

IEEE
**VICTORIAN
SECTION**
ANNUAL REPORT 2013





TASMAN BRIDGE, HOBART. The Section program during the coming year will see renewed activity in Tasmania and also new initiatives in Victorian regional centres.

PHOTO: EE HUI LIM

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chairman's report



Dr Greg Adamson

HIGHLIGHTS OF OUR ACTIVITIES during 2013 include the continuing growth of the Section membership, a strong engagement with IEEE globally and in Region 10, and a large influx of volunteers.

New operating units, such as our Vehicular Technology Chapter and the Swinburne Student Branch, show that we are growing both geographically and technically. An inter-section Joint Chapter on Oceanic Engineering, supported by Victorian Section, has recently come into operation. Preparations are well underway for an IEEE Student Branch at Deakin University. And we are exploring the possibility of establishing a Systems, Man and Cybernetics Chapter, based at the Deakin Waurn Ponds campus.

Apart from new chapters, we have been able to maintain and revitalise our existing chapter complement, assisted by an influx of new volunteers. This has made it possible to manage the new requirement that Chapter Officers can serve a maximum of six years in any single role. My thanks in particular to Rob Slaviero and Robin Lisner for having found successors following their long-standing tenures as Chapter Chairs, of the Signal Processing and PES Chapters, respectively.

In our Student Branches, we continue to benefit from the enthusiasm and commitment of our undergraduate and postgraduate members. Our practice is now to hold at least one Section Committee meeting per year at each of the universities where we have a student branch. Students from the host university routinely attend such meetings, sometimes in surprisingly large numbers.

Our Section Committee meetings commonly attract attendances of twenty-five or more. Such numbers include visitors and 'observers', but they nonetheless demonstrate a widespread interest in Section affairs.

This enthusiasm is reflected in our recruiting. Our membership continues to grow at modest but steady rate. This year, Higher Grade Membership has for the first time passed the 2,000 mark.

We have begun to experiment with the use of conferences to increase our engagement with visiting IEEE members. We have several such conferences scheduled for the Section in 2014, including some in Tasmania. In fact, next holds promise as one of the best years yet for our Section, including our Tasmanian Sub-Section. In May this year, we were honoured to have Region 10 Director, Professor Toshio Fukuda, visit Geelong where he is an honorary professor at Deakin University.

In July, IEEE President Dr Peter Staecker attended the very successful IGARRS conference, held in Melbourne. During his visit, Peter spent an evening with Section volunteers, and also attended a dinner for IEEE Fellows, held at the University of Melbourne.

I believe that the dominant challenge for IEEE today is to develop its role in explaining technology to the broader community. My own focus on this in the coming year will be through the IEEE 2014 Conference on Norbert Wiener in the 21st Century, to be held in Boston, USA from 24-26 June 2014. This conference will examine the present-day status and relevance of Wiener's many contributions, including his work on technology and society.

This is my second and final annual report as Chair of IEEE Victorian Section, and it has been a wonderful experience. I extend my thanks to 2013 Vice-Chair Eddie Custovic for his excellent outreach work, and to the whole Section Committee for their support. I congratulate Tony Gascoigne on his election as incoming Chair; I am confident he will do a great job in 2014.

GREG ADAMSON

Section Chair 2012, 2013

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activity review 2013



Election Report 2013

NOMINATIONS were called for the Section Executive Committee in September 2013. All positions other than Section Vice-Chair and Assistant Treasurer were contested - the largest slate of candidates in the history of the Section. Accordingly, elections were held during October 2013 and the results were presented to the Section Committee on 12th November 2013. Balloting was conducted online using V-Tools. The elected officers for 2014 are as follows: -

Chair - Anthony E. Gascoigne

Vice-Chair – Alan L. Harvey

Secretary – Golnar Khomami

Treasurer – Enn Vinnal

Asst. Treasurer – (vacant)

Since there was no nomination for Assistant Treasurer, this vacancy will be filled by resolution of the 2014 Section Committee. Thanks are due to all outgoing members of the 2013 Committee for their valuable service during the past year. Thanks also to the Nominations Committee chaired by Prof. Laurie Cahill and the Tellers Committee chaired by Dr Ee Hui Lim.

Annual General Meeting

THE ANNUAL GENERAL MEETING of IEEE Victorian Section was held at the Metropolitan Hotel, William Street, Melbourne, on 11th December 2013. Seventy-nine (79) persons attended, including IEEE Members and their partners and invited Guests. Roughly one-third of the attendees were IEEE Student and Graduate Student Members and their partners. We were also pleased to have the company of several representatives from our colleague organisations, Engineers Australia and The Institution of Engineering and Technology.

During the evening, Cash Awards were presented to the two winners of the Student Paper Travel Grant Competition (see details under Student Paper Awards, overleaf). Also, Certificates of Commendation were presented to outstanding Student volunteers and others who made a notable contribution to section affairs during 2012. Special thanks are due to all who assisted in the organisation and running of the AGM, and especially Ee Hui Lim and Mehrnaz Shoustarian.

Membership Development

THE SECTION grew at a steady but not spectacular rate

during 2013. Final membership statistics are now being analysed and will be used to develop publicity and recruitment strategies during 2014. We are particularly keen to recruit more members from Industry and the Consulting, Defence and Government sectors. The preliminary membership figures as at 31 December 2013 are shown in the Table below.

MEMBER GRADE	2013	2012	% Change
Fellow	16	12	+33
Senior Member	155	138	+12
Member	1459	1397	+4.4
Grad.Stud.Mem.	350	284	+23
Assoc. Member	44	58	-24
Stud. Member	116	118	-1.7
TOTALS:	2140	2007	+6.6

Chapters

THE MAJORITY of our Chapters operated at acceptable levels of technical activity during 2013. Particular mention is made of the Computer Chapter, the Signal Processing Chapter, and the recently formed Vehicular Technology Chapter, all of which returned outstanding results. The VTS Chapter also led some valuable inter-university collaboration. We now have a total of fifteen (15) chapters in the Section, including the SSIT and OES Joint Chapters. The OES Chapter is managed by North Australia Section.

Affinity Groups

THE WOMEN in Engineering Affinity Group was active during the year and participated in a range of Section activities. The GOLD (Young Professionals) Affinity Group held only one dinner meeting, but this single event was deemed a notable success. The YP's have planned a more comprehensive program for 2014. Preparations are underway for the formation of a Life Members Affinity Group (LMAG). We expect the latter initiative to proceed during the coming year.

Conferences

IEEE CONFERENCES and symposia held in Melbourne during 2013 include: The 8th International Conference on

Industrial Electronics & Applications (ICIEA); The 8th International Conference on Intelligent Sensors & Sensor Networks (ISSNIP); The 20th International Conference on Image Processing (ICIP); The 12th International Conference on Network & System Security; and The Geoscience & Remote Sensing Symposium. Victorian Section was a Technical Co-Sponsor for ISSNIP 2013.

Section Website

DURING the year, there was an unauthorised intrusion into the Section website and various internal changes were made without proper supervision or oversight. This has disrupted our web publicity and other features and caused a great deal of inconvenience. The site has been repaired on a temporary basis but is in need of further rebuilding. We hope to complete this work during H1 2014.

