

WHAT'S HAPPENING IN THE IEEE



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THE NEWSLETTER OF
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC
SOUTH AUSTRALIA SECTION
PO Box 53, Elizabeth, SA 5112

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Chairman's Column

Dear Colleagues

IEEE Region 10

The IEEE R10 Meeting has been postponed to 10-11 Oct 2003. The venue, Penang, is unchanged.

Expressions of interest to host the 2004 R10 meeting have been sought by the R10 Director, Dr. Jung-Uck Seo, Korea. After consultation with the IEEE Australia Council, IEEE SA has expressed interest, with strong support from IEEE VIC, who recently secured the 2005 TENCON. The R10 meeting is usually held in April.

Prof. Takeo YOSHINO, member of the IEEE EMC/S Board of Directors, recently enquired about formation of an EMC/S Chapter in Australia. SA has only 4 active EMC/S members but there are over 200 around Australia, with a concentration in Victoria.

IEEE Australia Council (IEEE AC)

The IEAust Electrical College Board will meet in Adelaide 20 Nov 03 and IEEE SA will represent IEEE AC at this meeting. A visit by the Electrical College Board is a rare event and discussions are being held with IEE about a possible "tripartite meeting" to be held at that time.

Considerable correspondence regarding IEEE DLs has occurred in recent months. One area of IEEE weakness in SA is the lack of a PES Chapter. Other Sections appear to cover this area of engineering better than IEEE SA, although there is no shortage of power engineers in SA! The net result is that there is no easy mechanism for bringing IEEE DLs in this area to SA.

South Australia

I attended a breakfast on behalf of IEEE SA at the invitation of Dr Peter Greenwood, National President IEAust. IEAust SA Division has appointed an Electrical Branch Chair, Andrew Reiter, and a IT&E Branch Chair, Peter Tromans, who will participate in the Electrical JTPC. IEAust is due to Chair the 2004 program, IEEE to provide the Secretary (Andrew Udina) and IEE to provide the Treasurer. The first meeting of the 2004 Electrical JTPC (18 Aug) will have occurred by the time this newsletter is published.

Educational Activities

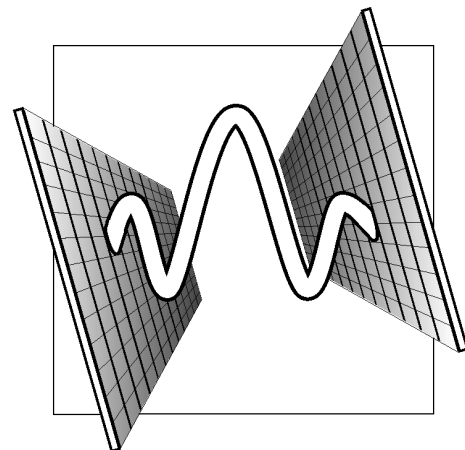
After some discussion, Prof Harry Green, has agreed to investigate some aspects of this portfolio. It is a traditional IEEE portfolio and it has handled in various ways in the past. It has been agreed that the focus will be on

"continuing education" activities in the sense used by IEAust when it refers to CPD or Continuing Professional Development.

In the first instance Harry will investigate the NPER (National Professional Engineers' Register) requirements and processes, which determine the criteria, which activities must meet, in order to qualify as CPD.

Harry's initiative is most timely and I would like to welcome him to the Section Committee and think him for his contribution.

Dr Michael E. Evans
Chair, IEEE South Australia Section
August, 2003



Radar 2003

**Australian International Conference on Radar
Adelaide, Australia, 3-5 September 2003
Sponsored by CSSIP and IEEE SA Section**
www.plevin.com.au/radar

Conference registrations have exceeded 250 and combined enrolments in the four tutorials have exceeded 100. The Buckland Park and Barossa Tours are both very popular. Overseas participation stands at about 40% of the total.

Premier Mike Rann has agreed to open the conference and we are looking forward to an outstanding international event.

