

## Welcome Message from Section Chair

Dear friends,

This issue signals the end of the third quarter of 2006. However, this is not yet the end. The WA Section and Chapters are organising a number of events in the coming months. This includes the "Designing games for the mobile phone" workshop by Elina M. I. Koivisto, who is a game researcher and designer in the Nokia Research Center; visit and talk by IEEE Distinguished Lecturer, Professor Vojin Oklobdzija; Postgraduate Electrical Engineering and Computing Symposium (PEECS 2006); ICT WA conference; and the International Conference on Cyber Game and Interactive Entertainment (CGIE 2006). These events will provide information from the latest research and development activities happening both locally and internationally.

Apart from the technical activities, spring is in the air with wild flowers in full bloom across WA. Did you know that over 12,000 species of plants are flowering from June until December? Carpets of daisies covering kilometers on the field, red-and-green kangaroo paws, eucalypts with blood-red blossoms, pink boronias,

orange banksias, red poker and magenta paperbark blossom are just a handful of examples. Exploring and enjoying such magnificent sights is an experience that no one should miss. In addition, the growth and health of the state's economy is at the envy of other states and even the world! We are truly fortunate living in the world-famous Wildflower State!

However, let's not forget the world and in particular at the IEEE Headquarter, Regional and Divisional levels. It's time to have your say through the ballot box in selecting the leaders for the coming years. By now, you should have received information and ballot papers in the mail.

In particular, I'd like to draw your attention to the positions of IEEE President-Elect 2007 and IEEE Region 10 Director 2009-2010. The two candidates for IEEE President-Elect 2007 are Lewis Terman and John Vig, while the candidates for IEEE Region 10 Delegate-Elect/Director 2009-2010 are Y.W. Liu, R. Muralidharan and Yong Jin Park. Information about the candidates, such as their background, IEEE activities and statements, can be found at the IEEE Election web site:

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

You will also be eligible to elect the Divisional directors according to your technical society memberships.

On behalf of the IEEE WA Section, I urge your participation in the voting process. The online process takes only approximately 5 minutes and it is extremely intuitive. The outcomes will affect all IEEE members as the leadership will chart the course and steer the institute in the coming years. Please also note that your BALLOT must be received by 12 o'clock noon, Central Time USA (18:00 GMT), 1 November 2006 for it to be counted.

Of course, don't forget the coming AGM of the WA Section at the end of the year. Call for nomination and announcement of the AGM will be sent to you soon. We look forward to meeting you at the AGM.

Last but not least, I'd like to thank Dr Douglas Chai for putting together another informative and entertaining issue of the newsletter and the contributors for submitting their articles.

Take care. Enjoy the spring and this issue of e-wavelets.

Lance Fung  
WA Section Chair

## In this Issue...

- Two more hard-working members promoted to senior member grade.
- IEEE Mentoring Program.
- Meet Our Members.
- Workshop on mobile phone game design.
- R10 GOLD Congress in Beijing.
- Ha Ha Story # 4.
- And more.

## Membership Renewal

You can renew your IEEE membership right now.

Simply login to [www.ieee.org/renew](http://www.ieee.org/renew) using your IEEE Web Account.

## IEEE Annual Election

Vote online at

[www.ieee.org/election](http://www.ieee.org/election)

## Senior Member Elevation

Congratulations to Philip Hingston and Lance Fung on their promotion to the IEEE senior member grade. Phil and Lance were promoted in June and August 2006, respectively.

Both Phil and Lance appear in this issue's **Meet Our Members**.

## IEEE Mentoring Program

The IEEE Mentoring Connection is an online program to foster mentoring relationships between IEEE members.

Opening 14 July 2006, IEEE is offering its members the opportunity to participate in an online program which will facilitate the matching of IEEE members for the purpose of establishing a mentoring partnership. By volunteering as a mentor, individuals use their career and life experiences to help other IEEE members in their professional development. As a mentee, you lead your partnership by selecting your mentoring partner from among those who have volunteered to serve in this capacity. We ask that you review the time and effort commitment to the program to ensure a successful mentoring partnership.

Presently, IEEE is offering potential mentors, like you, the opportunity to enter the program first. IEEE has partnered with The Training Connection, a vendor that has developed a web-based mentoring program to facilitate the matching process. Participation in the program is voluntary and open to all IEEE members above the grade of Student Member.

