

ACI newsletter

National Committee on Automation, Control and Instrumentation
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Whatever Happened to the "ACI Society" ?

No, we have not entirely gone to sleep on this initiative!

As previously reported, there has been (and still is) considerable uncertainty about the continuation of funding for some of the activities of the NCACI if the National Committee was to become a Society. This is due to current IEAust rules and procedures. In particular the Undergraduate Thesis Prize, the Industry Excellence Awards and this newsletter require both effort and dollars. Nonetheless, we pressed on and received from the Process Control Society a formal statement of their perspective on the merger, their perception of the likely advantages and concerns. It is obviously very important that any changes are not to the detriment of the current PCS activities.

Uncertainty with respect to the IEAust, was compounded by the mid-1999 release of the "IEAust 2000 Plus" proposal (as announced in Engineers Australia -- contact Trish Grice if you would like a copy). If adopted, the proposal will radically alter the landscape from our perspective. The proposal reaffirms the role and responsibility of the Institution in supporting and delivering the "learned society" functions, ie. both direct services to members and activities to promote the discipline, etc. To this end it is proposed that further Colleges be formed -- perhaps up to thirty! -- and from the information given it appears that the formation of an ACI College would be appropriate. We have made this suggestion to Joe Abercrombie, Past President of the Institution, as part of feedback requested on the proposal and we await developments.

What matters, of course, is not the title or even the organisational structure, but that we -- everyone interested in AC&I -- can continue to receive the services we desire and make those things happen that we think are important. Hence, until the organisational environment settles down we -- the NCACI and PCS -- will continue to get on with our respective activities.

As always, any feedback, comments or other expressions of interest would be appreciated.

Nigel Hancock (Chair, NCACI) &
John Lear (Chair, Process Control Society)

NCACI Committee Member Profile

Michael Lucas

Education:

I have a B.E. (Hons) (Mechanical) from the University of Queensland, 1994 (First Class Hons) and a Grad. Cert. Eng. from the Australian Chamber of Manufactures, Richmond Victoria, 1995. My honours thesis was on the development of ShaftCAD, a computer aided design tool for rotating shafts. My honours design project was the prototype development of the compound piston for the X3 super-orbital expansion tube, used in hypersonic ground tests of space re-entry vehicles. I am currently completing a PhD in Robotics and Mechatronics Design at the University of Queensland, Dept of Mechanical Engineering. My dissertation is titled

“On the nature of Modularity in Mechatronics Prototyping”, supervised by Assoc. Prof David Radcliffe.



Employment:

I am the Managing Director and Chief Technology Officer of Mechanimation Technology Services Australia, a growing technology consulting business specialising in mechanical and mechatronic design, robotics and automation and information technology for the agricultural, biomedical and entertainment and film industries. I was previously employed by Minenco (then a part of the Rio Tinto group) as a mechanical engineering consultant in the mining and minerals processing industries, with a special focus on automation of materials handling and dust suppression.

Honours and Awards:

2000 Finalist, Young Australian of the Year Awards (QCL Science & Technology Award)
2000 National Innovation Summit delegate (by Minister's invitation)
1999 Australian Young Professional Engineer of the Year
1999 Finalist, Young Australian of the Year Awards (QCL Science & Technology Award)
1999 IEAust Engineering Excellence Awards – High Commendation, Research Category
1999 Best New Technology Award – Karakuri World Robotics Festival, Koriyama City, Japan

1999 Best Robot Design Award - Karakuri World Robotics Festival, Koriyama City, Japan
1999 Project Leader, Australian Team Robocon World Robotics Championships, Fukushima, Japan
1998 Queensland Young Professional Engineer of the Year
1998 Finalist, Young Queenslander of the Year
1998 Team Leader, first Australian team at Robocon World Robotics Championships, Osaka, Japan
1998 2nd place, Australian Robotics Championships (Sumo Class)
1998 Australian New Leaders Forum delegate (by invitation)
1997 2nd place, Australian Robotics Championships (Sumo Class)
1996 2nd place, Young Engineers National Public Presentation Competition
1995 Queensland Young Engineers Public Presentation Competition winner
Representation:
2000 NCACI
2000 National Vice-President, Young Engineers Australia
1999/2000 Mechanical College Board
1998 – 2000 Queensland Division Committee
1999/2000 Federal Department of Industry, Science and Resources Advisory Board on Science & Technology Awareness Programme (Grants Committee)

Memberships:

Graduate Member of IEAust, Member of Software Engineering Australia, Member of UK Mechatronics Forum, Member of New Leaders Foundation

Collaboration with the Australian Robotics & Automation Association (ARAA)

NCACI is pleased to announce its first step in establishing links with the Australian Robotics & Automation Association. Alex Zelinsky, on behalf of ARAA and Ljubo Vlacic on behalf of NCACI, are the main drivers of this initiative. The initiative will facilitate the needs of a number of control engineers, constituents of the NCACI, who are actively involved in the robotics & automation field.

Please voice your opinion on how you wish this collaboration to proceed by contacting either Ljubo at

L.Vlagic@me.gu.edu.au or Alex at alex@syseng.anu.edu.au.

NCACI wishes to take this opportunity to congratulate Alex on his recent appointment to the post of Professor, Research School of Information Sciences and Engineering, The Australian National University.

IEEE - The Control Systems / Robotics & Automation Society Joint Chapter for Queensland has been formed

It is with great pleasure that we inform all members that the requirements of the IEEE Bylaws have been met, and the Control Systems/Robotics & Automation Society Joint Chapter of the Queensland Section, Australia, has been formed. The formation of this Chapter was effective from 12 March 1999.

