

# 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

AUGUST 2002

ARBN 078 576 495

[http://ewh.ieee.org/r10/s\\_australia/](http://ewh.ieee.org/r10/s_australia/)

## Chairman's Column

### Australian IEEE Information Theory Chapter

The future of the Information Theory Chapter has finally been resolved. Established in 1999 as a Chapter within the IEEE ACT Section, it has now been expanded to be a Chapter of the joint Sections SA/ACT reporting administratively through South Australia. There is provision within IEEE rules for this arrangement but it is the first time this mechanism has been employed within Australia. Further negotiations are underway to see if the remaining IEEE Sections are happy to join the coalition so that the Australian IT Society community can function as they always have, namely as a national group.

After a period of false starts and blind alleys this is an excellent result for the IEEE Information Theory community and an excellent result for South Australia. The IT Chapter now can get on with its business, and on behalf of the SA Section Committee I would like to welcome the new Chapter and its current chair Dr Alex Grant [Alex.Grant@unisa.edu.au].

### IEEE SA Annual Distinguished Lecture

The addition of an *IEEE SA Distinguished Lecture* to the annual calendar of IEEE sponsored events has long been a "gleam in the eye" of the SA Section Committee. At the most recent meeting of the SA Section Committee it was agreed that the Section's financial position was such that it is now feasible to support such an activity into the longer term at a level which will enable the Section to invite a suitable speaker from anywhere in Australia.

Bruce Vyden has agreed to coordinate the arrangements and the event will be a lecture and dinner, on Friday 22 November 02, at the Boulevard Room, Stamford Plaza on North Terrace. Negotiations with the speaker are at an advanced stage and the details of the speaker and topic will be released closer to the time. The event will be open to members and their partners in the first instance and invitations will be issued to representatives of some other professional associations.

Please remember the date ... Friday, 22 November 02. Put it in your diary now !!

### IEE/IEEE/IEAust Memorandum of Understanding - "The Tri-Partite Agreement"

The IEEE Australia Council has agreed a revised MOU for the Tri-partite agreement (IEEE/IEAust/IEE MOU). All issues of concern previously reported have been addressed and resolved, and the MOU has been forwarded to IEEE for

concurrence before being presented to the MOU partners for consideration.

### Student Activities

A meeting and BBQ for students was organised at Flinders University on 8 August as part of a student membership drive to establish an IEEE Student Branch meeting. Sherry Randhawa coordinated all the arrangements and numbers of students signed up for student membership.

Michael Evans

### Section Committee Officers for 2002

*Chair:* Dr Michael Evans  
michael.evans@ieee.org  
*Vice Chair:* Dr Miro Kraetzel  
miro.kraetzel@dsto.defence.gov.au  
*Secretary:* Dr Tim Ferris  
timferris@ieee.org  
*Treasurer:* Dr Andrew Piotrowski  
andrew.piotrowski@ieee.org

Membership Development	Andrew Udina andrew.udina@dsto.defence.gov.au
Awards	Dr Miro Kraetzel
Education	vacant
Technical Activities	Dr Michael Evans
Publications	Dr Andrew Piotrowski

Chair SP/Comms Chapter:	Dr Peter Shoubridge peter.shoubridge@dsto.defence.gov.au
Chair AP/MTT Chapter:	Dr Andy Kulesa andy.kulesa@dsto.defence.gov.au
Chair C/AES Chapter:	Dr Mark Pszczel mark.pszczel@dsto.defence.gov.au
Chair Computer Chapter:	Dr Thong Nguyen thong.nguyen@dsto.defence.gov.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 Counsellor	Andrew Allison aallison@eleceng.adelaide.edu.au

## Membership

	7 Jul 01	7 Jul 02
Members (all grades)	316	322
Affiliates	50	52
Students	75	58
TOTAL	441	432

### Senior Members

Have you reviewed the requirements for Senior Membership of IEEE recently? You may well qualify and it doesn't cost you anything to achieve this additional recognition of your seniority in the profession.

IEEE is currently encouraging MIEEE's to review their eligibility for SMIEEE. In fact there is a bounty !!! It is known as the "2002 Nominate a Senior Member Initiative " and each successful elevation is worth USD10 to the Section. If you are interested in following this up, please start at <http://www.ieee.org/ra/md/sinitiative.html>.

## Awards

### IEEESA Travel Grant

The Section has already provided two awards (of \$1000) this year under this "Travel Grant" program intended to assist students and others to deliver conference publications at overseas venues.

Julija Tovirac attended WOC2002, held in Banff (Alberta Canada), 17-19 July 2002, and delivered her paper, "A Simulation Study of P\_Mul Multicasting Protocol Enhanced by Ideal FEC Code", co-authored with W. Zhang.

