



The Institute of Electrical and Electronics Engineers, Inc.

Secretariat:

AUSTRALIAN PROFESSIONAL CENTRE
Private Bag No 1
DARLINGHURST NSW 2010
Tel: +61 2 9331 6920 Fax +61 2 9331 7296
Web page: <http://ewh.ieee.org/r10/nsw>

IEEE NEW SOUTH WALES SECTION
ARBN 078 576 495 ABN 34 078 576 495
Editor: Trevor Bird
Email: ts.bird@ieee.org

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1. 30TH ANNIVERSARY DINNER

On 16 August 2002, the NSW Section will be thirty years young. To celebrate the occasion we are holding a silver service dinner at the Royal Sydney Yacht Squadron, Kirribilli, on Friday 27 September, for all members and their partners. At this event, certificates will be presented to members who have served continuously on the Section Committee for ten years or more. These people are Walter Lachs, Jim Logothetis, Bruce Poon, Sam Reisenfeld, John Robinson, Jim Vasseleu and Ramutis Zakarevicius. Nine new Life Members will also be guests. At the bottom of the page is a slip for you to fill in to attend. Don't delay, as a maximum of 60 persons can be accommodated at the venue.

2. CHAIRMAN'S COLUMN

Over the past few months, the Section Committee has been very busy, as you will see from the announcements in this issue. Most important of all, I draw your attention to the 30th Anniversary of the Section, which will be celebrated with a dinner at the Royal Sydney Yacht Squadron, Kirribilli. Several members of the original Committee have been invited to what should be an outstanding event.

(continued next page)

Please Detach-----

IEEE NSW SECTION 30th ANNIVERSARY CELEBRATION

Venue: Royal Sydney Yacht Squadron Club, 33 Peel St., Kirribilli.

Date: Friday, 27 September **Time:** 6:30 pm for 7.00 pm

Payment: \$30 per person (including drinks) Enclosed is payment of \$..... for persons

Name:.....Tel: (w)..... (h)..... Fax.....

Address:.....Postcode.....

Post return not later than 13 September 2002 to: Jim Vasseleu [Tel: 9449 5076] PO Box 6001, Pymble NSW 2073

Many of you will have followed the plan to establish a GOLD (graduates of the last decade) affinity group in New South Wales. I am very pleased to announce that in April the IEEE approved the formation of this group. The first function will be a dinner to which all recent graduates are invited to attend. A registration form for attending the dinner is given elsewhere in this newsletter and also on the web site.

At the beginning of April I attended the annual Region 10 meeting in Bangkok. My report of this meeting is given later in this issue. Once again I was struck by the diversity of talent and ethnicities in this Region. Surely the level of cooperation and positive interaction that occurs in Region 10 must be a model for IEEE of the future. Currently Region 10 is the second largest IEEE Region, behind Region 6, which encompasses the west coast of the US. Looming up close behind is Region 8, which is the fastest growing region, and is even predicted to grow larger than Regions 6 and 10 by the end of the decade.

As an initiative to promote IEEE in New South Wales, the Section Committee agreed in March to fund about 200 new Student members in 2002. The response to this promotion has been amazing and the quota was filled very quickly. Unlike other similar schemes, a follow-up strategy is planned to assist the student make the transition from Student to full member.

Over the next few months there is a very full program of activities, including lectures, dinners and courses. I urge you to make the most of these opportunities and help build the interpersonal network that is IEEE in New South Wales.

Trevor Bird (email: ts.bird@ieee.org)

3. REPORT ON REGION 10 MEETING BANGKOK 5 – 6 APRIL 2002

The Chairman, Trevor Bird, attended the annual Region 10 Meeting held this year from 5 to 6 April at the Grand Hyatt Erawan hotel, Bangkok. The IEEE President Ray Findlay was present as was President elect Art Winston. A photograph of the delegates is shown below. Some of the highlights were:

- Director Dr Teck Seng Low reported continued growth of Region 10 members. Major issues include retention of students, the number of delinquent branches and the sharp decline of numbers in some student branches. For these and other details visit the Region 10 web site www.ewh.ieee.org/reg/10.
- Announcement of Outstanding Volunteers and NSW Section Secretary was one of them.
- The creation of Section Distinguished Members Awards. In future, the Region 10 Outstanding Volunteer awards will be selected from these awards.
- Details of plans for the first Region 10 Students Congress organized by the Singapore Section.
- Development of a Region 10 Operations Manual is well underway with final draft deadline by early 2003.
- Details provided of the 2002 Sections Congress "Creating a Global Community".
- The presentation by President Ray Findlay of the vision of IEEE, which is to promote the community worldwide.
- The IEEE is developing strategies for improving the conversion rate of Student Member to full Member grade.
- Great interest in the NSW Section's project to develop a CDROM to promote the electrical engineering profession.
- On the second day, the delegates worked in four groups on the second stage of a 5-year Strategic Plan for IEEE in Region 10.



