

Northern Australia Section Report 2023

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List

Position	Exec Committee Member
NA Section Chair	Mostafa Rahimi Azghadi
NA Section Vice Chair	Bronson Philippa
Treasurer	Kenny Leong
Secretary	Shou-Han Zhou
Web Master	Ethan Waters
Professional Activities Coordinator	Mel Olsen
Membership Dev Officer	Graham Woods
Technical Activities Coordinator	Yang Du
Educational Activities Coordinator	Mel Olsen
Industry Relations Coordinator	Graham Woods
Student Activities	Shou-Han Zhou
Student Branch Mentor	Shou-Han Zhou
Student Representative	Ethan Waters
Power & Energy Society Chapter	
PES Chair	Mohan Jacob
PES Vice Chair	Yang Du
Communication Society Chapter	
MTT-S/Com Sec Chair	Tao Huang
MTT-S/Com Sec Vice Chair	Mohan Jacob
Oceanic Engineering Society Australia Chapter	
OES Rep	Mohan Jacob
Women in Engineering Affinity Group	
WIE Chair	Maryam Ebrahimpour
Young Professional Affinity Group	
YP Chair	Tao Huang

- Section Highlights
 - 30 events were held by the Section and its 2 chapters, 2 affinity groups, and 1 student branch including Exec Meetings, and in-person technical and social events.
 - Three workshops were held on artificial intelligence in Higher Degree Research.
 - The main and most recognized Section event, i.e. the Peter Arlett (PE) lecture, was organized and planned by the PES chapter, in collaboration with the Section chair. This was held on Tuesday 7th November 2023. The guest speaker was the CEO of Powerlink Prof Paul Simshauser who provided a comprehensive analysis of Queensland's energy landscape.
 - In addition two technical seminars and a networking event was held on 30 October 2023 with Associate Professor Keith Kikkert presenting.
- Major Events (International, National)
 - Power and Energy Society Chapter

- The main and most recognized Section event, i.e. the Peter Arlett (PE) lecture, was organized and planned by the PES chapter, in collaboration with the Section chair. This was held on Tuesday 7th November 2023.
 - A Professional Development Training Program on Wind Power was held at JCU on 21st November 2023.
- Major Chapter Activities
 - MTT-S/Com Society Chapter:
 - Organized multiple events and technical talks throughout the year.
 - Power and Energy Society Chapter
 - The main and most recognized Section event, i.e. the PA lecture, was organized and planned by the PES chapter, in collaboration with the Section chair, on Tuesday 7th November 2023.
 - Technical seminars and networking events on 30 October 2023.
 - Hosted and Industry Night Celebration on Igniting Achievement, Cultivating Connections in the Energy Horizon.
- Major Student and Affinity Group Activities
 - Student Branch:
 - Entered and supervised a team in the R10 Robotics Competition.
 - Hosted a BBQ and Zumo Robotics competition in conjunction with the Engineering Undergraduate Society at JCU.
 - Hosted a two week long JCU vs Griffith University RoboEngTech Challenge in conjunction with IEEE and clubs at the universities.
 - Women in Engineering:
 - Held more than 9 joint events in 2023. For details see below Sections.
 - Young Professionals:
 - Held more than 8 joint events in 2023. For details see below Sections.
- Awards
 - PhD student Muhammad Umer Zia’s “IoT-Enabled Smart Farming in Queensland” project in the 2023 ComSoc Student Competition “Communications Technology Changing the World.” received an Honorary Mention.

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

- Summary (as per submitted on NetSuite)
 - Over the reporting period, payments were made to support awards, committee member attendance at IEEE events for professional development, and meeting catering. These were paid from our local bank account, as well as from our IEEE concentration banking account.
- Any other financial activities
 - Local Bank Account Expenses are as follows

Effective Date	Entered Date	Transaction Description	Amount	Balance
	31/12/2023	Interest Credit	\$0.78	\$5,732.13
	31/12/2023	Monthly Account Fee	-\$5.00	\$5,731.35
	30/11/2023	Monthly Account Fee	-\$5.00	\$5,736.35
	3/11/2023	Ext TFR - NET# 1879590169 to 100108512 J J GARDNIR SNX - Southern Cross Credit Union Ltd	-\$21.09	\$5,741.35
	3/11/2023	Ext TFR - NET# 1879590062 to 10619392 Seyedmostafa Rahimiazghadi CBA - University of Sydney	-\$184.85	\$5,762.44
	3/11/2023	Ext TFR - NET# 1879590052 to 10619392 Seyedmostafa Rahimiazghadi CBA - University of Sydney	-\$57.00	\$5,947.29

