

IEEE Singapore Section Report - 2024

PART A - SECTION SUMMARY

A.1 EXECUTIVE SUMMARY

POSITION	NAME
Chairman	Arokiaswami Alphones
Vice Chair (Awards & Recognition Chair)	Michael Ong
Secretary (eBroadcast Chair)	Aishwarya Bandla
Treasurer (Conference Chair)	Nicholas Wong
Committee Member - Student Activities Chair	Nicholas Wong
Committee Member - Membership Chair	Ravinder Pal Singh
Committee Member - Membership Co-Chair	Ernest Kurniawan
Committee Member - Professional Activities Chairs	Shilpa Manandhar
Committee Member - Industrial Activities	Emily Hao
Committee Member - Educational Activities Chairs	Yuen Chau

As at 27 November 2024, the Section organized 221 events, out of which 161 are technical, 13 non-technical, 43 administrative, 3 professional and 1 humanitarian activities. I believe there are still a lot of activities that were organized but not reported in vTools yet. I would like to thank all the active volunteers in Singapore for their time and effort that made the various events possible and even successful for many.

Growing the membership base remains a challenge and our goal would be to strive for a sustainable increase in members. We hope these new members will be engaged in various IEEE activities and would appreciate the value of professional networking.

1. ELEVATED IEEE FELLOWS – 2024

1. Bingsheng He
- for contributions to big data systems in the areas of many-core architectures and cloud-based systems
2. Biplab Sikdar
- for contributions to the security and privacy of the Internet-of-Things and cyber-physical systems
3. Hyunsoo Yang
- for contributions to controlling spintronic materials and devices for memories and terahertz technology
4. Jingsheng Chen
- for contributions to magnetic materials and heterostructures for Magnetic Recording Technology and Spintronics
5. Mandar Chitre
- for contributions to underwater acoustic interference modeling and development of acoustic communication networking protocols

2. MEMBERSHIP RENEWAL FOR NOMINATED COMMITTEE MEMBERS

All nominated ExCo members need to renew their membership for the coming year, before submitting their nomination forms. This will ensure that the Section office can update the IEEE vTools with the new committee at the beginning of the year and signatories of Chapter bank accounts can be updated promptly.

3. MEMBERS' BENEFITS

The Section had signed up for the Singapore Flyer Corporate Card which allows members to bring another 5 family members or friends. The card is valid from 1 December 2024 to 30 November 2025. Besides this, there are also a few special hotel rates listed. Please check the Section's website for more information.

4. IEEE AWARDS

This year, the Section received the Outstanding Member Recruitment Performance Award from the IEEE Inc.

5. TENCON 2024

The Section is organizing TENCON from 1 to 4 December 2024 at the Sands Expo & Convention Centre. There are around 650 papers received and 540 were accepted for presentation. Most of the submissions are from the Asia Pacific region. The theme of the conference is "Artificial Intelligence and Deep Learning Technologies for Sustainable Earth".

6. STUDENT ACTIVITIES

IEEE Singapore Section has 4 active Student Branches - NUS, NTU, SUTD and SIT. and 2 IEEE-HKN Branches – NUS and SUTD. These Student Branches organize regular educational workshops and competitions for the IEEE Student Members and for reaching out to non-members. They serve as platforms for connecting IEEE Members and the Student Members. They are also effective channels for IEEE to reach out to young Engineering students in the local universities

7. E-BROADCAST AND SOCIAL MEDIA

Regular broadcasts containing information on seminars, talks, conferences, social events and membership benefits have been sent to IEEE members in Singapore. This was well coordinated by Dr Aishwarya Bandla, who is also the Section Secretary. Aishwarya is also helping with prompt update of the social media pages.

A.1 FINANCIAL REPORT

Our consolidated financial position continues to remain healthy. The level of reserve is not excessive as the Section comprises 33 sub-entities (30 Chapters and 3 Affinity Groups), each recognized as a full-fledged IEEE Organizational Unit in terms of its privilege to organize events and manage its own finance.

The Section also helped to open 8 conference bank accounts for the conferences – 6 for 2024, 1 for 2025 and 1 for 2026 with the OCBC Bank.

The bank account for the IEEE Singapore CRFID Chapter was opened on 23 September 2024 with the DBS Bank.

Our Treasurer Prof Nicholas Wong, together with the Section Accountant, Ms Joy Leong have worked tirelessly over the past year to maintain our accounts in an efficient manner, and would like to thank them for their invaluable services.

PART B - ORGANIZATIONAL ACTIVITIES

B.1 MEMBERSHIP DEVELOPMENT PROGRAMS

As at October 2024, there are 2,635 active members. The breakdown of the members in various grades is summarized below:

IEEE Grade Description	Active Members (October 2024)
Student Members	144
Graduate Student Members	421
Associate Members	30
Members	1,415
Senior Members	476
Fellow	61
Life Members	43
Life Seniors	33
Life Fellow	12
TOTAL	2,635

B.2 CHAPTER ACTIVITIES

The Singapore Section has 30 Chapters and 3 Affinity Groups. As of 27 November 2024, 221 activities have been reported via the vTools system. Activities taking place after 27 November 2024 were reported subsequently after completion of the activities.

