

Welcome Message from Section Chair

On behalf of the IEEE WA Section committee, I welcome you to this edition of the IEEE WA Section newsletter. We thank Dr Douglas Chai for taking up the challenge as the 2006 newsletter editor and we look forward to a series of exciting and informative publications in the coming months.

On reflection, 2005 has been a year of consolidation and expansion. Consolidation was in the sense of the strengthening of membership numbers, the provision of training for volunteers, and the quality of activities for our local WA members. Expansion was demonstrated by the establishment of the new *Computational Intelligence Society* chapter and the *Women in Engineering* group. As a result, the WA Section now has five technical chapters, two affinity groups and three student branches.

The WA Section provided an increased number of activities directly and indirectly organised by the Section and Chapters. A total of 46 activities were held. Also, a record breaking number of participation by sponsors and visitors in the annual IEEE Student Branch Industry Networking Forum was achieved.

We have been actively promoting the IEEE WA Section to the general public and other non-IEEE communities through collaboration with other professional bodies and the WA state government. In 2005, with the support of the Department of Industry and Resources, the WA Section has joined five local and national professional organisations to form the Information and Communication Technology Industry Collaboration Centre of Western Australia, or ICTICC in short. This was established to provide a communication channel between the various sectors of the WA ICT industry, and between the industry and government with the objective to promote ICT industry nationally and internationally. Furthermore, the WA Section has been supportive of the local school and community through sponsorship of the Robocup Junior competition and hosting of the "Games Development Workshop" at the 2005 Australian Innovation Festival.

The successes in 2005 were largely due to the generous support of the many committee members, volunteers and IEEE members. It is expected that this momentum will be maintained in 2006. We will continue to promote the mission and to achieve the goals of the IEEE. I look forward to your participation in future events. Last but not the least, I wish all the readers and IEEE WA members a productive and prosperous 2006.

Associate Professor Lance Fung
WA Section Chair

2006 IEEE WA Section Committee

Chair – *Associate Professor Lance Fung*
Vice Chair – *Dr Kevin Wong*
Secretary – *Ms Valerie Maxville*
Treasurer – *Dr Hong Xie*

Membership Development – *Dr Douglas Chai*
Website – *Mr Shri Rai*
Newsletter Editor – *Dr Douglas Chai*

Technical Chapters

Communications (ComSoc) Chapter Chair – *Dr Daryoush Habibi*
Computational Intelligence (CIS) Chapter Chair – *Dr Phillip Hingston*
Computer Chapter (CS) Chair – *Dr Kevin Wong*
Power Engineering/Power Electronics (PES/PELS) Chapter Chair – *Mr Harry McDonald*
Signal Processing (SPS) Chapter Chair – *Dr Douglas Chai*

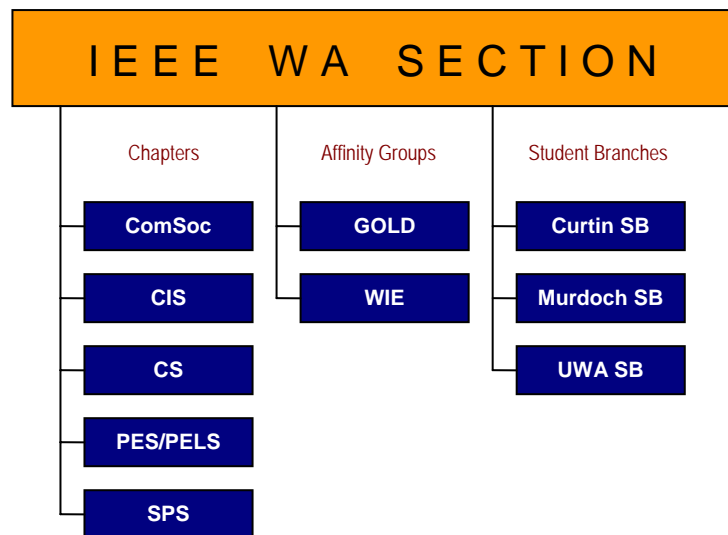
Affinity Groups

Graduate of Last Decade (GOLD) Group Chair – *Ms Helene Fung*
Women in Engineering (WIE) Group Chair – *Ms Valerie Maxville*

