IEEE NZCS Annual General Meeting

Chair's Report for 2019

Overview

The New Zealand Central Section has had another good year in 2019, with many events being delivered for members across many areas of interest. Many of these events involved Distinguished Lecturers from around the world. It is these activities which members find most interesting and enable us all to keep at the forefront of research within our fields of interest.

In 2019 we again held our two most prestigious events being the Postgraduate Symposium and the Combined Institutions breakfast. The first of these events is primarily focussed on our student members, while the latter is focussed on our industry collaboration. These events were again well received by members. More details on these events are provided below.

At this AGM we can celebrate the recent achievement of the Recruitment Goal Award for 2019, in recognition of the Section meeting its recruitment goal for the 2019 year. This is a goal that we need to achieve every year, but it is good to receive some recognition for our efforts, especially those of our membership coordinator: Abhipray Paturkar.

I would like to pass on my sincere thanks to all those members who helped to organise and support the wide range of activities undertaken by the Central Section during this year. Many people have contributed to this programme of activities and it is this volunteering spirit that makes the Section successful.

I also wish to take this opportunity to wish all members of the New Zealand Central Section a very happy festive season and hope you enjoy some relaxing holidays, ready to welcome 2020 with renewed vigour.

Administration

A total of 9 administrative meetings were held during 2019, with the final administration meeting of the year being this AGM. The list below gives the meeting dates, number of attendees and a reference to the associated minutes:

Date	# Attendees	Minutes File
9/10/2019	9	2019-10-09.pdf
11/09/2019	8	2019-09-11.pdf
7/08/2019	7	2019-08-07.pdf
5/06/2019	5	2019-06-05.pdf
8/05/2019	8	2019-05-08.pdf
6/04/2019	8	2019-04-06.pdf
6/03/2019	8	2019-03-06.pdf
13/02/2019	7	2019-02-13.pdf

The website provides comprehensive details of the items on the agenda and their discussion outcomes in the form of minutes. They are accessible from the Committee page of our website.

My thanks go to our active group of committee members:

- Xiang Gui,
- Steven Le Moan,
- Yi Mei,
- Donald Bailey,
- Richard Harris,
- Abhipray Paturkar,
- Ken Mercer,
- Ramesh Rayudu,
- Gourab Sen Gupta,
- Mengjie Zhang,
- Kanwal Zaida,
- Bing Xue,
- Arif Ahmed,
- Chanjief Chandrakumar

My special thanks go to Richard Harris who has done a tremendous job keeping the IEEE NZCS website up to date and vibrant, even given his personal challenges with ill health.

Affinity Groups

The Central Section has Student Branches at each of the main Universities within our region: Massey University and Victoria University of Wellington. Both groups have been active during the year.

Students from both the Massey University and VUW participated in the ANZSCON event held at Canterbury University over a weekend in April 2019. The students were sponsored by the Section to attend this event to a combined amount of $1500.00.

The most prestigious student event each year is the IEEE Postgraduate Presentation Symposium, which was held at Massey University in Palmerston North on 26 August 2019. The event provided post-graduate students an opportunity to present their research. The three best presentations were recognized and awarded. Participants were eligible to apply for a grant to the section to cover their IEEE student membership for a year. 33 master and PhD students from Massey University, Palmerston North and Victoria University, Wellington participated in this symposium and presented their research work. My thanks go to the Student Branch members for organising this very successful event, and a report with photos can be found on the website.

A Postgraduate student member from VUW, Raghavender Goud Deshagoni (Raghu) was awarded a prize to attend the IEEE Industry Applications Society Electrical Safety Workshop in March 2019. The Section supported the attendance at this workshop with an additional $400.00 on the basis that the attendee delivers a seminar for IEEE members and report on his learnings from the participation in this event (see below).

Due to significant changes in the leadership of the Young Professionals group at the end of 2018, the YPs only held one event during the period at Victoria University of Wellington. The Women in Engineering Affinity Group has not been very active for much of the past year due to leadership absences on maternity leave and other external factors. We hope to re-invigorate both the YP and the WIE Groups in 2020.

Summary of Events

The Section has run or supported a total of eleven professional lectures and related events during the 2019 year. The specific details for these events are as follows:

- **12-14 February 2019: Multicore World conference.** IEEE NZCS members were offered a 10% discount to attend this conference and at no cost to the section. The 8th Multicore World is held annually in Wellington and provides the knowledge and strategies to future-proof your technological innovation. Speakers were from Intel, Arm, Facebook, Oracle, Broadcom as well as from the major US National Labs (Oak Ridge, Los Alamos, Argonne, PNNL) and from Japan, Singapore, Netherlands, UK.

- **10 June 2019: IEEE Distinguished Lecture by Professor Kay Chen Tan.** This lecture was held as part of the 2019 IEEE Congress on Evolutionary Computation - 10-13 June 2019 in Te Papa, Wellington. Professor Tan spoke on "Advances in Evolutionary Dynamic Multi-Objective Optimization" to an audience of some 100 people. The IEEE NZCS did not need to contribute towards this event.

