



IEEE VICTORIAN SECTION



**Annual
Review
2017**

IEEE Victorian Section is an autonomous geographic unit of IEEE Inc., the world's largest technical-professional society dedicated to the advancement of technology for the benefit of humanity.

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Cover: Sugarloaf Reservoir, part of the vast network of storage, treatment and transmission facilities required to supply Melbourne's population and industry with high quality water. Photo: GNS Associates..

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From the Section Chair

UNDOUBTEDLY, the highlight month of the year was August, when we saw, first, the Australian-New Zealand Student Congress (ANZSCON 2017), then the global IEEE Sections Congress, both held in Sydney. About twelve (12) Victorian Section delegates attended these two events



This was the first time that the triennial Sections Congress has been held in Australia, and only the second time outside North America.

Following Section Congress, IEEE President Ms Karen Bartleson visited Melbourne and we had the pleasure of hosting her and her delegation during their brief stay. The theme of the visit was industry engagement and several special events were organised under this heading. The visiting party also travelled to Bendigo, Victoria, where they met with local industry leaders and representatives.

We much appreciated having President Bartleson's company during her brief stay. We wish her well in her future executive-level assignments in IEEE.

As to our local Section activities, our technical chapters and affinity groups generally performed well during the year – there were in fact some quite outstanding performances – but the average level of activity was somewhat lower than in the three preceding years.

The good news is that several low-performing chapters have now been rejuvenated and we expect to see greatly improved results from these units in the coming year.

Concerning our student branches, the outlook is very positive and we continue to be impressed by the energy and zeal of so many of our student members.

Further details of the activities of all our subunits are contained in this Annual Report.

I close by thanking all our volunteers and supporters for their hard work and unfailing commitment during the year. In IEEE Victorian Section, we are indeed a marvellous team! ■

Golnar Khomami, PhD
Acting Section Chair, 2017.

Review of Operations

SECTION LEADERSHIP

A call for Nominations for IEEE Victorian Section Officer positions for the term 2018/2019 was issued in August 2017, and elections for the sole contested position (Vice-Chair) were held in October 2017. The successful candidates who will take office from 01 January 2018 are:-

Alan L. Harvey, Chair

Golnoosh Tajadod, Vice-Chair

Elspeth McKay, Secretary

Mehrnaz Shoushtarian, Treasurer

Nalika Damayantha, Assistant Treasurer

Since there were no nominations for the position of Assistant Secretary, this vacancy remains, and the matter has been referred to the incoming 2018 Section Executive for action as required.

This year, the electoral formalities were overseen by a Nominations & Elections Panel chaired by Past Section Chair Anthony Gascoigne. ■

MEMBERSHIP DEVELOPMENT

Details of the Section membership as at 31 December 2017 are shown in the Table opposite. Membership retention during the year has been generally satisfactory, in fact, the higher grade subtotal increased by almost 3%. But this gain was negated by a large fall in student numbers, leading to a *nil change* outcome for the total Section membership.

The fall in Student membership may be partly due to the growth in Graduate Students, that is, former Student Members who have now graduated. But the magnitude of the change suggests that other factors are also involved. This matter will require due attention during the coming year.

The strong growth in Senior Members is very welcome and suggests that the SM publicity campaign of recent years is now having a positive impact.

We note also that the number of IEEE Fellows in the Section continues to grow steadily, with no fewer than three (3) successful candidates named for elevation to FIEEE grade in the current year. ■

CHAPTERS

The activity level of our technical chapters during 2017 was generally satisfactory, although still well short of the record “highs” set in 2014 and 2015. During the year there were sixty-eight (68) technical and special-interest events. The leading performers were Computer Chapter with nine events, followed by SSIT-Australia joint chapter, with eight events. Most meetings were held in Melbourne, but SMC Chapter held six meetings in Waurin Ponds (Geelong). In the case of SSIT, events were held variously in Melbourne, Sydney, Brisbane, and Wollongong. ■

Member Grade	2017	2016	%
Fellow	22	19	+16
Senior Member	187	167	+12
Member	1414	1400	+1.0
Associate Member	31	28	+11
Graduate Student Member	317	305	+3.9
Higher Grade Total:	1971	1919	+2.7
Student Member	164	216	-24
Total Section Membership:	2135	2135	0

Some chapter meetings were organised jointly by two or more chapters or other collaborating entities. Only one chapter failed to hold the required minimum of two (2) meetings for the year. Further details of chapter activities are given in a later section of this Annual Review. ■

AFFINITY GROUPS

All three Affinity Groups were active during the year, once again led by Women in Engineering, although not with the same level of dominance as in the preceding three years.

