

New Zealand Central Section

PART A - SECTION SUMMARY

A.1 Executive Summary

- Section Executive Committee Member List (2015)
Mansoor Shafi (chair),
Richard Harris (vice-chair, webmaster),
Donald Bailey (secretary, student branch counsellor),
Ramesh Rayudu (treasurer, PES Society),
Aaron Reid (membership development),
Murray Milner (industry coordinator),
Duncan Hall (awards coordinator, industry coordinator),
Bing Xue (WIE),
Sudhir Singh (YP),
Terence Betlehem (SP/IT Society),
Rainer Kunnemeyer (I&M Society),
Mengjie Zhang (CI Society, student branch counsellor),
Hermant Ghayvat (Massey students),
Henry Williams (Victoria students),
Gourab Sen Gupta
- Section Highlights
Joint Institutions breakfast
Wellington Engineering Festival
- Major Events (International, National)
Organisers and technical co-sponsor of three conferences in 2015:
 - International Conference on Automation, Robotics and Applications (17-19 February)
 - International Conference on Field Programmable Technology (7-9 December)
 - International Conference on Sensing Technology (8-10 December)
- Major Chapter Activities
A number of distinguished lecturers and other international visitors as outlined below
- Major Student and Affinity Group Activities
Postgraduate presentation day
- Awards
Murray Milner was awarded a R10 Outstanding Volunteer Award
Distinguished small section award 2014 – awarded retrospectively in 2015.
2015 Outstanding Membership Retention Award

A.2 Financial Report

- Summary:

Opening balance (1 Jan, 2015)	NZ\$ 14,331.00
Receipts	NZ\$ 5,608.31
Payments	NZ\$ 4,888.47
Closing balance (31 Dec, 2015)	NZ\$ 15,050.84

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.
2013: 291
2014: 289
2015: 285
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
 - We have had an active programme of section activities, particularly focused on Chapter activities to encourage more participation by members with specialist interests.
 - We have had a strong programme within the two universities associated with the section, particularly with postgraduate students. This is reflected in the strong participation with

the joint Postgraduate Presentation Day. However, for undergraduate students, the local university engineering societies are more visible, and we need to better coordinate with them.

- Last year we had 2 of the key YP drivers leave the section and committee. We have provided funding for the new YP coordinator to attend a congress to build contacts and as part of training.
- We have recently established a WIE coordinator, who is focusing on girls in their final years at school.
- We have good representation from industry on the committee, and have initiated two industry focused events within 2015.

