 32nd in the World? (defeating more than 3000 teams).

The students who were to become the Semicolon team were in the first year of their engineering degree when they heard about the IEEE Xtreme. In 2017 the IEEE Xtreme event was talked up a lot more effectively than ever before in the history of University of Wollongong, and a total of ten teams ended up participating there.

IEEE Xtreme is a programming competition organised worldwide by IEEE and it runs for 24 hours. In 2015 some 1900 teams spread around the world were in competition.

IEEE UOW Student Branch committee put in a great deal of effort to organise the competition at the University of Wollongong in October 2017 and ended up with 10 teams consisting of undergraduate students and post-graduate students. Some of the participants had recently joined the IEEE just for the competition.

All the teams were in a great spirit and stayed throughout the competition day engaging and finding the answers for the problems, which called on a range of programming skills, from simple to extreme.

The teams were mentored and observed by a team of proctors who were members and senior members of the IEEE.

The team 'Semicolon' were competitive with the other teams around the world and at one point they got up to 10th from the top. At the end of the 24 hours period they ended as the best team in Australia, if only 32nd around the world (but in a field of more than three thousand other team) while 4 other Wollongong teams managed to get into in the first ten in Australia.

The team 'Semicolon' was three first year undergraduate students who were (obviously) passionate about programming. They were awarded with their prizes and the certificate at the IEEE NSW Section's AGM.

This year team 'Semicolon' is back in action and has been helping the students who are hoping to join the competition this year again in October. IEEE UOW Student Branch invites other student branches in the NSW to join the competition and they welcome anyone who cannot join the competition at their university as well. Please contact the student branch via ieeuowsb@gmail.com.



Team 'Semicolon'

Submitted by Asanga Jayawardana <hpapj953@uowmail.edu.au>

Strategic Plan Progress

Item	Date Approved	Progress	Target Date	Completed
1.1 Position Descriptions	5/2/18	PD's commenced being reviewed at August and September meetings. Still progressing slowly	September 2018 Expected by Nov 2018	
1.2 Section Documents	5/2/18	No action	August 2019	
2.1a review financial stake in conferences	9/4/18	No action	April 2019	
2.1b Review income received	9/4/18	No action	May 2019	
2.2 SB funding model changed to incentive based	9/4/18	Model discussed with SBs and have been endorsed & active	May 2018	April 2018
3.2 Work with universities to better integrate lectures & seminars. >5 in 18	9/4/18	Agreement reached with 3 universities. Over 5 events promoted to date. This will be ongoing	Dec 2018	June 2018
3.3 Mid-year IEEE networking event	9/4/18	Held 10 Aug with 165 members attending	August 2018	September 2018
4.1a Refresh of section website	5/2/18	Section approved the new site. Gradual improvements going forward.	August 2018	August 2018
4.1b Section Facebook and LinkedIn pages	5/2/18	Complete. Facebook engagement substantially more than LinkedIn to date	March 2018	March 2018
4.1c Link SB and YP funding to social media compliance	5/2/18	Tied in with Goal 2.2	May 2018	April 2018
4.2 Review and identify support for inactive branches	2/7/18	Sasha to work with SACs determine a way forward	April 2019	
4.3 Review support and incentives for student branch councillors	2/7/18	Sasha to work with SACs determine a way forward	April 2019	
4.4 IEEE Rising Stars Australia	9/4/18	General call made for 2 YPs to join USA committee. Arslan & Abbas have joined	May 2020	
5.1 Mentor program for students and YP	6/8/18	SMC was appointed in August. To work with Sasha to setup and deliver program in 2019	March 2019	
5.2a Identify junior section positions for students and YPs	6/8/18	No action	July 2019	
6.1a IEEE NSW Section Awards	7/5/18	Policy created and awards have commenced advertisement	July 2018	June 2018
6.1b IEEE NSW Section Awards Presented	7/5/18	Have inaugural award presented at Nov 2018 AGM	Nov 2018	



Sasha Nikolic, Chair, IEEE NSW Section

Vale John L Robinson.



It is with great sadness we announce the passing of IEEE NSW Section and IEEE Australia Council past Chair John L Robinson. John passed away at Ashburn House Gladesville aged care facility on Saturday 1 September 2018.

The IEEE NSW Section would like to extend its sincere condolences to John's wife Olivia, his sons Elliott and Lloyd, daughter Claire and their families.

The funeral took place on Monday 10 September at Macquarie Park Cemetery and Crematorium. IEEE was represented by several Senior Members and Committee. There were in addition Engineers Australia and IET Representatives.

Past IEEE NSW Section Chair Dr Graeme Gwilliam delivered a tribute on behalf of the IEEE. His presentation was less theatrical than the Masons (who followed) but since John didn't join the Mason until 2007, Graeme had more to talk about.

John Robinson was born in Liverpool England in 1940. His parents died young - his father in Palestine in 1943 and his mother in London in 1946 - so he was raised by an aunt and an uncle. He obtained a B.Sc. from Bangor University in North Wales (Mathematics and Science) in 1962, and went on to join British Insulated Callender's Cables (BICC - renamed Balfour Beatty in 2000)

He married his wife Olivia in 1965, and BICC moved them to Canada in 1966, then to Australia in 1972 (to BICC- Oceania). In Australia he moved on from BICC to Burndy, then Email and in 1985 set up his own business - Robotronics - selling protection and safety equipment, much of which he imported from Germany.

While he was working full-time in Sydney he did a second university degree in Marketing, which he completed in 1980, which freed up enough spare time to let him join the IEEE Section Committee in that year.

His dedication and hard work culminated in his election to the position of IEEE NSW Section Chair (1999-2000) and IEEE Australia Council Chair(2003-2004), after being the Australia Council vice-chair in 2002.

He also served as NSW Section Treasurer (1990-1998 & 2011), Section Secretary(1998), Section Nominations Chair, Power and Energy Chapter Chair(2008-2009), PES Chapter Secretary/Treasurer(2006-2007), Life Members Affinity Group Chair, Professional Activities Chair and Joint Institutions Lecture Series IEEE Representative, besides acting as the Ocean Engineering Society NSW Co-ordinator and Financial Officer.

As Section Nominations Chair(2012-2015) he presided over the introduction of electronic voting(with Dr Bruce Poon, Dr Graeme Gwilliam and Prof Trevor Bird) which allowed all members to participate in the selection of the Executive Committee.

He was a key member in the organisation of several IEEE conferences held in Sydney including GLOBECOM 1998, PICA 2001 and OCEANS 2010, which provided a much-needed boost to the Section Finances.

GLOBCOM 1998 was the first big IEEE conference held in Sydney, and seems to have been a trail-blazer for a number of others.

He also volunteered his time for TENCON Spring 2013 and ICC 2014 and represented the Section at numerous IEEE Meetings in Australia and Overseas. (The editor notes that he first got roped into the NSW IEEE by John Robinson for TENCON Spring 2013).