The aggregate number of affinity group activities was eleven (11), significantly less than the eighteen (18) held during 2016. As with the chapters, several events were run jointly with other subunits.

Further information on affinity group activities is given in a later section of this Annual Review. ■

STUDENT BRANCHES

Victorian Section has seven (7) IEEE Student Branches and all of these reported various levels of activity during 2017. The aggregate number of events held was thirty-nine (39), rather less than the typical totals of recent years.

In an end-of-year assessment, the University of Melbourne Student Branch and La Trobe University Student Branch were deemed (equal) “Outstanding Student Units” for 2017.

RMIT University SB was named as “Most Improved” student unit of the year.

Further information on student activities is given in a later section of this Annual Review. ■

TASMANIAN SUB-SECTION

The Tasmanian Sub-Section was largely dormant during 2017 and had no recorded activities. ■

TECHNICAL PAPER AWARDS

For administrative reasons, there was no Student Paper Prize offered by the Section during 2017. The competition has long been a feature of Section operations and has been generally popular - both with students and their academic supervisors. We plan to re-launch this contest in the near future, with updated rules and guidelines.

The short-lived Industry R&D Prize has now been withdrawn pending further review. The future of this award of this award is uncertain. ■

SECTION SPONSORSHIPS

The Section is pleased to offer limited cash awards and prizes in selected areas of academic activity, wherever our financial resources permit, and subject always to our constitution and bylaws.

During 2017 we again supported the Endeavour student projects event at the University of Melbourne, the Engenius Awards and Exhibition at RMIT University, and the Engineering Awards program at La Trobe University.

At the Endeavour function, the IEEE Victorian Section Prize was presented jointly by past Section Chairs Robert Slaviero and Anthony Gascoigne. ■

CONFERENCES

The IEEE International Conference on Mechatronics was held at the Gippsland Campus of Federation University, from 13th -15th February, 2017. This was the

first time that this biennial event had been held in Victoria. The conference was sponsored by the IEEE Robotics & Automation Society. ■

UPLINK

There were nil (0) issues of the Section newsletter *Uplink* during the year. The problem here is essentially a shortfall in volunteer effort, although contributed copy is often also in short supply. We are presently working on new strategies governing the style, content and timing of this publication. ■

SECTION AGM

The Annual General Meeting of IEEE Victorian Section was held at Graduate House, Parkville, on 7th December 2017. Fifty-nine (59) persons attended, including IEEE Members and their partners and Invited Guests.

Section Vice-Chair, Dr Golnar Khomami, presided in place of Section Chair Eddie Custovic who was overseas at the time.

The year's highlights included the visit of IEEE President Bartleson and our participation in Sections Congress 2017 in Sydney, NSW. Details of both events are given elsewhere in this Annual Review.

There were two Guest Speaker presentations, the first by Professor Geoff Webb of Monash University, who spoke on aspects of bionic eye research. He was followed by Dr Farhad Goodarzy of *Nura*, a Melbourne-based manufacturer of unique “self-learning” headphones.

In the Section Awards segment, long-serving Section volunteers Enn Vinnal and Anthony Gascoigne each received Certificates of Appreciation. Section Vice-Chair Golnar Khomami was similarly honoured for her outstanding performance as Section Acting Chair during much of 2017.

University of Melbourne student Maryam Fanaeepour received her Certificate as winner of the IEEE Australia Council Student Paper Competition, in the WIE Division. ■

IEEE AUSTRALIA COUNCIL

An important item of Australia Council business during the year was the signing of a new intersociety Memorandum of Understanding between IEEE and The Institution of Engineers, Australia (Engineers Australia).

The signatories were IEEE President Karen Bartleson and the Chief Executive Officer of Engineers Australia, Mr Peter McIntyre. The Agreement reaffirms the cordial and constructive relationship that has long existed between the two professional bodies. ■

IEEE REGION 10

The Annual General Meeting of IEEE Region 10 was held in Chiba City, Japan, from 4th to 5th March, 2017. Over 100 delegates attended, including IEEE President Karen Bartleson, three Vice-Presidents, and a number of senior staff from IEEE Headquarters. Victorian Section was represented by Vice-Chair

Golnar Khomami.

The first day was devoted to routine business reports, also “training” breakouts led by senior IEEE staff. In the afternoon, candidates for president-elect 2018, Vincenzo Piuri and Jacek Zurada, each spoke on their respective electoral policies.

On the second day, business was concluded at the end of the morning session and the afternoon was devoted to a multi-stop sight-seeing tour.

