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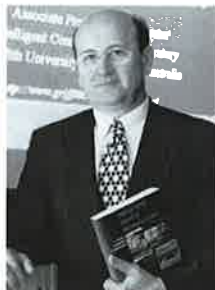
## News around NCACI Committee

Dr Michael Evans has recently stepped down from the chairmanship of the committee after three years in the role. NCACI would like to sincerely thank Michael for his excellent leadership of the Committee in the past few years, as well as for his longstanding service to the Committee. He managed the work skilfully and smoothly with a great sense of diplomacy that was often required.



*Dr Michael Evans*

Congratulations to Associate Professor Ljubo Vlacic for accepting the position of Chair and Professor Iven Mareels as the Vice Chair.



*Dr Ljubo Vlacic*



*Prof Iven Mareels*

## Greetings to Rob . . .

Professor Rob Evans of the University of Melbourne's School of Electrical and Electronic Engineering has been elected to a fellow IEEE. Congratulations Rob and well done!

## University of Newcastle Researchers Top in \$47 Million Funding Round

Leading researchers from the Faculty of Engineering and Built Environment and Faculty of Science and Information Technology at the University of Newcastle have been awarded a \$8,349,290 grant for a new Australian Research Council (ARC) Centre.

The grant for the new Centre is the largest of the nine new centres announced earlier this year by Dr Brendan Nelson, the Minister for Education, Science and Training. Professor Rick Middleton is the lead researcher in the joint bid with BHP-Billiton Innovation and Matrikon which won the grant to establish an Australian Research Council (ARC) Centre for Complex Dynamic Systems and Control at the University.

"The Centre will become a world leader in the analysis, design, optimisation and control of complex dynamic systems following on from the existing ARC Special Research Centre for Integrated Dynamics and Control at the University," said Professor Middleton.

"Our unique team combines engineers, mathematicians and statisticians will incorporate expertise in systems and control, mathematical systems theory and statistical methods. The team includes Professor Graham Goodwin and Professor Iain Raeburn who were both identified as world top scientists as ranked by ISI, the Institute for Scientific Information and Professor Kerrie Mengersen who is an internationally renowned expert in statistics."

Applications of the Centre's research will include: Mine production and transportation systems, process control and optimisation, operator guidance systems, advanced process control tools for industry, automotive systems, electromechanical systems including nano technology and robotics, and biomedical systems.

"A potential application of the Centre's research in conjunction with BHP-Billiton is bacterially enhanced mineral extraction. Improved dynamic control of this process may significantly improve the environmental impact and economic efficiency of some mineral extraction processes," said Professor Middleton.

"The research will add value to Australian society by enabling new technology based industries; reducing pollution; improved production and efficiency; and allowing safer operation of complex processes."

**Congratulations to Rick and his team.**

## Capt. PUI PIN WONG THE 2002 ACI UNDERGRADUATE THESIS PRIZE WINNER

The 2002 ACI Undergraduate Thesis Prize was awarded to Capt. Pui Pin Wong, recently graduated from the Australian Defence Force Academy, for the thesis "*Robust control for wing rock suppression on a single delta platform*" His work comprised an investigation of the application of intelligent controllers, mainly fuzzy logic- and neural network-based, to the task both theoretically and with wind tunnel testing. The project was supervised by Dr Anavatti Sreenatha in the School of Aerospace and Mechanical Engineering, ADFA.



*Dr Michael Evans presenting the Undergraduate Thesis Certificate and prize to Capt Wong*

Capt. Wong is currently serving with the Singapore Armed Forces Armour Corps.

The winner was announced and the prize presented at the M. A. Sargent Medal Dinner of the Electrical College of the IEAust, held on 20th June 2003 at the Matilda Bay Restaurant, Perth. Dr Michael Evans, retiring Chair of the NCACI, presented the award to Capt. Wong. The award comprises a medal, a certificate and a cheque for \$2000.

Certificates of Commendation were also awarded to:

- Mr Huzefa Ali, graduate of Monash University (Dept. of Electrical and Computer Systems Engineering), for the thesis "*Water tank instrumentation and control*";
- Mr Philip Bickerdike, graduate of Deakin University (School of Engineering and Technology), for the thesis "*The fusion of sensory systems applied to intelligent thermal management of the die in high pressure die casting*";
- Mr Brad Costa, graduate of University of Wollongong, for the thesis "*Wireless distributed sensing and actuation*";
- Mr Adrian Moo Chun Huong, graduate of University of Adelaide (Dept of Mechanical Engineering), for the thesis "*Active mirror control*"; and
- Mr Adrian Kuo Ching Lee, graduate of University of New South Wales (School of Electrical Engineering and Telecommunications), for the thesis "*Music for hearing implants*".