IEEE President, delegates and IEEE staff at Region 10 Meeting in Bangkok, Thailand 5 to 6 April 2002.

- TECON 2001, which was held on a cruise ship, was a huge success, with about 350 attendees and an excellent profit reported. TENCON 2002 will be held in Beijing. A significant number of papers have been submitted from Australia. Next year TENCON 2003 will be held in Bangalore, India, with the theme "Convergent Technologies for the Asia Pacific". Proposals for tutorials are requested. The closing date for submission of papers is 15 March 2003.
- The Region 10 Director-elect, Dr Jung-Uck Seo, decided that next year's Region 10 meeting will be held in Penang, Malaysia on 4 to 5 April 2003.

4. ANDREW PARFITT RECEIVES OUTSTANDING VOLUNTEER AWARD

The NSW Section Secretary, Andrew Parfitt, has been awarded an outstanding volunteer award by Region 10. Andrew has provided over thirteen years' service to the South Australia and New South Wales Sections. He was presented with a certificate at the April meeting of the NSW Section. Congratulations Andrew on the award and your exemplary record of volunteer work for IEEE!

5. REGION 10 STUDENT CONGRESS - SINGAPORE 17 – 21 JULY

David Pllum, a student at the University of Wollongong, has been selected by the New South Wales Section to attend the Region 10 Student Congress. The aims of the Congress are to exchange ideas, to encourage student participation in IEEE and to develop a student network in Region 10. David is currently

Chairman of the IEEE Student Branch at the University of Wollongong.

6. NSW SECTION WEB NEWS

WEB MASTER

The NSW Section Web Master is Jon Agnew (jpagnew@ozemail.com.au). Chapter Committee members should contact Jon to update the details on the web site. Don't forget to place the web address (<http://ewh.ieee.org/r10/nsw>) in your Bookmarks so as to keep up to date with the latest Section news and information.

CIRCUIT AVAILABLE ON THE WEB <http://ewh.ieee.org/r10/nsw>

For the remainder of this year, CIRCUIT will be mailed to members and will also be available from the website. Next year, CIRCUIT will be mailed to only those members requesting a printed copy. If you require a printed copy of CIRCUIT to be mailed to you in 2003 please contact the Editor via email (ts.bird@ieee.org) or the Secretariat at the address on the front page of this issue.

REGISTER FOR A PERSONAL EMAIL ALIAS "name@ieee.org"

Many IEEE members do not realise that the IEEE offers an Alias service with free Virus Scanning. IEEE members can register or update a personal alias of their choice (subject to availability), which will forward email to their real Internet email address. This overcomes the need to notify the IEEE (or the Section) if you change your home email address. To obtain an email alias go to the IEEE website (www.ieee.org), click on "Web Account" and follow the directions.

7. USEFUL IEEE WEB ADDRESSES

Increasingly, the IEEE is relying on the Internet to deliver services to members. Some useful web addresses are summarised below for your information.

- IEEE Operations Centre: www.ieee.org
- IEEE Regional Activities: www.ieee.org/ra
- Region 10: www.ewh.ieee.org/reg/10
- IEEE Senior Member upgrade: www.ieee.org/organizations/rab/md/smpprogram.html
- Region 10 Student Branch activities: www.cairo.utm.my/ieee/r10student.htm
- IEEE Contract administration: www.ieee.org/contractsonline
- Volunteer travel accident/medical plan. This is available to all IEEE volunteers and applies outside your normal country of residence. It starts and ends when you leave/arrive in your own country. For details see www.ieee.org/organizations/vols
- IEEE GOLD (Graduates of the last decade) program: www.ieee.org/organizations/rab/gold/programs.html
- Educational activities: www.ieee.org/eab/
- Professional development: www.ieee.org/pdi
- Career resources: www.ieee.org/eab/education.htm
- IEEE Award programs: www.ieee.org/about/awards, www.ieee.org/organizations/rab/rab/Awards/rabawards.htm
- Conferences: www.ieee.org/conferencesearch/

8. GOLD AFFINITY GROUP FORMED IN NEW SOUTH WALES

A GOLD (graduates of the last decade) affinity group has now been formed in NSW. The Coordinator of the GOLD Affinity Group, Filita Barker, received notification of this from Cecelia Jankowski, Managing Director, IEEE Regional Activities. Ms Jankowski wrote, "On behalf of the IEEE Executive Director, Dan Senese, it is a pleasure to inform you that the requirements of the IEEE Bylaws have been met, and the Graduates Of the Last Decade Affinity Group of the New South Wales Section has been formed. The effective date of this Affinity Group formation is 16 April, 2002."