Student Branches

PREPARATORY work for an IEEE Student Branch at Deakin University in Geelong was completed during 2013. We have recently received approval for formation of this new unit. There are now seven (7) Student Branches active in Victorian Section. Monash University Student Branch was deemed our Outstanding Student Group for the year, but in fact all Branches have exhibited very high levels of commitment and initiative.

An informal dinner for Student Officers was held in Melbourne in September 2013. This is now a regular calendar event that allows volunteers from the various student branches to become better acquainted. Also, students have an opportunity to discuss their activities with senior members of the Section Committee, in a low-key social environment.

Further details of student activities are given in a later section of this Annual Report.

Student Paper Awards

THE Student Paper Travel Grant competition provides financial support to IEEE Student Members and Graduate Student Members who present accepted papers at IEEE (or approved non-IEEE) conferences. There was only one such competition held during 2013. The successful lead-author was Mohammedreza Pourakbar of Victoria University, for a paper titled "Studies on Die-to-Substrate Interconnects for High-Q PCB Inductors". The standard of entries received in this competition continued at the

commendably high level of recent years.

Sponsorship and Prizes

ALTHOUGH the Section is not by its nature and constitution a grants-giving body, we are pleased to make limited contributions in selected areas wherever our Bylaws and available financial resources permit. During 2013 we continued our support of the Endeavour program at the University of Melbourne, the EnGenius exhibition at RMIT University, the Hooper Memorial Prizes at La Trobe University, and similar awards at Swinburne University of Technology. We expect to continue our sponsorship of these events during the coming year.

Uplink

FOUR (4) issues of the Section newsletter *Uplink* were published during 2013. This publication is one of our main channels of publicity and communication for significant IEEE events. We also publish articles on technical, professional and historical topics likely to be of interest to Victorian Section readers.

Uplink is edited by Alan Harvey and produced by Peter Barrett and other volunteers. Regular and occasional contributions to this publication are always in demand, and photographs of local events of interest to IEEE members are particularly welcome. Contributed material should be sent to Dr Harvey at the contact email address given at the end of this Annual Report.

Section Administration

THE NUMBER of volunteers active in the Section has continued to grow in the year under review. We continue to seek new recruits since there are always many more tasks requiring attention than people to perform them. Prospective IEEE volunteers in Victoria and Tasmania should contact the Section by email to contact@ieeovic.org. We also encourage members to visit the IEEE Centre of Leadership Excellence at <http://www.ieee.org/go/cle> to observe the many volunteer tasks and functions available.

IEEE Region 10

THE MAIN Region 10 activity in which the Section participated in 2013 was the Student/GOLD/WIE Congress held in Hyderabad, India, in July. Several student members were selected as our Section

Delegates, but unfortunately only two were able to attend because of administrative delays in obtaining visas. We will take measures to overcome these difficulties with such events in future.

IEEE Global

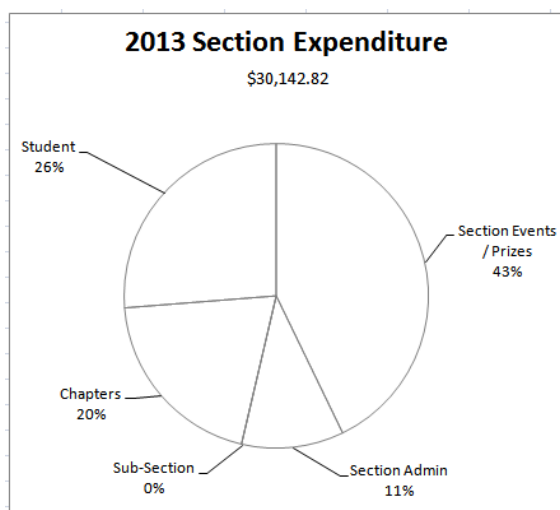
THERE were no major global activities of the IEEE in which we participated during 2013. We now look forward to the upcoming Sections Congress, to be held in Amsterdam, Netherlands, in August 2014. Sections Congresses are convened every three (3) years and provide an opportunity for worldwide collaboration and interaction within the IEEE community. Many delegates benefit from the workshops and discussion sessions held at this forum. The last such Congress was held in San Francisco, CA, in 2011, and attracted more than 1000 delegates.

section finances

A BRIEF SUMMARY of Victorian Section finances is given in Table 1. Further details are set out in the Consolidated Accounts appended to this Annual Report.

Section financial results for 2013, on an ex-GST basis, show a reduction in net assets of \$31,812. Ordinary expenditure increased by 36% and ordinary revenue decreased by 5% compared to the previous year.

Ordinary expenditure for the year was \$30,143, which continues to reflect a strong level of activity throughout the Section. This was an increase of \$8,007 on the previous year and was in large part due to the expense of sending student representatives to an IEEE Student and WIE Congress in Hyderabad, India.



Ordinary revenue for the year was \$21,545 with the main sources being the Rebate received from IEEE Headquarters, and interest earned from our bank deposits. The latter earnings were \$3,660 less than the previous year because of the significantly lower prevailing interest rates. The overall financial outcome was an operating loss of \$8,597.

In 2012, the MTT/AP Chapter acquired \$38,267 being the IEEE share of the profit from the IEEE Asia-Pacific Microwave Conference. These funds are being used to promote MTT activities elsewhere in Australia. Interest Revenue and Expenditure of these funds are deemed as 'extra-ordinary' items since they are not applied solely for the benefit of Victorian Section members. Extra-ordinary income from bank interest was \$1,078 and extra-ordinary expenditure was \$6,002. The main items of expenditure were MTT/AP student prizes and overseas travel to an MTT meeting.

The Section was a financial co-sponsor of the IEEE Technology & Society in Asia 2012 conference, jointly with IEEE Singapore Section and the IEEE Society on Social Implications of Technology. The Section's share of loans provided to this conference was \$4,111. Accounts for the conference are yet to be finalised.

IEEE Headquarters have assigned the Section a Reserve Allocation Expense of \$31,491. This is the Section's notional contribution towards future liabilities of the IEEE Defined Benefits Pension Plan. In the previous year the reserve allocation was \$13,072. This amount is presently retained in the Section deposits but is tagged as 'encumbered' and so cannot be disposed of by the Section.

The following table shows the IEEE Victorian Section consolidated financial results at a glance.

Item	Amount \$ (*)	Change from 2012
Ordinary revenue	21,545	-5%
Ordinary expenditure	30,143	+36%
Ordinary operating surplus	-8,597	9,036
Extra-ordinary revenue (**)	1,078	----
Aggregate cash at bank	187,396	-6% (***)
Bank interest earned	4,087	-47%
IEEE HQ rebates received	11,305	2.5%
IEEE Reserve Allocation	31,491	240%

(*) Exclusive of GST

(**) Reflects additional funds acquired by the MTT / AP Chapter (***) Includes extra-ordinary revenue the year-on-year change to the aggregate cash balance would have been -1.7%.

I would like to acknowledge the contribution of Tony Gascoigne, the Assistant Treasurer and Immediate Past Section Treasurer. His work and advice have been invaluable.

ENN VINNAL
Section Treasurer

tasmanian subsection

THE TASMANIAN SUB-SECTION was inactive during 2013. In the coming year we hope to proceed further with moves for an IEEE Student Branch at the University of Tasmania. We also plan to extend our industry contacts so as to serve a broader cross section of Tasmanian engineers and IT professionals. All IEEE members resident in Tasmania are invited to join us in this venture. If you are interested in contributing to the renewal of Sub-Section activities, please advise us by email to contact@ieeovic.org.