In his many IEEE duties John was ably assisted by his wife Olivia and the NSW Section owes both a great debt. He was always happy and willing to assist in many ways, including providing advice, support and mentoring to newer Committee Members, myself included.

As Power and Energy Chapter Chair he organised several Distinguished Lecturer visits all of which were highly successful, attracting much bigger audiences than usual.

He was a wonderful host to overseas visitors, picking up many from the airport, arranging their local accommodation and seeing to it that they felt welcome.

For his many years of outstanding service John Robinson won numerous IEEE Awards including the IEEE Millennium Medal for 2000, the IEEE Region 10 Outstanding Volunteer Award for 2010 and the NSW PES Outstanding Engineer Award for 2015.

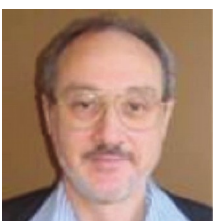
There were many messages of condolence from current and past IEEE, Engineers Australia and IET volunteers including IEEE Australia Council Chair Dr Zia Ahmed, NSW Section Chair Sasha Nikolic, Past Chairs, Dr Ramutis Zakarevicius, Prof Trevor Bird, Prof Andrew Parfitt, David Burger, Dr David Tien, Eddie Fong, and Prof Karu Eselle. Other section officers included Dr John Ypsilantis, Ray Brown, Dr Stefan Mozar, John Aitken, Dr Bruce Poon, Nuala Ward, Kate Caruthers, Prof Graham Town, Sherry Moghadassi, Olly D'Souza, Dr Raheel Maqsood and Dr Brian Ferguson. Peter Hitchiner, Peter Henderson and Alan Sangster from Engineers Australia and Deon Rowley from the IET also sent messages of condolence.



Prof Abbas Jamalipour FIEEE,
IEEE President Prof Roberto de Marca
and John Robinson at ICC 2014



Dr Ramutis Zakarevicius, Prof Branka Vuketic,
John Robinson, Dr Bruce Poon
and Dr Mahmoud Elkhodr at ICC 2014



Tony Zaglas
IEEE NSW Section Awards and Recognition Chair

Sensors, Instrumentation and Measurements: Theory and Applications

Date of workshop: July 18, 2018 Venue: Macquarie University, Sydney, Australia

The second annual workshop of the New South Wales Chapter of the IEEE Instrumentation and Measurements Society, entitled “On Sensors, Instrumentation and Measurements: Theory and Applications” was held on July, 2018 at the Macquarie University campus in Sydney, Australia. The event was attended by 79 people.

The IEEE Instrumentation and Measurement society has supported the workshop technically and financially. Macquarie University hosted the event A large percentage of the attendees were students.

Professor Subhas Mukhopadhyay welcomed all the attendees, and thanked them for coming to the workshop. He presented a promotional materials on the I&M Society and its activities, and also a short history of the IEEE IMS NSW Chapter, membership growth and so on. The NSW chapter has organized 7 technical activities including a workshop and two DL visits in 2017. So far in 2018, four technical activities had taken place before the workshop on July 18. The chapter membership has grown from 26 to 31 in a year.

The workshop included four presentations from local industry and 17 regular presentation across covering a range of different kinds of sensors, measurements and instrumentation. The audience found the topics very interesting, and they prompted numerous useful interactions between the attendees.

Overall, the workshop ran very smoothly. The IEEE IMS NSW Chapter would like to express thanks to IEEE IM society for the financial support, Macquarie University for the local arrangement and the IEEE NSW section for other supports.



Introduction by Subhas Mukhopadhyay



Mr. Colin Kinsey - Power Parameters –
Measurement Technology to Solve Emerging Grid
Issues

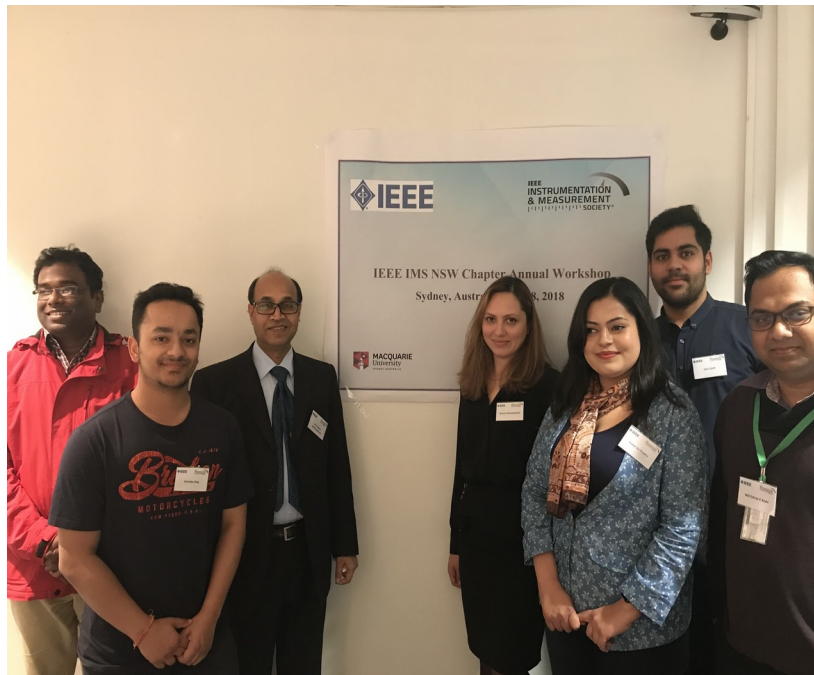


Delegates at the workshop



Certificate distribution

n



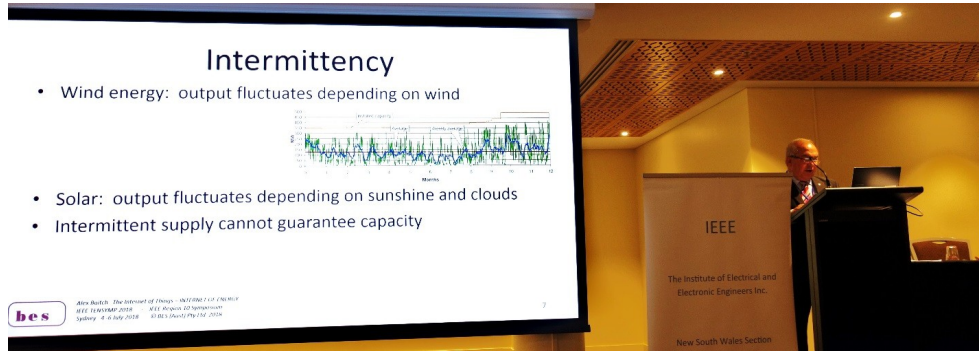
Volunteers - Shantanu Pal, Anindya Nag, Subhas Mukhopadhyay,
Nasrin Afsarimanesh, Sumedha Prabhu, Sam Z and Eshrat E Alahi

TENSYMP 2018, Sydney 4-6 July 2018

TENSYMP 2018 was held at the Mercure Central Sydney from 4 to 6 July 2018, with the theme "The Impact of the Internet of Things". The general chair, Dr Stefan Mozar and co-chairs Eddie Fong and Dr David Tien all contributed to the organisation and success of the Symposium, as did the Technical Chairs and Committee.

