

Region 10 Australian Capital Territory Section Report

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List in 2015

Chair	Fouad Karouta
Vice Chairs	Ambarish Natu
Secretary	Elias Lopez
Treasurer	Ross Summerfield
Webmaster	Ambarish Natu
Educational/Student Activities	Xiuping Jia
Membership Development	Ashley Chonka
Societies Chapter Chairs	
Antennas and Propagation	Greg Milford
Computer Society	Shaodi You
Joint Photonics & EDS	Sudha Mokkalapati
Signal Processing & Communications	Salman Durrani
GRSS	Huiang Zhi
Nanotechnology Council	Lan Fu
Young Professionals	Quyen Do
WIE Affinity Group	Girija Chetty
Oceanic Engineering	Glenn Alcock
Students Branches Representatives	
Australian National University	Miranda Zhang
Australian Defence Force Academy	Shelvin Chand
Canberra University	Matthew Collingridge
- Section Highlights

In 2015 the ACT Section ExCom held four meetings (23 Feb, 30 April, 21 July and 24 Sep) along with the annual general meeting held on 17th of November.

Around September-October Liam Waldron expressed his wish to stop as Section secretary and Greg Milford became the Secretary till end of 2015.

The main highlight of 2015 was the Section initiative to stimulate attendance to IEEE R10 conferences by making available a one \$1000-grant to allow one student/WIE member to attend R10 SYW and another \$1000-grant to one student to attend R10 TENCON. Meng Xu, a female PhD student from UNSW-ADFA (Canberra campus) attended the R10 SYW in Sri Lanka and reported her experience to the Section. The TENCON grant was allocated to another female PhD student from the Australian National University, Rani Yesudas. Unfortunately the latter wasn't able to attend and presented her paper through a video conference.

This year all Chapters managed to organize activities and the Computer Society Chapter, inactive in 2014, did organize one activity in 2015. This Chapter has a new Chair for 2016 and it has been stressed to organize more activities.

Major Events (International, National)
Fouad Karouta represented the ACT Section at the R10 meeting in Dhaka, Bangladesh in March 2015.
- Major Chapter Activities

All ACT Chapters except the Geoscience and Remote Sensing Chapter (Antennas and Propagation, Computer Society, Joint Photonics & EDS, Signal Processing & Communications, Nanotechnology Council) manage to organize at least one technical activity during 2015, mostly in the form of seminars. Unfortunately due to a sabbatical of Dr. Girija Chetty no WIE activities were organized in 2015. Dr. Chetty intends to organize > 1 activity in 2016. The YP group organized a social gathering to enhance the synergy between young members (YP and students).

- **Major Student and Affinity Group Activities**
One industry visit was organized to DamSmart, a company specializing in digitization of content, on April 9, 2015 with 14 attendees of whom 8 IEEE members (mostly students) and 6 attendees from Engineers Australia, a professional Australian organization associated with IEEE.

Moreover two social events were organized at UNSW-ADFA and at ANU to attract students to become IEEE student members:

- 1- BBQ at UNSW-ADFA on April 23, 2015: the event was very popular among UNSW students and we get enrolled four new students.
- 2- Social event at ANU attended by about 40 students, however only one new student enrolment (note ANU has the largest number of IEEE students among the tertiary institutes in the ACT).

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

- **Summary (as per submitted L50)**
The Section started year 2015 with total assets in bank accounts of AUD 12,953.48 and ended the year with a total asset of AUD 13,116.53, hence our balance has been stable and this is mainly due to drop AUD exchange rate vs USD though the level of activities and spending were maintained as 2014. Our main target remains to attract new members and retain existing members.

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:
 - Dec 2015: 531
 - Dec 2014: 535
 - Dec 2013: 552
 The total IEEE members number shows a moderate fluctuation, however this is well below the membership drop world-wide.
- **Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members.**
The Section organized two social events at two of the three universities present in the Section territory and resulted in a modest increase of student membership (five). We think to maintain this type of activities but improve the outreach to touch a larger number of students.

B.2 Chapter Activities

- **Total number of Chapters in the Section**
7
- **Number of Chapters formed in the current year**
None.
- **Number of active Chapters (Chapters who have reported required number of meetings during the year)**
6
- **Summary of Chapter activities (Chapter wise with attachment table/information)**
Summary:
 - **Antennas and Propagation Chapter**
Chair: Rainer Ignatik
 - Seminar on May 13, 2015, presented by Dr. John Norgard (NASA) on “Space Exploration: EMI/EMC Problems/Solutions NASA ~ Past/Present/Future Missions “Orion” Mars/Moon Spacecraft”.
 - Seminar on June 17, 2015, presented by Mr. Gordon Young (Air Services Australia) on “Precision Approach Satellite Landing System and Multipath Limiting Antenna”.
 - AP-S DL Seminar on 14th August, presented by Prof. Ahmed Kishk (Concordia University) on “UWB Antennas for Wireless Communication and Detection Applications”.
 - AP-S DL Seminar on November 2, 2015, presented by Dr. Sudhakar Rao (Northrup Grumman Aerospace Systems) on “Antenna Systems for 21st Century Satellite Communication Payloads”.