Event activity status based on IEEE vTools System as of 27 November 2024:

SN	Section / Chapters / Affinity Groups	Prof	Tech	Non-Tech	Admin	Hum	Pre-U	Total
1	Aerospace and Electronic Systems/Geoscience and Remote Sensing Joint Chapter	0	1	1	3	0	0	5
2	Broadcast Technology Chapter	0	0	0	0	0	0	0
3	Circuits and Systems Chapter	0	1	0	0	0	0	1
4	Communications Chapter	0	9	0	0	0	0	9
5	Computational Intelligence Chapter	0	6	0	2	0	0	8
6	Computer Chapter	0	1	0	1	0	0	2
7	Consumer Technology Chapter	0	2	0	0	0	0	2
8	Control Systems Chapter	0	0	0	0	0	0	0
9	Council on RFID Chapter	0	17	0	4	0	0	21
10	Education Chapter	0	0	0	0	0	0	0
11	Electromagnetic Compatibility Chapter	0	9	0	2	0	0	11
12	Engineering in Medicine and Biology Chapter	1	15	2	12	0	0	30
13	Industrial Electronics Chapter	0	18	0	0	0	0	18
14	Industry Applications/ Power Electronics Joint Chapter	0	3	0	3	0	0	6
15	Intelligent Transportation Systems Chapter	0	8	0	3	0	0	11
16	Life Members Affinity Group	0	0	0	0	0	0	0
17	Magnetics Society Chapter	0	0	0	0	0	0	0
18	Microwave Theory and Techniques/ Antennas and Propagation Joint Chapter	0	12	0	4	0	0	16
19	Nanotechnology Council Chapter	0	0	0	0	0	0	0
20	Nuclear and Plasma Science Chapter	0	0	0	0	0	0	0
21	Oceanic Engineering Chapter	0	11	0	0	0	0	11
22	Photonics Chapter	0	1	0	0	0	0	1
23	Power and Energy Chapter	2	7	3	0	1	0	13
24	Reliability/ Electronics Packaging/ Electron Devices Chapter	0	0	0	0	0	0	0
25	Robotics & Automation Chapter	0	2	2	2	0	0	6
26	Sensors Council Chapter	0	3	0	0	0	0	3
27	Signal Processing Chapter	0	9	0	2	0	0	11
28	Singapore Section	0	5	1	1	0	0	7
29	Solid-State Circuits Chapter	0	4	1	1	0	0	6
30	Systems, Man and Cybernetics Chapter	0	3	0	0	0	0	3
31	Technology and Engineering Management Chapter	0	0	0	0	0	0	0
32	Vehicular Technology Chapter	0	10	0	3	0	0	13
33	Women in Engineering Affinity Group	0	3	3	0	0	0	6
34	Young Professionals Affinity Group	0	1	0	0	0	0	1
		3	161	13	43	1	0	221

B.3 PROFESSIONAL AND CONTINUING EDUCATION ACTIVITIES

The Section supported the Women in Engineering Affinity Group in the following activities:

Date	Event Name	No. of Attendees
16-Feb-23	WiE Networking Nights, "Early Career Researchers in Academia"	25
8-Mar-23	Video Competition to celebrate International Women's Day	10
22-Mar-23	Pannel Discussion on "DigitALL: Innovation and Technology for Gender Equality", theme for IWD 2023	27
25-Mar-23	RoboRoarZ Competition: First Edition	200
29-Apr-23	RoboRoarZ Competition: Second Edition	200
19-Aug-23	9th IRC conference on Science, Engineering, and Technology (IRC-SET) 2023: WIE Special Session	25
31-Aug-23	WiE Networking Nights, for industry meet up, "Sustainable workplace practices"	25
3-Oct-23	IEEE Fest 2023, Inaugural talk	30

B4. STUDENT ACTIVITIES

IEEE Singapore Section has 4 active Student Branches - NUS, NTU, SUTD and SIT. and 2 IEEE-HKN Branches – NUS and SUTD. These Student Branches organize regular educational workshops and competitions for the IEEE Student Members and for reaching out to non-members. They serve as platforms for connecting IEEE Members and the Student Members. They are also effective channels for IEEE to reach out to young Engineering students in the local universities.

B.5 AFFINITY GROUP ACTIVITIES

1. IEEE WOMEN IN ENGINEERING AFFINITY GROUP

(A) ACTIVITIES FOR THE YEAR 2024:

- **Administrative Meetings**
There were 4 online meetings to discuss the plans.