	3/11/2023	Ext TFR - NET# 1879590034 to 08306686 C J Kikkert & M G Kikkert BAU - Bank Australia	- \$1,053.86	\$6,004.29
	31/10/2023	Monthly Account Fee	-\$5.00	\$7,058.15
	30/09/2023	Interest Credit	\$0.90	\$7,063.15
	30/09/2023	Monthly Account Fee	-\$5.00	\$7,062.25
	31/08/2023	Monthly Account Fee	-\$5.00	\$7,067.25
	31/07/2023	Monthly Account Fee	-\$5.00	\$7,072.25
	30/06/2023	Interest Credit	\$0.90	\$7,077.25
	30/06/2023	Monthly Account Fee	-\$5.00	\$7,076.35
	31/05/2023	Monthly Account Fee	-\$5.00	\$7,081.35
	23/05/2023	Ext TFR - NET# 1774805693 to 393058 Seyedmostafa Rahimiazghadi MBL - Macquarie Bank Limited	-\$274.53	\$7,086.35
	30/04/2023	Monthly Account Fee	-\$5.00	\$7,360.88
	31/03/2023	Interest Credit	\$0.91	\$7,365.88
	31/03/2023	Monthly Account Fee	-\$5.00	\$7,364.97
	28/02/2023	Monthly Account Fee	-\$5.00	\$7,369.97
	31/01/2023	Monthly Account Fee	-\$5.00	\$7,374.97

o Local Bank Term Deposit Account

Effective Date	Entered Date	Transaction Description	Amount	Balance
14/12/2023	13/12/2023	Interest Credit	\$506.05	\$22,448.25
14/06/2023	13/06/2023	Interest Credit	\$402.76	\$21,942.20

o IEEE CB Account

Date MM/DD/YYYY	Amount	Transaction Description
1/01/2023	22.38	Interest Paid Interest Calculation: 12/1/2022 - 12/31/2022 @ 2.18
1/02/2023	22.72	Interest Paid Interest Calculation: 1/1/2023 - 1/31/2023 @ 2.42
1/03/2023	22.78	Interest Paid Interest Calculation: 2/1/2023 - 2/28/2023 @ 2.69
1/04/2023	26.96	Interest Paid Interest Calculation: 3/1/2023 - 3/31/2023 @ 2.86
10/04/2023	1500	CBTRA CH10271 2023 ComSoc Chapter Funding
1/05/2023	31.3	Interest Paid Interest Calculation: 4/1/2023 - 4/30/2023 @ 3.14
1/06/2023	35.07	Interest Paid Interest Calculation: 5/1/2023 - 5/31/2023 @3.27
1/07/2023	36.07	Interest Paid Interest Calculation: 6/1/2023 - 6/30/2023 @ 3.47%
25/07/2023	4018.7	CBTRA Northern Australia Section 2023 IEEE MGA SECTION REBATE
28/07/2023	86	CBTRA Northern Australia Section 2023 IEEE MGA STUDENT BRANCH REBATE
1/08/2023	41.37	Interest Paid Interest Calculation: 7/1/2023 - 7/31/2023 @ 3.61
1/09/2023	53.25	Interest Paid Interest Calculation: 8/1/2023 - 8/31/2023 @ 3.74
1/10/2023	53.85	Interest Paid Interest Calculation: 9/1/2023 - 9/30/2023 @ 3.90
16/10/2023	-674.55	Outgoing Wire Transfer OTHER REFERENCE: IA064750000990// WIRE WT12328910240002 FOR 1053.86 AUD AT 0.640077 63106475-0 0