- AP-S DL Seminar presented by Prof. Mats Gustafsson (Lund University) on “Convex Optimisation for Optimal Design and Analysis of Small Antennas”.
- AP-S DL Seminar presented by Prof. Christophe Caloz (Ecole Polytechnique de Montreal) on “Metamaterials: Past, Present and Future”.
- **Computer Society Chapter**
 - The Canberra Functional Programming event held on October 21st, 2015 in collaboration with NICTA (a local computer organization) getting together programmers, developers and engineers to exchange ideas about solving problems and networking among professionals.
- **Joint Photonics and EDS Chapter**
Chair Lan Fu.
 - Seminar on Nov. 17, 2015, presented by Keisuke Goda on “Extreme Imaging and Beyond”.
 - Seminar on Dec. 16, 2015, presented by Albert Wong on “ESD & RFIC Co-Design”.
- **Joint activities ED15/PHO36 and Nano-Technology Council:**
 - Seminar on March 20, 2015 presented by Federico Capasso on “Structured light and structured surface plasmon polaritons from metasurfaces”.
 - Seminar on October 26, 2015 presented by Howard Jackson on “Optical Investigations of Semiconductor Nanowires: New physics, New Heterostructures, and a New Experimental Probe”.
- **Nanotechnology Council**
Chair Hoe Tan (for activities see above).
- **Signal Processing & Communications Chapter:**
Chair: Salman Durrani
 - Seminar on May 1st, 2015, presented by Hamid Krim on “Shape Analysis and Modeling in Video Applications - Activity Analysis”.
 - Seminar on August 26, 2015 presented by Jason McEwen on “Radio interferometric imaging with compressive sensing”.
 - Seminar on September 16, 2015, presented by Jamie Evans on “To Beam or not to Beam: A Potholed Traverse of Spatial Multiplexing in Wireless Networks”.
 - Seminar on September 18, 2015, presented by Akihiko Sugiyama on “25 Years of Audio Coding: How we arrived at audio playback on iPhone and its underlying technology”.
 - Educational event at ANU on BE R&D Projects in Communications Showcase held on November 26, 2015 with Salman Durrani as organiser.
- **Geoscience and Remote Sensing joint ACT and NSW Chapter**
Chair: Fuqin Li
- **Computational Intelligence Society**
Chair Ray Tapabrata
 - Seminar on June 18, 2015, presented by Prof. Hisao Ishibuchi on “Evolutionary Many-Objective Optimization: Search Behaviour, Performance Indicators and Test Problems”
 - Seminar on July 29, 2015 presented by Qingfu Zhang on “Combination of Evolutionary Algorithms with Experimental Design, Traditional Optimization and Machine Learning”.
 - Seminar on September 8, 2015, presented by Carlos A. Coello Coello on Recent Results and Open Problems in Evolutionary Multi-objective Optimization”.
 - Seminar on November 10, 2015, presented by Xin Yao on “Ensemble Approaches in Learning at UNSW Canberra”.

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

B.4 Students Activities

- **Total number of Student Branches in the Section**
ACT has two student branches: one at ANU and one at ADFA. Both branches are active and each has organized a social event to attract new student members (see above). We also have active students at University of Canberra but without 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)
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
- Summary of Student Branch activities (Student Branch wise with attachment table/information)

B.5 Affinity Group Activities

Young Professional (YP)

- [Collective Night on May 29, 2015: a social event getting together IEEE YPP members \(including students\) with professionals in Canberra mainly from CEA and from Engineers Australia.](#)
- Women In Engineering (WIE)
- Life Member

B.6 Awards & Recognition Activities

- Award constituted by the Section
N/A
- Award(s) received from R10
N/A
- Award(s) received from IEEE HQ
N/A

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)
<http://ieeect.org/>
- Other means of contacts with Section members
IEEE e-notices and emails.

B.8 Industry Relations

- Membership growth and retention
The ACT Section maintains a high percentage of its members working in industry (about 40% of the total number of Section members).
- Activities for/with industrial members
Please see under “Students Activities” the two student visits to industry in the ACT geographical area.

B.9 Humanitarian Technology Activities

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)”
At the Annual General Meeting (November 17, 2015) partners and children of IEEE members have attended the event and enjoyed Turkish food and drinks.

PART C - OTHERS

C.1 Special Events

Two social events: a BBQ at UNSW-ADFA on April 23, 2015 and another social event at ANU on April 24, 2015. Both events targeted recruiting new IEEE student members.

C.2 Relationship with National Societies

IEEE ACT Section maintains an excellent relation with Engineers Australia through a Section Liaison officer.

C.3 Collaboration with other IEEE Sections

- Support extended to neighboring Sections
- Joint activities with any other Section

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

The Section contributed to local costs of speakers at seminars and other events of various Chapters and Affinity Groups.

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 pay attention to the retention of IEEE members and 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 just greater than 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 gives consideration to what might work and what will engage our membership. We are implementing the loyalty program and just preparing the new members email given to us by the MD Team.