GOLD encourages participation of recent graduates in IEEE and electrical and electronic engineering professional activities more generally. GOLD groups around the world are involved in many activities ranging from liaison with the Student Branches to organizing conferences. Anyone who is interested in participating in the GOLD Affinity group, please contact Filita Barker, email filita@ieee.org.

The first function of the GOLD Affinity Group will be a dinner on Thursday, 15 August at the Duxton Hotel, North Sydney, 88 Alfred St, Milsons Point, commencing at 7pm. The cost is \$20 and this includes all food and beverages. Dress is semi Formal/Business. To attend please complete the coupon at the bottom of the page and send to the address indicated. If you have any inquiries send them to gold_nsw@yahoo.com.au.

9. NSW CAS/SSC CHAPTER SAVED

As a result of an article in February's CIRCUIT regarding possible delisting, Dr Steven Duvall,

Intel Australia, agreed to Chair the NSW Circuits & Systems / Solid State Circuits Joint Chapter in 2002. He is seeking members of both Societies to form a local Committee to organise events. It's important that a Committee is formed and activities commence. The IEEE has agreed to wait and see if this attempt to save the Chapter is successful before proceeding with delisting. Steven's contact details are as follows: ph 9937 5861, email: steven.g.duvall@intel.com.

10. DELISTING OF NSW HUNTER VALLEY SUB-SECTION SLATED

The NSW Hunter Valley Sub-section may be wound up because there has been little activity there for several years. The New South Wales Section Committee is seeking expressions of interest in forming a Committee and restarting activities. Failure to restart activities would lead to IEEE delisting of the Sub-section in the next three months.

If you are interested in helping to form a Committee in the Hunter Valley and avoid delisting, please contact the Chairman, Trevor Bird (ts.bird@ieee.org).

11. PETITION TO FORM A CHAPTER OF THE ENGINEERING MANAGEMENT SOCIETY IN NSW

A petition for the formation of a Chapter of the Engineering Management Society in NSW is being collected. To find out more, contact either Claude Le Comte (mobile: 0414 635 103) or Stefan Mozar (mobile: 0402 083 500 or email: s.mozar@ieee.org).

Please Detach-----

IEEE NSW SECTION GOLD AFFINITY GROUP LAUNCH

Venue: Duxton Hotel, North Sydney, 88 Alfred St, Milsons Point. **Date:** Thursday, 15 August **Time:** 7.00 pm

Payment: \$20 per person (including drinks) Enclosed is payment of \$..... for persons

Cheque: Y/N Credit Card: Y/N Card Type: Mastercard ☐ Bankcard ☐ Visa ☐

Card Number: _____ Expiry Date: /

Name on Card: _____ Signature: _____

Name:.....Tel: (w)..... (h)..... Fax.....

Address:.....Postcode.....

Post return not later than 15 July to: Andrew Parfitt [Tel: 9372 4187, Fax 9372 4106]

IEEE Committee C/- PROFESSIONAL CENTRE OF AUSTRALIA, Private Bag No. 1, DARLINGHURST NSW 2010

12. JOINT TECHNICAL MEETINGS FOR 2002

All members are invited to attend the listed joint meetings with the I.E. Aust., ITEES and IEE. All meetings are held at 5.30 for 6.00 pm (with light refreshments) at the Institution of Engineers, Australia Lecture Theatre, Eagle House, 118 Alfred St, MILSONS POINT, unless otherwise shown.

2002 Dates	Sponsor	Subject	Speaker
June 27 July 11 July 14 July 25 Aug. 8 Aug. 22		Modern Traffic Control Systems Hybrid Electric/ Petrol Vehicle Space Exploration & the Future of Radio Astronomy Metropolitan Fibre Networks Steel Lifting Magnets <i>Seminar from 12.00 - 5.30 pm. Cost \$55 per head</i> Recovery from Five Power Plant Accidents & an Insurer's View	Terry Richards Dr Howard Lovatt Prof. Ron Ekers TBA J. Richard 6 Speakers (see below)
Sept. 12 Sept. 26 Oct. 10 Oct. 24	IEEE	The Square Kilometre Array Embedded Generation – A Distribution Perspective Intelligent Transport Systems	Dr Graeme James Guy Grunwald TBA
Nov. 14 Nov. 28 Nov. 29	IEEE	Photonic – Processing of Microwave Signals Repairable Systems Reliability – Analysis of Failures Professional Liability of Engineers – IEAust. Elec. Branch AGM IEEE AGM	Prof. Robert Minasian Dr Platfoot TBA

13. DETAILS OF UPCOMING JOINT TECHNICAL MEETINGS

MODERN TRAFFIC CONTROL SYSTEMS Thursday, 27 June 2002

Speaker: Terry Richards

No details provided at time of printing. Please visit the 'News' page of the Section web site for details in the weeks preceding the meeting.