Lei Chen will attend the 11th IEEE Conference on Control Applications (CCA2002) to be held in Glasgow, Scotland, 18-20 September 2002, and will deliver two papers,

"Nonlinear Active Vibration Absorber Design for Flexible Structures", co-authored with F. He, K. Sammut, T. Cao

"Variable Structure Observer Design in Matrix Second-Order Formulation for Linear & Nonlinear Vibrating Systems using Velocity Measurements", co-authored with T. Cao, F. He, K. Sammut

## Technical Activities

### Joint Technical Program 2002

The IEEE SA Section shares the responsibility for a Joint Technical Program with the Institution of Engineers Australia (IEAust), the ITEE Society of IEAust, and the Institution of Electrical Engineers. The program consists of monthly meetings and visits on a range of topics. IEEE is hosting the 17 September meeting:

RESEARCH DIRECTIONS IN THE KNOWLEDGE-BASED INTELLIGENT ENGINEERING SYSTEMS CENTRE

Dr Noel Martin, Adjunct Professor KES Centre, University of SA.

Research and projects undertaken by the KES Centre using hybrid intelligent techniques.

The Student Paper Night, has been delayed by one week and will now be held on 29 Oct 02.

The JTP program is available on the SA Section website at [http://ewh.ieee.org/r10/s\\_australia/](http://ewh.ieee.org/r10/s_australia/).

### Asian Control Conference 2004

Prof. Iven Mareels FIEEE, U. of Melbourne (together with Prof. Rob Evans) has successfully bid for AsCC 2004 (Asian Control Conference). This is a biennial 500+ delegate event and IEEE SA has been invited to co-sponsor the event.

The usual timing of the event is July and it is unlikely to be held in either Adelaide or Melbourne because of the weather!! There is a good chance that Brisbane or the Gold Coast will be the preferred venue.

There is a Chapter of the Control Society (Control Robotics and Automation) in the Queensland Section (Ljubo Vlacic, founding Chair) Likewise SA has a Control Chapter (with Aerospace&Electronic Systems). These are the only chapters of the Control Society in Australia.

For the event to be held within the IEEE Queensland Section (and under IEEE co-sponsorship) it is formally necessary for the IEEE Queensland Section to endorse this, regardless of whether the Section has a financial interest.

*Michael Evans*

*Finance Chair AsCC 2004*

### Information Theory Conference 2005

The Australian Information Theory Chapter has successfully bid for the major annual IEEE conference in Information Theory. The conference will be held in Adelaide and attracts 700+ delegates. It will be the largest event of its kind that the IEEE SA Section will have been involved with since ICASSP 94. For such a small community this is an outstanding accomplishment.

### IEEE ComSoc Distinguished Lecturer Prof. Lajos Hanzo, University of Southampton

ADAPTIVE CODING AND TRANSMISSION  
PARADIGMS FOR WIRELESS CHANNELS:  
TURBO CODING,  
TURBO EQUALISATION AND SPACE-TIME  
CODING

Wednesday 4th September 2.50pm  
Room GP1-08 Building GP  
University of South Australia  
Mawson Lakes

Contact: P. Shoubridge  
[[peter.shoubridge@dsto.defence.gov.au](mailto:peter.shoubridge@dsto.defence.gov.au)]

### HyShot: The Australian Scramjet Dr Allan Paull, University of Queensland

In the first public presentation since the recent successful Hyshot launch, Dr Allan Paull, gave an outstanding presentation of the Hyshot program to a capacity audience in the Scot Allison Theatre at DSTO. 40 latecomers were disappointed to be turned away! Dr Sook-Ying Ho, WSD, chaired the meeting and

Dr Paull provided an entertaining and informative review of both the failed Hyshot launch in 2001 and the successful recent firing. Very high quality data was obtained from both launches and the scientific output of the recent firing significantly exceeded expectations.

WSD staff carried out the role of capturing telemetry data from the scramjet payload during flight. DSTO also lent its support to the Hyshot program through CWSD's interaction with Senior Defence staff and appraisal of the defence's interest of this work when the program sought governmental and Defence assistance. WSD is currently developing a detailed 3-5 year plan to further hypersonics research.

Dr Paull also spoke to a second audience (in excess of 80 attendees) at the University of Adelaide, which included a number of leading figures of South Australia's aerospace activity. Dr Ian Tuohy, Chair IEAust NC Space Engineering, Michael Davis who chaired the successful bid to secure for Adelaide the 2004 International Space University(ISU), and John Hisco of DECS who runs the Space School for secondary school students attended and all of the professional associations were well represented. The

meeting was chaired by Les Sheppard, formerly RL of WSD, on behalf of the AIAA Adelaide Section Steering Committee.

Both meetings were co-sponsored and financially supported by IEEE CAES Chapter (Dr Mark Pszczel, WSD, Chair) and both occasions were used to announce the recent decision by the Faculty of Engineering at the University of Adelaide to establish an Aerospace Engineering degree program to commence in line with the 2004 ISU. The ISU is an intensive 9 week residential course and this will be the first course to be held in the southern hemisphere.

This was the third occasion since 1999 on which Dr Paull has provided progress reports on the Hyshot program in Adelaide under the joint sponsorship of IEEE/CAES and AIAA, and this latest jointly sponsored lecture represents a continuation of a longstanding and fruitful collaboration in South Australia between IEEE and AIAA in the aerospace area.