- **Technical Seminars and Talks**

Events	Date
WiE Mentorship Program with LMAG	21 Dec 2023
WiE Networking Nights: Reducing Carbon Footprint	26 March 2024
WiE Panel Discussion: Inspiring Inclusion	19 April 2024
RoboRoarZ National Competition (Co-organizer)	23,24 Mar 2024
IEEE and WiE Industry Visit: SICK	28 May 2024
James Dyson Foundation RoboRoarZ International (Co-organizer)	13, 14 Jul 2024
WIE Special Session (10th IRC conference on Science, Engineering, and Technology (IRC-SET) 2024)	17 Aug 2024
WiE Special Session (Tencon 2024)	01 Dec 2024
Industry Panel Discussion (Tencon 2024)	01, 02 Dec 2024

- **International Conferences**
 1. Organized WiE session in TENCON 2024 [1 Dec 2024, MBS]
12 registered papers with 2 awards
- **Social Events**
 1. There will be one committee dinner to celebrate the year.

(B) FUTURE PLANS:

1. To establish connections with WiE student groups.

(C) SUMMARY:

In summary, we organized quite a number of talks, networking nights and also a session in Tencon. The year was eventful with these programs. We look forward to a more eventful year in 2025 with more interactions and events.

2. IEEE YOUNG PROFESSIONALS AFINITY GROUP

(A) ACTIVITIES FOR THE YEAR 2024:

- **Administrative Meetings**
 - 10 Jan: YP SG Committee Meeting #1
 - 05 Jun: YP SG Committee Meeting #2
 - 07 Oct: YP SG Committee Meeting #3
- **Technical Events**
 - 02 Mar: Madras – Singapore YP Connect
 - 12 Mar: NTU EEE Graduate Research Showcase 2024 (Co-organizer)
 - 22 Mar: Maxeon Company Visit (co-organized with NTU EEE GSC)
 - 16 Apr: IEEE Standards Association x YP SG: Singapore Technology Forum 2024
 - 28 May: Industry Visit to SICK Pte Ltd
 - 01 Jun: Region 3 - Singapore YP Connect
 - 27 Aug: RAS Hyderabad - Singapore YP Connect
 - 03-04 Oct: Singapore Healthcare Engineering Conference 2024 (SHEC)
 - 25 Nov: IEEE QT3 15.0 x YP Connect SG at Singapore Institute of Technology
- **Social Events**
 - 21 Feb: Chinese New Year Potluck Dinner
 - 18 Apr: Sightseeing Walking Tour of Kampong Glam by YP Singapore
>> In conjunction of Hari Raya Puasa celebrations and OCEANS 2024 Singapore Conference
 - 02 Nov: Deepavali YP Festive Gathering
 - 07 Dec: IEEE Singapore Family Day 2024 – Bowling Competition

(B) FUTURE PLANS:

To continue with YP Connect, Festival Gatherings and IEEE Singapore Family Day in 2025.

(C) SUMMARY:

Many collaborative activities have been organized in 2024 and the team is looking forward to more similar activities in 2025.

(C) SUMMARY:

IEEE Singapore YP continues to drive events for IEEE young professionals within and beyond our Singapore borders.

3. IEEE LIFE MEMBER AFFINITY GROUP (LMAG)

(A) ACTIVITIES FOR THE YEAR 2023:

- Technical Seminars and Talks: 1 technical site visit planned for Dec 2023
- Social Events: 1 social event planned for Dec 2023

(B) FUTURE PLANS:

- 2 technical events for 2024
- 1 social event planned for 2024

B.6 AWARDS & RECOGNITION ACTIVITIES

Section met both its recruitment and retention goals for the 2023 membership year and won the 2023 R10 Best Membership Retention Large Section Award.

Congratulations to Aishwarya Bandla (Section Secretary) for winning the 2023 MGA Young Professionals Achievement Award:

"For excellent efforts in mentorship initiatives for young professionals and women in engineering, and programs promoting cross-sector collaboration"

PART C - OTHERS

C.1 Special Events - Nil

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

- IES-IEEE Joint medal of excellence being continued for the year 2024. The Institution of Engineers, Singapore (IES) and the Institute of Electrical and Electronics Engineers, Inc. (IEEE) intend to continue with the IES/IEEE Joint Medal of Excellence Award after reviewing it to continue or not. The aim of the award is to promote engineering as a profession and to recognize an individual for his/her contributions in Engineering that have had far-reaching impacts on society. The award is expected to inspire the young to take up engineering as a profession. This award is highly prestigious and the recipient will be recognized not only in Singapore but also the region and around the world.

PART D - GOALS AND PLANS

D.2 Goals and Future Plans

Membership Development

To attract new members as well as make existing ones retain their membership.

1. Tie up with hotels and popular attractions for special discounts
2. Hold regular net-working events with topics that are of interest members
3. To add other attractions as membership benefits

Engaging Students

To increase support for HKN activities. To encourage the HKN chapters to lead outreach activities in schools.

To continue to support activities like Graduate Student Symposium (GSS) organized by YP at NUS and towards membership development.

Engaging Industry

Various industry related events have been planned.