WILDFLOWERS, white-water, and wide span pedestrian bridge, Central Tasmania.

PHOTO: EE HUI LIM



Guests and Guest Speakers and guests at the VTS Chapter Inauguration Ceremony, March 2013.

PHOTO: HARSH TRIVEDI



Dr Mehran Ektesabi and Dr David Newman (second and third from left), with SUT Students, inspect Aviation facilities at Swinburne, June 2013. PHOTO: HARSH TRIVEDI



Young Professionals at dinner with guest speakers, November 2013



Dr Robin Arianrhod presents to an attentive WIE audience, December 2013.



Section Officers for 2014 (from left): Anthony Gascoigne (Chair); Golnar Khomami (Secretary); Enn Vinnal (Treasurer); Alan Harvey (Vice-Chair)



Prof. Laurie Cahill (L) (La Trobe University) and Prof. Mike Faulkner (Victoria University) at the Section AGM.



Student Branch leaders with 2013 Section Chair Greg Adamson (centre rear) and Vice-Chair Edhem Custovic (centre front)



Student Award winners Goce Ristanoski (L), Sareh Fotuhi Piraghaj and Atefeh Khosravi

chapters & affinity groups

Circuits & Systems/Solid-State Circuits Chapter

DURING 2013 the CAS Chapter held two technical lectures, both by distinguished lecturers.

2013-03-12: The first was "Wireless Sensor Networks: Opportunities and Challenges", presented by Dr Magdy Bayoumi, Director of The Center for Advanced Computer Studies and Department Head of the Computer Science Department at the University of Louisiana at Lafayette. Dr Bayoumi showed how computers, communication, and sensing technologies are converging to change the way we live, interact, and conduct business. Wireless sensor networks also reflect such convergence. These networks use a large number of interactive sensor nodes and should be low cost, low power, and multifunction. Professor Bayoumi presented diverse applications, ranging from the oil industry to medical diagnosis. The venue was RMIT University.

2013-09-09: The second talk was by Prof. Tokunbo Ogunfunmi, from the University of Santa Clara. His topic was "Algorithm and Architecture, Co-Design for Fast Motion Estimation Video". His talk covered the increasing demand for high quality video on low power, portable devices, for various applications. Fast motion estimation (FME) is the computational bottleneck in video encoders in H.264/AVC and in the newer HEVC standard. Professor Ogunfumi presented co-designed algorithms and architectures with hardware implementations of new algorithms for FME in H.264/AVC.

The foregoing presentations have helped us in the organisation of the ISCAS 2014 Conference, which will be held in Melbourne in June 2014.

ALAN HARVEY, Chapter Chair

Communications Chapter

IN 2013 the chapter organised four technical seminars. These are detailed below:

2013-04-24: Mr Stephen Howell, National Manager Radio Network Development in Telstra, presented on the topic, "Managing The Spectrum Crunch". Mr Howell is responsible for delivering the radio related technology that will take Telstra beyond the 4th generation into the data-pervasive world of future mobile networks. He described the new developments, including late-generation radio systems, MIMO, HETNETS, and advanced interference management. All such technologies will be needed to provide capacity sufficient

to meet the explosive growth in demand for wireless and Internet services. (Joint with Signal Processing Chapter).

2013-07-03: Dr. Kandeepan Sithampanathan presented on the topic, "Cognitive Radio Technology: Embedding Intelligence in Radios". Kandeepan is with the School of Electrical and Computer Engineering at RMIT University. His talk addressed the concepts and fundamentals of cognitive radio, which will underpin significant future developments such as 'dynamic spectrum access' and 'green communications'. (Joint with Signal Processing Chapter).

2013-08-15: Ms. Carol Wilson delivered a seminar on the "Challenges and Benefits of Building the Square Kilometre Array Telescope". Ms. Wilson is a Research Consultant at CSIRO, where she is responsible for defining SKA buffer zones around transport and population centers, and also for predicting interference at specific site locations. The SKA will contain thousands of receiving units. The project presents significant technical challenges in antennas, electronics, data transfer and storage, computing, power generation and distribution, civil engineering and overall project management. There are also the obvious difficulties of maintaining such an extensive 'radio-quiet' area. Some valuable technological spin-offs may arise from the SKA project.

2013-09-11: Mr. Chris Hill, the CTO for ITC Global, presented a talk on "Today's High Capacity Satellite Solutions". Mr. Hill has 24 years experience in the IT and communications industry, specialising in the delivery of innovative, high availability ICT solutions, especially in remote locations. ITC Global is the world's largest privately owned satellite communications provider to mission critical operations in the mining, energy, and maritime markets. Mr. Hill discussed recent innovations and developments in satellite communication links, and some of the ways in which high reliability, ultra high capacity data links are provided to industries and communities in remote areas.

PAUL FITZPATRICK, Chapter Chair

Computational Intelligence Chapter

THE VICTORIAN IEEE Computational Intelligence Chapter hosted the following events during 2013:

2013-05-16: Garrison Greenwood spoke on "Introduction to Evolutionary Game Theory". The venue was RMIT University.

2013-05-17: Zbigniew Michalewicz presented on "Some Thoughts on the Complexity of Real World Problems". The venue was again RMIT University.

KEVIN KORB, Chapter Chair

Computer Chapter

OUR EVENTS for 2013 were as follows:

2013-02-26: "Microsoft and Amazon, A Comparison of Approaches to Cloud Security". Attendees 25.

2013-04-05: "The Problem with Big Data" Attendees 24. (Joint with SSIT Chapter).

2013-07-04: Career Assistance Workshop – run by Navitas Workforce Solutions. Attendees 30

2013-08-30: Industry Event - Practitioner's Night. Attendees 40.

2013-11-25: "The World's Most Positive Countries 2013". Attendees 13. (Joint with UniMelb Student Branch).

We acted as Technical Co-Sponsor for the 2013 IEEE International Conference on e-Learning, e-Management and e-Services (December 02-05). In overview, the chapter has had a successful year. We now plan to launch a new Computer Chapter segment of the Section website to better promote our activities.

NASIR UDDIN, Chapter Chair

Education Chapter

THERE WERE two meetings of the Education Society Chapter during 2013, both organised jointly with other local organisations.

2013-02-19: Technical presentation, "New Thresholds in Biomedical Engineering Education", by EMBS Chapter Chair, Paul Junor. The venue was Engineering House, North Melbourne. Attendance 25 (approx.) (Joint with EA Biomedical Engineering College Victoria and the Society of Biomedical Engineers (Vic)).

2013-07-16: This was a seminar, "Transforming Engineering Education". The venue was Engineering House, North Melbourne. The program opened with a presentation by Professor Emeritus David Beanland on "Transforming Engineering Education and the Role of Engineers Australia". This was followed by several panel discussions by an Employers Panel; an Education Panel and a Deans of Engineering Panel, respectively. The

program concluded with a Questions & Open Discussion session. It ran from 2pm to 5pm and attracted about 50 attendees. (Joint with Engineers Australia Victoria Division, Senior Engineers Group).

