



WHAT'S HAPPENING IN THE IEEE

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

IEEE

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Chairman's Column

Welcome

Welcome to Andrew Parfitt (Chair 1998) who has returned to South Australia to take up a professorial position as Director, Institute for Telecommunications Research. While in Sydney with CSIRO TIP, Andrew was active with the IEEE NSW Section and was Section Chair at the time of his move to South Australia.

Welcome also to Shane Cloude FIEEE, who has taken up the recently created position of *DSTO Professor in Microwave Radar*, in Electrical and Electronics Engineering at the University of Adelaide.

IEEE Regional Activities Board

Michael,

I tried to call you to give you the good news, but either couldn't get through or there was no answer. So, on behalf of the IEEE Regional Activities Board, I want to congratulate the South Australia Section for winning the RAB 2004 Outstanding Small Section Award. This is the first year for this Award, so it is a double honor to be the winning Section.

You will be contacted by Regional Activities Staff to arrange an appropriate venue for the presentation of the Award.

Congratulations again to your Section,

Marc

Marc Apter

Vice President Regional Activities

IEEE now has 304 Sections worldwide of which 144 qualify as Small. Region 10 has 47 Sections of which 21 are qualified as small. Details of this program can be found at:

<http://www.ieee.org/organizations/rab/rab/RABARC-Manual/Sect04-8.html>

A Small Section is one "whose total membership (including Students) shall be 500 or less as of 31 December of the prior year." The program is quite new and previous awardees can be found at

<http://www.ieee.org/organizations/rab/rab/RABARC-Manual/Appendix-E-4.htm>

IEEE Technical Activities Board

Dr John Vig, TAB VP-elect (TAB VP in 2005) advises that the IEEE Technical Activities Board "Colloquium" is planning to visit Australia and New Zealand in 2005.

This enquiry has come on the recommendation of the R10 Director, Dr Jung Uck Seo, who suggested that IEEE South Australia Section would be a good point of contact for Australia. The meetings will occur in the October timeframe.

IEEE South Australia Section

The IEEE South Australia Section was chartered on the 23rd of August, 1985, so 2005 will be the Section's 20th anniversary !!

The Publications Chair and Newsletter Editor positions remain vacant. If you can assist, please don't hesitate to contact me. The Section Committee relies on volunteers, and their new ideas to keep IEEE in South Australia moving forward.

Dr Michael E. Evans

Chair, IEEE South Australia Section

July, 2004



ASCC

Asian Control Conference

**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>

2004 IEEE Distinguished Lecture

Dr Robin Batterham AO, Australia's Chief Scientist, will deliver the 2004 IEEE South Australia Section Distinguished Lecture. The lecture and dinner is scheduled for, Friday, 12 Nov 04, in "The Crystal Room", Stamford Plaza Hotel.

A formal title is yet to be agreed but Dr Batterham has been invited "to report on [his] impressions of [his] second term as Chief Scientist", and what he sees as "the important strategic issues for Australian science and engineering, and how South Australia should play its part in this vision" ... and address "the particular contribution that DSTO should make to the national goals."

Put this date in your diaries! We look forward to his address.

Section Committee Members for 2004

Officers

Chair: michael.evans@ieee.org
 Vice Chair: zia.ahmed@ieee.org
 Secretary: timferris@ieee.org
 Treasurer: andrew.piotrowski@ieee.org
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Membership Development

	31 May 03	31 May 04
Fellows	2	3
Senior Members	30	28
Members	278	300
Affiliates/Others	33	15
Students	83	60
Other	5	2
TOTAL	431	408

IEEE Higher Grade membership now stands at 262,350 members (May 04), 147 members below the level of a year ago, representing a loss of 0.1% from May 2003, and a drop of 0.6% from last month. While the good news is that three out of the four non-US Regions remain ahead of their 2003 pace, the bad news is that Region 9 along with all six of the U.S. Regions continue to show declines from their 2003 levels. Region 10 has the highest rate of growth and retains the second largest higher grade membership.

IEEE Student Membership is one of the few bright spots in membership this year. At the end of May, there was an increase of 5.2% from last year. Eight regions (of 10) report growth – including an impressive +11.1% growth rate in R8 (R10 - 7.8%). We have gone against the trend in Region 10.

IEEE Nominate a Senior Member Initiative. This program awards Sections and Societies with \$10 for each successful Senior Member nomination. The details of the Senior Member Nomination Initiative and all applicable forms are available at this Web site:

<http://www.ieee.org/ra/md/sminitiative.html>

Andrew Udina
Chair, Membership Development

Awards

Student Travel Awards

The Section has approved two further post-graduate travel grants this year.