A HYBRID ELECTRIC/PETROL VEHICLE Thursday, 11 July 2002

Speaker: Dr Howard Lovatt, CSIRO Telecommunications and Industrial Physics, Lindfield, NSW.

Synopsis: Hybrid vehicles are becoming increasingly popular, because they reduce greenhouse gas emissions and also reduce urban pollution. Toyota produces the Prius and the Targo/Estima Hybrids, and Honda produces the Insight and the Civic Hybrids.

CSIRO has developed two concept hybrid vehicles: the Holden ECOMmodore, built in conjunction with Holden, and the aXcessaustralia LEV, built in conjunction with the car parts industry. The talk explains: why a reduction in greenhouse gas and urban pollution is important, how hybrid cars work, why hybrid technology is

attractive, and how CSIRO contributes to the technology of hybrid vehicles.

Biography: Dr. Lovatt has a first degree from Nottingham University and a PhD from Leeds University, both in Electrical & Electronic Engineering. He worked for Switched Reluctance Drives Ltd, a private consultancy firm in the UK, and now works for CSIRO. He specializes in electrical motor design, power electronics, and control. For the CSIRO Hybrid car project he led the team that designed the electric drive train and co-ordinated the design and development of the batteries, the super capacitors, the energy management algorithms, the performance modelling, the light metal alloy parts, and the environmental modelling.

METROPOLITAN FIBRE NETWORKS Thursday, 25 July 2002

No details provided at time of printing. Please visit the 'News' page of the Section web site for details in the weeks preceding the meeting.

STEEL LIFTING MAGNETS Thursday, 8 August 2002

Speaker: Justin Rickard, Managing Director – Jones & Rickard Pty Ltd & J&R Magnetics Pty Ltd

Synopsis: Lifting (electro) Magnets play an important role in materials handling for the steel industry. Whereas this was once mainly confined to the input end of the steel making cycle, today's magnets are increasingly used downstream at the final product stage or in the distribution warehouses where they are a major labour saver.

In this address, Justin Rickard, who has been associated with the Australian steel industry for most of his professional life and whose Company, Jones & Rickard Pty Ltd, has long been the major supplier of Australian-made electromagnets to Australian steel producers and users, will look at both the design and construction of large magnets including their many variations. The lecture will deal with the seldom discussed theoretical principles of magnetic lifting as well as important practical & constructional considerations.

Variable voltage power supplies for magnets, developments in control equipment and safety provisions are also discussed & illustrated, as are some more recent developments such as "electro-permanent" magnets.

The lecture will conclude with a brief video.

Biography: Justin Rickard AO, FIE (Aust.), MIEE, began his professional career with the Electricity Commission of NSW, and held the position of Senior Investigations Engineer in its Transmission Division before leaving to join his father's company, Jones & Rickard Pty Ltd. This Company was for many years a leader in the provision of electrical repairs and refurbishment services to the Australian power industry. It also boasted a significant manufacturing capability, mainly in specialized rotating machines and large electro-magnets. In June, last year, he was awarded the Medal of the Order of Australia "for services to electrical engineering and the community through Mission Australia".

SEMINAR - RECOVERY FROM POWER PLANT ACCIDENTS

Thursday, 22 August Time: Noon to 5.45pm

Cost: \$55 Cheque to IEAust. Contact: Rimma Koldodizner Tel: 89237100

Synopsis: The Seminar will consist of six talks from experts on various aspects of risk related to the electricity generating industry. An outline is given below.

A. Loy Yang B No. 2-500MW Generator

Mark Pearson from Loy Yang P.S., will describe the events that led to a major failure, in 2000, and return to service, of a 500MW brown coal generator. The unit had to be completely dismantled and rebuilt on site at a cost of over \$20 million.

B. Hazelwood 200MW Generator Transformer

In June 1999, the Generator transformer on the 200MW generator transformer failed, and within 9 days, the spare transformer also failed. The measures taken in overcoming this dire problem are to be described by John Morrissey from Hazelwood P.S.

C. Wallerawang 500MW Generator Turbine

The Wallerawang turbine suffered severe damage following major water ingress to the LP cylinders. David Prike of Siemens will describe the dismantling and interim return to service until all the necessary parts became available one year later when the turbine regained its full rating.