PAUL JUNOR, Chapter Chair

Electromagnetic Compatibility Chapter

At the time of printing we had no report from the EMC Chapter. The chapter is looking for new volunteers, so if you are interested in the theory or practice of EMC and associated issues, we will be very pleased to hear from you. (Ed.)

Engineering in Medicine & Biology Chapter

EMBS CHAPTER organised three technical talks during 2013.

2013-01-22: The first event, "Data-Driven Analysis and Fusion of Medical Imaging Data", was presented by IEEE Distinguished Lecturer Professor Tulay Adali. Prof Adali reviewed major data-driven methods that have been successfully applied to MRI analysis and fusion, and gave examples of their application for studying brain function, both in healthy individuals and those suffering from mental disorders such as schizophrenia. (Joint with Signal Processing Chapter).

2013-04-10: The second talk was by Professor Metin Akay, also an IEEE Distinguished Lecturer. Prof. Akay is John S. Dunn Professor of Biomedical Engineering at The University of Houston, USA. His Neural Engineering and Informatics Laboratory is developing an intelligent wearable system for detecting coronary artery disease. His laboratory is also investigating the effect of nicotine on the dynamics of ventral tegmental area (VTA) dopamine neural networks. This meeting was held at RMIT University and about 50 people attended.

2013-07-21: The third technical meeting was titled "A Look into the Bionic Eye". The presenter was EMBS Chapter Chair Saman Haghgoie. It was a full house and 40-50 people attended. An extended questions session followed and we received many complimentary comments afterwards. (Joint with Engineers Australia, Mechanical College, Victoria).

SAMAN HAGHGOOIE, Chapter Chair

Microwave Theory & Techniques/Antennas & Propagation Chapter

MTT/AP CHAPTER held a series of three distinguished lectures in 2013.

2013-09-16: The first talk was presented by Dr. Mark E. Davis with the title, "Foliage Penetration Radar". (Joint with La Trobe Student Branch).

2013-09-19: The second talk, "Circuit to System Level Microwave Education" was presented by Prof. Shibani K. Koul.

2013-11-22: The third talk was presented by Prof. Monai Krairiksh, whose topic was "Remote Sensing of the Physical Qualities of Fruits".

KAMRAN GHORBANI, Chapter Chair

Photonics Chapter

PHOTONICS CHAPTER organised two events during 2013, the details are as below.

2013-05-14: "Confessions of a Serial Entrepreneur: 30 Years of Photonic Start-ups in Academia and Industry". (Joint with Monash IEEE Student Branch).

2013-08-05: "How to Become a Successful Researcher-Academic in Australia". (Joint with Monash IEEE Student Branch).

MALIN PREMARATNE, Chapter Chair.

Power and Energy Chapter

PES CHAPTER ran four technical lectures during 2013, details as below.

2013-02-20: The first event was "Power System Restoration After Significant Disruptions". The speaker was Prof. Pascal Van Hentenryck, who leads the optimisation research group at NICTA and also holds a Chair in the University of Melbourne, School of Engineering. He showed that traditional power flow equations do not give reliable results in the context of major outages, and instead proposed a new modelling technique that accurately captures both real and reactive power. This lecture was held at Swinburne University of Technology and attracted 21 attendees.

2013-04-23: "Continuous Monitoring of Power System Assets in a Smart Grid Environment". This presentation was by Dr Peter Hart, technical manager of Jubatus

Consulting Pty Ltd. Dr Hart discussed the potential of smart grid technologies to improve the overall performance of power systems. Dr Hart outlined the key success factors for implementing such systems, including sub-system reliability and autonomous communications. This lecture was held at Monash University. There were 63 attendees.

2013-07-23: Our third event was titled "Large Scale Wind Farm Operation in Australia - The MacArthur Wind Farm Project". The presenter was Antonio Martinez, BoP Engineering Manager for Asia Pacific at Vestas. He outlined the design, construction and commissioning of the MacArthur Wind Farm in southwestern Victoria, a major power project with over 400 MW installed capacity. It is one of the largest wind farms in the southern hemisphere. This lecture was held at Monash University and sixty-seven (67) persons attended.

2013-10-01: Our final event for the year was titled "The Electrical Causes of Commercial, Residential and Vehicular Fires". The speaker was Dr Peter Hart, who also presented at our April meeting. More than half of all fires originating in electrical equipment are due to predictable causes, and thus are quite avoidable. There is an evident need for insurance companies and regulators to collaborate more effectively in the overall task of fire prevention. The venue for this lecture was again Monash University. There were 32 attendees.

ROBIN LISNER, Chapter Chair 2013

Signal Processing Chapter

WE ORGANISED or co-organised seven (7) technical activities during the year and also participated in an international conference.

2013-01-22: This was a talk on "Data-Driven Analysis and Fusion of Medical Imaging Data", by IEEE SPS Distinguished Lecturer Dr Tulay Adali (University of Maryland, USA). There were 30 attendees. (EEEV lecture; joint with EMBS Chapter).

2013-04-2/5: "IEEE Eighth International Conference on Intelligent Sensors Sensor Networks and Information Processing" (ISSNIP 2013). The venue was the Langham Hotel, Melbourne. A wide range of speakers, technical papers and poster presentations. Approximately 150 registrants attended the conference.

2013-04-24: This lecture was titled "Managing the Spectrum Crunch" and was presented by Stephen Howell (Telstra Operations). There were 47 persons in attendance. (Joint with ComSoc Chapter).

2013-05-01: This was a talk on "The Importance of Intelligent Signal Processing for Perimeter Security Systems" by Dr Jim Katsifolis (CTO of Future Fibre Technologies Pty Ltd). There were 22 attendees. (EEEVic lecture).

2013-07-03: A Talk on "Cognitive Radio Technology: Embedded Intelligence in Radios" by Dr Kandeepan Sithamparanathan (RMIT University). There were 35 attendees. (EEEVic lecture; joint with ComSoc Chapter).

2013-09-10: Talk on "Scalable Multi-rate Speech Coder for VoIP Networks: Beyond Ilbc" by Prof. Tokunbo Ogenfunmi (Santa Clara University, USA). There were 10 attendees. (EEEVic lecture).

2013-09-11: Talk on "Today's High Capacity Satellite Solutions" by Chris Hill (ITC Global). There were 45 attendees. (Joint with ComSoc Chapter)

2013-09-19: Talk on "Information Embedding: From Theory to Practice" by IEEE SPS Distinguished Lecturer Prof Pierre Moulin (University of Illinois, USA). There were 16 attendees. (EEEVic lecture).

After 12 years, and having organised over 80 events, I will be stepping down as Chapter Chair and handing over to Dr Karim Seghouane (University of Melbourne). Karim was previously SPS Chapter Chair in IEEE ACT Section. I will take the role of SPS Chapter Secretary from 2014 to assist with the transition.

ROBERT SLAVIERO, Chapter Chair 2013

Social Implications of Technology, Joint Australian Chapter

THE CHAPTER organised or co-organised four (4) technical events during the year. We also participated in an Australian Government policy review workshop.

2013-04-05: Dr Andre Oboler and Dr Lito P. Cruz presented on the topic, "The Problem with Big Data". The venue was Deakin University, Burwood (transmitted live to Deakin Waurm Ponds). (Joint with Computer Chapter).

2013-08-01: Adj. Prof. Philip Hall presented on the topic, "Water Quality Management: The Case for Real Time Monitoring & Reporting". Held at The University of Melbourne.