The Chapter will facilitate further professional development of IEEE members under the umbrella of the IEEE sponsored activities. A thematic lecture series will be the core activity for future chapter meetings. For more details, please contact Ljubo Vlagic at L.Vlagic@me.gu.edu.au.

Greetings To Bob, Jose

With great pleasure we announce that the two control engineers elected to the Australian Academy of Technological Science and Engineering on 22 November 1999 are:

- Professor Jose Romagnoli from Sydney University for a "distinguished research record in process systems engineering, both in developing fundamental ideas, and in transferring them to industry"; and
- Professor Robert Bitmead from Univ California San Diego (formerly with the Australian National University) for "enduring high impact national and international contribution to design methodology and industrial applications in process control systems and signal processing."

... Rick and Ian

At the CDC'99, held in Phoenix, Professor Rick Middleton of Newcastle University

was presented with his IEEE Fellow certificate. It was also announced that Professor Ian Petersen, of the Australian Defence Force Academy, had been elected IEEE Fellow from January 2000.

On behalf of the Australian community of control engineers, the NCACI wishes to congratulate Bob, Jose, Rick and Ian for their achievements. Bravo!

Control Related Events in Australia in 2000

In addition to two premier international conferences - the 39th IEEE Conference on Decision and Control (CDC2000) and the 5th IFAC/IEEE Symposium on Advances in Control Education (ACE 2000) - the Australian control community will host many other distinguished conferences in 2000. Here are the details:

9 - 12 July 2000 Workshop on Process Systems Engineering, in conjunction with Chemeca 2000, Perth

<http://www.chemeca.org/2000.htm>

29 Nov - 1 December 2000 IFAC DCCS Workshop, Sydney. Contact Dr Arcot Sowmya - School of Computer Science & Engineering, Uni NSW. Ph 02 9385 3936; Fax 02 9385 1814; email: sowmya@cse.unsw.edu.au

4 - 7 December 2000 IEEE-PES/CSEE International Conference on Power Systems Technology, POWERCON 2000, Perth, Australia

<http://www.ee.uwa.edu.au/~aips/powercon>

7 - 9 December 2000 The 6th IEEE International Workshop on Variable Structure Systems - VSS 2000, Gold Coast, Australia

<http://vss2000.cqu.edu.au>

12 - 15 December 2000 The 39th IEEE Conference on Decision and Control - CDC 2000, Sydney, Australia

<http://www.syseng.anu.edu.au/cdc2000/>

17 - 19 December 2000 The 5th IFAC/IEEE Symposium on Advances in Control Education - ACE 2000, Gold Coast, Australia

<http://www.gu.edu.au/centre/icsl/ace2000/>

*Workshop on
Process Systems Engineering*

Chemeca 2000 Opportunities and Challenges for the Resource and Processing Industries. 9-12 July, 2000, Perth, Western Australia

<http://www.chemeca.org/2000.htm>

Process Systems Engineering (PSE) encompasses all aspects of chemical engineering, and in fact, process engineering. The increasing availability of cheaper and reliable computing power allows integration of various aspects of PSE in an integrated and "seamless" fashion. The new millennium presents opportunities and challenges to scientists and engineers working in this dynamic and exciting field.

The purpose of this workshop is to provide a forum for scientists and engineers from industries, academia, and research institutes to discuss their latest work, exchange ideas, and renew old acquaintances in identifying the opportunities and challenges for PSE for the next millennium.

Topics:

- Modelling, identification, and estimation
- Model-based control
- Nonlinear process control
- Plant-wide control
- Inferential control
- Real-time optimization and control
- Adaptive control
- Neural networks and intelligent control
- Scheduling and decision support systems
- System integration technology
- Automation instruments and equipment
- Industrial applications
- Process monitoring and improvement

For details, please contact Professor Tade at tadem@che.curtin.edu.au

M2VIP

The seventh annual international conference on Mechatronics and Machine Vision in Practice will be held at the USQ campus in Hervey Bay, Queensland, September 19-21. Previous venues include Hong Kong, Portugal, China and Turkey.

Nearly half the papers are from outside Australia - including UK, USA, Portugal, Hong Kong, Germany, Finland, Iran and Greece. They cover topics ranging from mobile robots, legged, wheeled and underwater, to aids for the handicapped and simulators for surgical procedures. Many novel sensors are presented and team robots are featured in several papers.

Details can be found on the home page at <http://www.m2vip.com>, including a list of abstracts for which full papers have been invited and other papers still awaiting review. Further submissions can still be considered, but these must now be received as email attachments in the form of full papers using the template to be found on the home page. A firm deadline must be observed to allow the UK publisher to produce the hard cover proceedings in time for the conference.

Since it will be the height of the whale-watching season at Hervey Bay, it is important to register and book accommodation in very good time. Early-bird registration will cost A\$550 for institution members, including a banquet ticket, lunches, welcome buffet and farewell barbecue on the beach.

For more details, please contact Professor John Billingsley at johnbill@usq.edu.au

Editors' Post-script

- Discussion Forum: Letters to the editors in response to any article in the newsletter will have the responses published in subsequent editions.
- News of Interest to the Australian community of control engineers is most welcome.
- A special issue of the newsletter may also be worthwhile. Please submit a proposal.
- Contributions will be reviewed against the Mission Statement of the Committee when editing received material. The editors reserve the right to make changes.
- Your calls are always welcome.
- The Editors: Dr Ljubo Vlacic (ph: 07 3875 5024; email: L.Vlacic@me.gu.edu.au) and Ms Trish Grice (ph: 02 6270 6548; email: tgrice@eol.ieaust.org.au).

The NCACI Newsletter is published twice per year, usually in April and November.