Dr Don Sinnott
General Chair, RADAR 2003

Section Committee Officers for 2003

Chair:	Dr Michael Evans michael.evans@ieee.org
Vice Chair:	Dr Zia Ahmed Zia.ahmed@ieee.org
Secretary:	Dr Tim Ferris timferris@ieee.org
Treasurer:	Dr Andrew Piotrowski andrew.piotrowski@ieee.org
IP Chair	Dr Bevan Bates bevan.bates@ieee.org
Membership Development	Andrew Udina andrew.udina@dsto.defence.gov.au
Professional Activities	Bruce Vyden Bruce.vyden@dsto.defence.gov.au
Awards	Dr Zia Ahmed
Educational Activities	Prof. Harry Green (<i>pro tem</i>) harry@spri.levels.unisa.edu.au
Publications	Dr Andrew Piotrowski
Chair SP/Comms Chapter:	Dr Peter Shoubridge peter.shoubridge@dsto.defence.gov.au
Chair AP/MTT Chapter:	Dr Hedley Hansen hedley.hansen@dsto.defence.gov.au
Chair C/AES Chapter:	Dr Mark Pszczel mark.pszczel@dsto.defence.gov.au
Chair Computer Chapter:	Dr Fred Brown fred@cs.adelaide.edu.au
Chair IT Chapter (SA/ACT)	Dr Alex Grant alex.grant@unisa.edu.au
UofSA Student Branch:	Nimrod Lilith nimrod.lilith@postgrads.unisa.edu.au
Branch Counsellor	Dr Kutlu Dogancay kutluyil.dogancay@unisa.edu.au
UofAdelaide Student Branch:	Leonard Hall lthall@eleceng.adelaide.edu.au
Branch Cousellor:	Brian Ng bwng@eleceng.adelaide.edu.au

Membership

	31 June 02	31 June 03
Members	277	280
Senior Members	29	30
Fellows	1	2
Affiliates/Others	49	37
Students	58	84
TOTAL	414	433

Have you ever wondered just how many members there are world wide in the IEEE? As of June 2003 the membership totalled 330,923, a 16,509 decline since the same time last year. As SA section's membership numbers have increased we are doing well in comparison to the global trend.

As may be seen our membership has risen by 19 members overall. Whereas the member numbers have remained reasonably static, the student members have increased appreciably. This goes against the world trend where

student membership has dropped by 6.8%. This also goes against IEEE headquarters reports where they state that Region 10 shows the biggest student declines and have historically had the worst student retention rates.

Andrew Udina, Membership Development

Section Count Hits All Time High

For the first time, the IEEE has more than 300 Sections -- 301 to be exact -- thanks to three recently formed in Taiwan and Russia. Find out more at http://www.theinstitute.ieee.org/inst_art.jsp?isno=07031&arnumber=07031_7w.newssections§ion=41

2003 IEEE Distinguished Lecture

Mr Ric Smith, Secretary of Defence, will deliver the 2003 IEEE South Australia Section Distinguished Lecture. The lecture and dinner is scheduled for, Friday, 21 Nov 03.

A formal title is yet to be agreed but Secretary Smith has been invited to address his "impressions of [his] new post, in relation to what the future holds for Defence, and in particular [his] vision of the role of DSTO within this future," with "special reference ... to the DSTO South Australia context: electronics/IT, DSTO, defence industry"

It will be apt timing after nearly 12 months in the position for the Secretary to reflect on this subject, and we look forward to his address.

Dr Michael E. Evans

Chapter News

Antenna Propagation Microwave Theory & Techniques Chapter

The Section Committee has agreed to provide additional support for a one-day HF Radar course *HF Surface Wave Radar: Modelling and Simulation* by Prof Levent Sevgi, T.C.Dogus University, Istanbul, Turkey, to be delivered 9 Sep 03, adjacent to the RADAR 2003 conference.

The course is open (at no charge) to all interested professionals and will be held in the Willoughby Room, Department of Electrical and Electronics Engineering, at the University of Adelaide.

Dr Hedley Hansen, Chair, AP/MTT Chapter

Control, Aerospace and Electronic Systems Chapter

Peter Nikoloff, Nova Aerospace, and Dr Takeshi Ohnuki, NAL, Japan, delivered "*NEXSTI - Launch Incident Investigation*", on 30 June.

Dr Franklin Chang-Diaz, (NASA scientist), "*Plasma Thrusters, a NASA ANU Collaboration*" is scheduled for 21 Aug 03 (DSTO).

Dr Randii Wessen, (AIAA DL), will deliver "*Future of US Planetary Exploration*" 4 Sep 03.