If you are interested, please go to <http://www.ieee.org/mentoring> for information on the roles and responsibilities of each mentoring partner, the program, as well as additional information on time and effort commitments. To access the online program site visit the IEEE Membership Benefits page listed under Core Benefits "New for 2006" at

<http://www.ieee.org/web/membership/benefits/index.html>

This will then take you to the online mentoring program site. We encourage you to take advantage of the IEEE network of technical professionals and sign up for the online mentoring program today.

If you have any questions, please contact Cathy Downer, IEEE Mentoring Program Coordinator, at

Email: [c.downer@ieee.org](mailto:c.downer@ieee.org)

## Meet Our Members



**Philip Hingston** holds a PhD in mathematical logic from Monash University and a Postgraduate Diploma in Computer Science from the University of Melbourne. He has 14 years' experience as an academic and 9 years in industry. He has published 35 refereed conference or journal papers, 2 book chapters, and 10 other papers in machine learning, information retrieval, neural networks and genetic algorithms.

Between 1995 and 2000 he was a senior research scientist and then program manager in Rio Tinto's Research and Development division in Perth. He joined ECU in 2000. He has just been promoted to Associate Professor.

His main research interest is in Artificial Intelligence, related areas and their applications. The current focus of this work is Evolutionary Computation, and its application to industrial design tasks, to grammatical inference, and to modeling evolving social and natural systems. A recent addition is the use of AI methods in video games.



**Lance Fung** has been a member of the IEEE over 14 years. His technical career commenced as a Marine Radio and Electronic Officer in the merchant navy in 1974. After sailing the high seas for a few years, he returned to study and completed a Bachelor of Science degree in Maritime Technology with First Class Honours from the University of Wales, Institute of Science and Technology in 1981. This was followed by a Master of Engineering degree in System Test Technology from the same institute.

During his study, Lance was awarded the Marconi Avionics Prize and the Marconi Space and Defence Systems Prize for the best project and best performance in the postgraduate course. He then lectured in the Nautical Studies Department, and subsequently the Department of Electronic and Communication Engineering at Singapore Polytechnic from 1982 to 1988. In 1989, he took up a lectureship position at the School of Electrical and Computer Engineering at Curtin University of Technology where he stayed until 2003. He then accepted an offer at Murdoch University as an Associate Professor in the School of Information Technology where he is currently working.

While teaching full-time and raising his family, Lance studied for his doctoral program under the supervision of Professor Kit Po Wong. He received his PhD degree from the University of Western Australia in 1994. His thesis was in the disciplines of Artificial Intelligence and Power System Engineering. His study proposed solutions to the problems of

optimisation of circuit allocation of HV substation, and economic-environmental dispatch of power generators. In addition, he also received a Graduate Diploma in Business from Curtin University of Technology in 2000.

He has served in the IEEE WA Section and various technical chapters for over 10 years. He received the IEEE Third Millennium Award in 2000 in recognition of his services. He has also served in the organising and program committees of many IEEE conferences. Lance believes in involvement and serving the professional institutes as an integral part of career development and training. He is active in promoting IEEE to other professional bodies and the industry. He has been a member of the Institute of Electrical Engineers (IEE) and he is also a current member of the Institute of Engineers Australia (IEAust) and the Australian Computer Society (ACS). In his words, "It has been an enjoyable time serving IEEE and other technical communities in promoting technologies for the benefits of the society. I have gained much experience as well as many friends. I strongly encourage all members to be involved and to make good use of the opportunities provided."

## ABC Site Visit

The ABC Broadcast Studios site visit, which took place on the evening of Wed 26 July 2006, was very well-attended. Our host, Kris Bathgate, is very passionate about his work and gave us an extensive tour and a thorough explanation of the equipment, facilities and functions of the ABC Broadcast Studios. Further, many positive comments were received after the tour, which was organized by the IEEE Signal Processing Chapter.

## Engineering and Autism

IEEE Women in Engineering hosted an informative and interactive seminar on "Asperger's Syndrome and Autism & Engineering and Computing: Facts - Theories - Realities". Research has indicated a correlation between autism and having a relative who is an engineer, and many prominent computer scientists have been suggested to have Aspergers syndrome. Felicity Millman, who is researching autism at Curtin University, provided a historical, research and clinical perspective on autism and Aspergers syndrome. Dr Nicola Ritter provided a personal account of her family's experience after her son was diagnosed with Aspergers Syndrome. Attendees included families touched by autism, educators, researchers, employers and individuals who could identify with some behaviours described in the literature. Further information on these pre-sentations is available at <http://www.ieee.org/wawie>.

