WHAT'S HAPPENING IN THE IEEE

Chairman's Column

Dear IEEE members,

With the start of a new year there is a new IEEE SA Section Committee with me as the new Chairperson. My predecessor, Dr Michael Evans has left the Section in a very healthy state. The Section is in a sound financial position and continues to maintain a high profile not only in Australia but also in Region 10. Over the past three years Dr Michael Evans and his team of volunteers initiated some noteworthy activities such as Annual Distinguish Lecture and Dinner programs and refinements to the Travel Awards scheme. Under Dr Michael Evan's leadership we were declared the Outstanding Small Section for 2003 by the IEEE Regional Activities Board. This was indeed a major achievement by the previous committee. With an enthusiastic new Section Committee I hope to continue this momentum and will do our best to continue to serve our members by contributions to the Joint Technical Program, Chapter and Student Branches activities, the travel grant scheme and the IEEE SA Distinguished Lecture/dinner program. In this endeavour the Section needs your support and I therefore invite you to get involve with the Section and chapter activities. If you are interested in serving on the committee, please do get in touch with me. The Section Committee relies on new volunteers, and new ideas to keep IEEE in South Australia a vibrant Section.

A main significant event for this year will be the twentieth anniversary of IEEE SA. The IEEE South Australia Section was chartered on the 23rd of August 1985. The Section Committee will be working on various ideas to celebrate this occasion appropriately. If you have any suggestions please do send them to the Secretary, Dr Steven Gordon.

There are some areas where we need to lift up our activities. One such area is the Computer Chapter where owing to lack of technical activities there is a real danger for the Chapter to be closed down by the IEEE HQ. Unfortunately the Computer Chapter failed to hold any technical meeting in 2004. In order to survive a Chapter must hold minimum of two technical meetings every year to actively serve its members. Just like for all IEEE activities, the Computer Chapter needs some dedicated members to come forward as volunteers. I hope with the Computer Chapter being the largest chapter in South Australia Section we should be able to keep this Chapter alive.

Dr Zia Ahmed
Chair, IEEE South Australia Section

Our newest Fellow
Dr Derek Abbott FIEEE

Derek Abbott received a B.Sc(HONS) in physics from Loughborough University of Technology, U.K. in 1982 and a Ph.D in EEE from The University of Adelaide in 1997. Both degrees were obtained the long way whilst working! From 1978-1986 he worked at the GEC Hirst Research Centre, Wembley, U.K., in the pioneering days of CCD image sensors. There he also worked in the areas of VLSI, semiconductor device physics and device noise, vacuum microelectronics ("cold emission"), silicon-on-sapphire and development of the then "advanced" 1.5 μm CMOS process. He then migrated to Adelaide, working for Austek Microsystems in 1986-1987 where he worked on CMOS image sensor and microcode ROM design. In 1987, he joined the EEE department of The University of Adelaide where he is now currently an associate professor. There his interest in imaging expanded to include the infrared, millimetre-wave and terahertz (T-ray) regimes. In 1999, he pioneered Australia's first T-ray imaging program, with important applications in the area of biosensing. His interest in device noise expanded to investigating a range of stochastic phenomena, using information-theoretic and seminal game-theoretic techniques. He pioneered Australia's first *stochastic resonance* program, and his group has made novel contributions in the field of computational neurodynamics. Due to fact that both Dr Abbott's major programs converged on significant biological applications, he is also currently the director of Adelaide's Centre for Biomedical Engineering (CBME). This direction was profoundly influenced by role model giants such as Eric Willoughby, Bruce Davis, Bob Bogner, Andrew Downing, Kamran Eshraghian, Jag Mazumdar and Nanda Nandagopal who all performed original work in applying engineering and mathematical techniques to biological problems, at various times, within the EEE Department at The University of Adelaide. Dr Abbott currently holds over 90 journal articles/patents. He won the 2004 *Young Tall Poppy Award* for science and the 2004 premier's *SA Great Award* in science and technology. He has been a guest editor of IEEE SOLID-STATE CIRCUITS and is currently a guest editor of PROCEEDINGS OF THE IEEE. Dr Abbott's favourite motto is: "You can hold more sand in an open palm than in a clenched fist."

AP & MTT Chapter

The Chapter held a meeting to discuss activities at the beginning of February. At this stage two events are planned.

1) The chapter is hosting Prof Maria Stuchly, a distinguished IEEE lecturer and she will be presenting a lunchtime seminar entitled "antenna-the human interaction" in the Flory Theatre, University of Adelaide on 11 April.

2) The chapter is again planning to host a competition award for young engineers who have completed RF engineering projects, for the second half of the year. Last year, this competition was held on 17th December where entrants exhibited projects at the DSTO sponsored Terahertz Workshop's venue at the Adelaide University. The winning project, judged to be the best technical contribution within the technical areas covered by the Antennas and Propagation or the Microwave Theory and Techniques Societies, was entitled "Design of a Pre-Emptive Null-Steering Ionosonde and its use to investigate capacity of Multiple-Input Multiple-Output (MIMO) wireless communication systems operating in the HF band" by Nigel Brine.