Symposium general chair Dr Stefan Mozar, NSW Section Chair Sasha Nikolic, Australia Council Chair Dr Zia Ahmed, past chairs Dr David Tien and Eddie Fong and Dr Pina Dall'Armi Stoks, as well as the symposium WIE and SA sections chairs and Prof Trevor Blackburn all addressed the delegates and welcomed them to TENSYMP 2018 and Sydney.

The opening Keynote was Delivered by Prof Alex Baitch, FIEAust, Past National Chair of Engineers Australia and it was well attended. The Topic of his address was "Global Changes in the Electricity Industry".



Prof Alex Baitch delivering Opening Keynote

There were keynote speeches by;

Dr Robert Barr, FIEAust	– Future Development of the Electricity Supply System in Australia.
Dr Sharon Peng	– IoT & Smart Audio a glimpse to CE Industry Trends
Prof Chin-Moi Chow	- Wearable Sleep Trackers: How do you Sleep?
Dr John Ypsilantis	– IEC 61499 & IoT
Prof Hong Yan	– Co-clustering Analysis of Multidimensional Big Data
William McCann	– Breaking Wireless Security Systems
Soumya Kanti Datta	– IoT and Industry 4.0
Prof Ren Ping Liu	– IoT + Blockchain: Technologies, Challenges and Applications.
Sam Gorman(UNSW)	- Building a Quantum Computer with ^{31}P atom qubits in ^{28}Si
Prof Eleanor Huntington of ANU	- the title of her talk has unfortunately been lost
Olly D'Souza	- Standards, the Life Blood of Local Industry and World Trade.

Panel Sessions included Diversity in the Workplace(Women in Engineering - WIE), Entrepreneurship (WIE/Young Professionals -YP), Early Career(YP/WIE) and IoT.

A Power Workshop was chaired by Professor Trevor Blackburn with the following speakers

Prof John Fletcher (Energy Systems, UNSW): Distributed renewable power generation integration in microgrids and electrical supply, distribution and communication aspects.

Craig Harrison (CEO, IS Systems): The development and operation of renewable energy microgrids: case studies of installation in Australia and Oceania.

Tharmakulasingam Sirojan (Researcher, UNSW): Artificial intelligence techniques for data analysis using smart sensors to obtain real-time details of grid condition and consumer energy use in

microgrid systems

Shibo Lu (Researcher, UNSW): Use of signal processing techniques to provide feature extraction of disturbances in microgrid to detect and identify arcing faults in photovoltaic systems and microgrids.

There was a Software Workshop, delivered by William McCann on "Breaking Wireless Security Systems".

The Symposium included a poster session where delegates presented their work and had the opportunity to answer questions from other delegates and the committee. This included remote WebEx presentations organised for those presenters who were unable to travel.

More than 210 papers were submitted to TENSYP 2018 and about 100 were accepted.



Prof Iain Collings, FIEEE during WIE/YP Panel Session

On Thursday 6 July delegates and guests enjoyed a dinner cruise on board the Fusion Cruises motor vessel, embarking at Darling Harbour for a three-course dinner with views of Sydney Harbour from the observation deck between courses.

Some of the TENSYP Photos can be viewed at the IEEE NSW Section Facebook page

<https://www.facebook.com/pg/IEEE-NSW-Section-146048629397751/photos/?ref=page_internal>

TENSYP 2018 included an Industry Day - Friday, 6th July - which was very well received. .

Sponsors included the IET, IEEE Region 10, IEEE Life Sciences, IEEE SSIT, IEEE young professionals, IEEE WIE and IEEE NSW Section. In addition, Business Events Sydney provided conference bags and arranged a discount for the Bridge Climb.

I would like to thank all the keynote speakers, workshop presenters and panellists for their participation.

Stefan Mozar, reviewers and the TENSYP committee all put a lot of hard work into organising the symposium and into reviewing the papers submitted. It is always hard to get enough reviewers to volunteer their time and services. Dr Peter Beedle, of Academic Event Services, handled the registrations expertly and tackled a number of last-minute problems. The staff of the Mercure made the Symposium a pleasant experience.

Submitted by Tony Zaglas, IEEE NSW Section Awards and Recognition Chair

AS/NZS 3000:2018 and NSW Service and Installation Rules July 2018.

On 20 September 2018 I attended a presentation, at the East Leagues Bondi Junction, by Leon Dickson, NECA Technical Advisor, on the changes to the Wiring Rules. The Event was hosted by the National Electrical and Communications Association(NECA) and was part of a series of roadshows at different venues.

Those present were informed that an unauthorised version of the Wiring Rules, AS/NZS 3000:2018, had been circulated prior to the official release by Standards Australia. The unauthorised copy is based on a pre-release version and is not controlled or safe to use.

The new edition of AS/NZS 3000:2018 is over 600 pages, has a purple cover, and is now available from SAI Global. Cost is \$249.70 for a hard copy, \$224.73 in downloadable pdf format and \$393.28 in Networkable pdf. Enforcement date is likely to be around 1 January 2019 but this will depend on relevant state legislation. New work should comply with the new Standard.

The changes are numerous and quite a number are significant. They are summarised at
<<https://www.standards.org.au/engagement-events/flagship-projects/wiring-rules/wiring-rules-what-s-changed>,>

<<https://neca.asn.au/nsw/content/new-wiring-rules-brief-look-changes>>

< https://infostore.saiglobal.com/preview/as/as3000/3000/3000-2018_v6.pdf?sku=1974289>



Leon Dickson NECA Technical Advisor

In addition a new version of the NSW Service and Installation Rules(July 2018) is available free from

<<https://www.energy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gas-networks/network-connections/rules>.>

Also see <<https://neca.asn.au/nsw/content/service-and-installation-rules-2018-edition-out-now>.>

Submitted by Tony Zaglas

Joint Institutions Lecture, 13 September 2018

Voltage Measurement and Harmonic Analysis Based on Josephson Voltage Standards

On 13 September 2018 Dr Dimitrios Georgakopoulos, SMIEEE, gave an excellent talk at the Joint Institutions Lecture Series about the proposed changes to the definitions of SI Units. The changes will be considered at the General Conference on Weights and Measures(CGPM), Versailles France, 13-16 November 2018. For more details see <<https://www.bipm.org/en/measurement-units/rev-si/>>

Dr Georgakopoulos a Senior Research Scientist and has been working at the National Measurement Institute(NMI) Lindfield since 2007. His work has been on Quantum Electrical and Low Frequency EMC Standards. He is currently a member of the IEEE NSW Instrument and Measurement Chapter Committee.



