

South Australia Section Chair's Report

PART A - SECTION SUMMARY

A.1 Executive Summary

Firstly, I would like to thank all the Excom committee members that made possible the smooth functioning of the Committee during this year:

Karl Sammut - Vice Chair,
Pina Dall'Armi-Stoks – Treasurer and
Sherry Randhawa - Secretary.

I also would like to express my gratitude to all the Technical Chapter and Affinity Group Chairs and the members of the respective committees, as well as the leadership teams of our Student Branches, in particular

- AP/MTT Thomas Kaufmann
- CAES Cheng Chew Lim
- C&SP Brian Ng
- Computer Sebastien Wong
- IT Terrence Chan
- GOLD Anthony Milton
- WIE Pina Dall'Armi-Stoks
- LMAG Harry Green
- Conference support coordinator Leigh Powis
- Web master Bobby Yau
- Retired Engineers Liaison/Section History Michael Evans
- Student Activity coordinator Brian Ng
- University of Adelaide Student branch Simon Knight
- University of South Australia Student Branch Nayeema Sadeque
- Flinders University Student Branch Damian Tohl
- and DLD 2013 organizing committee: Pina Dall'Armi-Stoks, Sherry Randhawa, Thomas Kaufmann and Karl Sammut.

Our Section had a year full of high quality technical activities. The major one - RADAR 2013 - was a very successful conference, which attracted more than 250 participants. I'd like to congratulate Section's conference support coordinator Leigh Powis as well as Michael Evans and Andrew Piotrowski, who actively participated in all activities of the Conference Organising Committee and always ensured the best outcome for the event and for the interest of our Section membership.

In support our members and the local community IEEE SA Section and chapters had 47 technical and professional activities during 2013 and held 6 Section meetings.

AP/MTT	CAES	Computer	C&SP	IT	GOLD	WIE	LMAG	Section JTP	Section
7	2	3	6	3	4	5	6	11	6

According to SAMIEEE database our Section has got currently the total membership of 595 (6% increase compared with the previous year)– the table below illustrates the different membership grades.

Affiliate	18
Associate Member	9
Fellow	1
Graduate Student Member	66
Life Fellow	2
Life Senior	5
Life Member	5
Member	419
Senior Member	52
Student Member	26

The IEEE SA Section Committee met six times in 2013 (22 Jan, 19 Mar, 7 May, 2 July, 27 Aug, 24 Sep and 12 Nov plus the AGM on 11 Dec). In addition to the full committee meetings, the Section Officers held additional meetings as required to discuss matters arising between the scheduled dates of the full Committee meetings. The Section Committee members also maintained ongoing contact by email to deal with issues that could be handled by electronic means.

Continuing its long-standing programs of support to students in SA, the IEEE SA Section awarded three grants in 2013 to research students in support of their travel to present papers at international conferences.

Muhammad Asraful Hasan (in the first round) attending 34th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC'12., San Diego, USA

“Beat-to-Beat Spatial and Temporal Analysis for QRS-T Morphology”

Sam Darvishi (in the second round) attending EMBC 2013 conference in Osaka, Japan

“Investigation of the trade-off between time window length, classifier update rate and classification accuracy for restorative braincomputer interfaces”.

Mostafa Rahimi (in the second round) attending 21st IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC), Istanbul, Turkey
“A New Compact Analog VLSI Model for Spike Timing Dependent Plasticity”

Two IEEE SA Section Awards for Excellence in Engineering were presented to students of the students from the Adelaide University and UniSA:

Luke Howell – The University of South Australia *the Second Year Student in the Bachelor of Engineering and associated double degrees, who most distinguishes themselves in the course Signals and Systems.*

Kiyoan Kim - The University of Adelaide, *for the best overall performance in all Level II subjects.*

These awards were presented at the JTP Student Papers Night on 22 October 2013.

As part of the IEEE SA Section participation in the Joint Technical Program (JTP) Electrical, the IEEE SA Section hosted 3 of the 11 JTP technical meetings.

Towards the end of the year Section organised a very successful 2013 Distinguished Lecture and Dinner. The lecture “Where is my Robot Butler?” was presented by Dr Zoz Brooks.

