

Region 10 Section Report Format

(Please replace above heading with your Section name)

Please use the following format to submit your Section’s annual report to Region 10. Please note that the annual reports are used for selecting the outstanding Sections in the region and reports submitted after the announced due date will not be considered for the award. Please do not include more than 3 photographs and preferably put them on additional pages attached to the report (please delete this paragraph in your report).

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List

Chair	Fouad Karouta
Vice Chair	Ross Summerfield
Secretary	Ambarish Natu
Treasurer	Ashley Chonka
Webmaster	Muhammed Pallithadathil Nazer
Newsletter	
Educational/Student Activities	
Membership Development	Mahmoud Efatmaneshnik
Professional Activities	
Societies Chapter Chairs	
Antennas and Propagation	David Powell
Computer Society	Yanchang Zhao
Joint Photonics & EDS	Mohsen Rahmani
Signal Processing & Communications	Prasanga Samarasinghe
GRSS	Xiuping Jia
Nanotechnology Council	Ziyuan Li
Computational Intelligence	Saber Elsayed
Systems, Man and Cybernetics (SMC)	Daoyi Dong
Oceanic Engineering	
Young Professionals	Zohair Abu-Shaban
WIE Affinity Group	Kathryn Kasmarik
TISP Coordinator	Russel Gentle
ANU Student Councillor	Nan Yang
ADFA Students Councillor	David Ormrod
Student Branches Representatives	
Australian National University	Rabbia Saleem
Australian Defence Force Academy	Ayad Al-Mahturi
Student Chapter GRSS	Yiqing Guo

- **Section Highlights**
In 2019 the ACT Section ExCom held four meetings (19 Feb, 15 Apr, 18 July and 12 Sep) along with the annual general meeting held on 21st of November.
- The Section was also involved and present at Canberra Mathematical Association Conference 2019 (17 August, 2019), holding a booth and promoting TISP among the attendees and contributing to a prize drawn among booth attendees.
- **Major Events (International, National)**
ACT Section Chair attended the R10 meeting in Melbourne on 2-3 March 2019. As usual, the Section Chair attended the Australia Council meeting on the day prior to the R10 meeting on March 1st 2020.
- **Major Chapter Activities**
- All ACT Chapters have organised a minimum of two technical activities.
- **Major Student and Affinity Group Activities**
The YP and WIE groups did organize the required minimum of two activities. The UNSW-Canberra students Branch STB09141 including one BBQ promoting IEEE membership.
- **Awards**
The best student Branch award was attributed to the UNSW students branch STB09141 for their reported three activities in 2019.

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

- **Summary (as per submitted on NetSuite)**
Cheque Account: AUD 5,138.88
Term Deposit: AUD 7,731.65
Total: AUD 12,870.65
Of this total there is AU 2,120.72 allocated by GRS Society HQ and reserved for the activities of the GRS Students Chapter SBC09141.
- **Any other financial activities**
N/A

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- **Total number of active members in the past 3 years.**
The total IEEE members in the ACT Section was:
Nov 2019: 488 members
Dec 2018:
Dec 2017: 483 members and 14 affiliates
Dec 2016: 512
The total IEEE members has been steady in the last decade fluctuating around 500. It is worth noting this fluctuation is not alarming as compared to the steady drop in IEEE membership world-wide.
- **Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members**
In all activities organised by the Section IEEE membership, benefits are exposed and especially student membership are promoted.

B.2 Chapter Activities

- **Total number of Chapters in the Section**
8
- **Number of Chapters formed in the current year**
None
- **Number of active Chapters (Chapters who have reported required number of meetings during the year)**
8
- **Summary of Chapter activities (Chapter wise with attachment table/information)**

1. Antennas and Propagation Microwave Theories Chapter AP03/MTT17

Chair: David Powell. Two technical activities (seminars) were organised on 6th March and 24th June.

2. Computer Society Chapter C16

Yanchang Zhao. Two technical activities were organised, on 4th April and 5th June.