The SI Units redefinition includes Mass[kg], Luminous Intensity[cd], Length[m], Thermodynamic Temperature[°K], Time[s], Amount of Substance[mol] and Electric Current[A].

The changes that are proposed will take advantage of the quantum Josephson effect(Josephson Constant $h/2e$ known to some parts in 10^{17}) which results in voltage signals that are known more precisely.

Dr Georgakopoulos described the setups used at NMI to measure AC and DC voltages with extremely high accuracy using the above mentioned effect and detailed associated accuracies.

He also outlined the services provided to the Defence Sector and Industry.

On behalf of all those present I would like to thank Dr Georgakopoulos for his presentation and for taking the time to provide us with an update on the SI and the work being carried out at NMI.

Tony Zaglas

Region 10 Awards



IEEE Asia-Pacific (Region 10) Awards



The hard work of members within the IEEE NSW Section has been recognised on an international scale in the 2018 IEEE Region 10 Awards. The NSW Section received the R10 Best Membership Growth Large Section Award and long standing member David Tien received a R10 Outstanding Volunteer Award in recognition of outstanding contribution and services to the IEEE New South Wales Section and IEEE Region 10.

Region 10 Best Membership Growth Large Section Award

The NSW committee has been working hard for years to bring our members together and share knowledge, ensuring value in membership and helping to advance technology for humanity.

Below are two tables that show the strong performance of the NSW section in terms of recruitment and retention using the latest available data (July 2018). The data shows that the section is growing well but we do need to focus needed in improving student retention.

Recruitment by Section: 2018 Membership Year Jul 2018						
Section Name	2018	2017	# Change	% Change	2018 Goal	% to Goal
New South Wales Section	483	425	58	13.6%	460	105.0%

Renewal by Section: 2018 Membership Year - Jul 2018											
	HIGHER GRADE MEMBERS			STUDENT MEMBERS			TOTAL MEMBERS			2018 Goal	% to Goal
REGION 10	Opportunity	# Renewal	% Renewal	Opportunity	# Renewal	% Renewal	Opportunity	# Renewal	% Renewal		
New South Wales Section	2,136	1,774	83.1%	494	257	52.0%	2,630	2,031	77.2%	80.7%	95.6%

If we look at key data we are on track to reach our highest membership level ever come January 2019

Month - Year	Total Membership
Aug-18	2794
Jan-18	2921
Jan-17	2790
Jan-16	2873
Jan-15	2891

Region 10 Outstanding Volunteer Award 2017

The R10 Outstanding Volunteer Awards were announced on 21 September 2018 and one of the four winners was IEEE NSW Section Past Chair Dr Dapeng (David) Tien. The other winners were Shaikh Anowarul Fattah Bangladesh Section, Ryan Rhay P. Vicerra Philippines Section and Fawnizu Azmadi Hussin Malaysia Section.

David Tien served four terms as NSW Section Chair (2009-2010 and 2014-2015) and Past Chair (2011-2013 and 2016-2017). In addition, he served as Treasurer (2003-2004) and Secretary (2005-2006) as well as Vice Chair (2007-2008). He has been serving on the IEEE NSW Section Committee continuously since 2002 when he was appointed Student Activities Chair and is currently Conference Co-ordinator and Computer Chapter Vice Chair having previously served as Chair of that Chapter. He is the current IEEE Student Branch Counsellor at Charles Sturt University Bathurst.

He recently served as TENSYP 2018 Co-Chair and AI Technical Chair. David Tien has always been a willing and enthusiastic volunteer. As Section Chair he instigated meet the members monthly BBQ and Country NSW Committee meetings. He has actively promoted co-operation with other Sections including Singapore, Siberia and Bangkok. Several new Chapters were formed during his terms as NSW Section Chair and he hosted and organised several Distinguished Lecturer and Academic visits. He initiated and fostered contacts with Government and Industry which was instrumental in several Conferences Choosing Sydney as the host City.

Prior to coming to NSW he was based in Singapore where he served as IEEE Singapore Section Chair (2000), Secretary and Treasurer.



Dr David Tien Addressing TENSYP 2018 with Dr Stefan Mozar right

Tony Zaglas
IEEE NSW Section Awards and Recognition Chair

SSIT Activities

On 22 August, SSIT held a event at UNSW on the topic of “Ethics for the 21st Century”. The speaker, Tiberio Caetano, led a lively discussion about what a “science” of ethics might look like. In particular, how do we know whether a proposed action, when implemented, will make the world a better place. Obviously, too big a question to solve in an hour, but different techniques and challenges were highlighted, leading to a lively debate extending beyond the event itself into e-mail and other fora.

At SSIT, we try to ask the ‘bigger’ questions about what engineers do. If IEEE’s goal is Advancing Technology for Humanity – SSIT is the society that focusses on what that might look like. How do we better understand the impact that a particular technology might have on society and what measures should we take to improve those outcomes?

Please – join us (as part of your IEEE renewal), come along to events, and let us know what issues you would like us to explore. We can be contacted at ssit.australia@gmail.com.

Lyria Bennett Moses, NSW Co-ordinator, SSIT Australia

STEM Education

During 2018 the NSW Section has been involved in two presentations of the IEEE TISP (TSSP) Educational Activities Board resources of Tryengineering.

We assisted the ACT Section in August at the Conference in Canberra of the Canberra Mathematics Association which was conducted at ADFA. Of the 175 attendees nearly 30 joined us in the seminar presentation of the Tryengineering website and were informed how to get at the free resources that are provided by the IEEE.

In October we will again be attending the annual Industrial Arts school teachers conference (IIATE). This conference has been on our regular annual program for 5 years now, and each year it is well received by a fresh group of teachers who see the benefit of using the Tryengineering resources in their class rooms.

In 2019 we are hoping to increase our activities as there are about 6 annual teachers’ conferences in NSW in various discipline areas, all of which come within the scope of STEM education in schools.

These presentations can be quite gratifying for the presenters, and we are continuously looking for more member participation to support to our relatively small team of presenters.

Dr Graeme Gwilliam, NSW TSSP Coordinator

New and upgraded Members of the NSW branch of the IEEE

Fellows

There are no new fellows to report in this issue.

Life Fellow

We don't seem to have any new Life Fellows either

Senior Members

We have five new (or upgraded) senior members.

Weiwei	Liu	Yanhua	Luo
Luke	Murphy	Deon	Rowley
Bill	Tocher		

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 nor any additional on-going fees, and the NSW section gets an extra dollar out of the IEEE for every senior member.

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, but the NSW executive committee will be happy to help hunt up potential referees.

Life Senior Members

We have no new (or upgraded) Life Senior Members.