Student Branches

Curtin Student Branch Chairs – *Mr Ryan Carr and Mr Tameem Khader*
Murdoch Student Branch Chair – *Mr Kien Ping Chung*
UWA Student Branch Chair – *Mr Timothy Wong*

IEEE WA Section Organisational Structure



IEEE WA Section Membership

<u>GRADE</u>	<u>COUNT</u>
Fellow	2
Life Senior	1
Senior Member	42
Life Member	2
Member	406
Associate	21
Affiliate	28
Student	133
TOTAL	635
(as at January 2006)	

In this Issue...

- Welcoming messages from our leaders.
- The 2006 committees.
- Latest membership statistics
- Somebody got promoted to senior member.
- Quick facts and history
- Teambuilding workshop & 2006 goals.
- And much, much more...

Welcome Message from Curtin Student Branch Chair

On behalf of the Curtin Student Branch Committee I would like to extend a warm welcome to those who are returning to their studies in 2006. This year we plan to build on last year's success and provide even more events and benefits to members.

The committee has gone through a complete changeover this year, with the majority of the 2005 committee graduating. Tameem and I have carried over from last year to share the chairmanship. We hope that the new committee members will bring some fresh ideas to the table.

We have already kicked off this year with our annual membership drive, which carries over the first two weeks of uni. The second week will see our first BBQ for the year and hopefully more sign-ups.

The huge success of the 2005 Networking Forum has forced the organising committee to think about early planning. This year our focus will be bigger and better, with planning scheduled to start in the coming weeks.

We plan to run existing events such as the first aid course, bowling nights and BBQ's. With these events and many more new additions, 2006 is set to be a big year!

Ryan Carr
Curtin Student Branch Co-Chair

Welcome Message from GOLD Affinity Group Chair

The GOLD (Graduates of the Last Decade) group, as the name suggests, focuses on specific needs of recent graduates.

In 2006 we aim to organise social/networking, professional skills development events as well as opportunities to satisfy our common fascination with new technology and gadgets - first cab off the rank was a 'sneak preview' presentation and demonstration of the SmartRider system soon to be rolled out to the general public in Perth to replace the multi-rider system, given by members of the implementation team.

Our committee is also always on the look out for more members. If you are a recent graduate and are interested in joining us, please drop me a line.

Helene Fung
GOLD Chair
hfung@ieee.org

*** * 2006 GOLD Committee * ***

Chair – *Helene Fung*
Vice Chair – *David Beards*
Treasurer – *Roger Karpin*
Secretary – *Doug Brown*

Committee Members
Diana Soo, Vi Nguyen, Karyne Wong

Welcome Message from UWA Student Branch Chair

Welcome to 2006. This year promises to be exciting and event filled.

The first week of university got underway with successful lecture notes sales for the School of Electrical, Electronic and Computer Engineering at The University of Western Australia.

There are currently site visits, membership drives and other professional events being planned. This will build on last year's successful events such as the record ticket sales that were experienced for the IEEE Student Branch Networking Forum.

The overall focus of this year's events will be on raising and expanding the profile of the IEEE as an organisation to students. I look forward to leading our branch into a successful year.

Timothy Wong
UWA Student Branch Chair

WA Joint Chapter of the Power Engineering and Power Electronics Societies

The joint power engineering and power electronics chapter, or PES/PELS chapter in short, has conducted a planning meeting at the end of January 2006 to map out this year's activities. It was also an opportunity for the new committee to acquaint themselves with each other and the overall year plan.

The 2006 committee comprises Harry McDonald, Doug Brown, Karyne Wong, Amish Sheth, Vi Nguyen, An Li and Bob Stewart. This is a useful blend of experience and youthful energy. The younger members have all evolved with IEEE as student committee, GOLD and other professional association volunteering.