D. Liddell 500MW Generator

Loss of AC switchboard supply led to severe damage when the Liddell 500MW generator shut down without barring gear in operation. David Hurst of Alstom will describe the extensive repairs and modifications undertaken at Alstom Power's Maitland workshop.

E. Tarong Generator Transformer

When facing a generation shortfall during a high load period in August 1998, a failure occurred on a Tarong generator transformer. Alan du Mee of Tarong Energy will describe how, following a worldwide search, a replacement transformer was found in Collie Power Station (West Australia), then under construction and the difficulties in transporting it across Australia.

F. How insurance works to deal with accidents

Colin Cheney, Principal, Marsh's Risk Management Practice, will provide the overview.

THE SQUARE KILOMETRE ARRAY: HAS THE ANTENNA QUANDARY BEEN SOLVED? Thursday, 12 September 2002

Speaker: Dr Graeme James, CSIRO Telecommunications and Industrial Physics, Marsfield NSW (Email: graeme.james@csiro.au)

Synopsis: The Square Kilometre Array (SKA) is proposed as the next major radio telescope which, as the name implies, is designed to have an enormous antenna collecting area of around one square kilometre. This, of course, will not be achieved with one large antenna but will consist of many (several thousand in some designs) identical antenna elements to form a large array.

The search for possible designs has posed a major quandary for antenna engineers in meeting the demanding specifications within an acceptable cost. A number of designs is being

pursued by several countries including China, Canada, USA, the Netherlands and Australia. Of these, the

Australian proposal using a Lüneburg lens as the antenna element is seen by some as the most outlandish of all. Why use a Lüneburg lens? This talk will discuss in layman's terms the SKA antenna problem, the various solutions proposed by others, the basic operation of the Lüneburg lens and why we believe the Australian solution offers the most advantages to future generations of astronomers.

A critical factor in the successful realisation of a Lüneburg lens is the availability of suitable dielectric materials with the necessary electromagnetic properties. To this end, CSIRO has undertaken a multi-disciplinary project to develop artificial dielectrics and the current status of this work will be included in the talk.

Biography: Graeme James has B.E., Ph.D and D.Sc. degrees in Electrical Engineering from the University of Canterbury, New Zealand. Between 1973 and 1976 he was a post-doctoral fellow with the Department of Electrical and Electronic Engineering, Queen Mary and Westfield College, London, England, and since 1976 he has been with CSIRO. His main research interests are in the areas of antennas, feed systems and electromagnetic diffraction. He is a Fellow of the Institute of Electrical and Electronics Engineers (USA) and the Institute of Electrical Engineers (UK).

EMBEDDED GENERATION – A DISTRIBUTION PERSPECTIVE

Thursday, 26 September 2002

Speaker: Guy Grunwald

No details provided at time of printing. Please visit the 'News' page of the Section web site for details in the weeks preceding the meeting.

14. INTERNATIONAL CONFERENCE TO BE HELD IN BATHURST

The NSW Section is a technical co-sponsor of the First International Conference on Information Technology and Applications (ICITA 2002), to be held in Bathurst from 24 to 28 November 2002.

Details may be obtained from the Conference web site
<http://odysseus.mit.csu.edu.au/icita2002.html>.

15. PROFESSIONAL ENGINEERS WEEK 14 – 21 JULY KICKS OFF WITH HARRICKS ADDRESS

This year the annual Professional Engineers Week will be held in July. The official opening will be held at the Powerhouse Museum where the guest speaker will be Professor Ron Ekers, Director, CSIRO Australia Telescope National Facility. Prof. Ekers will give the Harricks Address entitled:

SPACE EXPLORATION AND THE FUTURE OF RADIO ASTRONOMY – A SQUARE KILOMETRE ARRAY

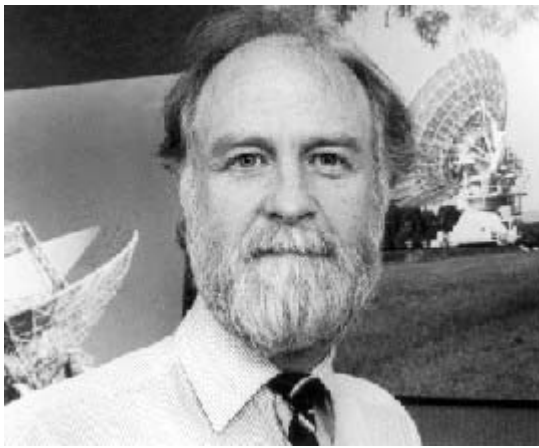
**The Powerhouse Museum, 4pm for 4:30pm,
Sunday, 14 July 2002.**

Synopsis: Sixty years ago, astronomers finally broke free of the boundaries of light when a new science, radio astronomy, was born. This new way of 'seeing' rapidly uncovered a range of unexpected objects in the cosmos. In its short life, radio astronomy has had an unequalled record of discovery, with three Nobel prizes being awarded for discoveries in this field: Big-Bang radiation, neutron stars, and confirming the existence of gravitational radiation.

