

2015 IEEE Singapore Section Report

PART A - SECTION SUMMARY

A.1 EXECUTIVE SUMMARY

This year is another fruitful year for IEEE Singapore Section. Altogether we, Chapters and the Section, have managed to organize 196 technical events, 31 social events and 65 administrative events as of 8 November 2014. This is a remarkable achievement.

In addition to holding regular executive committee and general committee meetings, the Section was honoured to be part of the Panel of Conference Organizers (POCO) which was held in Singapore from 17 to 19 July 2014 at Hilton Hotel. 170 members (40 from Singapore) registered for this event. POCO is the annual educational and networking event for IEEE conference organizers, which provides an opportunity for organizers to learn about conference issues with IEEE staff, industry experts, and peers.

1. AWARDS RECEIVED

MGA Award - Leadership

Dr Darrel Chong, who served in the IEEE Singapore Section as the Students' Activities Chair from 2009 to 2010 won the 2013 MGA Leadership Award.

Society Award – High Performing Chapter

Power and Energy Chapter received the 2014 IEEE PES High Performing Chapter Award.

R10 Award – Outstanding Activity by Section

Region 10 has an award to recognize outstanding activities organized by sections. For the SEA sub-region, Singapore section won the award for "Project membership drive and co-sponsorship of graduate student symposium at National University of Singapore".

R10 Award – Outstanding Volunteer

Prof Sanjib K Panda (IA/PEL Joint Chapter) won the 2013 R10 Outstanding Volunteer Award.

R10 Award - GOLD Individual

Mr Deepu Chacko John from the IEEE Singapore Section won this award.

2. IEEE VOLUNTEER LEADERSHIP TRAINING PROGRAM

Zhang Xin from IEEE Broadcast Technology Society was one of the 35 volunteers, from all IEEE Regions, who was selected for the prestigious IEEE Volunteer Leadership Training Program. Participants attend a weekly webinar and do quizzes, homework and a project in this 6-month long on-line program.

3. RECOGNITION FOR LONG-STANDING MEMBERS

Section has recognized and honoured IEEE members in Singapore who have retained their membership for 40 years or more.

4. SINGAPORE SECTION CONFERENCE

Section committee has started working on the organization of a regional conference which will be held in mid-October 2015. The focus of the conference will be on applied engineering (EEE related) and an attempt will be made to bring in industry partners.

5. TENCON 2016

Section has bid for TENCON 2016 and the bidding proposals are being prepared. It was informed by R10 conference committee and APO that Singapore has been selected as host of TENCON 2016. STB will be supporting Section in the bidding. Below are the past 5 TENCON hosts:

TENCON 2011	Bali	21-24 Nov 2011
TENCON 2012	Cebu	19-22 Nov 2012
TENCON 2013	Xian	22-25 Oct 2013
TENCON 2014	Bangkok	22-25 Oct 2014
TENCON 2015	Macau	01-04 Nov 2015

6. FINANCE SUB-COMMITTEE: RECOMMENDATIONS

A Finance Sub-Committee comprising of Section Treasurer, Dr Sahoo, as chair and chapter representatives was formed to look into the financial status of Section and provide recommendation for long-term sustainability. The recommendations are given below.

- Reduce AGM expenses.
- Keep the night safari membership as members value it. Try to get sponsor(s).
- Organize conference/short courses.
- Re-look at the formula used to calculate the sharing of the cost of secretariat and accountant fees.

7. FORMATION OF NEW CHAPTER

The formation of Intelligent Transportation Systems Society Chapter is approved by the IEEE HQ. Dr Guo Huaqun initiated the formation of this chapter.

A.2 FINANCIAL REPORT

Our consolidated financial position continues to remain healthy with the active support of all the chapters under our section. Our total assets, which includes seed monies, fixed deposits, cash & cash equivalents and other receivables held by the Section/Chapters and loans to conference accounts, totaling just over S\$2M, have been fairly stable for the last few years. This level of reserve is not excessive as the Section comprises 30 sub-entities (28 Chapters/council and 2 Affinity Groups), each recognized as a full-fledged IEEE Organizational Unit in terms of its privilege to organize events and to manage its own finance. The Section is registered under the category of Trade Association with the Registry of Societies of Singapore. This status allows the Section/Chapters to generate surplus revenues from organizing their activities such as running conferences and short courses, but requires the Section/Chapters to pay income tax.