A.2 Financial Report

IEEE-SA Section Statement of Income and Expense against Budget Period 01/01/2013 to 11/12/2013

	Approved Budget	YTD	Notes (YTD):
INCOME			
IEEE Section rebate	\$5,700.00	\$6,550.24	
Interests from term deposits (expected)	\$6,500.00	\$4,530.84	
Accounts receivable			
IEEE SA Distinguished Lecture Dinner	\$3,600.00	\$4,782.50	
GST Recovery on DLD	\$500.00	\$500.00	Assumes a \$500 accounts receivable from GST (mainly DLD)
Contribution from Accumulated Reserves		\$0.00	
Surplus RADAR 2013		\$0.00	
Radar Seed Funding loan repayment		\$20,000.00	
Computer Society Course 2013		\$1,780.00	
Closure of FTD (065122 50292658)		\$55,000.00	
TOTAL INCOME	\$16,300.00	\$93,143.58	

EXPENSE**Section Program**

Section Committee Meetings	\$450.00	\$587.34	
	\$250.00	\$250.00	Includes \$250 AGM Accounts payable amount
Annual General Meeting			
DL Dinner (total))	\$8,500.00	\$7,854.44	
DL Flight	\$500.00	\$1,000.00	
DL Accommodation	\$300.00	\$0.00	
PO Box Annual Fee	\$93.00	\$104.00	
Bank account and merchant facility maintenance	\$100.00	\$284.86	
IEEE Australia Council Levy	\$0.00	\$0.00	
Joint Technical Program Lectures	\$100.00	\$147.78	Includes a \$39.80 accounts payable amount
Ocean Engineering DL (accommodation)	\$200.00	\$0.00	
Total	\$10,493.00	\$10,228.42	
Student Activities			
IEEE SA Student Awards - 3 x \$500	\$1,500.00	\$500.00	
IEEE SA Student Travel Grants - 4 x \$1000	\$4,000.00	\$2,704.25	Includes 2x \$1000 Student travel accounts payable amount
IEEE SA Rep travel to R10 Student/GOLD/WIE Congress (India)	\$1,500.00	\$0.00	
Total	\$7,000.00	\$3,204.25	
Support to Chapters and SB			
AP-MTT#10109	\$300.00	\$300.00	
CAES #10204	\$300.00	\$300.00	
Comms & SP #10123	\$300.00	\$300.00	
Computer #10222	\$300.00	\$2,007.74	
GOLD GD00557	\$300.00	\$300.00	
IT (SA/ACT/VIC/NSW) #10244			
WiE #WE00557	\$300.00	\$300.00	
Uni Adelaide SB	\$300.00	\$0.00	
Uni SA SB	\$300.00	\$0.00	
Flinders Uni SB	\$300.00	\$0.00	
Life Members Affinity Group	\$500.00	\$500.00	
Power & Energy Society Chapter	\$300.00	\$0.00	
New FTD (065122 50306896)		\$55,000.00	
Total	\$3,500.00	\$59,007.74	
TOTAL EXPENSE	\$20,993.00	\$72,440.41	
NET Surplus (Deficit)	Budget	YTD	
Total	-\$4,693.00	\$20,703.17	

Radar 2013 seed funding

\$20,000.00

P. Dall'Armi-Stoks. Treasurer, IEEE-SA
section. 11 Dec 2013

Notes:

1. Approved Budget was considered the worst case scenario
2. If Radar 2013 seed funding is taken out from the total YTD amount and an accounts receivable of GST recovery (estimate) ~\$500, then a surplus of approx. \$700 is expected this FY.

P. Dall'Armi-Stoks. Treasurer, IEEE-SA
section. 11 Dec 2013

IEEE SA Section
Statement of Sources and Application of Funds
Period 01/01/13 to 11/12/13

Sources of Funds (1st Jan 2013)

Term Deposits

Opening Balance	Term Deposit	5122 50292658	55000.00
Opening Balance	Term Deposit	5122 50270803	85000.00
Total 1Jan 2013			140,000.00

Loans, Advances

Operating Account

Opening Balance	Cheque A/C	512200907594	10,023.66
Accounts Receivable			520
Accounts Payable			2767.05
Cash Balance 1st Jan 2013			7776.61

CASH POSITION 1st Jan 2013 **147,776.61**

Net Change in Position (1/1/13-11/12/13)