Life Members

We have no members who have moved into the life member category

Affiliates

We have 13 new affiliate members

Geoff	Baird	Dilek	Cetindamar
Carlos Felipe	Franca da Fonseca	Younhyun	Jung
Sergio Gregorio	Leon-Saval	Jianxi	Li
Lashika Janith	Medagoda	Stephen	Mehaffey
Bridianne	O'Dea	Dr Marina	Samokhina
Didi	Surian	Kevin Andrew	Wilkinson
Fanghua	Yu		

SA Member

We have one new member, Louise Milazzo, in this strange category. She's welcome anyway.

Members

We have 339 people who are new members or have been upgraded to member status.

Robert		Abbas		Mohamed Khaled		Abu Mahmoud
Mohamed Abdalla eltayeb		Adam		Osei Yaw		Adomako
George		Africa		Nasrin		Afsarimanesh
Sonam		Aggarwal		Touseef		Ahmad
Bilal		Akil		Temitope		Akindele
Hassan Abduljabbr		Al-shanawah		Kazi Saiful		Alam
Ahnaf Tabrez		Alam		Ahmed		Alghamdi
Mohammad Najam Liaquat		Ali		Nicholas		David Allen
Tanvir		Anwar		Mehdi		Arabizadeh
Stephanie		Ascone		Sarthak		Asthana
Rukshan		Athauda		Keith		Attard
Jasper		Chi HoAu		Abul		Azad
Darren	Marc	Bagnall		Bikram Pratap		Banerjee
Alhaji R		Barry		Md Rezaul		Bashar
Ashish		Basnet		Adriel		Bent
Oleg		Beskov		Nabin		Bhandari
Sriram		Bhargav Madhav		Andrea		Blanco Redondo
Donald	James	Bone		Anthony Julius		Borla
Bill		Bradshaw		Gabriela		Brandao Pereira
Philipp		Braun		Stephen Philip		Bremner
Anna		Bruce		Hilary		Byrne
Anna	Qian Yao	Cai		Frank		Cammaroto
John		Cantrill		Cong		Cao
Guiming		Cao		Bradley		Carden
Simon		Cartan		Luis		Catarino
Zenon		Chaczko		Kok Wai		Chan
Akrit		Chand		Nathan Liang Peng		Chang
Muhammad	Haris	Chaudhry		Ling		Chen
Jeff	C	Chen		Zijing		Chen
Hao-Chung		Cheng		Sagar		Chhetri
Michael	Alexander	Christie		David		Clarke
Phil		Cohen		Alex		Cohen-Perry
Dean		Cutajar		Ting		Dang
John		Daniels		Peter Wellesley		Dulhunty
Jovana		Dunisijevic		Andrew		Edwards
Renate		Egan		Al		Emran
Muhammad		Emzir		Seyedezahra Shadi		Erfani
Jeremy	Paul	Every		Peter		Faggion
Majid		Farhangi		Ayesha		Fatima
Hamidreza		Ferdowsi		Karl		Fernandes
Darren		Fisher		Joseph		Foti
Gilad		Francis		Huan		Fu
Oliver		Fuller		Samir G R		Gahatraj
Satyendra	Srikanth	Gadde		Mohideen Abdul		Gafoor
Kiran		Gautam		Mark		Gervasoni
Usman		Ghani		Jennifer		Gielis
Andrew	William	Gillett		Jake Mario		Gilmour

Guy Ahmad Mitch	William	Gimpel Golgir Green	Paritosh Craig Ian	Giri Gorman Griffiths
Ashanie Quan	Huy	Gunathillake Ha	Maniraj Walter	Gurung Haindl
Jacky		Han	Xiaojing	Hao
Johnny	Sarkis	Hawy	Stuart	Hinchliff
Natasha		Hjerrild	Louis	Hourany
Douglas	John	Howe	Nicholas	Hoyle
Xiaoshui		Huang	Tzu-I	Huang
Jialiang		Huang	Shujuan	Huang
Mubashir		Hussain	Kiran	Ijaz
Marek		Jablonowski	Reenu	Jacob
Tony		Jan	Antony	Jeganathan
Peter	Royden	Jenkins	Yajie	Jiang
Jignesh	Dhruvakumar	Jokhakar	Peter	Jones
Karna		Joshi	Pablo	Jurado
Christian		Kai	Shilpa	Kala
Baaskar		Kannan	Boominathan	Karpagam
Rowan James		Katekar	Manolya	Kavakli
Andrew		Kennedy	Aydin	Keser
Marcus		Khan	Chul	Kim
Muruges	Subhashchandra	Kiravadi	Trevor	Kleinert
Felix	Honglim	Kong	Peter	Krause
Jianming		Kuang	Nitish	Kumar
Zdenka		Kuncic	Bibin	Kurian
Jessica		Lee	Hojin	Lee
Damiaan		Letsch	Zhixiong	Li
Xiaoshuai		Li	Demetrius	Liang
Kuldip		Limbu	William	Lin
Hangyue		Liu	Ruidong	Liu
Anjin		Liu	Arthur	Liu
Guozhen		Liu	Saurav	Lohala
Alastair		Loutit	Desmond	Low
Shibo		Lu	Wenjie	Lu
Parbat		Luitel	Kelly	Lynch
Zihan		Ma	Chetna	Maan
Hugh		Macready	Rangana	Maddumahewa
Tarun		Malviya	Naresh	Mamtani
Mohammad	Anwarul	Mamun	Amir	Mansouri
Armando	Antonio	Marin	Dilshad	Marium
Stephen		Marshall	Wolfram	Martens
Christopher		Martinu	Peter	May
Robert	Owen	McDonald	Michael	McDonald
Craig		McLauchlan	Ali	Mehrabi
Peter	Maneshan	Mendis	Leon	Milne
Dr Mahira		Mohamed Mowjoon	Gelareh	Mohammadi
Steven		Mok	Sebastian	Montabone
Vikeerthan reddy		Mooray	Syyed	Moossavi Jazari
Kevin	James	Morgan	Duncan	Moss
Chibuzor	Joel	Mpamah	Sarah	Murphy
Pauline		Muscat	MOhsen	Naderpour

Zherui		Wang	Xin		Wang
Xun		Wang	Yubing		Wang
Dongxiao		Wang	Peng		Wang
Shengyu		Wang	Peter		Warhurst
Leslie	Roderick	White	Christoph		Wieschendorf
Timothy		Williamson	Troy		Wilson
Eunice	D	Wong	Shannon	James	Wood
Mark	Justin	Wood	Di		Wu
Lei		Xu	Weitao		Xu
Qingqu		Xu\	Shan		Xue
Wanli		Xue	Jiajia		Yang
Muhammad	Saad	Yasin	Sharon		Young
Di		Zhai	Yuan		Zhang
Wei		Zhang	Yi		Zhang
Rong		Zhang	Fan		Zhang
Chaoyi		Zhang	Qian		Zhang
Liang		Zhao	Shiyun		Zhao
Liang		Zheng	He		Zhu
Hua		Zuo			

Associates

We have seventeen new associate member

Rodney	Albert	Berry	Samuel	Blake
David		Butterworth	Laith	Cunneen
Katryna		Dow	Yaser	Hadi
Ye		Huang	Muhammad	Gholami
Ashwini		Kaveti	Natasha	Alessandra
Bingqiang		Liu	Amir	Knopf
Shivasmika		Nayani	Prasobhan	Man
D M	Motiur	Rahaman	Daniel	Pradhan
Jianghui		Zheng		Sando

Graduate Student Members

We have 336 new graduate student members.

