IEEE Newsletter

From the Editor

Welcome to the first IEEE Queensland section newsletter for 2001. This is the first of three newsletters for the year, with the remaining two due in July and October. With this newsletter, we hope to keep all our members up to date on the important issues and events in the IEEE Queensland section. I hope you find this Newsletter to be a valuable resource and I welcome any comments or suggestions via e-mail to M.Cowling@mailbox.gu.edu.au.

Michael Cowling
Newsletter Editor, IEEE Qld Section

IEEE Queensland Section Website

http://www.ieee.org/queensland/

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Annual General Meeting 2000

The IEEE Queensland section would like to congratulate the following members for being elected to the following positions at the 2000 AGM:

Dr. E. Palmer: Chair
Dr. R. Sitte: Vice-Chair
Dr. P. Sutton: Treasurer & Webmaster
Dr. D. Campbell: Secretary
Dr. A. Dawood: Technical Activities
Mr. S. Ellis: Membership Development
(database management)

Miss K. Melih: Acting Student-Counsellor (GUGC)
Mr. J. Faichney: Student Chair (GUGC)
Mr. M. Cowling: Newsletter Editor

Some IEEE Office Bearers
(from left to right): Dr. Renate Sitte,
Dr. Peter Sutton, Dr. Ed Palmer,
Mr. Simon Ellis, Dr. Duncan Campbell.

IEEE QUEENSLAND SECTION E-MAIL LIST

Future IEEE Queensland Section Events will be broadcast via e-mail. Notification of the publication of this newsletter will also be done over e-mail.

All IEEE Members who have notified the IEEE of their e-mail address will be automatically added to the e-mail list. Other members may subscribe by sending e-mail to majordomo@ieee.org with the body of their message containing **subscribe qld-section.**

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IEEE QUEENSLAND SECTION
Chair's Report, 2001

Welcome to this, the first newsletter for 2001. This is the first of three newsletters planned for this year, the others being planned for July and October. This year we hope to have an active program in professional activities across all four chapters, as well as activities aimed at recruitment of new members. We also hope to have a greater co-operation with the Institution of Engineers Australia with three joint seminars being planned on 28 March, 23 May and 21 November in the Hawken Auditorium.

After ironing out a number of bugs encountered with our electronic mailing list, we hope to be able to notify as many of you as possible regarding future events by email.

Regarding the committee meetings, these are generally being held this year on the last Tuesday of each month with the AGM being held on 20 November at QUT, Gardens Point campus. If you have any matter you would like raised at a committee meeting could you please email our secretary, Duncan Campbell (da.campbell@qut.edu.au).

Finally, I would like to encourage all of you to take an active role in the IEEE perhaps by taking on a committee position at some stage, perhaps by contributing to a professional activity such as a seminar, or simply by encouraging some of your colleagues to join the IEEE.

I look forward to seeing as many of you as possible at our activities.

Ed. Palmer
Chair, IEEE Queensland Section.

Activities of the Griffith University Gold Coast Campus IEEE Student Branch

The Griffith University Gold Coast Campus IEEE branch started in late 1997.

This will be our 4th full year in operation on the Gold Coast campus. 2000 was a successful year for the branch with a number of activities and new member recruitment's.

Trevor Stone, Engineering Services Manager of the Network Business Unit of CITEC was invited as a guest speaker to talk to students about "What they never told you at uni." This event was aimed primarily at students in their final year of study. The event was well received by students and generated much interest in the wider areas of Electrical Engineering and Computer Science and was considered to be a success by all that participated.

Two membership drives were held in 2000 promoting the benefits of IEEE membership to students. Students enjoyed free pizza and soft drinks and had an opportunity to speak with existing IEEE student members. The membership drives were successful in directly recruiting 12 new student members.

We have more membership drives and activities planned for this year and we are looking forward to another successful year.

Jolon Faichney
Chair, GUGC IEEE Student Branch.

From the Chair of the Computer Chapter

Since the last publication of this newsletter, the Computer Chapter has held many events. Some of the highlights were:

IEEE/IEAUST Seminar

The IEEE Computer Chapter and the IEAUST hosted a seminar where participants were to learn about an Australian success story: the development that prompted networking giant Cisco to purchase Brisbane start-up company Radiata for their leading edge radio modem design. The presentation was given by Gordon Foyster of Cisco and was titled "5 Million Transistors at 5 GHz in 5 Months: Design and CAD Issues in the development of Cisco's 802.11a Modem and RF ICs".

Gordon Foyster of Cisco

Academia meets Industry

This event, held in late 1999, is a debate between education and industry on how well the graduates produced by the universities in Queensland are prepared for the industries that are receiving them. In that event, the theme was:

> **Computing degrees with an expiry date? University degrees or Industrial degrees?**
>
> The computing industry is continuously changing and diversifying following market's pull and push. Yesterday's novelty and competence is obsolete by tomorrow. Can Universities provide sufficient multi-disciplinary computing knowledge to students or should we shift to training on the job? If so, should Industry provide competence or skills certificates equivalent to a degree, but with a limited validity time?

As you can imagine, at times the debate was controversial but always full of life. Some of the issues that were mentioned include:

♦ The only reason for considering degrees with expiry dates is because industry/business lobby groups have by default encouraged government educational policy to compromise the educational system and standards to the point where universities are unable to provide students with the fundamental mental aptitude to ensure that the half life of the value of their knowledge is sufficient to last them for the duration of their careers.