Net Change Operating Cash (1/1/13-11/12/13) **20,703.17**

TOTAL SOURCES OF FUNDS **168,479.78**

APPLICATION OF FUNDS (11 Dec 2013)

Term Deposits

Closing Balance	Term Deposit	5122 50270803	85,000.00
Closing Balance	Term Deposit	5122 50292658	0.00 (closed)
Closing Balance	Term Deposit	5122 50306896	55,000.00
11 Dec 2013 Total			140,000.00

Loans, Advances

Operating Account

Closing Balance (11/12/13)	Cheque A/C	512200907594	30,269.58
Accounts Receivable (11/12/13)			500.00
Accounts Payable (11 Dec 2013)			2,289.80
11 December 2013 Cash Balance			28,479.78

TOTAL APPLICATION OF FUNDS **168,479.78**

P. Dall'Armi-Stoks
Treasurer, IEEE-SA section
11 Dec 2013

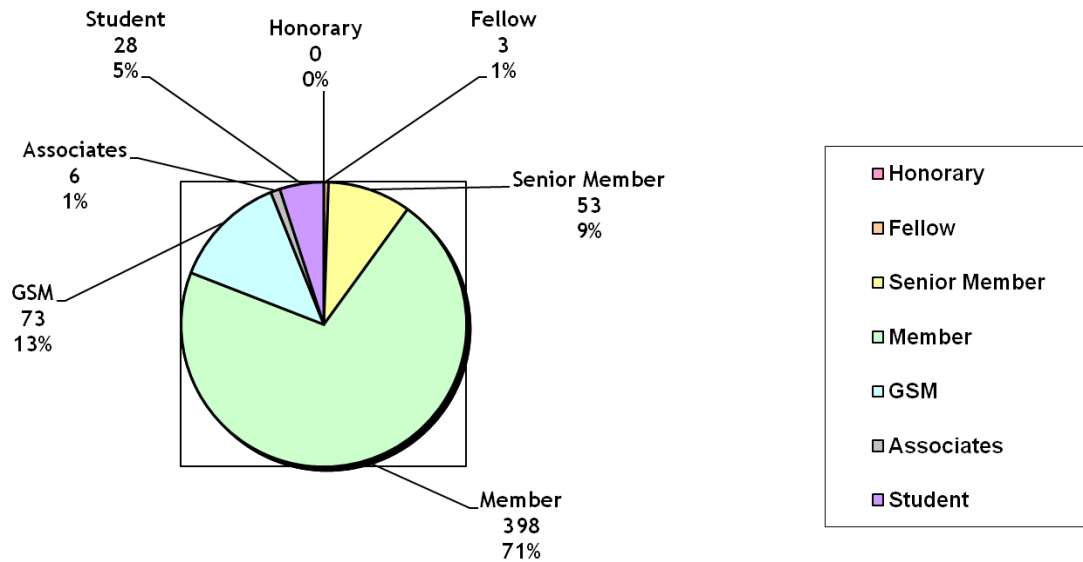
PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

Taking the information from SAMIEEE database our Section has got currently the total membership of 595 (6% increase compared with the previous year)– the table below illustrates the different membership grades.

Affiliate	18
Associate Member	9
Fellow	1
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Member	419
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Student Member	26

In 2012 our membership statistics were presented as follows:



Note 1: Member from...
 Academia: 42.59 %
 Industry: 57.40 %

Note 2: Retention
 Higher Grade Member: 84.0%
 Student Grade Member: 77.8 %

The SA section has now three IEEE Fellows: Prof Derek Abbott, Prof Don Sinnott, and Prof Michael Gibbard.

Prof Karl Samnut continued as the SA Section's Membership Development coordinator during 2013. He has established a network of suitable contacts and referees in the Section to assist members who wish to upgrade their membership.

B.2 Chapter Activities

IEEE South Australia section has six active chapters: Computer, Communication/Signal Processing, Antenna Propagation/Microwave Theory & Technique, Control/Aerospace and Electronic Systems, Information Theory (SA/ACT/VIC) and recently approved Power and Energy Chapter. In addition the Australia Council has Australia wide Instrumentation & Measurements Society (IMS) chapter. During 2013 number of Section expressed an interest to form an Oceanic Engineering Chapter. Initially it was to be sponsored by the Australia Council, but this fell through. This was picked up by the number of Sections and there was an ongoing activity with the aim to establish a joint OE chapter. I'm pleased to report that the Australian Chapter of the IEEE Oceanic Engineering Society was registered into existence on 3 December 2013 as a Joint Chapter between Sections QLD, VIC, SA, WA, ACT, and NA, with the latter being the administrating unit, and Mal Heron as the interim Chair.

