

New Zealand North Section Report 2020

PART A - SECTION SUMMARY

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

- NZ North Section (R00301) Executive Committee Member List
 - Chair: Ho Seok Ahn
 - Vice-Chair: Peter Over
 - Treasurer: Tek Tjing Lie
 - Secretary: Tek Tjing Lie
 - Past Chair: Nitish Patel

The section officers were nominated and formally elected at the Section AGM.
- Section Highlights
 - **Strategic Plan:** The Section has a new Strategic Plan (which was developed for 2019-2023) that is continued to our previous Strategic Plan (which was developed for 2013-2018) for sustainable development. We developed this plan and released.
 - **Virtual Meeting:** Due to the COVID-19 we had a challenging year, but the New Zealand North Section still has had another successful year in 2020. Although many events had to cancel or switch to virtual a event, we encouraged our members to participate to the virtual events. Also we had more events when the COVID-19 situation is better, under Alert level 1, in NZ.
- Major Events (International, National)
 - **WIE International Women’s Day Celebration**
 - Presentation on breast cancer awareness by Debra Leutenegger, registered nurse and national breast health educator for Breast Cancer Foundation NZ.
 - **PES Student**
 - Technical talk for IEEE PES Students.
 - **Technical events**
 - The Section has also technically sponsored or agreed to sponsor the following conferences held in New Zealand:
 - New Zealand Robot Soccer Championship, 2015-2020
 - New Zealand Robot Olympiad, 2020
- Major Chapter Activities
 - **A lot of meetings:** The New Zealand North Section has organized more than 30 meetings during the year. These include section committee administration meetings, technical seminars, technical/professional meetings, workshops, field trips and social events.
 - **L31 Meeting Reports:** The details of the activities have been listed on the Section website, and also reported online via IEEE v-tools L31 Meeting Reports. Note some joint chapters activities are reported under other Sections. For example,
 - **An IEEE day event:** NZ Robot Soccer Championship was an annual event organized again by the University of Auckland and IEEE New Zealand North Section. This was planned as the IEEE Day event for this year.
 - **PES Chapter** was separated from PELS Chapter in 2020.
- Major Student and Affinity Group Activities
 - **Two student branches:** We current have two active student branches; 1) The Univ of Auckland student Branch and 2) Auckland Univ of Technology Branch.
 - **Participating to ANZCON 2019:** the chairs of each student branches participated to ANZCON 2019 as key contributors. Also the Student Activities Chair, Nirmal Nair, UOA student Chair, Vilia Li, UoA student branch counsellor, Andrew Austin, and Young Professional chapter participated to this event to support our students.
 - **Joint Student Branches Initiative:** our two student groups are preparing a joint student group for better activities.
- Awards
 - **NZ Robot Soccer Championship:** We prize the students who got great results from technical competition.

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

- Summary (as per submitted L50)
 - The financial report was submitted separately via NetSuite. The Section finance is in a healthy condition with a total balance of NZ\$45,147.68 (including Chequing: \$21,568.78, Savings: \$5,436.12, and Term deposit: \$18,142.78).
- Any other financial activities
 - In 2020, the section had a special project to enhance the database budget approved (\$2,712.50) at the first committee meeting.

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years were increased.
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members