Aamer	Sohail	Aamer Sohail	Behrokh	Abbasnjad
Sherif	Mosad	Abdelfattah	Mahmoud	Abdolhoseini
Mahrokh		Abdollahi Lorestani	Hasini Viranga	Abeywickrama
Martino		Adisuwono	Foez	Ahmed
Amany Mohamed Mamdouh		Akl	Mmeti Monday	Akpan
Firas Qais		Al-Doghman	Mohammad Raja Ismail	Al-Soeidat
Muneer	Mohammad	Al-Zu'bi	Roumani Milad Saadi	Alabd
Abdulwahab		Alabdulwahab	Hussain	Aldawood
Muhammad		Ali	Usama	Ali
Syed Muhammad Nawazish		Ali	Muhammad Johan	Alibasa
Asim		Alkhaibari	Jose	Almeid
Hamzah Mohammad Salem		AlQudah	Belal Saeed	Alsinglawi
Raed		Alsurdeh	Tanzeela	Altaf
Uzma		Amin	B M Ruhul	Amin
Md Ziaul		Amin	Saeed	Amirgholipour
Majid		Amiri	Maral	Ansari
Anusuya		Arunan	Mahsa	Asadniaye Fardjahrom
Indriani	Puspitasari	Astono	Mahruz	Athanatu Aziz
Xin		Ba	Lei	Bai
Muhammad	Zeeshan	Baig	Sandesh	Ban
Preksha		Bangalore Virupaksha	this slot left empty	
Himal		Barman	William	Baxter
Mohammad		Bazaid	Mahmuda	Begum
Chirag		Beri	Julie Stephany Berrio	Perez
Aashish		Bhattarai	Dhagash Mineshkumarq	Bhavsar
Giordano		Biasi	David	Bolst
Saumik		Bose	James	Brownlow
Gregorius Satia		Budhi	Minh Xuan	Bui
Annette		Burke	Stuart Robin	Burns
Arden	Llewellyn	Burrell	Maryam	Butt
Daniel	Gebbran	C. Bacilla Ferreira	Emerson	Cabrera
Brian	James	Cahill	Dinesh	Chaudhary
Huaming		Chen	Jieqiong	Chen
Shu	Lin	Chen	Kaixuan	Chen
Han		Chen	Daniel	Chen
Ziqi		Chen	Yongbo	Chen
Qingqing		Cheng	Zhangkai	Cheng
Mahendra	Bahadur	Chhetri	Guoyu	Chu
Anthony		Cross	Angye Lorena Cruz	Leon
Jane	Elizabeth	Cullum	Aakash	Deep
Shaun		Delpiano	Subodha	Dharmapriya
Tian		Ding	Zewei	Ding
Tran Hiep		Dinh	Zhongli	Dong
Manqing		Dong	Xuanyi	Dong
Ali		Dorri	Adam	Drenoyanis
Yali		Du	Hans	Dushanthakumar
Praveen	Kumar	Edara	Parinya	Ekparinya
Hossein		Eslahi	Mitchell John	Evans
Xiaochen		Fan	Kun	Fang
Helia	Heli	Farhood	Jia	Fei

Edstan		Fernandez	Wene	Foong
Long		Fu	John	Gallego Carboneras
Ziba		Gandomkar	Qishuo	Gao
Dawei		Gao	Gabriel	Garcia
John		Gardenier	Ehsan	Gatavi
Mina		Ghaffari	Charitra	Ghimire
Chand Siva Leela Krishna		Gudi	Jaysson	Esteban
Nicholas	Christian	Gurieff	Tuan	Vinh
Daniel		Hageman	Ali	Ha
Rim		Haidar	Claire	Haidar
Waqas		Hassan	Rashid	Hameed
David		Henry	Van Truong	Truong
K M Anamul		Hossain	Zhanwei	Hoang
Than	Zaw	Htwe	Yining	Hou
Weiping		Hu	Chaoran	Hu
Hieu	Danh	Huynh	Md	Minarul
Bushra		Ismaiel	Mojtaba	James
Tim		Jackson	Benjamin	William
Titus Nanda Kumara		Jayarathna	Benjamin	Johnston
Thisandu	Dulhara	Kahingala	Saadullah	Kalwar
Peng		Kang	Muhammad	Kashif
Shahabodin		Khadivizand	Waleed	Khalid
Md Noman Habib		Khan	Shakil	Ahamed
Yee	Haun	Kim	Moonyong	Khan
Young	Ki	Kim	Mst. Nishat Yasmin	Kim
Vasista		Kondapalli	Samadhi Kaushaalya	Koli
Alexander	Andre	Kroh	Akshay	Reddy
Ngoc	Thuy	Le	Cedric	Korale Liyanage
James Ju Heon		Lee	Yannan	Kumbam
Yiyang		Li	Yaran	Le Gentil
Miao		Li	Jiannan	Li
Li		Liu	Dongnan	Li
Bryan	Chen	Liu	Yuezhu	Liu
Yuyue		Luo	Dong	Lu
Jianbo		Ma	Yiju	Ma
Daniel		Mackinlay	Jasmin	Ma
Peter		Magdas	Dhawal	Dilip
M A Parvez		Mahmud	Imran	Madhikarmi
Sukriti		Mantri	Richard	Mahajan
Nastaran		Maus Esfahani	Nur Sabrina Binti	Makhdoom
Hasan Mahmood		Meem	Peter	Maschmeyer
Nabil Abduljalil Abdo		Mohammed	Nurhakimah	Md Noorpi
Ghulam		Mohy-Ud-Din	Philippe	Mekhail
Naila		Mukhtar	Madhuvanthi	Mohd Mukhtar
Christopher		Natoli	Chau	Thi Minh
Cong	Thanh	Nguyen	Huynh	Nguyen
Mohammad Sohrab Hasan		Nizami	Mehdi	Nguyen Van
Khondaker Tasrif		Noor	Summera	Nobakht
Chuka	Finbars	Oham	Ilham	Nosheen
Harshil		Pandya	Iresha Udayangani Kumari	Osman
Emil Laurence		Pastor	Thomas	Pasquel Mohottige
Stefania		Peracchi	James	Paul
				Phung