Hedley Hansen
Chairperson, AP & MTT Chapter

Student Branch, University of South Australia

On a nice sunny day (2nd of March) the IEEE UniSA Student branch held a promotional BBQ at Mawson Lakes Campus. The tasty snags along with the drinks and ice cream attracted over 100 students on the relatively unpopulated campus. According to the Student Branch Chair the success of this event has encouraged the branch to plan for an increasing number of events this year, which could include but are not limited to seminars and probably another BBQ.

Information Theory Chapter
A Joint SA/ACT/Vic/NSW Sections Chapter

Committee Members:

Chair:	Lars K. Rasmussen, University of South Australia
Vice Chair:	Rodney Kennedy, Australian National University
Secretary:	Jamie Evans, Melbourne University
Treasurer:	Alex Grant, University of South Australia
NSW Rep:	Sam Reisenfeld, University of Technology, Sydney

The chapter was involved in organising the sixth Australian Communications Theory Workshop held in February 2005 in Brisbane, which again was a huge success. Over 120 researchers/students attended. University of Queensland, University of South Australia, Agere Systems, Cohda Wireless, EM solutions, and NICTA sponsored the event. This time the IEEE joint IT Chapter was a technical sponsor, which means that papers from the workshop will be available on IEEE Xplorer.

Furthermore, the organization of the International Symposium on Information Theory 2005 to be held in Adelaide Sept. 4 - 9, is progressing. The event will take place in the Adelaide Convention Centre, and is expected to attract 700-800 delegates. The paper submission deadline was January 30, and almost 700 papers were submitted, with USA having most submission, followed by Japan, Canada and Australia as number 4!!

A conference on Ultra-wideband Communications will be held in the second week of December 2005 at University of Technology, Sydney where A/Prof. Sam Reisenfeld will be the Technical Chair.

ARC Communications Research Network

Students at University of South Australia (Mawson Lakes Campus) were recently treated with a superb BBQ organised by the local Student Branch.

The successful bid for the ARC Communications Research Network (ACoRN) is a boost for the profile and recognition of Australian research excellence within the areas of telecommunications. ACoRN was awarded $1.5M over five years by the ARC, and together with pledged funding from participating organizations, the annual budgets are now in excess of $500K. The network is to be administered by the University of South Australia, and led by Professor Lars Rasmussen (who is also the IEEE Information Theory Joint Chapter Chair).

ARC research networks are new platforms designed to bring together researchers at the forefront of their fields of expertise to share their knowledge in interdisciplinary settings, to collaborate and to work together for the benefit of the nation's future. ACoRN brings together an impressive network of more than 120 esteemed researchers working in the field of information and communication technologies both nationally and internationally. By building on a strong platform of existing research excellence, the network aims to inspire new collaborative initiatives in emerging wired and wireless communications. The four core themes of research of the network are:

- Mobile and Wireless Data Communications
- Rural Communications
- Broadband and Optical Fixed Networks
- Fundamentals of Emerging Media

The network supports nation-wide collaborative research by consolidating existing linkages, facilitating multidisciplinary research, establishing new links, improving postgraduate education and increasing international prominence. Four complementing programs of activities are formulated to achieve these objectives, namely the Researcher Mobility Program, The National and International Workshops and Conferences Program, the Postgraduate Education Program, and the Knowledge Management Program.

There are already opportunities for current ACoRN participants (including students) to obtain support for attending local and international workshops. ACoRN is also open to new researchers joining, as well as organisations interested in fostering and working with the local telecommunications research community.

For further information on ACoRN, see the web site, www.acorn.net.au, contact the Network Convenor, Professor Lars Rasmussen (Lars.Rasmussen@unisa.edu.au), or attend a local information session:

ACoRN Information Session

Tuesday 22 March at 3:30pm

Lakeview Room, Technology Park Conference Centre

Mawson Lakes

Position Vacant – Newsletter Editor

There is an open position on the IEEE SA Section Committee for the 2005 Newsletter Editor. The role of the Editor is to: actively seek articles from members, IEEE and the wider press; prepare the newsletter (using the supplied Microsoft Word template); and organise the distribution (online and hardcopy). Initial assistance will be given by the past Newsletter Editor, as well as other committee members. If you are interested in volunteering your time to produce the Newsletter, please contact Dr Steven Gordon, s.gordon@ieee.org.

Upcoming Australian Conferences

EmNetS-II
2nd IEEE Workshop on Embedded Networked Sensors
Sydney, 30-31 May

ICITA 2005
International Conference on IT and Applications
Sydney, 4-7 July

INDIN 2005
3rd IEEE International Conference on Industrial Informatics
Perth, 10-12 August

TABLETOP 2005
IEEE International Workshop on Horizontal Interactive Human Computer System
Adelaide, 22-24 August

ISIT 2005
IEEE International Symposium on Information Theory
Adelaide, 4-9 September

APCC 2005
11th Asia-Pacific Conference on Communications
Perth, 3-5 October
Paper Deadline: 1 April 2005

LCN 2005
30th IEEE Conference on Local Computer Networks
Bondi Beach, 15-17 November
Paper Deadline: 10 May 2005