3. Photonics and EDS Chapter ED15/PHO36

Chair: Mohsen Rahmani. Three technical activities (seminars) were organised, on 23 and 25 July and 9th September.

4. Nanotechnology Council

Chair: Ziyuan Li. Two activities were held on 17th June and a 3-days workshop 21-23 October having a theme “Women in STEM Early Career Grant & Paper Writing Retreat (ECWR2019)” and attended by 25 persons mainly young women in engineering fields.

5. Signal Processing & Communications Chapter SP01/COM19:

Chair: Prasanga Samarasinghe. Five activities were organised on 6th February, 9th May, 15 and 17 July and 27 September.

6. Geoscience and Remote Sensing joint ACT and NSW Chapter

Chair: Xiuping Jia. Two activities (seminars) were organized on 1st and 8th of November. They were held at the ADFA complex, which is conveniently located a short distance from Geoscience Australia.

7. Computational Intelligence Society CIS11

Chair: Saber Elsayed. Two technical activities (seminars) were organised on 27 February, 29 April, 21st August and 1st of November.

8. Systems, Man and Cybernetics Society C16

Chair: Daoyi Dong. This newly formed Chapter (2018) has achieved an absolute record for our Section with one Chapter organizing 15 technical activities in one calendar year. One workshop (8 April) and 14 seminars of which one DL: 1st and 6th February, 5, 8, 12 and 24 April, 17, 24 and 31 May, 29th July, 12 and 26 August, 5 and 6 September.

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

Event Title	Event Date	Event Category
IEEE ACT Section 2019 Meeting 1	19/02/2019 19:00	Administrative
IEEE ACT Section 2019 Meeting 2	15/04/2019 19:00	Administrative
IEEE ACT Section 2019 Meeting 3	18/07/2019 19:00	Administrative
IEEE ACT Section 2019 Meeting 4	12/09/2019 0:00	Administrative
IEEE ACT Section 2019 AGM Meeting	21/11/2019 0:00	Administrative
Seminar: Hafnium Oxide Based Ferro-electric FET Non-Volatile Memory	23/07/2019 11:00	Technical
Seminar: QUANTUM PHOTONICS USING 2D MATERIALS	25/07/2019 14:15	Technical
Seminar: Down and Upconversion in Lanthanides for Photonic Devices	9/09/2019 11:00	Technical
ACT CHAPTER SP/COMS SEMINAR: Research and development of hearable technology	6/02/2019 11:00	Technical
ACT CHAPTER SP/COMS SEMINAR	9/05/2019 4:00	Technical