2013-09-02: This was a presentation in Sydney by Dr Greg Adamson titled, "Reintroducing Norbert Wiener, Inventor of Cybernetics". Our thanks to KPMG for providing the venue.

2013-12-05: This was a Technical Workshop in Melbourne on the topic "3D Printing: Social and Cultural Trajectories". The event was sponsored by Swinburne University of Technology with the support of SSIT Chapter. The venue was SUT Hawthorn Campus.

In August, SSIT Australia participated in a workshop providing input to an Australian Government policy report, "Securing Australia's Future, Section 5: New Technologies and Their Role in our Security, Culture, Democratic, Social and Economic Systems". The SAF report is at <http://technologyforaustralia.org/>.

SOPHIE MCKENZIE, Chapter Secretary

Technology Management Chapter

TMC CHAPTER was inactive during 2013 and is seeking new volunteers. If you are interested in the various aspects of professional Management, particularly the management of technology and technological ventures, we will be very pleased to hear from you. (Ed.)

Vehicular Technology Chapter

VTS CHAPTER organised and participated in six (6) technical events during 2013, its inaugural year.

2013-03-15: Professor Alex Grant from UNISA presented on the topic, "Vehicle to Vehicle Communications". Following this presentation we held an inauguration ceremony for the new Chapter and eighty-six (86) guests attended.

2013-04-10: This lecture was titled, "Green Mobility Research at CSIRO", presented by Dr. Mark Trigg. He discussed CSIRO's past and planned future projects in the field of Green Transportation. The venue was Monash University. Twenty persons attended.

2013-05-22: We organised a social gathering for members of VTS Chapter, held at The University of Melbourne. We received great support from IEEE UniMelb Student Branch. There were 15 attendees.

2013-06-12: Dr. David Newman, Head of the Swinburne Aviation Laboratory, delivered a lecture titled, "Swinburne Aviation's Human Factors Research in Helicopter Aviation". This event was very well received. There were 20 attendees.

2013-10-10: This was a talk at La Trobe University titled, "Cars and Connectivity". The guest speakers were Trish Messiter and Gokhan Tanyeri from Clarinox

Technologies, and they discussed general trends in the 'connectivity' requirements of the automotive industry. Twenty persons from industry and academia attended. (Joint with La Trobe Student Branch).

2013-11-26: We attended the Launch Night for the RMIT - SAE Electric Car, held at RMIT University. We received a Certification of Appreciation for our support.

In the coming year, VTS Victorian Chapter will be a co-organiser of The IEEE 6th International Conference on Modelling, Identification and Control (ICMIC-2014), to be held in Melbourne in December 2014.

MEHRAN EKTESABI, Chapter Chair

2013-06-26: Squadron Leader Michelle Oakden, an aerospace engineer in the Australian Defence Force, spoke on the topic, "How to Bring Value as a Young Engineer". Michelle discussed some of the challenges young engineers may face in their careers, based on her own experiences. This event was held at RMIT University.

2013-12-03: The final event for the year was a presentation by Dr. Robyn Arianrhod titled, "Émilie du Châtelet and Mary Somerville: Heroines of Mathematical Science".

MEHRNAZ SHOUSTARIAN, Chair, WIE Affinity Group

Young Professionals Affinity Group

THE FORMER GOLD AFFINITY GROUP has recently been renamed Young Professionals (YP). We organised one event during 2013 - a networking dinner with invited speakers.

2013-11-18: The first speaker was Ray Keefe, Managing Director of Successful Endeavours, an electronics design and embedded software consultancy. His topic was "Why Following Your Passion Always Beats a Better Pay Cheque". Later in the evening, Leo Grogan spoke on "Understanding Australian Workplace Culture". Leo is a Careers Advisor in the School of Engineering, The University of Melbourne.

LEILA KOUSHAEIAN, Chair, YP Affinity Group

Women in Engineering Affinity Group

THE WIE AFFINITY GROUP organised five (5) events in 2013:

2013-03-08: This was a Luncheon and Networking Meeting – Celebrating International Women's Day. (Joint with UniMelb WIE-Student Affinity Group and Women in Science and Engineering Group).

2013-04-18: Career talk by Hanieh Akhlaghi titled, "Graduated? Where Do You Start in the Job Market?" Hanieh discussed possible career opportunities for engineering graduates and how students could best prepare themselves for job interviews.

2013-05-15: Dr Leith Campbell, communications consultant, spoke on the topic "Regulation: A Possible Career". (Joint with UniMelb WIE Student Affinity Group).

student branches

La Trobe University Student Branch

LA TROBE IEEE Student Branch organised or co-organised eleven (11) events during 2013.

2013-03-27: Our first event for the year was a Welcome BBQ. This was the largest BBQ ever held by the Branch, with over 150 students attending. We signed up 30+ new IEEE Student Members.

2013-04-11: This was a MatLab Tutorial, presented by Selvaraaju Murugesan. He made particular mention of Code Vectoring techniques that help to improve the speed of MatLab code. Ten people attended, both undergraduate and postgraduate students. Thanks are due to Selvaraaju for his time and effort in preparing and presenting this tutorial.

2013-04-24: This was a special night for Final Year Project students. Adam Console presented tips and tricks on how to improve project designs prior to submission. Thanks to IEEE Victorian Section for their generous support of the event.

2013-06-11: A "Solidworks for Beginners" tutorial was delivered by Mr Adam Console, who has extensive experience with Solidworks and 3D drafting. Alex Stumpf gave support as Assistant Tutor. This tutorial was very well received by all present. There were 15 attendees (capacity due to licence limitations).

2013-08-07: Our Second Semester BBQ was held to "reconnect" with our members. The event had over 60 people attend, with a number signing up for IEEE Student Membership.

2013-09-12: Here we had Mustafa Youldash present a workshop on "Apple iOS Development". The workshop was aimed primarily at beginners, but we also had experienced people present. All the participants found the workshop useful. Thanks to Mustafa for his efforts; also to IEEE Victorian Section and La Trobe University Student Union for supporting the event.

2013-09-16: This lecture on "Foliage Penetrating Radar" was presented by Dr Mark E. Davis. He outlined the problems of finding man-made objects under dense foliage cover, and also of characterising the foliage itself. The technology has both military and civilian applications, for example in geospatial imaging. Attendees found Dr Davis technical insights quite fascinating. (Joint with MTT/AP Chapter).

2013-10-01: La Trobe Student Branch celebrated International IEEE Day, together with members of the IEEE Victorian Section Committee. Cake and drinks were supplied and great fun was had by all.

2013-10-09: Ms Trish Messister presented an informative talk on "Motor Vehicle Interconnectivity". Trish outlined Clarinox's involvement in the vehicle connectivity field and gave an insight into the current state of the industry. (Joint with VTS Chapter).

2013-10-21: We were very fortunate to have Paul Cowan present on, "Designing for Brobdingnang". This unusual topic refers to how Google scales up web applications, from initial concept to final implementation. Paul provided insights into how Google operates and what it is like to become a 'Googler'. More than 60 people attended this talk.

2013-11-22: Our Student Branch held a dinner at The William Angliss Institute to celebrate the year of activities. IEEE Student Members, members from ESOLU, and La Trobe University staff and alumni attended. Prof. Laurie Cahill presented Commemorative Certificates to members of the SB Executive Committee.