Valerie Maxville  
IEEE WA Women in Engineering

## Join IEEE

Know someone who would like to join??

*It's easy, just to go*

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

## Designing Games for the Mobile Phone Workshop

The WA Chapter of the IEEE Computer Society is organising a one-day workshop on designing games for the mobile phone.

### When and where?

Date: Friday, 24 Nov 2006

Time: 8:45am to 5:00pm

Venue: Murdoch University

### Who should attend?

Anyone who is interested in mobile game development.

### What will I learn?

You will learn what the mobile platform offers for game design. The methods that can be used in design and evaluation of mobile games will also be discussed. Some of the topics to be covered are:

- Designing games for the mobile platform
- Evaluating mobile game play
- Tools and methods
- Game design
- Building simply physical prototypes in groups

### Who is the speaker?

Elina M. I. Koivisto.

Koivisto is a game researcher and designer at the Nokia Research Center.

Her main research topics are the design and evaluation methods for mobile games as well as the Massively Multi-player Online Game (MMOG) design and communities.

She has published several articles on these topics and frequently spoken in game conferences such as the Games Developers Conference (GDC).

Recently, Koivisto's work has focused on evaluating the player experience. She has conducted play-testing for commercial and research game titles.

### What is the cost?

Registration fee starting from AUD 80.

### Need more information?

Find out more at the Computer Chapter website at

[http://ewh.ieee.org/r10/w\\_australia/computer/](http://ewh.ieee.org/r10/w_australia/computer/)

## R10 GOLD Congress in Beijing

The first ever IEEE R10 GOLD Congress was held in Beijing on 14-16 July 2006 in association with the bi-annual IEEE R10 Student Congress. Delegates were given the opportunity to *Share Beyond Boundaries*, which was the theme of this congress.



The first day of the congress started with presentations from several international IEEE representatives including the IEEE President, Dr Michael Lightner and the IEEE Regional Activities Board GOLD Committee Chair, Mr Darrel Chong.

This coincided with the announcement of several new IEEE initiatives to add value to membership, such as IEEE.tv and GOLD Mentoring Program.

GOLD and Student delegates from all over R10 were given the opportunity to network with one another, and discuss important issues such as the transition from student membership to GOLD member. Delegates also participated in a Q&A session with a prestigious panel including the IEEE president.

In the evening, the dinner banquet - fit for an Emperor - was followed by a cultural performance by students from the four participating Beijing Universities. They entertained the audience with samples of traditional Chinese music, opera and Wu Shu (Martial Arts). Distinguished GOLD committee members were honoured with recognition as they received awards for their tireless contributions and for bringing innovations to the IEEE.

On the second day, GOLD delegates participated in a GOLD Affinity Group activities workshop, where a representative from each section of R10 presented to fellow volunteers on the activities of their affinity group. Representing GOLD WA Section, I took this opportunity to share with the other delegates the vision, background, and local events held here in WA for the benefit of members. The presentations proved to be successful as discussions developed into what makes a strong GOLD Affinity Group, with each Section taking note of suggestions and ideas for improvement. The day ended with a phenomenal trip to the Great Wall of China.

Vi Nguyen  
IEEE WA GOLD



## Did you know that...

- The IEEE is divided geographically into 10 regions, with the Asia Pacific region being named the Region 10 or R10 in short.
- GOLD is an acronym for *Graduates of Last Decade*. This group caters for the special needs and interests of recent graduates. Find out more at <http://www.ieee.org/gold>.
- IEEE.tv is an internet broadcasting network that produces and delivers special-interest programming about technology and engineering. Find out more about the IEEE internet television initiative at [www.ieee.org](http://www.ieee.org).

## Competencies of Engineering Graduates (CEG) Project

The Faculty of Engineering, Computing and Mathematics at The University of Western Australia is developing an instrument to profile the generic competencies of engineering graduates. The instrument will help universities to align engineering courses with industry requirements.

The instrument development is being conducted as a PhD project by Ms Sally Male BE(Hons) (Electrical), under the supervision of Dr Elaine Chapman, Associate Dean Research, Graduate School of Education, and Professor Mark Bush, Dean, Faculty of Engineering, Computing and Mathematics.