27/10/2023	560	CBTRA IEEE PES High Performing Chapter Award for Northern Australia Section Chapter
31/10/2023	674.55	- OTHER REFERENCE: IA615890000991// RETURN WIRE WT12328910240002 FOR 1053.86 AUD AT 0.640077 63661589-0 0
1/11/2023	-3.19	CB Card Transaction 7298-M974490292-31-OCT-23--3.19-CROSS BORDER TRANS FEE---000000000-Bank Fee-----0.00
1/11/2023	-319.35	CB Card Transaction 7298-M974503783-31-OCT-23--319.35-JAMES COOK UNIVERSITY-DOUGLAS--048140000-Colleges Universities Professional Schools-----0.00
1/11/2023	56.01	Interest Paid Interest Calculation: 10/1/2023 - 10/31/2023 @ 3.97
9/11/2023	-1.98	CB Card Transaction 7298-M975049482-07-NOV-23--1.98-CROSS BORDER TRANS FEE---000000000-Bank Fee-----0.00
9/11/2023	-198.13	CB Card Transaction 7298-M975095323-07-NOV-23--198.13-JCU BISTRO-DOUGLAS--048140000-Caterers-----0.00
17/11/2023	-246.8	Intl Money Transfer Debit OTHER REFERENCE: IA013200000990// WIRE WT12332113530002 FOR 375.25 AUD AT 0.657684 64301320-0 0
29/11/2023	-95.1	Intl Money Transfer Debit OTHER REFERENCE: IA461110020990// WIRE GPSPM WT12333309090001 FOR 142.06 AUD AT 0.669448 64646111-2 0
29/11/2023	-2139.22	Intl Money Transfer Debit OTHER REFERENCE: IA461110010990// WIRE GPSPM WT12333309090002 FOR 3195.50 AUD AT 0.669448 64646111-1 0
1/12/2023	55.28	Interest Paid Interest Calculation: 11/1/2023 - 11/30/2023 @ 4.00
19/12/2023	300	- R10 Incentive for the 2nd highest voting percentage: Northern Australia Section (US\$ 300)
22/12/2023	-525.34	Intl Money Transfer Debit Mohan Jacob - PES Chair Meeting Claim (reimbursement) - accom plus domestic air fare.
22/12/2023	-3380.84	Intl Money Transfer Debit Transfer from IEEEENA CB account (IEEE NexGen) to IEEE NA Bank Australia account
22/12/2023	-533.42	- OTHER REFERENCE: IA168190000990// WIRE WT12335613190006 FOR 776.93 AUD AT 0.686575 65716819-0 0

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.
 - We had 141 members on 28 Jan 2022. This was slowly grown over the few years before that.
 - As at 25 Feb 2023, we have 156 members, which shows >10% growth in 2022-23.
 - As at 25 Feb 2024 the Northern Australia Section has 157 members which shows the section has been able to maintain strong membership for the year.
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
 - Held a wide range of technical & networking events in different locations within the section, including in Cairns and Townsville.
 - Sponsored student membership and awarded student awards to attract high-caliber student members.
 - Held 30 events within the Section including 5 in-person events in Townsville and Cairns.

- Hosted a two week long online JCU VS Griffith University RoboEngTech Challenge in conjunction with the IEEE Student branch and other clubs at Griffith. This was a series of technical and non-technical problems released daily that could be solved for points.
- We have also focused on high profile events such the Peter Arlett lecture to attract new members as well as supported the RoboEngTech Challenge.

B.2 Chapter Activities

- Total number of Chapters in the Section
 - Two (2) (MTT/Comm and PES). We are also part of an Australia wide OES Chapter.
- 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 Two (2) (MTT/Comm and PES) full chapters were active this year and we also reported activity locally as part of the Australia wide OES Chapter.
- Summary of Chapter activities (Chapter wise with attachment table/information)

PES Chapter Activities:

- Participated in joint executive meetings throughout the year.
- 21/11/2023 - Industry Night Celebration on Igniting Achievement, Cultivating Connections in the Energy Horizon, 11 attendees in person.
- 21/11/2023 - Dr Jiajia Yang - Professional Development Training Program on Wind Power Systems – 7 attendees in person.
- 07/11/2023 - Prof Paul Simshauser – PA Lecture Queensland Energy Market Outlook – 90 attendees in person.
- 30/10/2023 - Associate Professor Keith Kikkert - The Energy Transition: Implications for you and your grandchildren / Networking Event / A Phasor Measurement Unit (PMU) Algorithm for FPGA implementation – 20 attendees in person.
- 05/09/2023 - Professor Nirmal Nair - Effective Fault-ride through and Smart Load-shedding schemes for Secure Renewable Grid Integration – 50 attendees online.
- 22/08/2023 - Dr Jiajia Yang - EDS August 2023 Presentation: Power Engineering Research Capability at JCU – 64 attendees online.
- 06/04/2023 - Ethan Waters - Sugarcane Health Monitoring with Satellite - 8 attendees online.