A.3 LIST OF SECTION OFFICERS AND EXECUTIVE COMMITTEE MEMBERS

IEEE Singapore Section Executive Committee Members - 2015

Dr Arokiaswami Alphones	Chairman
Dr Sahoo Sanjib Kumar	Vice-Chairman
Dr P. N. Suganthan	Secretary
Dr Ong Ling Chuen, Michael	Treasurer
Dr Rajnish Gupta	Immediate Past Chairman

Dr Muhammad Faeyz Karim	Membership Development Sub-Committee Chairman
Dr Erdal Kayacan	Student Activities Chairman
Dr Ma Maode	E-Communications Chairman
Dr Li Wei	Publicity Chairman
Dr Huang Shaoying	Professional and Educational Activities Chairman

PART B - ORGANIZATIONAL ACTIVITIES

B.1 MEMBERSHIP DEVELOPMENT PROGRAMS

The IEEE promotes the engineering process of creating, developing, integrating, sharing, and applying knowledge about electrical, electronics and information technologies and sciences for the benefit of humanity and the profession. As at November 2014 we have 3037 IEEE members in Singapore. In 2013, 3049 members were there, and in 2012, 3258 members with different grades have been recorded. We continue to encourage qualified members to be promoted to Senior Members and Fellows every year.

IEEE Singapore Section has made a corporate tie-up with the Singapore Science Centre and the Night Safari Singapore. Our members enjoy discounted rates and special privileges at these places. Also in few hotels IEEE member rate with subsidy has been in place.

IEEE Singapore Section Membership

IEEE Grade Description	Active Members (2014)
Student Members	68
Graduate Student Members	575
Associate Members	67
Members	1893
Senior Members	389
Fellow	32
Life Members	6
Life Seniors	5
Life Fellow	2
TOTAL	3037

During the Section's 37th AGM held on 26 November 2014, the Section honoured 9 longstanding members who have retained their IEEE membership for 40 years or more.

B.2 CHAPTER ACTIVITIES

In 2014, the IEEE Singapore Section has a total of 28 Chapters. The petition for the formation of the IEEE Intelligent Transportation Systems Society (ITSS) Chapter in Singapore was initiated in September 2014.

Below is the list of activities of the IEEE Singapore Section and Society Chapters in 2014.

L31 Submission status based on IEEE VTool System as of 8 November 2014:

S.N.	Section / Chapters / Affinity Groups	OU	Tech	Admin	Non-Tech	Total
1	Aerospace and Electronic Systems / Geoscience and Remote Sensing Joint Chapter	AES10/GRS29	2	4	0	6
2	Antennas & Propagation / Microwave Theory & Techniques Joint Chapter	AP03/MTT17	22	0	1	23
3	Broadcast Technology Chapter	BT02	3	2	2	7
4	Computer Chapter	C16	7	6	0	13
5	Circuits & Systems Chapter	CAS04	13	4	1	18
6	Consumer Electronics Chapter	CE08	0	1		1
7	Computational Intelligence Chapter	CIS11	5	0	0	5
8	Communications Chapter	COM19	12	0	2	14
9	Control Systems Chapter	CS23	2	2	1	5
10	Education Chapter	E25	3	1	0	4
11	Engineering in Medicine & Biology Chapter	EMB18	2	3	5	10
12	Electromagnetic Compatibility Chapter	EMC27	12	0	0	12
13	Graduates of the Last Decade Affinity Group	GOLD	1	5	4	10
14	Industry Applications / Power Electronics Joint Chapter	IA34/PEL35	6	3	2	11
15	Industrial Electronics Chapter	IE13	5	1	0	6
16	Magnetics Chapter	MAG33	11	1	1	13
17	Nanotechnology Chapter	NAN042				0
18	Nuclear and Plasma Science Chapter	NPS05	6	2	1	9
19	Oceanic Engineering Chapter	OE22	5	3	0	8
20	Power & Energy Chapter	PE31	6	4	2	12
21	Photonics Chapter	PHO36	16	1	6	23
22	Reliability / Components, Packaging & Manufacturing Technology / Electron Devices Joint Chapter	R07/CPMT21/ED15	6	3	1	10
23	Robotics & Automation Chapter	RA24	8	0	0	8
24	Section	Section	0	5	0	5
25	Sensors Chapter	SEN39	3	0	0	3
26	Systems, Man & Cybernetics Chapter	SMC28	6	1	0	7
27	Signal Processing Chapter	SP01	5	2	1	8
28	Solid State Circuits Chapter	SSC37	9	1	0	10
29	Technology Management Chapter	TM14	3	2	0	5
30	Vehicular Technology Chapter	VT06	12	3	0	15
31	Women in Engineering Affinity Group	WIE	3	5	1	9
	Total		196	65	31	292

B.3 PROFESSIONAL AND CONTINUING EDUCATION ACTIVITIES

In 2014, IEEE Singapore Section initiated the Distinguished Lecturer series. Three distinguished lecturers were invited to conduct lectures. The details of the lecture are tabulated.