ACT CHAPTER SP/COMS SEMINAR	15/07/20 19 14:00	Technical
ACT Chapter SP/COMS Seminar	17/07/20 19 10:30	Technical
ACT CHAPTER SP/COMS SEMINAR: Deep Learning for Ultra-Reliable and Low-Latency Communications in 5G/6G	27/09/20 19 15:00	Technical
IEEE ACT CS Seminar 1 - Entity Resolution and Social Media Analysis	4/04/201 9 15:45	Technical
IEEE ACT CS Seminar 2: DebateNight - Role of Twitter Socialbots During US Presidential Debate	5/06/201 9 15:00	Technical
IEEE MTT Distinguished Lecture - Markus Gardill - Automotive Radar	6/03/201 9 14:00	Technical
IEEE AP Distinguished Lecture - Prof. Buon Kiong Lau	24/06/20 19 11:00	Technical
Quantum dot displays	17/06/20 19 14:00	Technical
Women in STEM Early Career Grant & Paper Writing Retreat (ECWR2019)	21/10/20 19 8:30	Professional
ACT and NSW GRSS Chapter Seminar Nov 1	1/11/201 9 13:30	Technical
ACT and NSW GRSS Chapter Seminar Nov 8	8/11/201 9 16:00	Technical
IEEE CIS Seminar: Fairness and Exploitation in the N-player Ultimatum Game	27/02/20 19 13:00	Professional
IEEE CIS Seminar -2	29/04/20 19 15:00	Professional
IEEE CIS Seminar - Professor Christian Wagner	21/08/20 19 11:00	Technical
IEEE CIS Seminar - 4	1/11/201 9 10:30	Professional
ACT IEEE SMC Chapter Seminar 1	1/02/201 9 10:00	Technical
ACT IEEE SMC Chapter Seminar 2	6/02/201 9 11:00	Technical
ACT IEEE SMC Chapter Seminar 3	5/04/201 9 10:00	Technical
ACT IEEE SMC Chapter workshop	8/04/201 9 8:30	Technical
ACT IEEE SMC Chapter Seminar 4	8/04/201 9 14:31	Technical
IEEE ACT SMC Chapter Seminar 5	12/04/20 19 15:00	Technical
IEEE ACT SMC Chapter Seminar 6	24/04/20 19 11:00	Technical
IEEE ACT SMC Chapter Seminar 7	17/05/20 19 13:00	Technical
IEEE ACT SMC Chapter Seminar 8	24/05/20 19 11:00	Technical
IEEE ACT SMC Chapter Seminar 9	31/05/20 19 11:00	Technical
IEEE ACT SMC Chapter Distinguished Lecture	29/07/20 19 12:00	Technical
IEEE ACT SMC Chapter Seminar 11	12/08/20 19 12:00	Technical
IEEE ACT SMC Chapter Seminar 12	26/08/20 19 12:00	Technical
IEEE ACT SMC Chapter Seminar 13	5/09/201 9 13:00	Technical

IEEE ACT SMC Chapter Seminar 14	6/09/2019 12:00	Technical
Women in Engineering Lunch	29/07/2019 11:30	Professional
Women in Engineering Pitch to Industry	19/09/2019 17:30	Professional
IEEE Young Professional Bowling Night!	13/07/2019 19:00	Nontechnical
IEEE ACT Young Professional Picnic	2/11/2019 10:00	Nontechnical
Seminar: Standing on the Edge: Internet of Things in Australia: Univ Of New South Wales	25/07/2019 15:15	Technical/seminar
Workshop: Writing your thesis in Latex: Univ Of New South Wales	22/08/2019 15:15	Professional/workshop
IEEE - Arc BBQ: Univ Of New South Wales	31/10/2019 11:30	Nontechnical/social
IEEE GRSS UNSW Canberra Student Branch Seminar: Weed Classification via Deep Learning Using Hyperspectral Remote Sensing Images	22/05/2019 13:30	Technical
Conference Presentation: A Drone-based Sensing System To Support Satellite Image Analysis For Rice Farm Mapping	1/08/2019 8:00	Technical

For more details see attached excel file that includes all Section activities.

B.4 Students Activities

- Total number of Student Branches in the Section
ACT has two student branches: one at ANU and one at UNSW-Canberra (ADFA). The coordinator of ANU STB Both branches are active with drives for new student members being organized. We also have active students at University of Canberra but without an official student branch.
- Number of Student Branches formed in the current year
N/A
- Section level student activities (student congress, paper and other contests, awards etc)
UNSW-Canberra Student Branch (STB09141) reported three activities: one seminar (25 July), one workshop (22 August) and one social event (31 October).
Students Chapter (SBC019141) GRSS has also reported two activities of which one is attendance of an international conference in Japan.
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
One
- Summary of Student Branch activities (Student Branch wise with attachment table/information)
See same excel file as above.

B.5 Affinity Group Activities

- Young Professional (YP)
Chair: Zohair Abu Shaban. Two social activities were organized on 13 July and 2nd of November
- Women In Engineering (WIE)
Chair: Kathryn Kasmarik. Two activities were organized on 29 July and 19 September
- Life Member (LM)
None

B.6 Awards & Recognition Activities

- Award constituted by the Section
The best active students branch award was allocated to the UNSW-Canberra Students Branch STB09141. With this award this STB will enter the Australia Council competition for 2020 best students Branch in Australia.

- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year
The ACT Section did receive a certificate of Recognition from R10 for “outstanding achievement in member recruitment for the Australian Capital Territory Section during the 2019 membership year”.

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://site.ieee.org/act/> Till November 2019 the website wasn't regularly updated due to the graduation of the webmaster and moving out of Canberra. At the AGM a new person has been appointed and since then the website has been updated a few times.
- Other means of contacts with Section members including social media
IEEE e-notices, emails and website.

B.8 Industry Relations

- Membership growth and retention
The ACT Section membership is quite steady with minor fluctuation around the number of 500. A high percentage of our members are working in industry and government (about 40% of the total number of Section members).
- Activities for/with industrial members
None

B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
The last 3-4 months Australia knew unprecedented and recurrent bushfires ravaging a massive area in New South Wales, Victoria and Australian Capital Territory resulting in a number of casualties, massive land destruction including wildlife. The ACT did send an eNotice encouraging members to donate for bushfires relief and our Section did make a donation of \$500 to the Rural Fire Services (effectuated in January 15, 2020).
- SIGHT Activities

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)”
At the Annual General Meeting (21 November 2018) we had 70 adults including partners and children of IEEE members have attended the event (and enjoyed Turkish food and drinks along some quiz).

PART C - OTHERS

C.1 Special Events

- Please briefly describe the importance of special events and the outcomes achieved
In 2019 the NTC Chair Dr. Ziyuan Li organized and ran a 3-days workshop on “Women in STEM Early Career Grant & Paper Writing Retreat (ECWR2019)”. The workshop was very successful and attended by 25 persons mainly young women in engineering fields from Canberra and Sydney with speakers from Canberra and Sydney.
- Funding secured from the IEEE and external sources including sponsorships

The workshop received a subsidy from NTC HQ of USD800 along other local sponsoring with the technical support of the Section.

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

- Nature of relationship and details of any formal agreement signed
- Details of joint activities
- Benefit to IEEE members (for example discounts, access to technical information etc.)
ExCom meetings, seminars and most Section activities are organized using free venues at the Australian National University, UNSW-Canberra, CSIRO locals in Black Mountain, etc.
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)
One social event (BBQ) was organized by our students Branch at UNSW-Canberra in association with their Arc local students association where IEEE membership benefits were exposed.

C.3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
Technical activities like visits of Distinguished Lecturers are coordinated through the Australia Council to expand the benefits of these high-profile lecturers to the benefits of larger number of our members.
- Joint activities with any other Section
GRSS operates as a joint Chapter with our neighbouring Section of NSW and its activities are coordinated for local participants from adjacent cities across the border.

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

- Support extended for organising technical, educational and professional activities
The Section contributed to local costs of speakers at seminars and other events of various Chapters and Affinity Groups (accommodation/meals).
- Joint activities for membership development
The section works with the student branches to assist with membership drives like the BBQ at UNSW-Canberra.
- Support extended for the formation of a Sub-section or transition of a Sub-section into a full Section
N/A

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

N/A

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

PART D - GOALS AND PLANS

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

The Section will continue to pay attention to the recruitment and retention of IEEE members especially student members close to graduation. The is happy to receive any hints in this matter.

D.2 Goals and Future Plans

The ACT Section is a modest Section situated in a territory counting less than half million population and therefore the Section is quite happy with a total number of members around 500.

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

The ACT Section follows the outline and instructions the Membership Development Team from their meetings and considers what might work and what will engage our membership. We still maintain the loyalty program and preparing the existing members who qualify to apply for membership elevation (member to senior member) as well elevation within the IEEE societies (Fellows). ACT Section learns and tries new options to help with recruitment. One of these options included an ongoing pilot of working with industry to try to encourage more STEM recruitment through some schools and particularly through our presence at the Canberra Mathematical Society Conference, which has a heavy attendance by high school teachers.

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

The ACT Section has maintained financial stability over at least the past 5 or more years, with a maintained reserve, set aside to aid a major conference.