MTT/Comm Chapter Activities:

- Participated in joint executive meetings throughout the year.
- 26/10/2023 - Dr Sajjad Ahmed - Invited industry - talk (Optus) about modern communications systems and IoT technologies - 29 attendees online.
- 27/09/2023 - Professor Yi Huang - Wireless Energy Harvesting and Power transfer from RF to Optical Frequencies - 16 attendees online.
- 10/08/2023 - Jae-Sung Rieh - Terahertz Integrated Circuits and Applications - 40 attendees online.
- 16/06/2023 - Dr Akbar Naqvi - Dielectric Properties of Healthy Human Skin and Challenges towards Dermal Anomaly Detection using Electromagnetic Techniques - 17 attendees online.
- 03/05/2023 - Dr. Weijie Gao - Terahertz Communications Accelerated by Photonic Technologies - 35 attendees online.
- 26/04/2023 - Dr Rod Waterhouse - 5G and Beyond: A Diverse Set of Antenna Solutions for a Diversity of Requirements - 20 attendees online.
- 20/04/2023 - Prof. Dr.-Ing. Suramate Chalermwisutkul - Antenna, Microwave and Electromagnetic Research For Smart Cities - 22 attendees online.
- 24/03/2023 - Present and Future Spin-on Electro-optic Waveguide Modulator - 5 attendees online.

B.3 Professional and Continuing Education Activities

Summary of continuing Educational activities including conferences, technical activities, training courses, and distinguished lecture programs with attachment table / information

- Our main continuing education activity for the past 12 years has been the annual Peter Arlett Lecture, which is our Section flagship event gathering the most number of members in one even throughout the year. We usually bring high-profile people from industry and academia to our Section to provide a technical and/or a general seminar on a key problem in the Power and Energy Domain. PA Lecture is also always preceded by a networking event, where the Section provides food and drink to incentivise more interaction from the community in the Townsville region.
- We also host at least one distinguished lecture each year, which considering the small size of our Section has been very successful over the past few years. In 2023 two technical seminars and a network event was held being:
 - A Phasor Measurement Unit (PMU) Algorithm for FPGA implementation
 - The Energy Transition: Implications for you and your grandchildrenThis was also accompanied by a networking even between the two seminars.
- Three workshops were held on artificial intelligence in Higher Degree Research. Places in each workshop were limited to 5 persons. The workshops were very well received and attended and provided industry with the opportunity to obtain hands on experience.
- A Professional Development Training Program on Wind Power Systems was held in November 2023. The course provided essential theoretical knowledge and hands-on experience through experimental test benches to facilitate a comprehensive understanding of wind power system technologies.

B.4 Students Activities

- Total number of Student Branches in the Section
 - One (1) with Two new branches through SubSection
- Number of Student Branches formed in the current year
 - Nil
- Section level student activities (student congress, paper and other contests, awards etc)
 - Student branch hosted a two week long online JCU VS Griffith University RoboEngTech Challenge in conjunction with the IEEE Student branch and other clubs at Griffith. This was a series of technical and non-technical problems released daily that could be solved for points
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
 - One (1) and two new ones through Sub-section that need more assistance with reporting
- Summary of Student Branch activities (Student Branch wise with attachment table/information)
 - A total of 10 Student Branch activities were undertaken in 2023. A summary of key items in addition to the RoboEngTech Challenge is included below.
 - Hosted a seminar on monitoring the health of sugarcane with satellite based spectroscopy for IEEE education week.
 - Hosted a BBQ and Zumo Robotics competition in conjunction with EUS
 - Provided a drone safety and design workshop for a 4th year mechanical engineering class and provided personnel with the necessary drone licences to test drones on JCU land.
 - Entered / supervised a team in R10 Robotics competition. The team successfully developed an autonomous tree planter over three months and secured provisional acceptance into the finals, although they ultimately chose not to participate citing that they felt they needed a bit more development time to ensure a satisfactory product for that level.
 - Attended JCU Industry night talking about the IEEE and Student Branch opportunities.

B.5 Affinity Group Activities

- Young Professional (YP)
 - Participated in joint executive meetings throughout the year.
 - 07/11/2023 - Prof Paul Simshauser – PA Lecture Queensland Energy Market Outlook – 90 attendees in person.