Sheila Maricela		Pinto Caceres	Noushin	Poursafar
Sumedha	Nitin	Prabhu	Somanath	Pradhan
Haoran		Qiang	Feng	Qiao
Yichen		Qiao	Min	Qiu
Alice		Qiu	Sohaib	Rafique
ObaidurB		Rahman	Shahriar	Rahman
A M	Mahfuz Ur	Rahman	Amin	Rajabi
Atiq ur	Rehman	Rana Muhammad Ayub	this slot left empty	
Yifei		Ren	Aedan	Gavin Keir
Philipp		Rouast	Harley	Roberts
Animesh		Sahoo	Abubakar	Sadiq
Yuris	Mulya	Saputra	Abu	Sadat Md.
Arun		Sebastian	Mohammad	Sayem
Amal		Shaju	S M	Showybul
Vivek		Sharma	Divya	Shakib
Wei		Shen	Zhiyuan	Sharma
Forough		Shirin Abkenar	Sai	Satwik
Ram	Kuber	Singh	Khushboo	Shi
Tharmakulasingam		Sirojan	Jingwei	Singampally
Yiliao		Song	Lizhao	Singh
Diego	Andres	Soria	Hrishikesh	Song
Benjamin		Stephens-Fripp	Robert	Srinivas
Naomi		Stringer	Jinfeng	Michael
Prashant		Subedi	Haihan	Stephenson
Shuyang		Sun	Guohao	Su
Kaile		Sun	Luke	Wicent
Ahmedi	Tasneem	Syeda	Jin	Yeong
Deepa		Thapa	Nirmal	Tan
Talents		Titus	Alexander	Thapa
Kwun Yiu Cadmus		To	Anthony	To
S M Muslem Muslem		Uddin	Ihsan	Tompkins
Arthur		Van Der Merwe	Tran	Ullah
Cindy		Van Heerden	Bogdan	Van Dung
Vishnu		Vijayakrishnan	Alexander	Vatulya
James		Vohradsky	Thai	Joseph
Munshi	Kamal	Wahid	Nathan	Tien
Yifan		Wang	Bin	Daniel
Tianming		Wang	Huogen	Wallace
Yishun		Wang	Shuyang	Wang
Jianfu		Wang	Clyde	Robert
Zhiqiang		Wei	Haijie	Wang
Buddhi		Wickramasinghe	Keenan	John
Cameron		Wong	Xiaowei	Wen
Huijun		Wu	Kaihang	Wilson
Jianqing		Wu	Tong	Wu
Ying		Xu	Zhong	Xiao
Boyang		Yan	Junnan	Xu
Yi		Yang	Yuqing	Yang
Bohan		Yang	Xunxiang	Yang
Emily	Wern Jien	Yap	Ali	Yao
Chuqi		Yi	Baran	YeganehMajd
Wenliang		Yin	Liang	Yildiz
				Yuan

Raheel		Zafar	Arian	Zahedmanesh
Seid	Miad	Zandavi	Melek	Zarifi
Yiyu		Zeng	Weizheng	Zhang
Xiang		Zhang	Shuai	Zhang
Xiaolin		Zhang	Diwei	Zhang
Xiaocai		Zhang	Yueyuan	Zhang
Donghao		Zhang	Yanhao	Zhang
Wentian		Zhang	Shisheng	Zhang
Juan		Zhang	Xiangyu	Zhang
Shaojun		Zhang	Muming	Zhao
Jiahong		Zhao	Bowen	Zheng
Wei		Zhou	Weiwei	Zhou
Hang		Zhou	Fujin	Zhu
Junting		Zhu	Yuewen	Zhu
Alex		Zyner		

Student Members

We also have 120 new student members

Danny		Acimovic	Mohammed	Hamed	Al Towairqi
Ashraf		Al-Zaemey	Sultan	Fahad	Alhujaili
Neil	William	Anderson	Fang		Bai
Adam		Bainey	Storm		Bartlett
Matt		Bigelow	Rhiannon		Bolton
Taylah	Jane	Brennen	Sarah		Bruggisser
Duc	Thien	Bui	Shane		Bullock
Elmer	Junior	Caballero	Harry		Cameron
Andrew		Chacon	Qingbei		Cheng
Esther		Chong	Henry		Clifton
Luciano	Vito Peter	Colagiuri	Lexie		Condon
Jonatan		Cooper	Trung	Quang	Dang
Dilini	Hansika	Darmawardana	Matthew	James	Dsouza
Cameron		Durie	Rose		Elliot
Jennifer		Feng	Eva		Fernandez fernandez
David		Ford	Yunhao		Fu
Ronel		Gascon	Will		Gilbert
Emi	Minghui	Gui	Shashank	Kumar	Gupta
Jason		Ha	Lewis		Hamilton
Michael		Hamilton	Ryan		Hopson
Xiaoxi		Hou	Shunlong		Hu
Simon		Hua	Jonathan	Yue	Huang
Mazen		Jaber	Pushkar	Anand	Kadam
Grant	Paul	Kelly	Jordan		Kime
Carl		Kleinschmidt	Wai	Yi	Lau
Anh	Minh	Le	Albert		Li
Minrui		Li	Yihuan		Liao
Yang		Lin	Ziyu		Liu
Robyn		Liu	Zheng	Yue	Liu
Kevin		Lucas	Ben		Marks
Alex		McClung	Peter	Rayhan	Mendis
Fadhil	Abbas Bin	Mohamad Zain	George	Stanley	Morgan
Andrew		Muscat	Minh	Quang	Nguyen
Edoba		Osariemen	Timia	Miranda Sarah-Marie	Osman

David		Oxley	Yuxin		Pan
Rhiannon		Pauling	Ricco	Yudha	Pratama
Meilin		Qian	Rowan		Ramamurthy
Madelyn		Robertson	Bryce		Robilliard
Abel	Kevin	Rop	Tarun		Roy
Yuxi		Ruan	Muhammad		Saqib
Gregory	Ian	Schneider	Daniel	Robert	Selmes
Mohammad	Mousa	Shalby	Dipixa		Sharma
Paul	William	Simmons	Catherine		Simpson
Pallavi		Singh	Dinal	Sachinthaka	Sinhapruthivi
Xiaoyu		Song	Colin		Steward
Edwin		Sun	Benjamin	David	Taylor
Felix		Theska	Jinhao		Tian
Aaron		Tootell	Zahir		Toufie
Abu	Noman	Tusar	Vaughan	Anthony	Van Heerden
Nigel		Venaruzzo	Rocio		Vera
Chaoran		Wang	Junzhe		Wang
Han		Wang	Zhongqin		Wang
Nyi		Wang	Yucheng		Wang
Joshua		Willigers	Alex		Wong
Yu		Wu	Jingyao		Wu
Victoria	Shengli	Xu	Qilin		Ye
Huan		Yu	Thet	Htoo	Zaw
Clinton		Zhang	Elian		Zheng
Raymond		Zhou	Qiuchen		Zhu
Mohammed		Zoobi	Mohammad	Abdulkader	Zoubai

Dr. Bruce Poon – e-mail adsphere@optusnet.com.au – extracted this data from the IEEE's SAMIEEE data-base, which isn't easy.

It was made harder recently, when the IEEE improved its system. This batch of names came in a week late, in an e-mail sent off at 1.26 am. Bruce finally triumphed ...