♦ While the current trend in higher education is to provide tool skilling and thereby teach at the level of vocational training schools, originally universities sought to educate the person with the fundamental long term ability for critical thinking and independent methodological problem solving. The concept of an industry based degree is by definition akin to short term vocational training, which in today's rapidly changing technological environment implies the need for continual retraining. It would be rather sad if industry/business is unable to appreciate the value of the higher learning traditionally provided by universities. If industry prefers vocational training, this is fine however industry should recognize that it is not the role of the university to provide it.

♦ In your future work life, you can be certain of one thing, change. The technology you learn to use now will change dramatically. Be it hardware or software. The way we use technology will change both in the sense of how we use it and what we use it to achieve. The issue therefore is how to maintain your skill currency in this environment of change, and so therefore I recommend to focus on those skills which are durable over long periods of time and technology independent such as project management, communications (people to people communications), people management, delegation and trust, analytical skills, strategy planning, etc.

♦ The Web isn't Everything !

♦ The semiconductor industry with its relentless drive to produce complex systems on silicon has driven the computer revolution. This revolution has seen most professions move from a material to a service base. This is particularly so with computing and communications which are now mainly service based professions. Have educational establishments realised this trend or will our courses have a use by date attached to them?

♦ An Academic once said that digital technology was a passing phase. An extension of logic would say that computing and computers is also a passing phase. If both statements are correct what replaced digital technology and what will replace Computing and Computers?

- if BIT = persistent concepts and principles PLUS skills then we can do either:
  - concepts first and some skills, + apprenticeship in industry, OR
  - skills, + apprenticeship in industry AND p/t studies in concepts and principles
  - (but who will attend ...)
  - AND reskilling through lifelong learning

  But,
  - Who will fund/assist/encourage the processes in [lifelong learning] to it?

  - Where do we teach/promote problem solving and design skills?

- Graduate IT degrees will be irrelevant to employers in 5 years unless tertiary institutions ensure extensive "on the job training" as a perquisite for graduation!

Academia Meets Industry, 1999

In addition to Academia meets Industry, these other events were organised:

Tuesday 21 September 1999
Joint Computer Society / IEEE GUGC Student Branch
Ralph Hunt, Hitachi Data Systems
"What they never told you at Uni"

Tuesday 15 August 2000
Joint Computer Society / IEEE GUGC Student Branch
Trevor Stone, CITEC
"What they never told you at Uni"

Dr. Renate Sitte
Chair of Computer Society Chapter
Queensland Section

IEEE Computer Society Membership

If you (or somebody you know) is interested in joining the IEEE Computer Society or wish to know more about it, please e-mail the Chair of the Computer Society.

R.Sitte@mailbox.gu.edu.au

Computer Chapter Upcoming Events

Wednesday 23 May 2001
Seminar IEEE/IEAUST
Prof. Dr. Ing. Ulrich Rückert
Heinz Nixdorf Institute, University of Paderborn, Germany
"Do-it-yourself hardware: the Field Programming Gate Array revolution"

August 2001, One week, Date TBA
Joint Griffith University/ IEEE Computer Chapter Intensive workshop (certificate for participants)
Prof. Dr. Werner Dirlewanger
University of Kassel, Germany
"Measurement of Information Processing Systems Performanceand of Software Efficiency"

August 2001, Date TBA
Seminar IEEE/IEAUST
Prof. Dr. Werner Dirlewanger
University of Kassel, Germany
"Communications hardware-software timing" (Exact title TBA).

Conference Announcement:

FUZZ-IEEE 2001

The 10th IEEE International Conference on Fuzzy Systems, Sunday 2nd December to Wednesday 5th December

Deadline for Submissions: Friday 20th April

http://www.conferences.unimelb.edu.au/fuzzy/

From the Chair of the IEEE CSS/R&A Joint Chapter

Salient features of the Chapter's activities in 2000 were:
a) hosting of two technical presentations; and
b) organising two IEEE sponsored conferences held in cooperation with the Chapter.

Technical presentations were held under the umbrella of the IEEE Distinguished Lecture Series as follows:

- A seminar on Recent Developments in Mechatronics by Professor Okyay Kaynak of Bogazici University, Turkey (01/02/00); and
- A workshop on Intelligent Control (15/12/00) which included lectures on:
  - Computational Intelligence in Robotics, by Professor Toshio Fukuda of the University of Nagoya, Japan;
  - Hybrid Control Systems by Professor Panos Antsaklis of the University of Notre Dame, USA; and
  - The ICSL Cooperative Mobile Robots by Associate Professor Ljubo Vlacic of Griffith University Australia.

ACE 2000, IFAC/IEEE Symposium on Advances in Control Education (chaired by L Vlacic) and the Sixth IEEE International Workshop on VSS (chaired by X Yu), both held in December 2000, were successfully organised in cooperation with the Chapter.

Two technical events have been planned for 2001. It is a great pleasure to announce that Dr Michel Parent of INRIA, France, will visit the Chapter and present its lecture on Intelligent Autonomous (driver-less) Vehicles on 5 October 2001. Negotiation regarding the other event is under way.

If you wish to be involved in Chapter activities and contribute to its operation, please contact its Chair, Ljubo Vlacic, at (l.vlacic@me.gu.edu.au).

Assoc. Prof. Dr Ljubo Vlacic
Chair of Joint Chapter CSS/R&A
Queensland Section

IEEE Joint Control Systems and Robotics & Automation Society Membership

If you (or somebody you know) is interested in joining the IEEE Joint Control Systems and Robotics & Automation Society or simply wish to know more about it, please e-mail the Chair of the Chapter.

L.Vlacic@me.gu.edu.au

Rewards & Scholarships

The IEEE Queensland Section would like to congratulate **Dr. Renate Sitte** on being awarded the IEEE Third Millennium medal for her valued services and outstanding contributions.

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