- 30/10/2023 - Associate Professor Keith Kikkert - The Energy Transition: Implications for you and your grandchildren / Networking Event / A Phasor Measurement Unit (PMU) Algorithm for FPGA implementation – 20 attendees in person.
- 26/10/2023 - Dr Sajjad Ahmed - Invited industry - talk (Optus) about modern communications systems and IoT technologies - 29 attendees online.
- 14/09/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 3 - 18 attendees.
- 05/09/2023 - Professor Nirmal Nair - Effective Fault-ride through and Smart Load-shedding schemes for Secure Renewable Grid Integration – 50 attendees online.
- 28/07/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 2 - 35 attendees.
- 27/06/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 1 - 58 attendees.
- 16/06/2023 - Dr Akbar Naqvi - Dielectric Properties of Healthy Human Skin and Challenges towards Dermal Anomaly Detection using Electromagnetic Techniques - 17 attendees online.
- 06/04/2023 - Ethan Waters - Sugarcane Health Monitoring with Satellite - 8 attendees online.
- Women In Engineering (WIE)
 - Participated in joint executive meetings throughout the year.
 - 07/11/2023 - Prof Paul Simshauser – PA Lecture Queensland Energy Market Outlook – 90 attendees in person.
 - 30/10/2023 - Associate Professor Keith Kikkert - The Energy Transition: Implications for you and your grandchildren / Networking Event / A Phasor Measurement Unit (PMU) Algorithm for FPGA implementation – 20 attendees in person.
 - 26/10/2023 - Dr Sajjad Ahmed - Invited industry - talk (Optus) about modern communications systems and IoT technologies - 29 attendees online.
 - 14/09/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 3 - 18 attendees.
 - 05/09/2023 - Professor Nirmal Nair - Effective Fault-ride through and Smart Load-shedding schemes for Secure Renewable Grid Integration – 50 attendees online.
 - 28/07/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 2 - 35 attendees.
 - 27/06/2023 - A/Prof Mostafa Rahimi Azghadi - AI in HDR Workshop 1 - 58 attendees.
 - 06/04/2023 - Ethan Waters - Sugarcane Health Monitoring with Satellite - 8 attendees online.
- Life Member (LM)
 - Any?

B.6 Awards & Recognition Activities

- Award constituted by the Section
 - IEEE Northern Australia section awards four undergraduate students has been awarding for the past 7 years at University awards ceremonies:
 - Townsville: 1st year Engineering Student with highest GPA, who is joining Electrical/ Computer Engineering UG program.
 - Townsville: 4th year Electrical/ Computer Engineering Student for the best project work.
- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year
 - None.

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

- Newsletter (name and number of issues in the year)
- Home Page of the Section (give the URL and how often it is updated)
 - Website was continued to be updated on an ad-hoc basis
<https://r10.ieee.org/naus/>
 - LinkedIn Group for the Section was maintained through 2023 for posting about the events etc.
<https://www.linkedin.com/company/82341453/admin/>
- Other means of contacts with Section members including social media
 - ✧ An invitation to all the Section events is emailed by the Section Chair to all the Section members twice at two weeks and one week before any event.

B.8 Industry Relations

- Membership growth and retention
 - Have had good retention of industry membership over recent years and maintained member numbers in 2023, which is a great for our small Section. This has been achieved through our wide range of activities including many face-to-face events, which has attracted industry people to our events and incentivizes their membership.
- Activities for/with industrial members
 - Our main activity for industry in our region has been our Peter Arlett Lecture, which is the Flagship annual event of the IEEE Northern Australia Section. The Peter Arlett lecture is IEEE North Australia section and PES chapter's most prestigious event each year in Townsville where the chapter reaches out to the local Power Engineering community with a technical presentation of interest to the sections' members. In 2023 the lecture was given by the CEO of Powerlink Prof Paul Simshauser who provided a comprehensive analysis of Queensland's energy landscape. The lecture was preceded by a social networking event with finger food and drinks.
 - The event was attended by approximately 90 IEEE and non-IEEE members from across the Townsville region, representing the local industry, university researchers, and postgraduate and undergraduate students, as well as the Arlett's family.
 - Three workshops were held on artificial intelligence in Higher Degree Research.
 - A Professional Development Training Program on Wind Power Systems was held in November 2023. The course provided essential theoretical knowledge and hands-on experience through experimental test benches to facilitate a comprehensive understanding of wind power system technologies.

B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
 - None
- SIGHT Activities
 - None

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)”
 - Key in person technical presentations I were accompanied by industry networking drinks and nibbles. This includes the Peter Arlett Lecture and the PES distinguished lecture presentation.
 - An Industry Night was also held in November to celebrate achievements and cultivating connections in the Energy sector.