Speaker	Affiliation	Title of the talk	Date
Professor Thian Ng	Clinical Imaging Research Center, A-star	Basics Physics of Magnetic Resonance Imaging & Pulse Sequences	1 April 2014
Dr. Virginia Cha	NUS, INSEAD	Making Sense of Big Shifts	4 June 2014
Professor Lawrence Wald	Harvard Medical School, Massachusetts General Hospital, MIT	New directions for brain MRI hardware and acquisition	20 Oct 2014

In addition, a workshop titled *Simulation best practices: nanophotonic and integrated optical components and circuits* was co-organized with Lumerical Solutions on 4th June 2014.

B.4 STUDENTS ACTIVITIES

2014 has been a vibrant and high-achieving year for students in IEEE Singapore Section. In Region 10 student paper contest, we ranked No. 1 in the postgraduate category and No. 1 and No. 3 in the undergraduate category.

New Students' Branch

- The third student branch in IEEE Singapore Section, IEEE SUTD Student Branch, was officially formed on 15th May 2014.
- Two student branch chapters were officially formed, namely, IEEE NTU Microwave Theory and Techniques Society Student Chapter and IEEE NTU Antennas and Propagation Society student chapter.

B.5 AFFINITY GROUP ACTIVITIES

IEEE WOMEN IN ENGINEERING (WIE) AFFINITY GROUP

Chairman: See Swee Lan

(A) ACTIVITIES FOR THE YEAR 2014:

- **Administrative Meetings**
 - ❖ WIE EXCO has so far met on 27th January, 27th March, 25th July and 9th October to brainstorm new activities, to plan selected activities, and to update on the operations of the Affinity Group and the organization of activities for Year 2014.
 - ❖ WIE EXCO hosted the visit of Dr Roberto De Marca (IEEE president), Dr Takako Hashimoto (Coordinator, IEEE R10 Women In Engineering), and Ms. Cecelia Jankowski (Managing Director, Member and Geographic Activities) to Singapore on 3rd March. The meeting started with a discussion on how to promote IEEE activities more comprehensively and strategically, how to engage more engineers to join IEEE and to empower contributions of WIE, and ended with a buffet dinner of local food delights.

- **Technical Seminars and Talks**
 - ❖ Co-organized with IEEE BTS and IRC the HSBC Financial Talk on Children's Education Planning on 20th May.
 - ❖ WIE EXCO held a WebEx Meeting with WIE Japan on 25 July to discuss and explore possible future collaboration via video-conferencing technologies, as well as the 2015 WIE International Leadership Conference.
- **International Conferences**
 - ❖ WIE's proposal to organize the Health is Wealth Conference (HIM 2014) was selected to receive a 2014 IEEE R10 WIE Support Fund of USD300. This event is jointly organized by IEEE Singapore Section, IEEE SG WIE AG and the Institute for Infocomm Research on 13th November. There are IEEE membership drive, "a dime for a meal" charity drive, invited talks and sharing session on healthy lifestyle, breast cancer awareness, workshop on office ergonomics and tips on work and well-being by speakers from Brahm Centre, Breast Cancer Foundation, Tan Tock Seng Hospital and IEEE member, Dr Lekha Chaisorn. The 1-day conference also introduces meditation and yoga to the participants.
- **Social Events**
 - ❖ WIE initiated the 2014 Friend/Partner of WIE program on 16th October electronically. This enables professionals who are not eligible to be IEEE member or supporters of WIE to join WIE activities at discounted rate or free of charge, and to provide WIE members with additional networking opportunity to widen their professional circle and WIE SG to have additional fund to organize activities.

(B) FUTURE PLANS:

Future plans include: to organize a social activity in December 2014 for WIE members to socialize and catch up before Year 2014 ends, and/or an administrative meeting to review & do hand over to the new EXCO team. WIE received several partnership requests from external corporations, and would therefore follow up to meet the potential collaborators to explore and organize possible activity for WIE SG & IEEE members.

(C) SUMMARY:

Year 2014 is another fruitful and interesting year for WIE. They have planned to do 4 meetings, 2 talks, 1 meaningful health conference, and initiated a new social networking program. In total, they have 8 activities, with 2 more activities still in the pipeline. Despite limited budget, WIE is able to organize and deliver these activities successfully. They appreciated the generous support from IEEE Singapore Section, IEEE R10 WIE, and 2014 Friend/Partner of IEEE SG WIE. We hope that in future, WIE can continue to organize many more interesting and meaningful activities for her members and supporters.