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In support our members and the local community IEEE SA Section and chapters had 47 technical and professional activities during 2013 and held 6 Section meetings.

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B.3 Professional and Continuing Education Activities

The IEEE SA Section has provided seed money for the RADAR2013. This funding has been now returned back to the Section. The Section was financial co-sponsor with Engineers Australia and technical co-sponsor with AESS Society and IET SA and NT branch. The conference has been an outstanding success with excellent attendance and matching technical level.

B.4 Students Activities

IEEE South Australia has three student branches at Adelaide University, University of South Australia and Flinders University. Continuing its long-standing programs of support to students in SA, the IEEE SA Section awarded three grants in 2013 to research students in support of their travel to present their papers at international conferences.

1991, the IEEE South Australia Section established a Travel Fund to support students to attend national and international events relevant to IEEE activities. The scheme continues to attract strong interest. This year, the following students received travel awards:

Muhammad Asraful Hasan (in the first round) attending 34th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC'12., San Diego, USA

“Beat-to-Beat Spatial and Temporal Analysis for QRS-T Morphology”

Sam Darvishi (in the second round) attending EMBC 2013 conference in Osaka, Japan

“Investigation of the trade-off between time window length, classifier update rate and classification accuracy for restorative braincomputer interfaces”.

Mostafa Rahimi (in the second round) attending 21st IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC), Istanbul, Turkey

“A New Compact Analog VLSI Model for Spike Timing Dependent Plasticity”

In addition to this travel grants, IEEE SA Section presents awards for Excellence in Engineering to engineering students of the three South Australian universities, the awards are presented at the JTP Student Papers Night.

The student Subject prize-winners for the IEEE South Australia Section 2012 Student Award for Excellence in Engineering with an electrical and/or electronics emphasis were presented to

Luke Howell – The University of South Australia and

Kiyoong Kim - The University of Adelaide.

The Student Branches at The University of Adelaide and the University of South Australia continued their high levels of activity with University of Adelaide student branch chair Simon Knight and UniSA student branch chair Nayeema Sadeque. The Flinders University Student Branch was reactivated last year, with Damien Tohl as student branch chair. Brian Ng was the Student Activities Coordinator of the SA Section in 2013.

B.5 Affinity Group Activities

South Australia Section has three Affinity Groups: Graduates Of the Last Decade (GOLD), Women In Engineering (WIE) and Life Members Affinity Group (LMAG).

The reports for GOLD and WIE are included in their AGM reports.

LMAG:

LMAG had recently it AGM and the new officers for LMAG are:

Chair Prof Harry Green

V-chair Prof Keith Kikkert

During 2013 LMAG organised the following technical meetings:

6 Feb “Challenges Educating the 21st Century Mechatronics Engineer”
Dr Steven Grainger, School of Mechanical Engineering, University of Adelaide.

27 Feb “Sound Engineering – Engineering Sound, Film & Screen Centre, Glenside”

- Dr Peter Swift FIEAust CPEng, Associate Director – Acoustics, AECOM
(*Joint Meeting EA REG/IET REG*)
- 17 Apr “Hexapod robot site visit”
Dr John Costi, School of Computer Science, Engineering and Mathematics,
Flinders University.
- 6 Jun “Stem Cell Therapy – Hype or Hope” (Partners Lunch)
Professor Andrew C W Zannettino, Head, Myeloma Research Laboratory.
- 7 Aug “Electronic Warfare in the Afghanistan Battlespace”
SQLDR Fernando Gonzalez, Australian Chapter of the Association of Old
Crows Inc.
- 2 Oct “Next Generation Nuclear and the Future of Sustainable Energy”
Prof Barry Brook, School of Earth and Environmental Sciences, Univ. of
Adelaide.
- 6 Nov “What is Sports Engineering?”
Dr Paul Grimshaw, School of Mechanical Engineering, Univ. of Adelaide.