B.2 Chapter Activities

- Total number of Chapters in the Section
 - Chapter of the Instrumentation and Measurement Society (joint with NZ North and NZ South)
 - Chapter of the Communications Society (joint with NZ North and NZ South)
 - Joint Chapter of the Signal Processing and Information Technology Societies (joint with NZ North and NZ South)
 - Chapter of the Power and Energy Society
 - Chapter of the Computational Intelligence Society
- Number of Chapters formed in the current year
 - None
- Number of active Chapters (Chapters who have reported required number of meetings during the year)
 - 3
- Summary of Chapter activities (Chapter wise with attachment table/information)
 - Computational Intelligence Society
 - 13/2/2015 Dr George Barmpalias, “Information theory and dynamics of spatial models”
 - 16/2/2015 Prof Manuel Ujaldon, “GPU computing: achievements and perspectives with an emphasis on evolutionary computing”
 - 8/5/2015 Dr Roman Klapaukh, “Introduction to R”
 - 4/6/2015 Dr K C Tan, Distinguished Lecture “An Introduction to Computational Intelligence”
 - 28/8/2015 Dr Yi Mei “Large Scale and Dynamic Evolutionary Scheduling”
 - 4/9/2015 Prof C Coello, Distinguished Lecture “Recent Results and Open Problems in Evolutionary Multi-objective Optimization”
 - 16/9/2015 Prof Yanchun Zhang, “Medical Data Mining and Innovative Applications”
 - 18/9/2015 Dr Yi Mei, and Dr Bing Xue, “Introduction to Evolutionary Multi-objective Optimisation”
 - 23/10/2015 Dr Andy Song, “Evolutionary Computation for Complex Real-world Problems”
 - 27/10/2015 Dr Kamran Shafi “Learning Classifier Systems: Can We Carry on with the Legacy of John Holland?”
 - 28/11/2015 Prof Yongshen Gao “Vision Perception for Environmental Informatics”
 - Signal Processing / Information Theory Society
 - 17/4/2015 Dr Soichi Koyama, “Sound field recording and reproduction and its extension to super-resolution”
 - 6/5/2015 Prof Hamid Krim, “SPS Distinguished Lecture - Shape Analysis and Modeling in Video Applications: Activity Analysis”
 - 31/8/2015 Dr Amal Punchihewa “Hybrid Television broadcasting: Integrated Broadcast-Broadband (IBB) Technologies, Standards and Services”
 - 19/11/2015 Ms Josefin Lindebrink “Auralization - methods and practice”
 - 30/11/2015 Prof Nozomu Hamada “Localization, Tracking, and Separation of Multiple Acoustic Sources using Microphone Array”
 - Instrumentation and Measurement Society
 - 11/8/2015, J.M. Corres, “Basics of Fibre Optic Sensors and a Few Applications”
 - 9/12/2015, Dr Octavian Postalache, Distinguished Lecture “Unobtrusive Smart Sensing and Pervasive Computing for Healthcare”

- 14/12/2015, Dr Octavian Postalache, Distinguished Lecture “Unobtrusive Smart Sensing and Pervasive Computing for Healthcare”
- 15/12/2015, Dr Octavian Postalache, Distinguished Lecture “Unobtrusive Smart Sensing and Pervasive Computing for Healthcare”
- 18/12/2015, Dr Octavian Postalache, Distinguished Lecture “Unobtrusive Smart Sensing and Pervasive Computing for Healthcare”
- Communications Society
 - 7/5/2015 Prof Hamid Krim, “Sensor and Social Networks: A case for Topological Data Analysis”

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

- The section provided technical co-sponsorship of 3 conferences during 2015. These were chaired or co-chaired by members within the section:
 - 17-19/2/2015 International Conference on Automation, Robotics and Applications
 - 7-9/12/2015 International Conference on Field Programmable Technology
 - 8-10/12/2015 The 9th International Conference on Sensing Technology
- The section also hosted the 1st Software Defined Networks Workshop on 18-19/2/2015

B.4 Students Activities

- Total number of Student Branches in the Section
 - 2 (Massey University, and Victoria University of Wellington)
- Number of Student Branches formed in the current year
 - None
- Section level student activities (student congress, paper and other contests, awards etc)
 - 20/10/2015 Massey University student branch hosted the annual postgraduate presentation event, with 24 presentations.
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
 - 0
- Summary of Student Branch activities (Student Branch wise with attachment table/information)

B.5 Affinity Group Activities

- Young Professional (YP)
 - 23/4/2015 Chris Thomson, “C-Prize information evening at Victoria University of Wellington”
- Women In Engineering (WIE)
 - An event was planned in 2015, but the coordinator had difficulty finding an appropriate time to run the event.

B.6 Awards & Recognition Activities

- Award constituted by the Section
 - None
- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year 2015
 - Outstanding Volunteer Award for Dr Murray Milner
 - Distinguished Small Section Award – awarded retrospectively in 2015.
 - 2015 Outstanding Membership Retention Award.

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

- Home Page of the Section (give the URL and how often it is updated)
 - The Section website is updated regularly with activity information, both as announcements of upcoming events, and reports on the events as they happen. The URL is <http://www.ewh.ieee.org/r10/nzc/>
- Other means of contacts with Section members including social media
 - Members are notified of upcoming events through e-notices.