MATTHEW FELICETTI, Chair, La Trobe Student Branch

Monash University Student Branch

WE ORGANISED a total of twelve (12) activities during the year, including technical seminars, workshops, industrial tours, membership development programs, and social events.

2013-01-31: This was a talk on, "The Energy of Mindfulness". The speaker was The Venerable Seelagawesi, Principal Teacher at Sri Sumedha Meditation Centre, Sri Lanka. Attendance 20.

2013-03-19: This was an IEEE-Awareness promotion at Monash College and was part of Engineering Week for Monash College Students. The presenter was Dr Ahmed Sekercioglu (Monash University). Attendance 50.

2013-03-21: Workshop on, "Android App. Development for Beginners". Presenter Mr. Matthew Browne (Monash University). Attendance 35.

2013-03-26: This was a repeat of the above Android workshop. Attendance 70.

2013-04-10: Social Event, Pizza Evening. This event was aimed at promoting IEEE to the academic staff and postgraduate students, particularly new postgrads.

(Joint with Monash ECSE Postgraduate Society).

2013-06-18: Industrial visit to the Channel 9 Studio, Docklands, organised by Les Davey, Industry Mentor. Twenty branch members attended.

2013-08-05: Public talk on, "Green Mobility Research at CSIRO". Speaker Dr Mark Trigg (CSIRO). (Joint with IEEE VTS Chapter). Attendance 50.

2013-08-07: Career Development Program, Part 1. Prof. Jamie Evans, Monash University, presented on, "How to Become a Successful Researcher/Academic in Australia". Attendance 30.

2013-08-13: Career Development Program Part 2. Carolyn Vark, Monash University, spoke on, "Get to Know How Monash Careers Can Help You". Attendance 45.

2013-08-15: Career Development Program Part 3. Mr Ray Keefe, Successful Endeavours Pty Ltd spoke on "'Get to Know What the Industry Wants From You!"

Speakers: Mr. Ray Keefe, Successful Endeavours Pty Ltd; Dr. Aakanksha Chhikara, formerly with DorsaVi Pty Ltd; and Mr. Stephen Howell, Telstra Corporation. Attendance 35.

2013-11-01: Staff vs Students (friendly?) soccer match. Monash Sports Centre. Participants: 40.

2013-11-25: CV-Checking and Career Guidance Session with our Industry Mentor, Les Davey. Participants: 8.

In other news, two Monash student members attended the IEEE Region 10 Student/WIE/GOLD Congress 2013 in Hyderabad, India. Also, Monash IEEE Student Branch was nominated for the Outstanding Student Branch Award of IEEE Australia Council.

CHAMATH DIVARATHNE, Chair, Monash Student Branch

RMIT University Student Branch

OUR BRANCH organised four events during 2013.

2013-04-24: "IEEE Engineering Challenge". This was a very successful and enjoyable event with quizzes and engineering-related activities. Twenty IEEE Student Members attended.

2013-05-01: This was a brief presentation, "Energy Efficient Engineering", by Mr. Raqibul Hasan. The talk was well received and all attendees gained an appreciation of the variety of fields engineers deal with.

2013-05-02: Tutorial, "Altium for Beginners". This tutorial was an introduction to Altium software. It also provided an opportunity for students to discuss their circuitry design problems. Five members attended.

2013-09-26: "IEEE-Industry Networking Night". This was to allow students to interact with professional engineers from industry. Thirty Students and Professionals attended.

MERCY SAMSON, Chair, RMIT Student Branch

Swinburne University of Technology Student Branch

OUR ACTIVITIES during 2013 are outlined below.

2013-02-27: Swinburne IEEE Student Branch participated in the university's Orientation Day to promote our Branch to new Engineering and ICT students.

2013-03-05: We again introduced IEEE to students participating in the second Orientation Day

2013-03-15: Prof. Alex Grant presented a lecture titled, "Vehicle to Vehicle Communications". Prof. Grant is Director and Research Professor of Information Theory at the Institute for Telecommunications Research. It was a very successful event. (Joint with IEEE VTS Chapter).

Following the above lecture, our Branch assisted with the hosting of IEEE VTS Chapter's Inaugural Ceremony.

2013-04-05: We co-organised a hands-on workshop with Leap Australia, introducing the ANSYS software package and in particular its Electromagnetics Analysis capabilities. This workshop was held at Monash University.

2013-04-12: SUSB organised a tutorial on the software QIQQA. PhD candidate Maimuna Musarrat presented the topic, "How to Use Technology to Efficiently Manage Your Research".

2013-06-12: This was a seminar, "Aviation's Human Factors Research in Helicopter Operations", by Dr David Newman, Head of the Aviation Simulation Laboratory. We then went to inspect the Swinburne Helicopter Simulator. In response to the interest created by this event, Dr Newman kindly agreed to organise another site visit at a later date.

2013-08-14: SUSB introduced IEEE to all the students by participating in the third Orientation Day for the year.

2013-10-09: This was an introductory level MATLAB tutorial. We plan to organise a series of such tutorials in the future.

AREZOO EKTESABI, Chair, SUT Student Branch

University of Melbourne Student Branch

THE IEEE University of Melbourne Student Branch program for 2013 was as follows:

2013-02-18: Tea Session, joint with the Postgraduate Students Group of the CIS Department.

2013-02-22/24: "Hackathon". This annual event is held at universities around the world. It is an exciting opportunity for women in Engineering and Computing to collaborate on Microsoft projects over a three-day period. Four Guest Mentors assisted students with their projects. Three female speakers described their personal experiences in IT and Engineering, and we also had a speaker from Microsoft. The event was co-sponsored by IEEE Women in Engineering Victoria, UniMelb Women in Science and Engineering, and the Department of Computing and Information Systems. A total of 30 people attended.

2013-03-263: Workshop, "Introduction to Latex". This workshop gave a basic overview of Latex to postgraduate students who had not previously used the language. The presenter was Dr. Rodrigo Neves Calheiros, a Research Fellow with the CLOUD Computing Laboratory. A total of 15 students attended.

2013-04-18: Employment awareness talk titled, "Graduated? Where Do You Start in the Job Market?". The presenter was Hanieh Akhlaghi, a Recruitment Consultant with a background in engineering and IT. Over 30 people attended the event. (WIE Student Affinity Group, joint with IEEE WIE Victoria).

2013-05-15: Dr Leith Campbell presented a lecture titled, "Regulation: A Possible Career". Dr Campbell described some of his experiences in consulting to telecommunications regulators in Australia, Asia and the Middle East. He noted the prominent roles of women in many overseas regulatory organisations. A good background for such work is engineering augmented by knowledge of economic cost modeling. There were 25 attendees at this lecture. (Joint with IEEE WIE Victoria).

2013-07-29: Workshop for enhancing presentation skills and public speaking. The course leader was Jacinta Richardson. At the end of her address, several members of the audience volunteered short presentations of their own. This was followed by a networking session. About 40 people attended the event. (WIE Student Affinity Group).

2013-08-08: This was a promotional event to familiarise new students with the activities of the Student Branch and IEEE in general. Prof. Rob Evans and Paul Kubik were guest speakers and they described the benefits of IEEE for academics and practising engineers, respectively. Loai Khalayli spoke on the benefits of joining IEEE as a student. The event had about 30

attendees. We later received several emails from students enquiring about membership and the opportunities for getting involved.