B.6 Awards & Recognition Activities

Continuing its long-standing programs of support to students in SA, the IEEE SA Section awarded three grants in 2013 to research students in support of their travel to present their papers at international conferences.

In addition to this travel, two IEEE SA Section Awards for Excellence in Engineering were presented to students of the three South Australian universities, the awards being presented at the JTP Student Papers Night.

Sincere congratulations for our colleagues for their efforts leading to the establishment of two new chapters Power Engineering and Oceanic Engineering.

A successful year of IEEE SA Section activities was celebrated with the Annual Distinguished Lecture and Dinner at Adelaide Pavilion on 31 October 2013. The event was attended by over 90 members, professional colleagues and guests.

B.9 Other Organizational Activities

PART C – OTHERS

C.1 Relationship with National Societies

The IEEE-SA Section has also a very strong collaboration with our professional colleagues in Engineers Australia, the Institution of Engineering and Technology (IET), and the Telecommunication Society of Australia (TSA) through the Joint Technical Program (JTP) and IET Retired Engineers Group. As part of the IEEE SA Section participation in the Joint Technical Program (JTP) Electrical, the IEEE SA Section hosted 3 of the 12 JTP technical meetings and presentations.

Under 2013 JTP program we've had the following activities:

19th Feb Host EA ****VISIT - Tindo Solar Pty Ltd (Technology Park, Mawson Lakes, Adelaide)**

26th Mar Host IEEE **A Short Discourse on Countermeasures Being Developed for Some Emerging Cyber Threat**

16th April Host EA **** VISIT to SA Power Networks – Network Operational Centre,**

21st May Host IET **The Current State of the Art and Future Trends in Submarine Battery Technologies,**

18th June Host EA Joint Mech **Large-scale Federated Ship Control System of the AWD**

16th July Host TSA **Government initiative for a Public Safety Mobile Broadband Network (PSMBN),**

20th Aug Host EA **Maintenance and Support of the Collins Class Submarine – ISCMMS,**

17th Sep Host IEEE **Phase Arrays and Beyond,**

15th Oct Host IEEE **Luminescence, Ionising Radiation and Archaeological Dating,**

22nd Oct Host IET **STUDENT PAPERS NIGHT,**

19th Nov Host TSA ****VISIT - Bureau of Meteorology Kent Town How do the Bureau Boffins produce a forecast?**

C.2 Special Events

2013 IEEE SA Section Distinguished Lecturer

This year event was presented by Dr Zoz Brooks (host of “RoboNation” and “Prototype This”). The presentation “Where is my Robot Butler?” was delivered 31 October 2013 at the Adelaide Pavilion.

Zoz discussed facts of unmet expectations related to the so-called robot revolution, which largely remained confined to the industrial applications. The “new frontier” can only be achieved through the next generation of engineers and inventors – thus developing the concept of “self-replicating educational machine”.

The members and guests enjoyed great company, a wonderful meal, and the great talk by Zoz Brooks

The Organising Committee would like to acknowledge the help from the robotic teams from The Flinders University and from The University of South Australia for bringing their robotic projects and arranging a small exhibition, where the guests could discuss and appreciate the projects.

C.3 Problems to be anticipated

The Section anticipates that finding young people to be active IEEE volunteers will be one of the biggest challenges that our section is facing in the future. Young members are under huge time pressure from their employees/careers, families and friends and finding time for IEEE volunteering is a challenge.

C.4 Best Practices of your section (which you would like share with other sections for the benefits of members).

It would be an understatement to say that South Australia Section Distinguished Lecturer series is an important part of South Australia IEEE Section calendar providing not only opportunity for social interactions between members but also expanding their horizon beyond electrical and electronic engineering.

PART D - GOALS AND PLANS

D.1 Continuation of Project/Activity in Progress and Their Implementation Plans

The Section will advance its support for TISP project in South Australia. Four Committee members attended Sydney 2013 TISP Workshop and there are plans to organise first TISP SA activities during this year.

Also we will continue to support student members with travel grant awards to support their attendance at the international and national conference to present their papers

D.2 Goals and Future Plans

The Section will support organisation of new chapters to satisfy the interest and requirements of our members.

Mark Pszczel,
Chair IEEE SA Section
25 February 2014
mark.pszczel@ieee.org

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