30. IEEE YOUNG PROFESSIONALS (YP) AFFINITY GROUP
Chairman: Li Yongfu

(A) ACTIVITIES FOR THE YEAR 2014:

- **Administrative Meetings (5 Meetings)**
 - (1) Jan, Mar, May, Aug and Oct 2014
- **Technical Seminars and Talks (6 Technical Talks)**
 - (1) NUS ECE Graduate Student Symposium in May.
 - (2) "Successful Innovation" by Fayyaz Singaporewala in Jun.
 - (3) Connect to Corporate talk-1.
 - (4) Connect to Corporate Series I Talk III: by Infineon Technologies.
 - (5) Connect to Corporate Series I Talk IV: by EURAXESS, British High commission, French Embassy, DAAD Singapore.

(6) Arduino workshop in Dec.

- **Social Events**

(1) National Day Celebration in Aug.

(2) Social Network cum Badminton competition in Nov.

(B) FUTURE PLANS:

- Strengthen collaboration with Student Chapters and Various society.
- Looking for members in SUTD and Industries.

(C) SUMMARY:

- Awarded IEEE Region 10 Young Professional Grant.
- Awarded IEEE STEP Grant.
- Several sponsorships for our events.
- 5 Admin meetings.
- 6 technical seminars.
- 3 membership drives (53+ new members)
- 2 social networking events.

B.6 AWARDS

The Section Awards and Recognition Committee led by the Section Vice-Chairman made decisions on two local awards to recognize our volunteers. The Computational Intelligence Chapter won the “2014 Best Chapter of Singapore Section Award” after a keen competition from other Chapters.

MGA Award - Leadership

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R10 Award - GOLD Individual

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B.7 E-COMMUNICATION, SOCIAL & EDUCATIONAL LINKS

As at 31 October 2014, 22 broadcasts with 51 news containing information on seminars, talks, conferences, social events and membership benefits have been sent to IEEE members in Singapore.

From last year onwards, the AGM announcements were made via two e-Broadcasts and no printed forms were posted hence saving on printing and postage costs.

Section Website

The new website provides an ideal publicity platform for IEEE Singapore Section and chapters to promote their events. The platform is getting traction now. Last year, 6 events and 2 new membership benefits were publicized through the website. The annual maintenance cost is reduced by 50%. The website also generates additional income for section through the publicity collaboration with external partner.

PART C - OTHERS

C.1 RELATIONSHIP WITH NATIONAL SOCIETIES

One of the burning issues that many societies and institutions (IES, Polytechnics, Universities, etc) are facing is the decrease in the number of students going into engineering field. IEEE Singapore Section has joined force and promotes engineering at the national level, thereby making IEEE more visible in Singapore. The Section is also part of National Committee of Engineering Organisation. IEEE Singapore section chair is one of the representatives in the meeting panel and address all the issues and suggestion to bring members in to engineering field especially electrical engineering is the primary motive.

C.1 HUMANITARIAN SERVICE

The Section sponsored the Singapore Polytechnic EEE Go-Serve Day held on 27 April 2014. There were 9 events on that day - visiting Henderson Home (wheelchair outing), Bukit Batok Home for the Aged, Jamiyah Home, NPark and 5 Senior Activities Centres.

PART D - GOALS AND PLANS

D.1 GOALS

- A. To increase the visibility of IEEE in Singapore.
- B. To retain existing members and encourage members to obtain higher grade membership

D.2 IMPLEMENTATION PLANS

A. Increase the visibility of IEEE

- 1) To collaborate with other institutions and companies to organize activities in Singapore.
- 2) To publicize the IEEE achievements and activities (conferences, etc) through various channels
- 3) To actively participate in activities leading to the promotion of engineering in Singapore.
- 4) To approach the 5 Polytechnics and Singapore University in Technology & Design in Singapore to set up student branches.

B. Membership retention & upgrading to higher membership grade

- 1) Sending membership renewal reminder
 - a) Create an attractive membership renewal reminder email with list of benefits of IEEE membership
 - b) Send monthly email reminder 3 months before membership expire date
 - c) Send weekly reminder 3 weeks before membership expire date
- 2) Formation of Higher Grade Members Elevating Committee to help members to upgrade and recommend Fellow Candidates to IEEE Fellow Committee.



IEEE Annual General Body Meeting, Nov 2014



Student chapter's social event



IEEE SIGHT Activity at Wheel Chair Outing Community Service by section volunteers