

# Region 10 New Zealand North Section Report 2017

## PART A - SECTION SUMMARY

### A.1 Executive Summary – (Please follow the format given below)

- Section Executive Committee Member List  
Section Chair: Dr Nitish Patel  
Section Vice Chair: Dr Mohan Sridharan  
Section Treasurer: Dr Kevin Wang  
Secretary :Dr Ho Seok Ahn
- Section Highlights  
The section hosted the IEEE Day celebrations at a national level, from three different cities. We used video conferencing, and engaged in nation-wide Q/A sessions. The event was bvery well attended and participants were actively engaged with each of the cities.
- Major Chapter Activities  
Several chapters hosted distinguished lecturers.  
Industry representatives were invited run a mini workshop to engage with students.  
A city-wide robo-soccer competition was run and participation was strong from schools and universities.
- Major Student and Affinity Group Activities  
The WIE group hosted a very prominent Ms Eric Loyd GM of Callahan Innovation to motivate and encourage the WIE members that there are no limits.

### A.2 Financial Report – (Please follow the format given below)

- Summary (as per submitted L50)  
Attached

## PART B - ORGANIZATIONAL ACTIVITIES

### B.1 Membership Development Activities

- Total number of active members in the past 3 years.  
Our membership is averaging 450+ consistently. We have 112 student members with most from Univ. of Auckland. The small population and lower density of population makes it difficult to widen our reach.
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members  
In 2017 we have been not able to come up with novel ideas to promote IEEE and bring out value. The Section Congress was attended by the Section Chair however, there were not inspirational ideas that could be applied to NZ North.

### B.2 Chapter Activities

- Total number of Chapters in the Section  
NZ North hosts 7 chapters.
- Number of Chapters formed in the current year  
None
- Number of active Chapters (Chapters who have reported required number of meetings during the year)  
All of our chapters are active and reporting events.
- Summary of Chapter activities (Chapter wise with attachment table/information)  
Attached

### B.4 Students Activities

- Total number of Student Branches in the Section  
Three student branches: Univ of Auckland, Auckland Univ of Technology and UniTec.
- Number of Student Branches formed in the current year  
None

### **B.5 Affinity Group Activities**

- Young Professional (YP)  
It has been difficult get the Young Professionals to engage. They did however attend the Section Congress and engage with the YP community gathering in Sydney to seek ideas and motivation.
- Women In Engineering (WIE)  
This group has been quite active and tried to inspire new members. They have hosted two events with a view to empower women to look beyond gender. The first one was a wide networking event to get to know each other in a casual environment. Their second event was a motivational talk by a the GM of Callahan Innovation.
- Life Member  
No activities.

### **B.10 Community Activities**

- IEEE Social activities (Family day, IEEE day, Engineers Week)”  
The three sections of New Zealand hosted IEEE day with much fanfare and interest. The three sections hosted prominent speakers with a view to highlight the importance of IEEE in the achievements of the IEEE community in New Zealand.

## **PART D - GOALS AND PLANS**

### **D.1 Continuation of project/activity in progress and their implementation plans**

### **D.2 Goals and Future Plans**

**Our goal for 2018 is to engage the schools in Engineering activities – particularly IEEE. We will use the TISP resources to seed this activity. Fundamentally speaking, there are several groups that are working in this space and this poses difficulties in IEEE's intentions to offer assistance. However, we will endeavor to engage young students to undertake ‘technology’ and ‘engineering’ projects that can be done at home with very little cost.**

### **D.3 Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.**

### **D.4. Business Plan for Sustainable Growth and Financial Stability.**

#### **Attachement**

#### **Financial Statement from NetSuite**

## **Summary of Chapter Activities**

1. ComSoc DL-NSRG Workshop  
We have successfully hosted EEE DL-NSRG Workshop at AUT on Monday 24 July 2017. IEEE DL Professor Song Guo (Hong Kong Polytechnic University) delivered his keynote talk at the workshop. Prof Guo also gave lectures in Wellington, Palmerston North, and Christchurch on 25, 26, and 27 July, respectively.
2. ComSoc Invited Talk: We hosted Associate Professor Fabrice Labeau (McGill University, Canada) who gave an interesting talk “How to Publish in IEEE Journals/Conferences” on Thursday 10 August 2017. About 28 research students attended the session.
3. Invited talk: Dr Marija Furdek (KTH Royal Institute of Technology, Sweden) gave an interesting talk “Resilient design of optical backbone networks” on 8 February 2017.
4. IEEE-IQRA Community Workshop: We had a successful community workshop at IQRA academy (YMCA Complex, Rocket Park Auckland) on Saturday 11 February 2017.