PART C - OTHERS

C.1 Special Events

- Please briefly describe the importance of special events and the outcomes achieved
 - The Peter Arlett event is held in honour of Peter Arlett from the NA Region, and it is always a highlight from our Section in our region.
- Funding secured from the IEEE and external sources including sponsorships
 - Student Branch continued with the funding from sponsorships for continuing involvement with the RoboEngTech Challenge.
-

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

- Nature of relationship and details of any formal agreement signed
 - Working with Australia Council to sign MOU with Engineers Australia
- Details of joint activities
 - Many of our virtual events were advertised across Australia in collaboration with other sections.
- Benefit to IEEE members (for example discounts, access to technical information etc.)
 - Subsidised or free membership cost to attract student members who were awarded an IEEE NA Section award
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)
 - Increase in exposure of IEEE within our region and exposure of our members to new technology areas outside of those typically promoted within IEEE Northern Australia (e.g. Renewable Energies, Artificial Intelligence and Marine Engineering).
 - Providing hands on workshops and training to members in the region.

C3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
 - Supported events to boost the newly formed IEEE Northern Territory sub-section.
 - Shared hosted events with other sections and chapters nationally through virtual presentation formats.
 - As part of the Australia Council our section contributes to Australia wide initiatives such as the student branch competitions and also consultation on important matters relevant to Australia.
- Joint activities with any other Section
 - The Northern Australia section covers a huge geographical area. The nearest section is approximately 1500km from our sections geographic centre. Joint activities typically involve coordinating visiting lecturers throughout the year and cohosting virtual events. The vast majority of our virtual technical seminars were also cohosted with other Australian sections.

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

- Support extended for organising technical, educational and professional activities
 - Supported student awards through payment of the award
- Joint activities for membership development
 - Key membership development activities were focused on joint technical talks and networking events often involving industry partners such as Energy Queensland and the Australian Institute of Marine Science.
- Support extended for the formation of a Sub-section or transition of a Sub-section into a full Section
 - None

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

- One of the key strength of our Section has been many interactions with the local community through various events. These include the following:
 - The Peter Arlett Lecture
 - Professional Development Training Program for Wind Power Systems.
 - Distinguished Lecture presentations
 - Workshops on artificial intelligence in Higher Degree Research

- Executive committee members were encouraged to assist with the planning and execution of key events throughout the year. This was very successful not only leading to outstanding events but also empowering members within the Section. This has led to increased interest from members, particularly young members to take on new executive roles within the Section.
- An activities calendar was developed at the start of the year to set dates and start planning for key events in the year. This planning was useful to ensure funding was available to support upcoming events and new initiatives.
- Continued involvement and activities in the Student Branch and YP affinity groups.

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

The executive needs to continue to invite and encourage the student branch, YP, WIE executive committee members to attend Section executive committee meetings and plan events to continue activities in 2024 to the same high standards as previous years.

PART D - GOALS AND PLANS

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

The NA Section website use is planned to be increased in 2024 as well as continuing an archive for important documentation such as the section's history, photographic records, strategic plan, etc.

D.2 Goals and Future Plans

Due to its small size, our Section has not been recognizing its volunteers widely. A plan for 2024 is to setup at least 2 of the below awards.

- IEEE Northern Australia Outstanding Volunteer
- IEEE Northern Australia Outstanding Young Professional
- IEEE Northern Australia Outstanding Women In Engineering Volunteer
- IEEE Northern Australia Outstanding Student Volunteer

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

Continue to investigate opportunities for hands-on workshops catering to the interests and needs of local members, such as the Wind Power Systems and Artificial Intelligence in higher Degree Research held in 2023. These could be non-technical in nature and may include a networking/ social focus as well.

Hold an Industry Event to celebrate 30 years of the Northern Australia Section.

Engage in regional events involving problem solving, engineering & innovation initiatives to broaden our member-base. This includes joint events with other engineering groups (especially affinity groups) and wider community initiatives such as science week.

Incorporate social media and more frequent website promotion into our advertising regime, to increase the audience at our activities and our presence in the community.

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

The Section is fortunate to have a stable organizational committee with a good mix of members from academic and industry backgrounds that understand the area and member needs. The executive committee includes representation from many of the major regional cities within the section including Cairns, Townsville and Darwin to encourage activities in the various regions. The executive members are also generally highly motivated and willing to assist and support the Section as required.

By focusing on a small number of high-profile events and including networking opportunities, the Section aims to remain relevant to the needs of local members and promote growth within the wider professional community.