The first survey in the CEG Project is to discover whether the jobs of established engineers can be grouped into clusters requiring similar competencies. This survey is nearing completion.

For further information visit

<http://ceg.ecm.uwa.edu.au>

## Your Article Here

We would like to hear from you.  
Please send in your article to the  
Newsletter Editor.



IEEE WA GOLD visited Dreamfit. Find out more on page 4.

### Mechanical Engineers Wanted

- Are you a hands-on person who likes to get their hands dirty?
- Seeking an ever challenging career in a new and developing industry.
- Enjoy working on a variety of projects that include customizing motor boats, hovercrafts, motorcycles and other performance vehicles for clients with disabilities?

Enquire within...

(We can't afford to pay you much but hopefully you would find the work satisfying and would to make a solid contribution to society).

The mock job vacancy above would be overlooked by most when browsing through the Employment section of the newspaper. Riding on the back of boom times of the Western Australia's resource industry, it is difficult for some engineers to be contemplating doing work on the minimal wage. Darren Lomman, founder of Dreamfit, could have easily sought employment with a high profile company and enjoyed a rising career on the back on his many accolades. Instead, he has chosen to pursue a path that is more rewarding in terms of self-satisfaction from the job rather than high returns financially. Quoting in his words, he would like to give "life choices" to those who have been forced to forfeit them due to certain disability conditions.

On 27 September 2006, IEEE GOLD WA organized a site visit to Dreamfit. It was held at their workshop in Bentley, Western Australia. The workshop was every handy-person's dream with all sorts of tools and materials in boxes lined up from wall to wall.

On display was the renowned hand-controlled motorcycle that started it all. Darren kindly gave us a demonstration of the bike but not without running through the mechanics of it, highlighting problems encountered during the construction. Also available was the hovercraft and speed boat that have been customized for wheel chair access. The former has traction for access and actually locks the wheel down when the vehicle is operating. The latter has an in-built crane with the capacity to lift a person in a wheel-chair, making the process of boarding convenient for the driver.



The toys themselves are all very nice to look at. Speaking on behalf many office workers out there, our daily lives are usually involved sitting in a cubicle and staring a computer all day. Any hands-on work would seem to be a blessing. The student volunteers certainly found this aspect to be very enjoyable when comparing it to their standard course work. It is also rewarding to see the happiness on the client's face when they have been given a choice in life that was once considered lost.

It is hoped that IEEE GOLD WA would have an opportunity to schedule another visit sometime in the future to gaze upon Dreamfit's projects.

#### Future Project

Dreamfit has obtained funding to construct an amp sailing vertical ramp that use a motorized railing system to bring its wheel-chair patron to the top of the tower before allowing them to amp sail on the other sides.

#### Short Brief

Dreamfit was founded by Darren Lomman after successfully completing an engineering project to outfit a standard motorcycle to accommodate a person who does not have muscular control of their legs. It led to the development of an organization that allows engineering students to customize recreational vehicles for people in the community that have such special needs.

More details can be found at their website [www.dreamfit.com.au](http://www.dreamfit.com.au). For engineering students and keen people, Dreamfit are on the look out for volunteers please contact them for further details.

David Lim  
IEEE WA GOLD

## Ha Ha

### Story #4 – Man in a balloon

This is a story about a man in a hot air balloon. He realised he was lost. He reduced altitude and spotted a woman below. He descended a bit more and shouted, "Excuse me, can you help me? I promised a friend I would meet him an hour ago, but I don't know where I am."

The woman below replied, "You're in a hot air balloon hovering approximately 30 feet above the ground. You're between 40 and 41 degrees north latitude and between 59 and 60 degrees west longitude."

You must be an engineer," said the balloonist.

"I am," replied the woman, "How did you know?"

"Well," answered the balloonist, "everything you told me is, technically correct, but I've no idea what to make of your information, and the fact is I'm still lost. Frankly, you've not been much help at all. If anything, you've delayed my trip."

The woman below responded, "You must be in management level."

"I am," replied the balloonist, "but how did you know?"

"Well," said the woman, "you don't know where you are or where you're going. You have risen to where you are due to a large quantity of hot air. You made a promise which you've no idea how to keep, and you expect people beneath you to solve your problems. The fact is you are in exactly the same position you were in before we met, but now, somehow, it's my fault."

### What Do You Think?

Send your letter to the editor at [douglas.chai@ieee.org](mailto:douglas.chai@ieee.org)

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