On the other hand, we have lost the experience of Terence Law and Thom Fox at the end of 2005. Both had been on the committee since its inception in 1996 and had served as chapter chairs.

New committee members and proposals for technical talks are most welcome. The chapter was transformed from a Power Engineering Chapter to a joint chapter with Power Electronics to better serve the local technical interests.

Professor Sivaji Chakravorti from Jadavpur University Kolkata India will be visiting Perth in late July and early August as part of the Power Engineering Society's Distinguished Lecturer program. His specialist areas include:

- Artificial Neural Network as an Optimisation Tool in High Voltage Engineering;
- Electric Field Analysis in High Voltage Systems; and
- Modern Tools for Impulse Fault Diagnosis in Transformers

Details of the selected presentation will follow once the arrangements are finalised.

Harry McDonald
PES/PELS Chapter Chair

WA Chapter of the Computational Intelligence Society Starts Activities in 2006

In a recent meeting, members of the WA Chapter of the CIS elected its founding Executive Committee.

The CIS chapter extends an invitation to join to all IEEE members interested in the theory, design, application, and development of biologically and linguistically motivated computational paradigms emphasising neural networks, connectionist systems, genetic algorithms, evolutionary programming, fuzzy systems, and hybrid intelligent systems in which these paradigms are contained.

Members will enjoy opportunities for research or professional growth by participating in our activities, so as to remain on the leading edge of science, technology, and economy in the field of interest of our Society.

Become part of the world of computational intelligence! Benefit from the many opportunities of expanding and updating your knowledge, sharing the results of your activities, developing new knowledge and professional practices, networking with your peers, and promoting your career. If you want to join or require more information, please visit the web site of the society or contact our Chapter Chair Dr Philip Hingston.

<http://www.ieee-cis.org>



CIS WA Chapter Chair Email
p.hingston@ecu.edu.au

Continuing Professional Education

Dear members,

I have been appointed as a member of the IEEE Education Activities Board's Continuing Professional Education Committee (CPEC) in Feb 2006, to provide an international perspective and a voice for recent graduates to the committee.

The mission of CPEC is to identify and serve the educational needs of working professionals by being the resource of choice for quality educational products and services. This can be interpreted to include both technical and non-technical educational needs.

Some of the CPE online resources are available through the IEEE's EAB online learning website (see below).

If you have any thoughts or ideas on what's important in the continuing educational needs of working professionals such as yourself, please feel free to drop me a line (hfung@ieee.org) so I can bring relevant feedback to the committee.

Helene Fung

Probe further @
http://www.ieee.org/web/education/Continuing_Education

What Do You Think?

Send your letter to the editor at douglas.chai@ieee.org

Senior Member Elevation

Congratulations to Associate Professor Adam Osseiran who has been promoted to the senior member grade in Jan 2006.

Adam appears in this issue's **Meet Our Members** (see below).

Meet Our Members



Associate Professor Adam Osseiran is the Director of the National Networked Tele-Test Facility which is the only Major National Research Facility in Western Australia. The NNTTF provides access to researchers and industry from Australia to characterise their intellectual properties on the Facility multi-million dollar tester.

Adam was the General Chair of three international conferences: IEEE International Mixed-Signal Testing Workshop (*IMSTW*) 2002; IEEE Electronic Design, Test and Application (*DELTA*) 2004; and IFIP Very Large Scale Integration and System on Chip (*VLSI-SOC*) 2005.

He is the editor of the book entitled *Analog and Mixed-Signal Boundary-Scan, A guide to the IEEE 1149.4 Test Standard*, published in 1999 by Kluwer Academic Publisher; invited editor of the *Microelectronics Journal* in 2002; and invited keynote speaker at the IEEE *IMSTW'2005* conference in France.