Luke Rosenberg, U. of Adelaide
Multichannel SAR Imaging using Wavefront Reconstruction, Int'l Radar Symposium 2004, 18-21 May, Warsaw
The Effect of Anti-jamming Techniques on Multichannel SAR Imaging, EUSAR 2004, 25-27th May, Ulm, Germany

David Kettler, U. of Adelaide
The Point Spread Function for UWB SAR Imaging using Inversion of the Circular Radon Transform EUSAR 2004, 25-27th May, Ulm, Germany

IEEE SA Section Distinguished Service Award

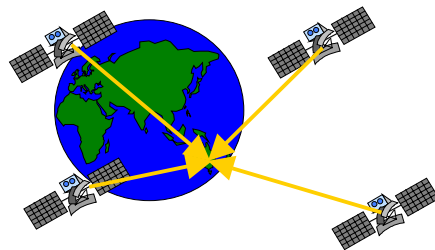
A draft terms of reference has now been established for this program and nominations are invited for awards to be presented in 2004. Please forward nominations to IEEE Awards Convenor, PO Box 53, Elizabeth, SA 5112, by 30 September. (or contact Zia for details).

Zia Ahmed
Chair, Awards

Chapters/Branches/Affiliates

Control, Aerospace and Electronic Systems Chapter

The Chapter sponsored (1 Jul 04) Éamonn Glennon, Sigtec Navigation, to deliver *Cutting Edge AGPS Solutions from Signav* to an audience at DSTO and U.of Adelaide, as a joint CAES/AIAA activity.



The HyShot Zuni Demonstrator, Dr. Ross Paull, Mr. Myles Frost, from the U. of Queensland is scheduled for 30 Jul 04.

The IEEE CAES has an active program of technical meetings co-sponsored with AIAA Adelaide Section in aerospace. If you would like to be put on the mailing list for future meetings please contact me.

Dr Mark Pszczel
 Chair, CAES Chapter



Communications and Signal Processing Chapter

IEEE Distinguished Lecturer Visit

Next-Generation Networking: Solutions and Challenges

Presenter: Professor Andrzej Jajszczyk
Date and time: Friday 20th August, 1:00 - 2:30 p.m.
Venue: SPRI Lecture Theatre (SPRI Building, Mawson Lakes Campus)

Abstract:

The lecture presents possible evolution paths for core and metropolitan networks taking into account the current slowdown of the world economy as well as the changing telecommunications environment. First, the current status of core and metropolitan networks is presented, including a brief presentation of such networking technologies as: SDH/SONET, Ethernet, MPLS and Resilient Packet Ring (RPR). Then, the evolution scenarios are discussed that involve the introduction of reconfigurable WDM networks, the Generic Framing Procedure (GFP), enhanced SDH/SONET, Optical Transport Network (OTN), as well as all-optical networking technologies. Second part of the lecture deals with the intelligence of optical networks based on either ASON or GMPLS control planes. The lecture concludes by presenting current standardization activities, open issues and perspectives of intelligent optical networking.

Biography:

Andrzej Jajszczyk is a Professor at AGH University of Science and Technology in Krakow, Poland. He received M.S., Ph.D., and Dr Hab. degrees from Poznan University of Technology in 1974, 1979 and 1986, respectively. He spent a year at the University of Adelaide in Australia and two years at Queen's University in Kingston, Ontario, Canada as a visiting scientist. He is the author or co-author of six books and more than 180 scientific papers, as well as 19 patents in the areas of telecommunications switching, high-speed networking, and network management. His current research interests focus on control plane architectures for transport networks, quality of service and network reliability. He has been a consultant to industry, telecommunications operators, and government agencies in Poland, Australia, Canada, France, Germany, and the USA. He was the founding editor of the IEEE Global Communications Newsletter, editor of IEEE Transactions on Communications, and editor-in-chief of IEEE Communications Magazine. Since January 2004 he is Director of Magazines of IEEE Communications Society. He has been involved in organization of numerous technical and scientific conferences. He is an IEEE Communications Society Distinguished Lecturer. He is a member of the Association of Polish Electrical Engineers and a Fellow Member of IEEE. Andrzej Jajszczyk is Vice-President of the Kyoto-Krakow Foundation, fostering cultural and technical relations between Asia and Poland.

Dr Arek Dadej

Chair, C&SP Chapter

Student Branch, U. of Adelaide

An EEESAU BBQ organised by the student branch executive was held on 28/05/04. A huge event attended by more than 150 members of EEESAU and/or IEEE.

The EEESAU noticeboard has been completed at the School of EEE. It will advertise and promote activities held by the student branch as well as IEEE.

A Matlab Tutorial for undergrad. students is planned for sometime in August.