In a separate item of Regional interest, in October 2017, Section Chair-Elect Dr Alan Harvey travelled to Kuala Lumpur at the invitation of IEEE Malaysia Section. He also visited local universities and gave several technical presentations. ■

IEEE GLOBAL

As noted in the Chair’s Report, the key event of 2017 was IEEE Sections Congress, held in Sydney, NSW, in August. This was the first such IEEE Congress ever held in Australia. Victorian Section was represented by Section Chair, Edhem Custovic, Section Vice-Chair Golnar Khomami, and several other delegates representing various elements and subunit of the Section.

Following Sections Congress, IEEE President Karen Bartleson, Past President Barry Shoop, and 2018 President-Elect Jim Jeffries visited Melbourne as guests of the Section. The presidential party later made visits to a number of sites in Melbourne and regional Victoria. ■

Section Finances – in brief

A summary of Victorian Section financial results for 2017 is set out in the Table below.

Net assets fell by \$13,916, or 7.9% less than in 2016. Cash holdings at year-end were \$162,941, also about 7.9% less than for the previous year.

On the Income (P&L) statement, Revenue fell and Expenditure rose, leading to a net deficit of \$13,134.

The heavy expenditure included \$8,764 spent on sending delegates to IEEE Sections Congress and the preceding Australia-New Zealand Students’

Congress. Both of these events were held in Sydney, NSW.

Section funds at year end include an amount of \$38,221 being held for the IEEE MTT Society, on an informal (short-term) basis.

During the year, the third-party ledger created for the 2016 NW21 Conference was closed. The related bank account has now reverted to normal Section use. ■

Enn Vinnal
Section Treasurer, 2017

Item	2017	2016	%
Net Assets	163,781	177,698	-7.8
Revenue	41,335	56,669	-27
Expenditure	54,469	48,159	+13
Operating Surplus (Deficit)	(13,134)	8510
Cash at Bank	162,941	176,959	-7.9
Bank Interest Earned	2055	3553	-42
IEEE HQ Rebate Received	17,525	17,248	+1.6
IEEE Reserve Allocation	47,123	47,123	0

Year-on-year financial summary for 2016/2017



Technical lectures and seminars continue as a staple of Section activities



Mehrnaz Shoustarian speaks to a group meeting at Sections Congress



Victorian Section Young Professionals “ham it up” at Sections Congress



IEEE President Karen Bartleson (back to camera) responds at a welcome event in Melbourne



Robert Slaviero Announces Prize Winners at UniMelb Endeavour 2017



Advanced urban transportation - a subject of interest to many IEEE members

Subunit Activity Profiles

CHAPTER ACTIVITIES

The performance of our seventeen (17) technical chapters is summarised in the Table below. The overall activity level is similar to that of the previous year. The leading performers included Computer Chapter, Power and Energy Chapter, Systems, Man & Cybernetics Chapter, and Antennas & Propagation/MTT Joint Chapter. The Society on Social Implications of Technology Joint Australian Chapter logged a large number of events, but many of these activities were held in other States, far outside the Victorian Section boundaries. Thus, the SSIT event-totals are not directly comparable with those of the Victorian Chapters.

Chapter	2017	2016
Antennas & Propagation/Microwave Theory & Techniques Joint Chapter	7	4
Circuits & Systems/SSC Joint Chapter	4	4
Communications Chapter	5	5
Computational Intelligence Chapter	1	0
Computer Chapter	9	6
Education Chapter	2	2
Electromagnetic Compatibility Chapter	4	3
Engineering in Medicine & Biology Chapter	2	6
Industry Applications Chapter*	0	-----
Photonics/Electron Devices Joint Chapter	4	0
Power & Energy Chapter	7	6
Signal Processing Chapter	4	3
Systems, Man & Cybernetics Chapter	6	9
Social Implications of Technology Joint Australian Chapter	8	12
Technology & Engineering Management Chapter	2	2
Vehicular Technology Chapter	3	4
Total - All Chapters:	68	66

AFFINITY GROUP ACTIVITIES

Of our three Affinity Groups, Women in Engineering in Engineering led the way in 2017, with eleven (11) reported activities. Also to the credit of the women is their diverse range of contacts established in “outside” organisations. The goodwill so created has been very much to the benefit of the Section, particularly in terms of our corporate objectives and strategies. None of which detracts from the quite creditable performance of the Life Members and the Young Professionals. Both of these groups have now established their own distinctive identities in the Section, which we hope will grow still stronger in the future.

Group	2017	2016
Life Members Affinity Group	2	3
Women in Engineering Affinity Group	6	11
Young Professionals Affinity Group	3	4
Total – Affinity Groups:	11	18

STUDENT BRANCH ACTIVITIES

All seven (7) student branches held events during 2017 although the overall activity level was considerably lower than in the previous year. The individual tallies for each branch are shown in the table below. Only two (2) units were able to equal or exceed their 2016 results.