IEEE TENCON 2005
IEEE Region 10 Technical Conference
Melbourne, 21-24 November
Paper Deadline: 15 May 2005

ATNAC 2005
Australian Telecommunications, Networks and Applications Conference
Melbourne, 22-24 November

For all IEEE conferences see:
http://www.ieee.org/conferencesearch/

IEEE SA SECTION COMMITTEE 2005

Chair
Dr Zia Ahmed (zia.ahmed@ieee.org)

Vice Chair
Assoc. Prof. Arek Dadej (Arek.Dadej@unisa.edu.au)

Secretary
Dr Steven Gordon (s.gordon@ieee.org)

Treasurer
Mr. Andrew Udina (andrew.udina@ieee.org)

Immediate Past Chair
Dr Michael Evans (Michael.Evans@ieee.org)

Chapters/Affinity Groups

C&SP Chapter Chair: Dr John Asentorfer
(John.Asentorfer@dsto.defence.gov.au)

AP/MTT Chapter Chair: Dr Hedley Hansen
(hedley.hansen@dsto.defence.gov.au)

CAES Chapter Chair: Dr Michael Evans
(Michael.Evans@ieee.org)

Info Theory Chapter Chair: Prof. Lars Rasmussen
Lars.Rasmussen@unisa.edu.au

GOLD Chair: Dr Andrew Piotrowski
(Andrew.Piotrowski@ieee.org)

Computer Chapter Chair: *Vacant*

Professional Activities

Joint Tech Program	Mr. A. Udina & Dr Leigh Powis
Liaison (External)	Zia Ahmed, Michael Evans and Bevan Bates, Andrew Parfitt

Education Activities
Prof. Harry Green (hgreen@ieee.org)

Publication

Newsletter	*Vacant*
Web site	Mr. Damon Couper (damoncouper1@optusnet.com.au)

Awards

Travel & Subject Prize: Assoc. Prof. Arek Dadej

Annual Awards/Dinner Committee: A. Dadej, A. Parfitt, M. Evans and B. Bates

STUDENT ACTIVITIES

Student Branches Coordinator
Dr Samuel Mickan (spm@ieee.org)

The University of Adelaide
Student Advisor: Dr Samuel Mickan
Student Branch Chair: Kin Shing Bobby Yau
ksyau@eleceng.adelaide.edu.au

The University of South Australia
Student Advisor: Dr Kutluyil Dogancay
k.dogancay@ieee.org
Student Branch Chair: Aaron Areege Mohtar
Mohaa001@students.unisa.edu.au

The Flinders University
Student Advisor: Dr Jimmy Li
Jimmy.Li@flinders.edu.au
Student Branch Chair: Sherry Randhawa
sharmil.randhawa@flinders.edu.au

IEEE PERSONAL EMAIL ALIAS BLOCKED NINE MILLION VIRUSES IN 2004

Users of the IEEE Personal Email Alias were protected from more than nine and a half million viruses in 2004. The service, a free benefit of IEEE membership, also includes an optional tool to block unsolicited commercial email, otherwise known as spam. For more information, visit http://www.ieee.org/alias.

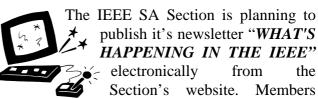*The IEEE LEADERSHIP WIRE*
3 March 2005

NOMINATIONS SOUGHT FOR STORAGE DEVICE TECHNOLOGY AWARD

The IEEE Awards Board is seeking nominations for the 2006 IEEE Reynold B. Johnson Data Storage Device Technology Award, which is presented for outstanding contributions to the advancement of information storage with emphasis on technical contributions in computer data storage device technology. The recipient will receive a bronze medal, certificate and cash honorarium. The nomination deadline is 1 July.05. For nomination forms, visit IEEE Awards online at http://www.ieee.org/portal/pages/about/awards/sums/johnsondsdt.html.

Do You Wish to Continue to Receive IEEE SA Newsletter By Post?

The IEEE SA Section is planning to publish it's newsletter "*WHAT'S HAPPENING IN THE IEEE*" electronically from the Section's website. Members will be notified by email when a new issue is posted on the website. Please email your address to s.gordon@ieee.org.

A printed copy will be mailed on request to members without an email address. If you need a printed copy posted to you, please send your request to the following address:

PO Box 53, Elizabeth, SA 5112

IEE Retired Engineers Group

Partners Lunch plus a talk ' The sense of smell and its electronic nose imitators' by Richard Gawel

The Group will be meeting for the annual Partner's lunch at Fellini Café, 102, O'Connell Street, North Adelaide at 12.00 noon on Wednesday, 1 June 05. The guest speaker at lunch will be Richard Gawel of Recognose Pty. Ltd who will give a talk on *'The sense of smell and its electronic nose imitators'*. The sense of smell is a system that rivals the best in terms of sensitivity and range, and as such, designing artificial systems to mimic it, which is a hotbed of research. For more information, contact Keith Rendell, Secretary IEE SA & NT Branch Retired Engineers Group, on 8380 5146 or by email fibonacci@esc.net.au