He was Chair of the IEEE Mixed-Signal Test Standard Working Group from 2000 to 2005; is currently Vice Chair of the IEEE Test Technology Technical Council for Asia Pacific; and is a member of the Steering Committees of IEEE *IMSTW*, IEEE *DELTA* and the European Workshop of Microelectronics Education.

On top of his recent promotion to IEEE Senior Member, Adam has received from IEEE-CS six certificates of appreciation awards, one achievement award and a meritorious award.

Section Meeting

The first section committee meeting for 2006 was held at Technology Park, Bentley on 30 Jan 2006.

The next Section meeting is tentatively scheduled on 3 May 2006 at the same venue.

PES/PELS Chapter Meeting

The joint PES/PELS chapter committee meeting was held on 30 Jan 2006

Teambuilding Workshop & Goals for 2006

The WA Section held its sixth annual teambuilding workshop on 25 Feb 2006. Nine IEEE WA volunteers participated in this half day event at Technology Park, Bentley. The program included presentations from volunteers with different portfolios and responsibilities, discussions of new ideas, planning and leadership training.

The WA Section's goals for 2006 will focus on the following four aspects:

1. **Technical.** To provide up-to-date and cutting edge technical talks, forums and events.
2. **Industry.** To establish liaison and relationship with local industry.
3. **Students.** To raise awareness and involvement of student members to ensure continuation of membership after graduation.
4. **Community.** To improve service and communication to committees, members, institutions, schools and general public.



6th Annual Teambuilding Workshop: (Standing Left to Right) V Maxville, K P Chung, T Wong, C Ortega-Sanchez, L Fung, H Xie; (Sitting Left to Right) D Chai, K Wong and H McDonald.

Computer Chapter Meeting

A computer chapter committee met on 15 Feb 2006, at Technology Park, Bentley. Lead by Kevin Wong, the committee members include Valerie Maxville, Lance Fung, Włodzimierz Gornisiewicz, Hong Xie, Shri Rai and Douglas Chai.

CIS Meeting

The very first WA CIS chapter meeting was held on 13 Feb 2006. Find out more about the newly formed CIS chapter on page two.

Women in Engineering Meeting

The very first WA WIE meeting took place on 1 Feb 2006. Agenda included election of committee and planning of activities for 2006. It was held at Dome Café – the women in engineering sure know how to host a meeting.

GOLD Meeting

The GOLD committee met on 30 Jan 2006 to plan for this year's activities.

Volunteering

The IEEE WA Section, Chapters, Groups, and Student Branches are always on the look out for new leaders.

We host a number of technical meetings, career development seminars, networking events and site visits throughout the year (announcement are usually sent out to members via IEEE mailing list).

Although the organisations of these activities are usually carried out through emails and telephones, the committee members do get together for a face-to-face meeting from time-to-time.

You are welcome to attend our administrative meeting as an observer. All you need to do is send a notice to and get meeting details from the chairperson. (see page one for a list of chairpersons) Find out what takes place at one of these meetings and see if you are eligible to join. For instance, you must be a student to join a student committee. If you like what you see, then you too can lend a hand by becoming a volunteer. On the other hand, if you don't like what you see, then by all means become a volunteer right away and do something about it!!

Join IEEE

Know someone who would like to join??

It's easy, just to go
<http://www.ieee.org/join>

Quick Facts

The IEEE has:

- » more than 365,000 members, including 68,000 students, in over 150 countries.
- » 311 sections in ten geographic regions worldwide.
- » about 1,570 chapters that unite local members with similar technical interests.
- » more than 1,430 student branches at colleges and universities in 80 countries.
- » 39 societies and 5 technical councils representing the wide range of technical interests.
- » 128 transactions, journals and magazines.
- » more than 300 conferences worldwide each year.
- » about 900 active IEEE standards and more than 400 in development.

Find out more at <http://www.ieee.org> .