*Mark Pszczel  
Chair, IEEE CAES Chapter*



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## ANNOUNCEMENTS

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### IEEE TENCON 2003

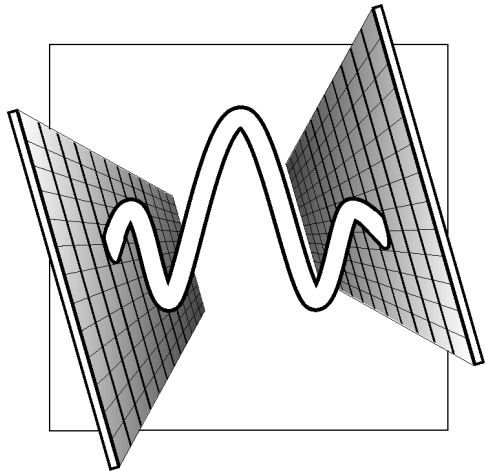
OCTOBER 14 – 17, 2003 BANGALORE, INDIA

*CALL FOR PAPERS*

IEEE Region 10 Technical Conference on  
Convergent Technologies For The Asia-Pacific

IEEE TENCON 2003 is the 18<sup>th</sup> Annual International Technical Conference of IEEE Region 10, which will be held during 14-17 October 2003, at Bangalore, India.

Tel no: 080-3942509 Email-id: [tencon@ee.iisc.ernet.in](mailto:tencon@ee.iisc.ernet.in) Fax: 91-080-3600444, 3600683



# **Radar 2003**

**Australian International Conference on Radar  
Adelaide, Australia, 3-5 September 2003  
Sponsored by CSSIP and IEEE SA Section  
Call for Papers**

Australia has now joined the five-nation series of annual international radar conferences. This series involves the US, UK, China, France and now, Australia. The conference for 2002 is being hosted by the UK in Edinburgh over the period 15-17 October 2002 and the Australian conference will continue the annual series with its event 3-5 September 2003, to be held in Adelaide, South Australia.

Radar 2003 will cover all aspects of radar systems for civil, security and defence applications. Tutorials are being planned in a number of fields of radar technology.

Topics to be covered at Radar 2003 include (but are not confined to):

Radar Systems, Dual-Use/Civil Applications, Antenna and Component Technology, Radar EW, Environment and Phenomenology, Processing Techniques, Emerging Technologies, Computer Modelling, Radar Simulation, Electromagnetics

## **Conference Organising Committee**

Appointments are currently being made to the organising committee. Current appointments are as follows.

Professor Don. Sinnott, CSSIP (General Chairman)  
Dr Bevan Bates, DSTO (Technical Program Chairman)  
Dr Michael Evans, DSTO (Finance Chair)  
Dr Kutlu Dogancay, U of SA (Publication)  
Dr Anthony Szabo (Local Arrangements)

For initial inquiries and to register for receipt of the call for papers refer to the Conference General Chairman, Professor Don Sinnott, e-mail [don.sinnott@ieee.org](mailto:don.sinnott@ieee.org). The website is [www.cssip.edu.au/conferences/radar](http://www.cssip.edu.au/conferences/radar).



UNIVERSITY OF SOUTH AUSTRALIA

## **POSTGRADUATE RESEARCH SCHOLARSHIPS**

**INSTITUTE FOR TELECOMMUNICATIONS  
RESEARCH**  
*EXPLORE THE CUTTING EDGE OF COMMUNICATIONS  
RESEARCH*

The Institute for Telecommunications Research (ITR) is one of Australia's foremost research organisations specialising in world class research and postgraduate studies in the applications of coding, signal processing and protocol engineering in the areas of satellite communications, mobile radio systems and networks. ITR is a core partner in the CRC for Satellite Systems, and leads the Satellite Communications Research Program in that CRC.

We are currently inviting applications for postgraduate scholarships, leading to the award of MEng or PhD, from bright, highly motivated students who expect to obtain a 1st Class Honours degree in 2002, or persons who have previously completed an honours degree and have some work experience.

Women are encouraged to apply.

**Visit our website on:**

<http://www.itr.unisa.edu.au/>

For further information contact Ms Sonia Watts:  
Student Support Officer, on telephone: +61 8 8302 3890, facsimile: +61 8 8302 3873,  
email: [sonia.watts@unisa.edu.au](mailto:sonia.watts@unisa.edu.au)

## **Closing dates:**

Applications for Australian students will be received up to 28th October 2002

## **ADVANCE NOTICE IEEE-SA ANNUAL GENERAL MEETING**

The South Australia Section of the IEEE will be holding its Annual General Meeting on **Friday, 22 November 2002**, at Stamford Plaza North Terrace.

The AGM will commence promptly at 6:00pm and will precede the inaugural **IEEE SA Distinguished Lecture and Dinner** to be held in the Boulevard Room, Stamford Plaza.