Radio telescopes have followed the pattern of exponential growth seen in many areas of science and technology. There is no technical reason for this not to continue, but to do so will require a shift in technology, which will set new challenges.

He will argue that a radio telescope with an aperture of one square km could now be built. Such a telescope would be so powerful that we could expand our knowledge of the universe from the earliest stages of its formation through to planetary exploration with greatly enhanced spacecraft communications. He will illustrate the potential applications with some examples related to observations of the early universe, which would be highly complementary to planned future instruments in other wavebands.

One path to achieving this vision is through international collaboration and he will conclude with some remarks on the value of international collaboration in astronomy.



Biography: Prof R.D. (Ron) Ekers was appointed Foundation Director of CSIRO's Australia Telescope National Facility in 1988. He was born at Victor Harbour, South Australia and graduated from University of Adelaide in 1963. He gained his PhD in astronomy at the Australian National University in 1967. His professional career has taken him to the California Institute of Technology, the Institute of Theoretical Astronomy in Cambridge, UK, the Kapteyn Laboratory in Groningen, Netherlands and the National Radio Astronomy Observatory, New Mexico, USA. He was director of the VLA, the major national radio telescope in the USA, from 1980 until 1987. He has been a member of various advisory and visiting committees in the USA, UK, Canada, France, Germany and the Netherlands. He was Chairman of the International Union of Radio Science Commission J from 1990-1993, Pawsey Lecturer 1990, Oort Professor 1997, Miller Professor 2001. He is chairman of the International SKA Steering Committee and President-elect of the International Astronomical Union.

16. BECOME AN IEEE SENIOR MEMBER

Many members may not be aware of the benefits of IEEE Senior Membership. As well as recognizing your performance and contribution to the profession in a tangible way, each new Senior Member receives an attractive fine wood and bronze engraved Senior Member plaque and a US\$25.00 gift certificate toward one new Society membership. Who can become a Senior Member? Anyone with ten years in the profession (not 10 years of IEEE membership.) Your educational experience is counted towards this ten-year requirement. You need five years of significant performance and three IEEE Senior Member or Fellow references. If you are nominated, only two references are needed. Now it is even easier to become a Senior Member via the IEEE website. Details and application forms are obtained at www.ieee.org/organizations/rab/md/smpprogram.html.

17. MEMBER PROFILE – NSW SECTION VICE CHAIR GRAEME GWILLIAM



Graeme Gwilliam is the current Vice Chair of the New South Wales Section. Prior to accepting this role in 2002, he served for three years as Section Treasurer. Graeme received a BE (Elec.) from the University of New South Wales, Sydney (1963), Grad. Dipl. Ed. (Tech. Teacher Ed.) Sydney Teachers College (1979), M. Appl. Sc. Univ. Technology, Sydney (1984) and Doctorate of Education Pacific Western University, USA (1989). He is a Senior Member of IEEE, Fellow of IE Aust. and Member of IEE (UK).

Graeme has worked in a variety of industries with numerous employers. From 1957 to 1975 he worked in Engineering, Consultancy and Project Management in construction, from 1975 to 1997 in Technical Education and Training and, from 1997 onwards, in Education and Training Consultancy.

Projects completed from 1957 to 1975 involved industrial construction and food processes, including waste water treatment, commercial/public building construction, and project management of various developments. Clients included ANU, Maidstone Borough Council (UK), NSW Government Architect, 3M Company, QANTAS (Flight Kitchen, Mascot), AGL Ltd, Sydney Opera House, Alfa Laval, Moree Abbatoir, Lindemans Wines and Amatil among others. Work tasks included engineering planning/design, contract establishment and administration, construction supervision and commissioning, negotiation with regulatory authorities, supervision of consultants, feasibility studies, and general liaison/project management.

He received engineering excellence awards for the design of lighting of buildings for the ANU Library, Canberra (1963) and the 3M Building, Pymble (1968).

In the period 1975 to 1997, he was employed by the TAFE organisation in NSW; during 1975 to

1980 as a Teacher/lecturer at Bankstown and 1981 to 1982 at Sydney Technical College. From 1982 to 84, he was a secondment to the position of executive Assistant to the Deputy Director-General (Colleges), and from 1984 to 1997 Head of Section of (Power) Electrical Engineering at Granville College of TAFE. As an additional activity, from 1980 onwards, he lectured part-time at the NSW Institute of Technology/ University of Technology, Sydney at various times. He was appointed a Visiting Research Scholar at the University of Technology, Sydney in 1985 to assist with research on industrial applications of solar energy.