B.2 Chapter Activities

- ComSoc Chapter
 - 2020 IEEE ComSoc VDL: We have had our first Virtual DL (VDL) lecture last night. Professor M Atiquzzaman (University of Oklahoma, USA) was our VDL. The talk went very well. We started at about 5pm and finished at around 6.30pm (NZ time). We really enjoyed and learned the latest communication technologies and protocols especially protocol for mobility management, industry collaboration, and work related to NASA. About 29 participants attended the event. We had Q/A session after the talk. However, I received positive feedback from audience indicating that the event was successful.
 - Second VDL: Our next VDL is going to be held on Wednesday 28 October 2020 starting at 10 am (NZ time). Professor Arumugam Nallanathan, (Queen Mary University of London), UK will give his lecture on some aspects of “Artificial Intelligence in Massive IoT Networks”.
 - 2020 IEEE NZ Wireless Workshop: The IEEE NZ Wireless Workshop will be held on Friday 28 August this year. Victoria University of Wellington will be hosting this event. I will attend the workshop to represent ComSoc Chapter and also membership recruitment purposes.
 - IEEE ComSoc DL: Professor M Atiquzzaman (University of Oklahoma, USA) has agreed for DLT tour to NZ. However, due to travel restriction, perhaps we can run the tour/speeches virtually. I am in touch with IEEE ComSoc HQ.
 - IEEE NZ Wireless Workshop: Tentative date for 2020 IEEE NZ Wireless Workshop is Friday 4 September. Victoria University of Wellington will be hosted this event. I will update you on this as we progress.
- IAS/IES Chapter
 - Dr. Grzegorz Ombach run an online seminar: “Wireless power and data transfer via Zenneck waves” The seminar was well received with 26 people attended online from US, China, and both online and face to face in Auckland, 25 of them were IEEE members.
 - Professor Martin Neuburger and Professor Mathias Oberhauser from the Univ of Applied Sciences, Esslingen, Germany, delivered a joint seminar with the Dept of Electrical computer and Software Engineering, on ‘The Development of Hybrid Trolley Bus System’ on 24 Feb 2020 in the Univ of Auckland. About 25 people attended the seminar, of which 20 are IEEE full or student members.
- PELS Chapter
 - A technical seminar is prepared for 11th December by Professor Abhilash Kamineni.
 - A distinguished lecturer seminar by Professor Tobias Geyer arranged to be delivered online on 1st of September.
- PES Chapter
 - PES Chapter was separated from PELS Chapter in 2020.
 - PES NZ North Chapter organized the session of IEEE NZ North Lifelong Learning Series October 2020. The session was on “Current Interruption in Atmospheric Air” delivered by

Dr. David Peelo, DF Peelo & Associates Ltd. Canada (who is also a DLP speaker). The session was held on 23rd October from 12:00-13:30HRS NZST and received 54 registrations from a diverse group of people. The registrants were from NZ, Australia, UK, Indonesia and India with over 60% registrants from Industry background. The session was attended by 37 people and received very good feedback.