2013-10-04: In collaboration with Amazon Web Services, we held a one-day tutorial on AWS Essentials. All students in the Melbourne region had access to similar tutorials. The tutor was John Hildebrandt from Amazon. A total of 30 students participated, and at the end of the course all attendees received certificates.

2013-11-25: This was the annual event of Daily Positive, a non-profit media initiative in Melbourne. It's objective is to publish "positive" news from countries around the world. We had a presentation by Leigh Blackall from Wikipedia Australia, "Can I Get an Education from Wikipedia?", and a speech by D+ founder, Dr. Arif Jubaer, "World's Most Positive Countries 2013". About 50 IEEE members attended. Our sponsors were The City of Melbourne, NICTA and Arif Systems. (Joint with IEEE Computer Chapter).

In July, two delegates from our Branch were selected to attend the IEEE Region 10 Student/GOLD/WIE Congress in Hyderabad, India.

LOAI KHALAYLI, Chair, UniMelb Student Branch

Victoria University Student Branch

WE HELD three technical events during 2013.

2013-06-19: This lecture was titled, "Electronicians are from Venus, Mathematicians are from Mars!" It was presented by Associate Prof. Francois Rivet of The University of Bordeaux, France. He described a full-software radio transceiver based on Fourier and Riemann principles. These are key enablers for receiving and transmitting any kind of signal from 0 to 5 GHz, with low power consumption suitable for mobile applications. This presentation was a great introduction to modern RF system design. The venue was VU Footscray Park Campus. (Joint with IEEE Victorian Section).

2013-12-02: Dr Craig Watkins presented on the topic, "Speech Signal Basics: an Historical Overview of Speech Codecs". Dr Watkins showed how a speech signal can be represented by elementary digitisation. There was a need for 'companding' for effective 64 kbps PCM representation. This progressed through 32 kbps ADPCM, 16 kbps LD-CELP, 8 kbps ACELP, and a host of other standards of historical interest. He then discussed some of the current standards that cater for wider bandwidth in

speech and audio. Understanding the evolution of speech processing in this way can help us identify potential future developments. Dr Watkins emphasised the significance of greater CPU and RAM availability, and other developments in hardware and software. Also, there are important societal influences in the ever-changing market environment.

2013-12-16: This technical lecture, "Optical Fibres for Communications: Past, Present and Future", was presented by Dr Peter C. Schultz. Dr. Schultz is co-inventor of the fibre optics now used worldwide for telecommunications. He received the National Medal of Technology from President Clinton. In his presentation, Dr Schultz reviewed the history of optical fibres and the current state of the art. He also discussed the likely future directions of development and the major technical challenges that need to be addressed. (Joint with IEEE Victorian Section).

MIRHOJJAT SEYEDI, Chair, VU Student Branch

Section and Chapter Officers, 2013

Greg Adamson – Chair, IEEE Victorian Section; g.adamson@ieee.org

Edhem Custovic - Vice-Chair, IEEE Victorian Section; E.Custovic@ieee.org

Enn Vinnal - Treasurer, IEEE Victorian Section; e.vinnal@ieee.org

Anthony Gascoigne - Assistant Treasurer, IEEE Victorian Section; aeg@teksupport.net.au

Emran Amin - Secretary, IEEE Victorian Section; emran.amin@monash.edu.au

Paulo de Souza – Chair, IEEE Tasmanian Sub-Section; paulo.desouza@ieee.org

Chapter Officers:

Alan Harvey - Circuits and Systems / Solid-State Circuits Societies Chapter Chair, Email: acupak00@hotmail.com

Paul Fitzpatrick - Communications Society Chapter Chair, Email: paul.g.fitzpatrick@gmail.com

Nasir Uddin - Computer Society Chapter Chair, Email: nasir@ieee.org

Kevin Korb - Computational Intelligence Society Chapter Chair, Email: kevin.korb@monash.edu.au

Paul Junor - Education Society Chapter Chair, Email: p.junor@latrobe.edu.au

(vacant) - Electromagnetic Compatibility Society Chapter Chair

Saman Haghgoie - Engineering in Medicine & Biology Society Chapter Chair, Email: saman@monash.edu.au

Kamran Ghorbani - Microwave Theory & Techniques/ Antennas & Propagation Societies Chapter Chair, Email: kamran.ghorbani@rmit.edu.au

Malin Premaratne - Photonics/EDS Societies Chapter Chair, Email: malin@ieee.org

Robin Lisner - Power & Energy Society Chapter Chair, Email: robin.lisner@monash.edu.au

Robert Slaviero - Signal Processing Society Chapter Chair, Email: r.slaviero@ieee.org

Greg Adamson – Society on Social Implications Of Technology Chapter Chair, Email: g.adamson@ieee.org

(vacant) - Technology Management Council Chapter Chair

Mehran Ektesabi - Vehicular Technology Society Chapter Chair, Email: mektesabi@swin.edu.au

Leila Koushaeian - Young Professionals Affinity Group Chair, Email: leila.koushaeian@ieee.org

Irena Atov - Women-in-Engineering Affinity Group Chair, Email: i.atov@ieee.org

For further contact details, please visit the Victorian Section website at www.ieeevic.org or email to contact@ieeevic.org

Financial Accounts 2013

I. Consolidated Operating Statement 2013 (calendar year)⁽¹⁾

IEEE VICTORIAN SECTION		
2013 CONSOLIDATED OPERATING (P&L) STATEMENT		
	(2013)	(2012)
Receipts		
Meetings & Social	1,916	2,464
Student Activities	3,045	140
Rebate from IEEE HQ	11,305	11,027
IEEE Societies	1,192	459
IEEE Region 10	0	0
IEEE Australia Council	0	0
Sections Congress (SC'11) Subsidies	0	713
Bank Interest	4,087	7,747
Miscellaneous receipts	0	25
Sub-total	21,545	22,575
Extra-ordinary Society Income	1,078	38,267
Total	22,623	60,842
Expenditure		
Meetings & Social	12,951	11,864
Publication Expenses	316	522
Student Activities	12,262	4,651
Grants & Awards	2,000	4,327
Travel & Accommodation	0	0
Conferences/Workshops	0	0
Sections Congress (SC'11) Expenses	0	0
Australia Council levy	0	0
Postage, printing, supplies & miscellaneous	2,614	771
Sub-total	30,143	22,136
Extra-ordinary Society Expenditure	6,002	0
Total	36,145	22,136
Surplus / deficit without extra-ordinary items:	-8,597	439
Surplus / deficit with extra-ordinary items	-13,522	38,706

//. Balance Sheet as at 31 December 2013

IEEE VICTORIAN SECTION			
Balance Sheet as at 31 December 2013			
		2013	2012
		(\$)	(\$)
Current Assets			
Cash in bank	- Section accounts	122,976	130,527
	- ComSoc Chapter accounts	29,565	29,148
	- MTT Chapter accounts	503	1,000
	- MTT Chapter Society trust accounts	33,343	37,267
	- All other sub-unit accounts	1,009	1,851
	Sub-total	187,396	199,793
	Repayment of conference loan receivable	4,111	4,111
	Total Current Assets	191,507	203,904
Current Liabilities			
	Provision for bad debts (T&SA Conference, Singapore)	4,111	4,111
	IEEE Reserve Allocation (IEEE Pension Fund liability)	31,491	13,072
	Sub-total	35,602	17,183
Net Assets		155,905	186,721