Since 1997, Gwilliam Associates Pty Ltd is a company within which many of Graeme's current activities and programs are conducted. Projects have been completed for the NSW Board of Studies, Catalyst Training and TOSHIBA, among others.

Outside the engineering profession, Graeme has, for nearly 30 years, held a variety of Commissioner appointments within the Scout Association of Australia; most recently he was Assistant Area Commissioner - Public Relations for the North Metropolitan Area.

18. SECTIONS CONGRESS 2002

The Sections Congress 2002 "Creating a Global Community" will be held 18-21 October 2002 at the JW Marriott Hotel in Washington, DC, USA. The Section Chair will be the primary delegate from the NSW Section. SC 2002 will be unlike any other Congress in that it will feature both administrative officer training and leadership training for the assembled delegates. For more information, visit the web page www.ieee.org/sc and click on "SC 2002".

19. STUDENTS RUSH FOR FREE MEMBERSHIP

In the month of May, the New South Wales Section offered free membership to new student members in approved courses. When applications closed at the end of May, over 200 applications had been received. The call for applications was organized by the Student Counsellor, David Tien, with the help of an academic staff member at universities in New South Wales.

20. HARVARD BUSINESS SCHOOL PUBLISHING PARTNERS WITH IEEE

Harvard Business School Publishing (HBSP) has joined the growing list of premiere university partners of IEEE. HBSP provides selected online courses at a 10% discount for IEEE members. Currently, thirteen courses in leadership, management, and strategy are being offered to IEEE members along with one powerful performance resource called Harvard ManageMentor®.

HBSP courses utilize Harvard Business Review articles, interactive case studies and expert feedback from instructors. Each course is self-contained with all the resources you need provided for you online. In one to two hours at your desktop, you can acquire both new and classic business concepts to apply immediately to your job.

To assure your discount, enter through the IEEE Educational Activities Board at <http://www.ieee.org/eab/verify/hbsp/verify.htm>. You must pre-register in order to access the course list and see the demonstrations of each course. The pre-registration in no way obligates you to buy a course. For more information about the Partners Program, see <http://www.ieee.org/eab/eduPartners.htm>, or contact Jason Prue, IEEE Educational Activities, at j.prue@ieee.org.

21. SUCCESSFUL SEMINAR ON EMC

Professor Paolo Tenti (M'85, SM'91, F'99), a past president of IEEE Industry Applications Society, and a Distinguished Lecturer for this Society, gave a day-long tutorial at the UNSW, Sydney, on 8 February 2002. He was assisted by his colleague from the University of Padova Dr. Giorgio Spiazzi, who is a very well known expert of EMI in power electronic applications. The topic of the tutorial was: Electromagnetic Compatibility in Industrial Equipment: Standards, Problems and Solutions. The tutorial was repeated in other major cities in Region 10, including Melbourne, Brisbane, Perth, Auckland, Singapore and Hong Kong, for which Professor Tenti was on the road for about a month.

The tutorial included the following topics: Introduction to European Directive on EMC; High-frequency emission standards and case studies; Origin of high-frequency pollution and Design provisions to reduce EMI; Spectra of signals; Coupling mechanisms and cable shielding; Shielding properties of materials, EMI Filters, Grounding; Low-frequency emission standards: definition and case studies; Origin of low-frequency pollution, definitions and basic compensation techniques; PFC structures; Example of application: PFC; Immunity standards and case studies

The tutorial was well attended, and very well received by the audiences in all cities. There were thirty attendees at the Sydney tutorial.

Report by Prof. Faz Rahman

22. COMPUTER SOCIETY NEWS

The IEEE NSW Computer Chapter held a successful seminar on 30 May 2002 at UTS in Sydney. Prof. G. Sivakumar, IEEE Distinguished Lecturer, Indian Institute of Technology, Bombay presented on Internet Security and Cryptographic Protocols, discussing Cryptographic protocols, which are security-related interactions for reaching agreement between two or more principals. Professor Sivakumar provided examples of the use of Cryptographic protocols including authentication and key distribution, and discussed Cryptographic protocols described by alternate transmission and receipt of (encrypted) messages in a pre-defined format and sequence between the principals. More information on Prof. Sivakumar's lecture is available on the NSW Section Computer Society home page http://ewh.ieee.org/r10/nsw/subpages/ch_comp/ch_comp.htm.