Student Branch	2017	2016
Deakin University Student Branch	8	0
La Trobe University Student Branch	6	12
Monash University Student Branch	5	18
RMIT University Student Branch	9	13
Swinburne University of Technology Student Branch	2	4
University of Melbourne Student Branch	5	16
Victoria University Student Branch	4	2
Total – All Student Branches:	39	65

Section & Chapter Officers

SECTION OFFICERS

Eddhem (Eddie) Custovic – Chair, e.custovic@ieee.org

Golnar Khomami - Vice-Chair, g.khomami@latrobe.edu.au

Enn Vinnal - Treasurer, e.vinnal@ieee.org

Nissanga (Nishad) Mendis - Secretary, nrm786@uowmail.edu.au

Elsbeth McKay, Assistant Secretary, elsbeth.mckay@rmit.edu.au

Mehrnaz Shoushtarian – Assistant Treasurer, mehrnaz.shoushtarian@gmail.com

CHAPTER & AFFINITY GROUP OFFICERS

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

Kandeepan Sithamparanathan - Communications Society Chapter Chair,

Annick Boghossian - Computer Society Chapter Chair, annick.n.boghossian@ieee.org

(vacant) - Computational Intelligence Society Chapter Chair,

Paul Junior - Education Society Chapter Chair, p.junior@latrobe.edu.au

Mark Mifsud - Electromagnetic Compatibility Society Chapter Chair, mark.mifsud@NovaSystems.com

Mehrnaz Shoushtarian - Engineering in Medicine & Biology Society Chapter Chair, mehrnaz.shoushtarian@gmail.com

Stefan Burger - Microwave Theory & Techniques/ Antennas & Propagation Societies Chapter Chair,

(vacant) - Photonics/ED Societies Chapter Chair,

Apel Mahmud - Power & Energy Society Chapter Chair,

Karim Seghouane - Signal Processing Society Chapter Chair, karim.seghouane@unimelb.edu.au

(vacant) – Society on Social Implications of Technology Chapter Chair, lyria@unsw.edu.au

Saeid Nahavandi - Systems Man & Cybernetics Society Chapter Chair, saeid.nahavandi@deakin.edu.au

Claudio Insaurrealde - Technology & Engineering Management Chapter Chair, c.insaurrealde@ieee.org

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

Keith Adams - Life Members Affinity Group Chair, wortel30@gmail.com

Chamath Divaratne - Young Professionals Affinity Group Chair,

Nalika Dayamanthi - Women-in-Engineering Affinity Group Chair, Nalika.dona@gmail.com

Financial Accounts

I. Statement of Comprehensive Income (calendar year 2017)

	(2017)	(2016)
REVENUE (\$)		
Meetings & social	8766	11,589
Conferences/workshops	250	18,913
Student activities	1217	2287
Merchandise (net of expenses)	0	(1358)
Rebate from IEEE HQ	17,525	17,248
IEEE Region 10	3965	0
IEEE Australia Council	300	0
IEEE Societies	6212	2602
Sections Congress subsidies	1045	0
Bank interest	2055	3553
Miscellaneous receipts	0	802
Total Revenue:	41,336	56,669
EXPENDITURE (\$)		
Meetings & social	22,179	15,065
Conferences/workshops	0	12,393
Student activities	8065	6138
Sections Congress expenses	1423	0
Grants & awards	15,565	10,576
Travel & accommodation	5289	1186
Publication expenses	822	1115
IEEE Australia Council levies	569	0
Postage, supplies & miscellaneous	557	1686
Total Expenditure:	54,469	48,159
Surplus (Deficit):	(13,132)	8510

II. Balance Sheet as at 31 December 2017

	(2017)	(2016)
ASSETS (\$)		
Cash at bank	162,941	176,959
Accounts Receivable	0	1277
GST tax credits	1145	782
Total Assets:	164,086	179,018
LIABILITIES (\$)		
Accounts Payable	0	569
ATO creditors	305	751
Total Liabilities:	305	1320
Net Assets:	163,781	177,698
RESERVES (\$)		
IEEE – Section Reserve Allocation	47,123	47,123
Net Assets Less Reserves:	116,659	130,575

III. Cash-Flow Statement (calendar year 2017)

	(2017)	(2016)
OPERATING CASH PROFILE (\$)		
Cash from (to) Section activities	(43,775)	(15,632)
IEEE - HQ rebates	17,525	17,248
IEEE – other receipts	10,177	2602
Bank interest	2055	3553
Net Cash Inflow (Outflow):	(14,018)	7771
CASH RECONCILIATION		
Cash at start of year	176,959	169,188
Cash at end of year	162,941	176,959
Net Change in Cash Held:	(14,018)	7771