- **25 June 2019: Public Seminar by Raghavender Goud Deshagoni (Raghu).** Raghu was awarded one of five student participation awards at the Electrical Safety Workshop held in Jacksonville, Florida, USA in March of this year (see above). He will present his award-winning paper and his observations from the conference at which it was presented. His talk was entitled "Factors Determining the Effectiveness of a Wind Turbine Generator Lightning Protection System". The seminar was held Victoria University of Wellington and some 12 people enjoyed the presentation and associated discussion.

- **26 June 2019: IEEE PES Distinguished Lecture by Dr. Damir Novosel.** This was lecture organised by the PES NZ Central Chapter, Transpower, and Victoria University of Wellington jointly with IET and EEA. The Distinguished speaker was from IEEE Power and Energy Society visiting New Zealand to deliver the Keynote during EEA 2019 conference.

- **2 July 2019: IET / IEEE Joint Event Presented by Dr. Stuart Johnson.** This a joint event by the IET and IEEE was entitled "Developing a distribution network for the future proofing of households". The talk provided an overview of 'Australian Open Network Program' that is future proofing household PV installations and battery systems in Australia. It was held at the Beca Offices in Wellington and was attended by about 25 people.

- **29 July 2019: VW-Stiftung project.** This was a joint MEE / CRISP / IEEE NZ Signal Processing and Information Theory Chapter seminar held at Massey University, Palmerston North. The presenter was Sven Simon, Professor of Parallel Systems, Institute of Parallel and Distributed Systems, University of Stuttgart, Germany. His topic was "Industrial 3D Computed Tomography with Applications in Electrical Engineering". Details can be found at: IEEE NZ Central Section website in the Recent Events section http://ewh.ieee.org/r10/nzc/#RecentEvents .

- **26 August 2019: IEEE Postgraduate Symposium held at Massey University in Palmerston North** This event involved presentations from some 33 master and PhD students from Massey University, Palmerston North and Victoria University, Wellington who presented their research work. In addition, there were approximately 30 fellow students who enjoyed the presentations. The three best presentations were recognized and awarded with prizes.

- **11 September 2019: Combined Institutions Breakfast Event.** This is an annual joint event between the engineering institutions (IEEE, IET and Engineering New Zealand). This year the guest speaker was Andrew Carroll, General Manager, Network and Field Management, Chorus who spoke on the topic of "Challenges in Deploying Fibre Optic Cable to 87% of New Zealand Premises". About 30 people attended this event.

- **1 October 2019: Workshop on Hyperspectral and thermal remote sensing - From Data to Applications** This event was held at Massey University and involved some 18

speakers on the above topic. Further information can be found at IEEE NZ Central Section file:///D:/My Webs/IEEECentral2/index.html4 of 8 2/11/2019, 10:25 am.

- **7 November 2019: IEEE PES Distinguished Lecture by Dr. Joseph Minervini from the** Plasma Science and Fusion Centre, Massachusetts Institute **on the topic of** Compact Fusion: A Faster Path to Limitless Clean Energy. This lecture is being organised by IEEE PES NZ North (Auckland), IEEE PES NZ Central (Wellington) and IEEE PES South (Christchurch), New Zealand Electrical Energy and Power Sciences (NZEEPS) and the Robinson Research Institute, Victoria University of Wellington. (IEEE NZ Central Section file:///D:/My Webs/IEEECentral2/index.html)

- **18-21 November 2019: 11th EAI International Conference on Ad Hoc Networks (ADHOCNETS 2019) to be held in Queenstown, New Zealand.** (http://www.adhocnets.org/) The annual International Conference on Ad Hoc Networks (AdHocNets) focuses on ad hoc networking technologies and their applications.

There are two events planned for post the AGM as follows:

- **21 November 2019: Colour and Visual Appearance in Computer Graphics and 3D Printing.** This event is co-sponsored by the IEEE New Zealand Central Section and Massey University. It involves a number of presentations on related topics as follows:
  Fabricating Beauty:
  The Art and Science of Graphical 3D Printing
  Prof Philipp Urban, Head of Competence Center
  Fraunhofer Institute for Computer Graphics Research (Germany)
  Voxel Printing Hyper-realistic Eyeballs
  Tor Robinson, Digital Manufacturing R & D Specialist
  Weta Workshop
  Cinematic Mixed Reality Rendering
  Dr Andrew Chalmers, Researcher
  Victoria University of Wellington

- **27-29 November 2019: The International Telecommunication Networks and Applications Conference ITNAC.** This annual event is held every year either in Australia or New Zealand (www.itnac.org.au) and it is New Zealand's turn to host the event this year. ITNAC 2019 seeks to address and capture highly innovative and state-of-the-art research from academia, the communications industry and standardization bodies that covers distributed, mobile, cognitive and cloud computing, modelling and simulation, computer and data communications, local and metropolitan networks, optical, wired and wireless telecommunication networks and applications.