The next Computer Chapter seminar will be held at the end of July. Please check the home page for updates.

Report by Kate Carruthers

23. MAX SYMONS MEMORIAL PRIZE

The Max Symons Memorial Prize, given by the IEEE NSW Section for the best NSW Student Paper submitted to the Region 10 IEEE Student Paper Contest has been awarded to Mr Yuehe Ge of Macquarie University for his paper entitled "Efficient Analysis of Microstrip Circuits Using New Closed-Form Green's Functions". The paper was co-authored with his supervisor Dr Karu Esselle. The prize will be presented at the 30th Anniversary Dinner, details of which appear elsewhere in this issue. Congratulations to Mr Ge on his success.

24. INTERNATIONAL CONFERENCES

Details of conferences and other forthcoming international events can be found by visiting the IEEE web site www.ieee.org/conferencesearch/.

25. SUMMER SCHOOL IN COMPLEX SYSTEMS

The third Biennial Complex Systems Summer School will be held from 1 to 6 December 2002. Details can be found at: <http://clio.mit.csu.edu.au/rgai/csss2002/>

26. WANTED

Research engineer/ assistant, part-time or full-time, wanted in electromagnetics/antennas at Macquarie University. Contact: Dr Karu Esselle (ph. 9850 9141, email karu@ics.mq.edu.au).

PhD scholarships. The Research Group for Complex Systems at Charles Sturt University is seeking one or two PhD students to work on intelligent agents for data mining. Contact: Professor Terry Bossomaier (ph 0419 626 824, email tbossomaier@csu.edu.au).

Wanted to purchase. Hardbound copy (1st or 2nd edition) of 'A treatise on the theory of Bessel functions', by G.N. Watson. Contact: the Editor (ph 9372 4289, email ts.bird@ieee.org).

27. STOP PRESS - RF CMOS COURSE

The Australian Microelectronics Network in association with the NSW CAS/SSC Society is holding a course and workshop in Sydney on RF-CMOS circuit design. The presenter of the course is Professor Asad Abidi. Information on Professor Abidi is given on the website: www.ee.ucla.edu/faculty/bios/abidi.htm. Details are given below.

Course title:

RF-CMOS Circuit Design Principles and Practice

Date: Tuesday, 16 July

Venue: MGSM Executive Hotel and
Conference Centre,
MACQUARIE UNIVERSITY NSW

Course topics:

Low Noise Amplifiers

- Specifications: Noise, Impedance, Dynamic Range
- Fundamental Limits to Low Noise, and
- Practical Design Considerations, low power methods

Mixers

- Basics
- Understanding mixer action through noise, and
- Practical design considerations.

Oscillators

- Basics
- Understanding oscillators through phase noise mechanisms, and
- How to design an integrated VCO to a specified figure of merit.

Integrated passive elements

- Spiral Inductors
 - Qualitative understanding
 - Influence of Substrate
 - Good design practice.
- Varactors
 - Continuous voltage-controlled, and
 - Discrete

Cost:

Full Package: \$475 non-members, \$325 members, \$125 students
Workshop Only: \$395 non-members, \$275 members, \$100 students
Cocktail Reception Only: \$100 non-members, \$75 members, \$50 students

Please contact Steven Duvall (ph 9937 5861, email steven.g.duvall@intel.com) for further details.

28. NEW SOUTH WALES SECTION AND CHAPTER COMMITTEES FOR 2003

The Nominations committee invites members to submit nominations for appointments to the year 2003 Section and 7 Chapter committees. Already the following Section Committee nominations have been received: F. Barker, T. Bird, D. Burger, K. Carruthers, S. Duvall, K. Esselle, G. Gwilliam, W. Lachs, J. Logothetis, P. Ogunbona, A. Parfitt, B. Poon, F. Rahman, S. Reisenfeld, J. Robinson, D. Tien, J. Vasseleu & R. Zakarevicius. Members are invited to nominate on the form below. All nominations for Section and Chapter Committee members will be considered at the Annual General Meeting, to be held on 29 November.

Please Detach-----
-

2003 COMMITTEE NOMINATION FORM

Name:.....Signature.....

Address:.....Postcode:.....

Tel: (H).....(O)..... FAX.....email.....

POSITION:..... SECTION/CHAPTER.....

Post return not later than 6 September 2002 to: Andrew Parfitt [Tel: 9372 4187, Fax 9372 4106]

IEEE Committee C/- PROFESSIONAL CENTRE OF AUSTRALIA, Private Bag No. 1, DARLINGHURST NSW 2010.

IEEE NEW SOUTH WALES SECTION

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16 AUGUST 2002

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For further information, please contact Andrew Parfitt - ph. (02) 9372-4187.