Bobby Yau

President

Professional Activities

The dates have now been set for TENCON 2005, to be held 21-24 November, 2005 in Melbourne under the leadership of the IEEE Victorian Section. Further information can be obtained at

<http://www.tencon2005.org/>



**Eighth IEEE International Symposium on
Spread Spectrum Techniques and Applications**
30 August - 2 September, 2004, Sydney

<http://www.isssta2004.org/>

Bruce Vyden

Chair, Professional Activities

NEWS

The Institute Online

This reports on news around the IEEE, from the editors of The Institute. The most current version of The Institute can always be found at

<http://www.ieee.org/theinstitute>

The IEEE Foundation recently awarded two grants totaling US\$25,000. One covers the expenses of a conference that will explore ways of teaching engineering concepts to college EE students, while the other grant is for developing a precollege curriculum that helps students better understand technology and its role in society. To read more, visit

http://www.theinstitute.ieee.org/portal/index.jsp?pageID=institute_level1_article&TheCat=2202&article=tionline/legacy/inst2004/may04/5w.newsfoundation.xml

IEEE SCOOP

IEEE Regional Activities provides grants of \$500 each to Sections or Chapters sponsoring a one-day technical symposium. The 2004 program is underway, and two events have already been funded. The guidelines have changed for 2004: units funded in the past may apply again for funds provided at least one year has passed.

Units are advised to apply at least three months in advance of their event.

For more information and the grant request form visit <http://www.ieee.org/scs> and click on "FORMS". Please direct questions to Tracy at t.hawkins@ieee.org.

The IEEE History Center's program most closely geared to IEEE Sections is the Milestones in Electrical Engineering and Computing. A Section proposes a local achievement of significance, prepares a carefully documented nomination, and, if approved by the IEEE History Committee and IEEE Executive Committee, dedicates a bronze plaque recognizing the honor. At their April 2004 meeting, the ExCom approved four Milestones recommended by the History Committee, from four different Sections in three Regions. This brings the total number of Milestones in the program to 58. The newest additions are:

Electronic Quartz Wristwatch, 1969 (Tokyo Section)
 First Computers to Use Magnetic Disk Storage, 1956 (Santa Clara Section)

Alternating Current Electrification, 1886 (Berkshire Section)

Electric Fire Alarm System, 1852 (Boston Section)
 Visit

http://www.ieee.org/organizations/history_center/milestones_program.html.

IEEE ONLINE COLLECTIONS

IEEE Xplore, the online document delivery system for the IEEE's publications, including its standards, is adding a new search function. With it, users can make a keyword search of an entire article instead of only the article's abstract, as was the case before.

IEEE Retired Engineers Group, 4 Aug 04

Tactical Data Information Links (TADILs) - From "Then" to "When"

Howard Harvey

Room S127, The Frank Bull Design Suite
 Level 1, Engineering South Building,
 The University of Adelaide
 1.00 pm

Lunch for members and guests (optional)
 12.00 noon, University Staff Club

Synopsis

Howard's presentation will describe the development of Tactical Data Information Links (TADILs) used or proposed for the Australian Defence Forces, with an emphasis on the way technologies determine the structure, capabilities and performance of the links.

Speaker

Mr Harvey is an Electronics Engineer with over 30 years engineering experience in hardware and software aspects of computer systems. He commenced work at WRE Salisbury as an Apprentice Radio Tradesman in 1962, and was a Technical Assistant in Communications and Electronic Engineering Division for 3 years before being awarded a 2-year Defence Science scholarship in 1969. He has been involved with TADILs for over nine years and was the DSTO representative on the ADF TADIL Authority from 1995 to 2001. He retired from DSTO in 2002 after a career spanning 40 years.

RSVP: Keith Rendell 8380 5146, fibonacci@esc.net.au

JOINT TECHNICAL PROGRAM 2004 - *Electrical and Electronic Engineering*

20th July Host IEEE	EIA: ELECTRONICS HUB ADELAIDE Mr. Tim Stollznow, SA President of the Electronics Industry Association A background and analysis of the Australian electronics industry, identification of the significant players and EIA's vision for the future.
17th August Host IEE	**VISIT (FROM 5:30PM)** CLINICAL SIMULATION UNIT, Visit the Flinders School of Medicine Simulation Unit and learn how medical students and health professionals are trained with the skills to save your life before they must apply it to a life-threatening situation. Register by email, sa@ieaust.org.au .
21st September Host TSA	THE SENSE OF SMELL AND ARTIFICIAL NOSE TECHNOLOGY Mr Richard Gawel, Recognose Pty Ltd A look at the sense of smell. It is a system that rivals the best in terms of sensitivity and range, and as such, designing artificial systems to mimic it is a hotbed of research.

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
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/
21-24 November, 2005	TENCON 2005	Melbourne	http://www.tencon2005.org/