- PES NZ North Chapter is organizing the session of IEEE NZ North Lifelong Learning Series December 2020 on 4th Dec from 12:00-13:00HRS. The session will be on “Regulatory Aspects of Implementing Advanced Technology” delivered by Dr. Jessica Bian, Grid Services, USA. The session will be followed by a fishbowl conversation with Jessica Bian on “Global energy career opportunities and challenges”.
- Dr. Nirmal Nair and Lakshita presented at IEEE PES Women in Power Congress in Region 10 which was conducted between 12-13 Sept 2020. Dr. Nirmal presented on “Unconscious bias, Diversity, Inclusion, Visibility and Leadership: Through the Lens of an IEEE long standing member”. The NZ Women in Power Strategy and the presence/involvement of women researchers were presented by Lakshita who represented WiP NZ North Section.
- IEEE NZ North Section Lifelong Learning Series 2020: On 17th July 2020, Dr. Saifur Rahman (PES Distinguished Lecturer) from Virginia Tech, USA delivered a webinar on Global Electric Power Sector: Engaging with Environmental Issues from 12:00-13:00hrs. The event had a total of 51 registrations with 25 participants attending the event on the day. The event was hosted by PES NZ North Chapter, IEEE SB UoA and IEEE SB AUT.
- Fishbowl Conversation with Dr. Saifur Rahman: On 17th July, Dr. Saifur Rahman engaged with around 15 IEEE members and Non-members and discussed about “Global Electric Power Sector: Opportunities and Challenges”. This Virtual interactive session that ran from 13:00-13:30hrs saw good level of involvement from the participants.
- R&A Chapter
 - International Robot Olympiad 2020: Team NZ got 12 Golds and more medals.
 - New Zealand Robot Soccer Championship 2020: Successfully done in from November 23 for a week as one of the IEEE day event.
 - New Zealand Robot Olympiad 2020: 3-11 December 2020 at University of Auckland, Over 100 students participated to the weekly workshops.
 - Five seminars have organized.
- SP & IT Chapter
 - On 20 November, the SP/IT Chapter hosted a technical seminar given by the following two speakers at University of Auckland. The seminar was attended by 34 people (18 in person, 16 online) including 7 IEEE members. The seminar was co-sponsored by the Acoustics Research Centre of the University of Auckland to organise the seminar on the campus.
 - Dr Mark Poletti, Callaghan Innovation, Title “What are A format and B Format in Ambisonics?”
 - Dr Yusuke Hioka, University of Auckland, Title “Title: Speech intelligibility in noise with varying spatial acoustics under Ambisonics-based sound reproduction system”
 - On 27 October, the SP/IT Chapter hosted a postgraduate student seminar given by the following two speakers at University of Auckland. The seminar was attended by 20 people (8 in person, 12 online) including 4 IEEE members. The seminar was co-sponsored by the Acoustics Research Centre of the University of Auckland to organise the seminar on the campus.
 - Mr Benjamin Yen, University of Auckland, Title “Source enhancement for unmanned aerial vehicle recording using multi-sensory information”
 - Ms Farah Sarwar, Auckland University of Technology, Title “Livestock detection and tracking using an unmanned aerial vehicle”
- VTS Chapter
 - A VTS DL seminar by Prof. Jalel Ben Othman from the University of Paris 13, France, has been originally planned on 15 April. But now it has to be postponed because of the coronavirus pandemic. The talk is themed at vehicular ad hoc network (VANET) security and Dr. Ben-Othman’s webpage is <https://www-l2ti.univ-paris13.fr/>
 - Working together with Engineers for Social Responsibility (ESR: <https://sites.google.com/site/test4esr/>) Group, we are co-hosting a seminar, with the theme of green computing on 15 July
- WIE Chapter
 - International Women’s Day Celebration
 - Facilitator: Kathryn
 - Date: 05/03/2020 Time: 4:00 PM – 6:00 PM
 - Venue: MLT 2, Room 303-102, The University of Auckland

B.3 Professional and Continuing Education Activities

- Total number of Student Branches in the Section: 2.
- We successfully organized school student events, which are NZ Robot Olympiad and NZ Robot Soccer Championship.

B.4 Students Activities

- Total number of Student Branches in the Section: 2.
- Number of Student Branches formed in the current year: None.
- Section level student activities (student congress, paper and other contests, awards etc): The student branch organizes their own activities under the guidance the Section Student Activity Coordinator.
- Number of active Student Branches: 1. UoA Branch, and 2. AUT Branch
- Summary of Student Branch activities:
 - Virtual Internship Panel on May 20, 2020; via Zoom
 - IEEE UoA Student Branch Podcast (After)Office Hours Episode 1 – Societal Expectations, Leadership & Ice Cream with Senior Computer Science lecturer Danielle Lottridge (May 30 2020)
 - IEEE UoA Student Branch Podcast (After)Office Hours Episode 2 – The Human Aspects of Software Engineering & Life Advice with Software Engineering lecturer Kelly Blincoe (August 6 2020)
 - IEEE UoA SB Annual Practice Interview (Online)

B.5 Affinity Group Activities

- Young Professional (YP)
They organizes their own activities.
- Women In Engineering (WIE)
They organizes their own activities.
- Life Member: 17

B.6 Awards & Recognition Activities

- Award constituted by the Section
- Award(s) received from R10
- Award(s) received from IEEE HQ
 - Performance Bonus
 - Got USD 50.00

B.7 Communication Activities (Newsletter, Home Page, E-mail etc.)