Call for Papers

Macquarie University, Australia is pleased to announce that the 13th International Conference on Sensing Technology (ICST 2019) will be held on December 2 to 4, 2019 at Macquarie University in Sydney, Australia. ICST 2019 is intended to provide a common forum for researchers, scientists, engineers and practitioners throughout the world to present their latest research findings, developments and applications in the area of sensing technology. ICST 2019 will include keynote addresses by eminent scientists as well as special, regular and poster sessions. All papers will be **peer** reviewed on the basis of a full length manuscript and acceptance will be based on quality, originality and relevance. Accepted papers will be published in the conference proceedings with an IEEE catalog number and ISBN number. **The proceedings will be submitted for possible publication in IEEE Xplore and indexing by EI Compendex.** Topics will include, but are not limited to, the following:

1. Vision Sensing
2. Sensors Signal Processing
3. Sensors and Actuators
4. Sensors Phenomena and Modelling
5. Sensors Characterization
6. Smart Sensors and Sensor Fusion
7. Electromagnetic Sensors
8. Chemical and Gas Sensors
9. Physical Sensors
10. Electronic Nose Technology
11. Biological Sensors
12. Electro-optic Sensors and Systems
13. Mechanical sensors (inertial, pressure, and tactile)
14. Nano Sensors
15. Acoustic, Noise and Vibration Sensors
16. Wireless Sensors and WSN
17. Body Area Network
18. Internet of Things (IoT)
19. Security and Reliability of WSN and IoT
20. Optical Sensors (radiation sensors, optoelectronic/photonics sensors, and fibres)
21. Lab-on chip
22. Sensor Arrays
23. Intelligent sensing
24. Telemetry
25. Online monitoring
26. Applications of Sensors (automotive, medical, environmental monitoring, earthquake life detection, high speed impact, consumer, alarm and security, military, nautical, aeronautical and space sensor systems, robotics, and automation)
27. Solid State Sensors
28. Sensors for high energy physics applications
29. Particle accelerators and detectors
30. Internet-based and other Remote Data Acquisition
31. Education using sensors

E. Petriu, UO, Canada
K.T.V Grattan, CUL, UK
P. Sallis, AUT, NZ

General Chair

S. Mukhopadhyay, MQ, Aus

Technical Program Chairs

O. Postolache, ETA, Portugal

K.P.Jayasundera, UTS, AusRegional Programme Chairs

America: G. Chattopadhyay, JPL, USA

Europe: I. Matias, PUN, Spain

Middle-East: C. Gooneratne, KAUST

Asia: R. Huang, NCKU, Taiwan

A. Mason, LJMU, UK

D. Preethichandra, CQU, Australia

Publicity Chair

K. Kuo, IIR, Taiwan

Webmaster

L.M.Dunn, MU, NZ

International Programme Committee

E. Sazonov, UA, USA

Rajan Shankaran, MQ, Aus

I. Ihara, NUT, Japan

M. Yuce, MU, Australia

L.Tang, MU, NZ

S. Bhadra, McGill Uni, Canada

M. Asadniae, MQ, Aus

Y.C.Liang, NUS, Singapore

W.Y. Chung, PKNU, Korea

J. Kosel, KAUST, SA

H. Ewald, Rostock Uni., Germany

V. Sberveglieri, CNR-IBBR, Italy

G.Liu, MQ, Aus

M.A. Yunus, UTM, Malaysia

R. Dykstra, VUW, NZ

N.K.Chen, NUU, Taiwan

B. George, IITM, India

S. Yamada, KU, Japan

Y.H. Chung, PKNU, Korea

E. Lewis, Uni. Of Limerick, Ireland

C. Alippi, PM, Italy

M. Haji-Sheikh, UNI, USA

T. Okayasu, KU, Japan

C.H.Chuang, STU, Taiwan

K. Rajanna, IISc, India

H. Leung, UC, Canada

T.Newe, UL, Ireland

A. Flammini, UniBs, Italy

M. Nadi, U de Lorraine, France

R. Yan, SU, China

T. Bosch, TU, France

K. Tashiro, SU, Japan

V.J. Kumar, IITM, India

S. Ikezawa, WU, Japan

H. Ewald, U Rostock, Germany

T. Sun, CU London, UK

J.A. Jiang, NTU, Taiwan

A. Fuchs, GUT, Austria

T. Azuma, UU, Japan

I. Platt, LT, NZ

J. Zou, CHHK, HK

M. Soleimani, UB, UK

P. Arpaia, US, Italy

J.E.Y. Lee, CUHK, HK

C.S. Kim, MUST, USA

L. Rufer, CNRS, France

K. Shimano, KU, Japan

H. Wakiwaka, Shinshu Uni., Japan

T. Islam, JMI, India

And many others

Paper Submission

Authors are invited to submit the full manuscript (4 to 6 pages including references) of their technical paper, for oral or poster presentation. Papers in pdf format may be uploaded via the web using EDAS paper management system at www.edas.info.

The MS Word and pdf template will be available on the conference website. Final manuscripts are limited to six (6) A4 size pages.

In submitting a paper, the author(s) agree that, upon acceptance, they will prepare the final manuscript in time for inclusion in the published proceedings and will present the paper at the conference. The final manuscript will not be published without advance registration.

Special Sessions

ICST 2019 solicits special session proposals. The special sessions are intended to stimulate in-depth discussions in special areas relevant to the conference theme. The session organizers will coordinate the review process for their session papers. The conference proceedings will include all papers from the special sessions. **Authors contributing to special sessions are required to register for the conference.** Please contact the general chair if you would like to organize a special session.

For further details, please contact: **Subhas Mukhopadhyay** Subhas.Mukhopadhyay@mq.edu.au

Web site: Come soon

Organized by: Macquarie University, Sydney, Australia

Manuscript Submission	30th June 2019
Acceptance Notification	30th August 2019
Camera Ready Submission	30th September 2019
Advance Registration	30th September 2019



Technical sponsors: |

IEEE NSW (Aus) Sec

Circuit is currently provided electronically from the IEEE NSW Section web site

<http://sites.ieee.org/nsw/newsletters/>

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.

If you require Circuit to be mailed to you in 2018 please complete the form below:

Don't bother if you were already getting it by mail in 2017.

Please Detach

Yes, I want to continue receiving future editions of *Circuit* by post

Name:

Member No:

Address: Postcode:

Tel:

(H)..... (W)..... (M)..... FAX.....

Email:

Post to: Bill Sloman, Circuit Editor, Unit 60, 1Tewkesbury Avenue, Darlinghurst NSW 2010



Patents | Trade Marks | Designs

View our attorney profiles at:

www.adamspluck.com.au

Phone us on 02 9476 0477 to discuss your IP requirements

Building Business Assets

Suite 3, Level 1, 20 George Street Hornsby NSW 2077

Fax: 02 9987 2405 E: email@adamspluck.com.au