Quick History

- » The IEEE WA Section was formed back in 1984.
- » The previous chairs of the WA Section were:

1984	Alan Billings
1985	Alan Billings
1986	Alan Billings
1987	Alan Billings
1988	Yianni Attikiouzel
1989	Yianni Attikiouzel
1990	Yianni Attikiouzel
1991	Laurie Faraone
1992	Yianni Attikiouzel
1993	Yianni Attikiouzel
1994	Yianni Attikiouzel
1995	Dorota Kieronska
1996	Dorota Kieronska
1997	Harry McDonald
1998	Harry McDonald
1999	Kit Po Wong
2000	Kit Po Wong
2001	Lance Fung
2002	Lance Fung
2003	Douglas Chai
2004	Douglas Chai
2005	Lance Fung

Top Ten Things They Never Taught You in Your Engineering Degree

10. There are at least 10 different types of capacitors.
9. Theory tells you how a circuit works, not why it does not work.
8. Not everything works according to the specs in the databook.
7. Never trust anyone in a suit.
6. Managers, not engineers, rule the world.
5. Working in engineering is like having a 9am lecture, and a 1pm lab every day for the rest of your life.
4. Dilbert is a documentary.
3. Always try to fix the hardware with software.
2. Anything practical you learn will be obsolete before you use it, except the complex math, which you will never use.
1. Smoke makes it work. Let out the smoke, and it will stop working.

[Received from Alistair Kitchen who in turn got this top-ten list from an engineer he used to work with years ago.]

Contributors

RYAN CARR is an engineering student at Curtin University of Technology.

HELENE FUNG is a senior consultant at Quantum Consulting Australia, and a high flyer at the IEEE.

LANCE FUNG is an Associate Professor at Murdoch University. He is one of the longest serving and most dedicated committee members of the IEEE WA Section.

ALISTAIR KITCHEN is a PhD student at Edith Cowan University.

HARRY MCDONALD works at Western Power. He is one of the most experienced IEEE volunteers in WA. The IEEE WA Section won't be needing an operation manual if anyone was like him.

CESAR ORTEGA-SANCHEZ is a senior lecturer at Curtin University of Technology. He has switched to wine, because beer is over-priced in Australia.

ADAM OSSEIRAN is the latest WA member to become an IEEE senior member.

KEVIN WONG provided the teambuilding workshop photo. Like all good engineers, he converted a chair into a tripod for the camera. He is a lecturer at Murdoch University.

TIMOTHY WONG is an undergraduate student at the University of Western Australia.

Ha Ha

Story #1 – Two Antennas

This is a story about two antennas. They met on a roof, fell in love and got married. The ceremony wasn't much, but the reception was fantastic.

Story #2 – An Architect, Artist and Engineer

This is a story about an architect, an artist and an engineer.

They were discussing whether it was better to spend time with the wife or a mistress.

The architect said he enjoyed time with his wife, building a solid foundation for an enduring relationship.

The artist said he enjoyed time with his mistress because of the passion and mystery he found there.

The engineer said, "I like both."
"Both?"

Engineer: "Yeah. If you have a wife and a mistress, they will each assume you are spending time with the other, and you can go to the plant and get some work done."

From the Editor's Desk

Hi everyone. As you know, the IEEE WA Section is here to serve the local members of the IEEE, and it is run entirely by local volunteers. This year, I have put my hand up for the newsletter editor position. Armed with the ambition to kick-start the WA Section newsletter back into life and my limited supply of spare time, I am aiming at quarterly publication to begin with.

When compiling our newsletter, I will have quality, relevance, timeliness and conciseness in mind. I will adopt the "short but sweet" philosophy when putting articles together, and limit the length of each newsletter issue to four pages or less. Therefore, it won't take up too much of your time to get your quarterly doses of local IEEE news.

Please do not hesitate to send me any comments, suggestions, and articles for future publication.

I thank those who have contributed to this issue and lent a hand in getting this up and running.

I hope you have enjoyed reading this edition of *e-Wavelets*, and I look forward to compiling the next issue, which should be out in July.



Douglas Chai
Newsletter Editor

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