- Newsletter (name and number of issues in the year): None
- Home Page of the Section (give the URL and how often it is updated): <https://ieeenorth.org.nz/>
- Other means of contacts with Section members including social media: Face to face meetings, Zoom meetings, and phone calls.

B.8 Industry Relations

- Membership growth and retention
We have most members from universities, but we do have active members from industry coming to attend IEEE events. Growth and retention in industries are a bit difficult in NZ due to the small size.
- Activities for/with industrial members

Our IEEE seminars are often deliberately scheduled in late afternoons to make it easier for industrial members to attend, and we plan to have more speakers from industry

B.9 Humanitarian Technology Activities

- We helped the Fiji Subsection can be independent from IEEE New Zealand North

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)
Apart from the end of year Section Dinner, we had the IEEE day with robot soccer competition. And the student Branches and the Young Professional had their own activities.

PART C - OTHERS

C.1 Special Events

None

C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)

We have an agreement with IPENZ, and we continued the practice of allowing members to attend seminars organized by the other party, including IET.

C.3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
We have joint chapters with NZ South and Central Section, and have been helping each other in seminar organizations, particularly DLs, conferences sponsorships, etc.
- Joint activities with any other Section
We had joint activities, particular in organizing local and DL seminars.

C.4 Support extended to Sub-sections & Society Chapters within the Section

- The Fiji subsection is formed under NZ North Section, and now they were independent from us but can help them.

C.5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)

- Strong support to the student branches and YP, it is rewarding for both the young professionals and the Section.

C.6 Problems anticipated and suggestions for solutions, if any

- None.

PART D - GOALS AND PLANS

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

We will continue to make the best use of our new Section website for running the Section. We designed and modified the database using the PAC fund. We helped Fiji Subsection to be separated from us, and give more support to YP, WIE, and the two existing student branches.

D.2 Goals and Future Plans

We developed our new Section Strategic plan (2019-2023). A summary of the main goals are shown below:

The strategic planning session for the IEEE NZ North section for the year 2019-2023 was organised on 21st July 2018 from 9 am to 5 pm at Newmarket campus, The University of Auckland, Auckland, New Zealand. The event was attended by around 15 people, which included 12 participants from New Zealand and 3 participants from Fiji subsection. The event was organised by Prof. Nirmal Nair and Dr. Ho Seok Ahn, and facilitated by Prof. Nirmal Nair and Dr. Latha Murugesan. An effective feedback and knowledge on strategic planning was inculcated to the participants by Prof. Peter from AUT during the event. The discussion during the workshop was around the six main focus areas, which included (1) Leadership, Visibility and Recognition, (2) Conferences & Workshops, (3) Bidding for R10 & IEEE global events, (4) Student, Women in Engineering and Teachers-in-Service Program, (5) Chapter rejuvenation and regular committee refresh, (6) Engagement with other NZ and international learned societies and affinity groups (IET, ENZ etc.). The outcome of this workshop is a strategic planning document, which includes the list of strategies, events and conferences, which will be considered during the year 2019-2023. With Fiji subsection in place, the vision, mission and goals of the IEEE NZ North section has also been updated during this workshop.

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

Provide more tangible benefits to members comparable to those experienced by American members. Discounts on conferences fees for members definitely help, but not all conference organizers are happy to give decent discounts, it would be great if the IEEE Headquarter can offer some subsidy. We believe that IEEE should reach out to 'middle school' i.e. students in the 7 to 12 year age group. A large portion of this section of the student body makes a decision to keep away from the 'geeky' or 'boyish' professions. Naturally, they need to make a well-informed decision. Our underlying assumption is that some students make this decision of following a path – other than STEM – simply because of an incomplete or erroneous understanding of 'Engineering'. IEEE needs to champion Engineering (Electrical Engineering) to ensure we motivate the very young minds to look at Engineering positively.

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