Prof. Bob Bitmead, (IEEE CSS DL) "*Model Predictive Control, State Estimation and Coordinated Vehicles*" is scheduled for 29 Oct 03.

Dr Hugh Stone has been invited to deliver a lecture on his *T-Wing UAV Project* (a tailsitter) towards the end of September. The date is yet to be agreed.

Dr Mark Pszczel, Chair, CAES Chapter

Information Theory Chapter

IT Society DL Prof. Ezio Biglieri from Politecnico di Torino presented the lecture "*Multiple antenna transmission and reception: Capacity considerations, signal processing, and space-time code design*" in Adelaide, Melbourne, and Canberra, attended by about 50 in each location. This was co-advertised with the Communications and Signal Processing Chapters in each state.

Dr Alex Grant, Chair, IT Chapter
<http://www.informationtheory.net>

Computer Society Chapter

The CS chapter had its first technical meeting of the year on the 22nd of July. Dr Alex Farkas presented a seminar entitled: "High Confidence Security Engineering".

Dr Fred Brown, Chair, CS Chapter

U. of South Australia Student Branch

- Our annual general meeting will be on 29th August at 10am, with a BBQ following at 12pm aimed at getting undergraduate exposure.
- Nimrod Lilith will be presenting a seminar on C programming for Matlab in late September/early October.

Our website is currently undergoing maintenance and will be up and running again week ending Friday 22nd August.

Nimrod Lilith, Chair U. of SA Student Branch

IEEE GOLD - Young Professionals

IEEE SA GOLD Affinity Group at DSTO is organizing a talk by Gordon Frazer from ISR Division. The topic of the talk will be "How to successfully manage your career" on 10 November 2003 at 12.00. The talk is open to everyone and is followed by pizza lunch.

If you are an IEEE member who graduated with your first professional degree within the last ten years, you are automatically part of **IEEE GOLD!**

IEEE recognizes that you are a key to the future of the technical profession. IEEE GOLD can empower you to make the most of your developing career and to help you find your place in the world of technology. Make a

connection with your peers and colleagues - a GOLDen opportunity awaits you!

If you want to take part in this GOLDen action contact: Andrew on Andrew.Piotrowski@ieee.org or Sebastien on Sebastien.Wong@dsto.defence.gov.au

NEWS

UNIVERSITY OF SOUTH AUSTRALIA
POSTGRADUATE RESEARCH SCHOLARSHIPS
TELECOMMUNICATIONS RESEARCH
<http://www.itr.unisa.edu.au/>

THE CUTTING EDGE OF COMMUNICATIONS RESEARCH

The Institute for Telecommunications Research (ITR) is one of Australia's foremost research organisations specialising in technology for digital wireless communications, both fixed and mobile satellite and terrestrial radio services. ITR is a core partner in the CRC for Satellite Systems, and leads the Satellite Communications Research Program in that CRC. The Institute has a reputation for finding elegant solutions to complex telecommunications problems.

We invite applications for postgraduate scholarships, leading to the MEng or PhD, from highly motivated students who expect to obtain a 1st Class Honours degree in 2003, or who have previously completed an honours degree and have some work experience.

ITR has an excellent research environment, extensive commercial linkages, international exchange programs, scholarships and top-ups and offers an opportunity to be part of an organisation supporting development of Australia's telecommunications future.

Women are encouraged to apply.

Information: Sonia Watts: Student Support Officer,
tel: +61 8 8302 3890, fax: +61 8 8302 3873,
email: sonia.watts@unisa.edu.au

Closing date: Applications for Australian students will be received up to 31st October 2003

IEEE Region 10

Region 10 publishes a newsletter, which may be found in electronic form on the IEEE Region 10 home page, <http://www.ewh.ieee.org/reg/10/>. There are a number of student and other awards that are available through Region 10 so the website is well worth a look.



Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications
30 August - 2 September, 2004, Sydney
<http://www.isssta2004.org>



5th Biennial Asian Control Conference
Melbourne, 20-23 July 2004
Sponsored by IEEE (SA, NSW, QLD), IEAust, U. of Melbourne
<http://ascc2004.ee.mu.oz.au>

Second Call for Papers

The Asian Control Conference (ASCC) is a biennial event and the major control conference held in Asia. The 5th ASCC is being held at the Grand Hyatt in Melbourne Australia, 20-23 July 2004 and will provide professionals, researchers and engineers worldwide with excellent information exchange opportunities. The conference consists of a four-day program, beginning with a workshop day followed by a three-day conference program, which includes international plenary speakers, poster sessions, workshops, and industry exhibits. The Grand Hyatt Melbourne located in the heart of Melbourne's CBD provides a first class meeting and exhibition venue with delegate accommodation provided.

JOINT TECHNICAL PROGRAM 2003 - Electrical and Electronic Engineering

- 16th September
Host IEE **WIND GENERATION IN SOUTH AUSTRALIA**
Mr Paul Driver, Customer Development Manager, and Mr Mark Denton, Project Manager Starfish Hill Project, ETSA Utilities. A look at the new Starfish Hill wind generation plant on the Fleurieu Peninsula and associated connection to the SA electricity system.
- 21st October
Host IE Aust (Elec Branch) **5:30 PM VISIT: P3C ORION FLIGHT SIMULATOR**
FltLt Doug Hogg, Operational Mission Simulator, and SQNLDR Colin Smith, Advanced Flight Simulator, RAAF. The P3C Orion has undergone a mid-life refit, with the upgrading of the avionics, navigation, and radar systems. Watch the simulator go through its paces on an "operational mission". To register, please RSVP to sa@ieaust.org.au.
- 28th October
Host IEE **STUDENT PAPERS NIGHT**
Students from our three universities present their final year projects whilst competing in the IEE Australasian Student Prize Competition. IEEE Student Subject prizes will also be presented at this meeting.

Chapman Hall, Engineering House, 11 Bagot Street, North Adelaide, Light tea commences at 5:30 pm and the meeting at 6:15 pm

Conference Schedule

Date	Conference	City	Website
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The 5th ASCC will build on the success of previous conferences in Tokyo, Seoul, Shanghai, and Singapore.

Topics of interest are in the broad area of control and automation ranging from industry applications to theoretical advances and include:

- System Theory
- Nonlinear Control
- Multivariable Control
- Fuzzy, Neural Systems
- Mechatronics
- Process Control Systems
- Aerospace
- Linear Control
- Optimal Control
- Fault Detection
- Simulation and Control CAD
- Robotics and Motion Control
- PID Control
- Adaptive Control and Tuning
- Predictive Control
- Hybrid, Supervisory Systems
- Guidance and Navigation
- Measurement and Sensing
- Automotive Control
- Robust Control
- Intelligent/Learning Control
- Discrete Event Systems
- Signal Processing
- Manufacturing Systems

Conference Committee:

- Co Chair Prof. Iven Mareels FIEEE, U. Melbourne
- Prof. Rob Evans FIEEE, U. Melbourne
- Program Co Chair
- Prof Rick Middleton FIEEE, U. Newcastle
- Dr Dragan Nescic SMIEEE, U. Melbourne
- Finance Chair, Dr Michael Evans SMIEEE, DSTO
- Publications Chair
- Dr Michael Cantoni MIEEE, U. Melbourne
- Industry Liaison Chair, Dr Sam Crisafulli, FIEAust
- Tutorials Chair, Prof Vikram Krishnamurthy SMIEEE, U. Melbourne
- Local Arrangements Chair
- Dr Francesco Crusca, MIEEE, Monash U.
- Education Workshop Chair
- Assoc.Prof. Ljubo Vlacic SMIEEE, Griffith U.

Authors are invited to submit papers electronically via <http://ascc2004.ee.mu.oz.au>.

For more information regarding the ASCC2004 please visit the website at <http://ascc2004.ee.mu.oz.au>.

3-5 September, 2003	Australian International Conference on Radar (RADAR 2003)	Adelaide	http://www.plevin.com.au/radar
20-23 July, 2004	5th Biennial Asian Control Conference	Melbourne	http://ascc2004.ee.mu.oz.au
30 August - 2 September, 2004	8th IEEE International Symposium on Spread Spectrum Techniques, Applications (ISSSTA)	Sydney	http://www.isssta2004.org
4-9 September, 2005	IEEE International Symposium on Information Theory (ISIT)	Adelaide	http://www.informationtheory.net/conference