NOTES TO ACCOUNTS

1. All income and expenditure amounts are ex-GST

List of Section Events for 2013

- 16-12-2013 Optical Fibres for Communication: Past, Present and Future (Room D714, Building D, Footscray Park Campus, Victoria University)
- 11-12-2013 IEEE Victorian Section AGM Dinner (The Metropolitan Hotel, 1st Floor, 263 William Street, Melbourne)
- 03-12-2013 Émilie du Châtelet and Mary Somerville: Heroines of Mathematical Science (Telstra Conference Centre, Level 1 / 242 Exhibition St (crn Lonsdale St & Exhibition St); 5:30pm start for a 6pm-7pm lecture)
- 02-12-2013 Speech Signal basics through an historical overview of Speech Codecs (Room D231, Building D, Footscray Park Campus, Victoria University)
- 25-11-2013 World's Most Positive Countries 2013 (Theatre 3, Level 2, Business and Economics Building, 111 Barry St., The University of Melbourne)
- 18-11-2013 Hot Career Advice from EXPERTS for recent Engineering Graduates (Green Pepper Restaurant, 18 Bourke Street, Melbourne)
- 11-10-2013 Population-based Algorithm Portfolio for Numerical Optimization (Room 10.08.03, RMIT)
- 01-10-2013 Electrical Causes of Commercial, Residential and Vehicular Fires (Room E7, Bldg 72, Monash University Clayton)
- 19-09-2013 Information Embedding: From Theory to Practice (Meeting Rooms A&B, Engineers Australia Building, 21 Bedford Street, North Melbourne)
- 12-09-2013 A Perspective on Innovation (Theatre 1, Allan Gilbert Building, University of Melbourne, Grattan St, Carlton)
- 11-09-2013 Today's High Capacity Satellite Solutions (Swanston Academic Building, 445 Swanston Street, Melbourne VIC 3000, RMIT University Room: Building 80, Level 10, Room 17)
- 10-09-2013 Scalable Multi-rate Speech Coder for VoIP Networks: Beyond iLBC (RMIT University, City Campus, Building 10, Level 8, Room 4 (10.08.04), Swanston Street, Melbourne)
- 09-09-2013 Algorithm and Architecture Co-Design for Fast Motion Estimation Video (RMIT University city campus Room 10.7.27)
- 04-09-2013 Technical Analysis of the NBN and its Alternatives (John Connell Auditorium, Engineers Australia, 21 Bedford Street, North Melbourne, VIC)
- 30-08-2013 Computer Society Industry Event 2013 (Navitas Workforce Solutions, Level 4, 206 Bourke Street, Melbourne)
- 15-08-2013 Learn how you can be a successful Entrepreneur in Engineering (Room 132 / Building 72, Monash University, Clayton Campus)
- 15-08-2013 Challenges and Benefits of building the Square Kilometre Array Telescope (Telstra Conference Centre, Level 1 242 Exhibition St Melbourne)
- 13-08-2013 Get to know what the industry wants from you! (Room 132 / Building 72 Monash University, Clayton Campus)
- 06-08-2013 Tips for a successful job hunt from a Technical Recruitment Consultant (Room 132 / Building 72, Monash University, Clayton Campus)
- 05-08-2013 How to become a successful researcher / academic in Australia (Room 132 / Building 72, Monash University, Clayton Campus)
- 29-07-2013 A Look into the Bionic Eye (Australia)
- 23-07-2013 Large Scale Wind Farm Operation in Australia: The MacArthur Wind Farm Project (Monash University Clayton)

Section Events 2013 (cont'd)

04-07-2013 Career Assistance Workshop (Training Room 1, Navitas Professional, Level 3, 206-218 Bourke Street, Melbourne)

03-07- 2013 Cognitive Radio Technology: Embedding Intelligence in Radios (Ohn Connell Auditorium , Engineers Australia Building, 21 Bedford Street, North Melbourne)

26-06-2013 How to Bring Value as a Young Engineer (Building 80, Level 9, Room no. 6 , Swanston Street, RMIT University, Melbourne)

12-06-2013 Swinburne Aviation's Human Factors Research in Helicopter Operations (Room ATC-714 (Level 7), Advance Technology Centre (ATC), Swinburne University of Technology (Hawthor))

09-06-2013 Electronics are from Venus, Mathematicians are from Mars! (Room D714, Building D, Footscray Park Campus, Victoria University)

06-06-2013 Solidworks for Engineers (Australia)

22-05-2013 IEEE VTS- Victorian Chapter Networking Event (Room 8.03 - level 8, Doug McDonell Building, University of Melbourne)

17-05-2013 Some Thoughts on the Complexity of Real-World Problems (10.08.04)

16-05-2013 Introduction to Evolutionary Game Theory (12.07.02)

15-05-2013 Regulation: A Possible Career (Richard Newton Room, Level 5, EE Engineering Bldg (193), University of Melbourne)

14-05-2013 Confessions of a Serial Entrepreneur: 30 Years of Photonic Start-ups in Academia and Industry (Theatre S10, Building 25, Monash University Clayton)

01-05-2013 Importance of Intelligent Signal Processing for Perimeter Security Systems (John Connell Auditorium, Engineers Australia Building, 21 Bedford Street, North Melbourne)

24-04-2013 Managing the Spectrum Crunch (Room 2, Level 5, Building 12, Swanston Street, City Campus, RMIT University, Melbourne.)

23-04-2013 Continuous Monitoring of Power System Assets in a Smart Grid Environment (Monash University Clayton)

18-04-2013 Graduated? Where Do You Start in the Job Market? (Doug McDonell Building (Building 168), Room 8.03, The University of Melbourne, Parkville)

12-04-2013 How to Use Technology to Efficiently Manage Your Research (EN203 (EN Building), Swinburne University of Technology (Hawthorn))

11-04-2013 Matlab tricks and tips for Intermediate users (Room 420, Beth Gleeson bld, La Trobe University, Bundoora)

10-04-2013 Green Mobility Research at CSIRO (Lecture theatre S10, Building 25, Monash University (Clayton Campus))

10-04- 2013 Advances (Innovations) in Neural Engineering. (RMITUniversity,Emily McPherson Building Building 13, Level 3, Room 7 Corner Russell & Victoria street)

05-04-2013 ANSYS Electromagnetics Hands-On Workshops (Monash University (Clayton Campus) - Engineering Computer Labs (Building 60))

05-04-2013 The Problem with Big Data (Deakin University, School of IT, Waurm Ponds Victoria)

21-03-2013 Android App Development for Beginners (ECSE Dept, Monash University, Clayton campus. [Exact Venue TBC])

26-02-2013 Microsoft and Amazon, A comparison of approaches to cloud security (Room 8.03, Doug McDonell Building, University of Melbourne)

20-02-2013 Power System Restoration After Significant Disruptions (Swinburne University, Hawthorn Campus)

22-01-2013 Data-Driven Analysis and Fusion of Medical Imaging Data (John Connell Auditorium, Engineers Australia Building, 21 Bedford Street, North Melbourne)