#### Computer Society

1. Computer Society Seminar - Title: Reconfigurable Computing at TU Darmstadt: Architectures, Tools, and Applications, by Prof Andreas Koch  
Affiliation: TU Darmstadt, Germany
2. Computer Society Seminar - Topic: An introduction into Embedded ARM development, Presenter: Ryan Kurte and Travis Scott
3. Topic: Big Data – A Perspective and how to become a Data-Driven Organization, Presenter: Dr. Mazin Yousif, Chief Technology Officer and Vice President of Architecture for the Royal Dutch Shell Global account at T-Systems

#### Industrial Applications and Industrial Electronics Society

1. IAS/IES - Organised and sponsored catering for the “Annual IPT Powered Toy Car Race” in June, which was attended by about 80 students and IEEE members.
2. Organised a seminar on “An Introduction Android Application Development” in April, which was attended by about 30 students and IEEE members.
3. IEEE PES and AUT D/L by Prof. S.S.Choi
4. IEEE PES/IET/EEA Distinguished Lecture 2017 along with EEA Conference (19th June) by Dr Edvina Uzunovic (IEEE) and Dr Graham Ault (IET) at the University of Auckland Business School.
5. IEEE PES Distinguished Lecture 2017 by D. Kalyan Sen (04 Dec 2017).

#### Power Engineering and Power Electronics Society

1. IEE PES/PELS Chair visit to Region PEL Chapter Chair Meeting in Kaohsiung, Taiwan on 5th June 2017. \$500 support from PELS – Pacific Region and mostly funded by Chapter Chair himself. The take away from this meeting is to involve more industry in the chapter and initiate a student branch for PELS in the NZ North Chapter.
2. ISGT Asia 2017 – 04th to 07th Dec 2017, Auckland, New Zealand. <http://iee-isgt-asia.org/>
3. IEEE PES Student Support for ISGT Asia 2017 – <http://iee-isgt-asia.org/iee-pes-isgt-asia-2017-student-support/>
4. IEEE PES YP/WIP/Student Day – 06th Dec 2017. The day activities included; Breakfast with CEOs (10 CEOs/Executives from Power Sector), Young Professionals Industry Forum (Vector, Transpower, BECA), Focus Talk by Dr. Mike Hopkins (CEO EMANZ), Interview with Peter Berry (ED EEA), Women in Power (ERANZ, Transpower, Unison Networks, AECOM), Student Seminars (University of Canterbury, Performance Focus Consulting). <http://iee-isgt-asia.org/studentypwie-program/>
5. PEL chapter seminar by Prof. Lorenz (Germany) on Wednesday (22nd March 2017). It was attended by 31 participants and mostly were IEEE members. Pizzas and drinks were served.

#### Robotics and Automation

1. New Zealand Robot Soccer Championship 2017 Workshop  
Over 100 students were attended the workshop and prepared the competition. 12 teams participated the Championship (3 teams from high school and intermediate school).
2. Participation – International Robot Olympiad 2017  
NZROA selected 16 students representing NZ.  
Ho Seok Ahn is invited to the International Robot Olympiad 2017 as a judge.
3. New Zealand Robot Olympiad 2017, 17-20 July 2017, had 4 categories with about 100 school students, top 3 + a students will go to world championship.

#### Signal Processing and Information Theory

1. The DL visit on Tuesday 19 December, Prof Josiane Zerubia (INRIA Sophia-Antipolis Méditerranée)
2. Yusuke Hioka gave a technical seminar with the title “Estimating power spectral density for acoustic signal enhancement – an effective approach for practical applications”, at Massey University, Parmerston North. The seminar was attended by 12 people (including two attending from Albany, Auckland through video conference), including 7 IEEE members. The seminar was also cosponsored by the SCHOOL OF ENGINEERING & ADVANCED TECHNOLOGY, Massey University to organise the seminars on their campus.
3. On 5 December 2016, the SP/IT Chapter held a technical seminar given by Professor Shrikanth (Shri) Narayanan from Signal Analysis and Interpretation Laboratory at University of Southern California, Los Angeles, CA, with the title “Behavioral Signal Processing: Deriving human behavioral informatics”. The seminar was attended by 16 people, including 13 IEEE members. The seminar

was also cosponsored by the Department of Electrical and Computer Engineering, UoA, to organise the seminars on the UoA campus.