B.8 Industry Relations

- Activities for/with industrial members
 - 4/8/2015 Wellington Engineering Festival: Dr. Michael Donn and Dr. Fabriccio Chicca “Zero Net Energy Buildings for New Zealand – ‘The Architect’s Dream and the Engineering Possibilities’”
 - 10/9/2015 Joint Institutions Breakfast: David Havercroft “Disruption”
 - 3/11/2015 Wellington Engineering Festival: Prof Subhas Mukhapadhyay and Prof Hans Guesgen “Wireless Sensor Nodes, Smart Homes and Intelligent Buildings: From sensors to computing”

PART C - OTHERS

C.1 Special Events

- Please briefly describe the importance of special events and the outcomes achieved
 - In 2015, we participated in the Wellington Engineering Festival, both through financial support, and in organizing one of the lunchtime talks.
 - The event was a joint activity with our sister organisations (IET and IPENZ)
 - It provided an event in support of industry members.
- Funding secured from the IEEE and external sources including sponsorships
 - We were successful in applying to the WIE Support Fund for US\$400 funding for outreach to schools to promote more women in engineering. Unfortunately, we were unable to organize the event in 2015. We plan to give focus to this in 2016.

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

- Nature of relationship and details of any formal agreement signed
 - We have a good coordination with the local IET Wellington Network, and IPENZ Wellington Branch.
- Details of joint activities
 - 4/8/2015 Wellington Engineering Festival: Dr. Michael Donn and Dr. Fabriccio Chicca “Zero Net Energy Buildings for New Zealand – ‘The Architect’s Dream and the Engineering Possibilities’”
 - 10/9/2015 Joint Institutions Breakfast: David Havercroft “Disruption”
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- Benefit to IEEE members (for example discounts, access to technical information etc.)
 - These activities give support for members of all the organisations, as well as providing an excellent opportunity for networking.
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)
 - Participation in these activities increases the visibility of IEEE.
 - Working together enables us to broaden the number of people that we are able to reach, and enable us to hold larger events with wider appeal. The sharing of the costs among the participating organisations mean that we can all benefit from the event, without significant costs to any one institution.

C3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
 - Three of the Chapters are joint with neighbouring NZ North and NZ South sections.
 - Chapter of the Instrumentation and Measurement Society
 - Chapter of the Communications Society
 - Joint Chapter of the Signal Processing and Information Technology Societies
 - These enable the chapters to coordinate technical talks within the respective sections when visiting speakers visit (New Zealand is a long way from anywhere, so this maximizes the benefits gained from speakers who have travelled far to get to NZ).

- Joint activities with any other Section
 - Joint technical co-sponsorship of the FPT and ICST conferences.

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

- Support extended for organising technical, educational and professional activities
 - The Section provides financial support for chapters hosting visiting speakers within the Section

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

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

- One key challenge we have had is broadening the pool of volunteers who are active in organizing activities and providing support. It is usually the same handful of people who are always involved.
- Finding a range of activities that are attractive to the broader membership. The proportion of the membership that participate in the activities organized is quite low.
- Maintaining dynamism within the student branches, especially with a high turnover (students are only with us for a short time). We need to focus on the attraction and retention of members within our two student branches.
- Seeking active members for the YP Affinity group organization / committee as it is being left to only one or two volunteers.

PART D - GOALS AND PLANS

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

D.2 Goals and Future Plans

- Key goals for 2016 include:
 - Improving support for our student branches
 - Continue the successful Postgraduate Presentation Day, hosted in 2016 by the Victoria University of Wellington Student Branch
 - Get the Young Professionals affinity group reinvigorated under the new leadership
 - Target one activity on entrepreneurship
 - Begin building the WIE affinity group
 - Plan an outreach activity to schools for Women in Engineering.
 - Continue support and co-sponsorship of the activities organized by our technical chapters.
 - Continue to organize our regular joint institutions breakfast lecture.
 - Plan an event to celebrate 50 years of R10.

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