The IEAust Undergraduate Thesis Prize in Automation, Control and Instrumentation was inaugurated in 1995 to recognise individual excellence achieved in undergraduate project work across the breadth of A, C & I. The quality of work presented has been such that the prize has been awarded each year since then: in addition a total of 29 Certificates of Commendation have been awarded for prize-worthy work of other applicants.

## CALL FOR THE 2003 ACI UNDERGRADUATE THESIS PRIZE SUBMISSIONS

Entries for the 2003 Undergraduate Thesis Prize will close on 15th December, 2003. Further information may be obtained from Ms Martine Griffiths, the NCACI Committee Administrator, ph. 02 6270 6530; email: mgriffiths@ieaust.org.au

You may also visit the NCACI website at [http://www.ieaust.org.au/about\\_us/natcomm/ncaci/](http://www.ieaust.org.au/about_us/natcomm/ncaci/)

## UPCOMING EVENTS

### Fourth Summer Systems and Control Workshop in Communications and Control, 16 February 2004

This is the Summer Systems and Control Workshop organized jointly by Systems and Control Research Group at the School of Electrical and Telecommunications Engineering, University of New South Wales and School of Electrical Engineering and Computer Science, University of Newcastle.

**Topic:** Communications and Control

**Date:** 8:30am - 5:00pm, Monday 16 February 2004

**Venue:** Biomedical Theatre B, University of New South Wales

#### Speakers as of to date:

Professor Tamer Basar, University of Illinois, Urbana-Champaign, USA

Professor R. Evans, University of Melbourne

Dr. Girish Nair, University of Melbourne

A/Prof. Predrag Rapajic, University of New South Wales

Professor Andrey Savkin, University of New South Wales

Professor Patrick Senac, UNSW and ENSICA (France)

For more information visit <http://scrg.ee.unsw.edu.au/workshop04/wshp04.html>

## The 5th Asian Control Conference, 20-23 July 2004, Melbourne

The Asian Control Conference (ASCC) is a biennial event and the major control conference held in Asia. The 5th ASCC is being held at the Grand Hyatt in Melbourne, Australia, 20-23 July 2004 and will provide professionals, researchers and engineers worldwide with excellent information exchange opportunities. The conference consists of a four-day program, beginning with a workshop day followed by a three-day conference program, which includes international plenary speakers, poster sessions, workshops, and industry exhibits.

Topics of interest are in the broad area of control and automation ranging from industry applications to theoretical advances and include but are not limited to:

- System Theory
- Nonlinear Control
- Multivariable Control
- Fuzzy, Neural Systems
- Mechatronics
- Process Control Systems
- Aerospace
- Linear Control
- Optimal Control
- Fault Detection
- Simulation and Control CAD
- Robotics and Motion Control
- Power Systems
- Human Machine Systems
- GA, Evolutionary Computing, Information Technology
- PID Control
- Adaptive Control and Tuning
- Predictive Control
- Hybrid, Supervisory Systems
- Guidance and Navigation
- Measurement and Sensing
- Automotive Control
- Robust Control
- Intelligent/Learning Control
- Discrete Event Systems
- Signal Processing
- Manufacturing Systems
- Environmental and Bio-engineering
- Control Education

Visit the conference website at <http://ascc2004.ce.mu.oz.au> for detailed paper submission instructions and further information on the conference.

### 3rd IFAC Symposium on Mechatronic Systems, September 6-8, 2004, Manly Beach, Sydney, Australia

The development of mechatronic systems involves finding an optimal balance between the basic mechanical structure, sensor and actuator implementation, automatic digital information processing and overall control, and this synergy results in innovative solutions. The practice of mechatronics requires multidisciplinary expertise across a range of disciplines, such as: mechanical engineering, electronics, information technology, and decision making theories.

While control engineers have been practicing mechatronics for many years, IFAC has only very recently formed a Technical Committee to develop and promote activities in this area. The goal of the third IFAC symposium on Mechatronic Systems, following in the footsteps of the first conference in Darmstadt, and the second in Berkeley is to bring together experts from different areas to give an overview of the state-of-the-art of mechatronics and to present recent research results and perspectives of the future development in this multidisciplinary field.

For more details on the conference and paper submission visit <http://mechatronics2004.newcastle.edu.au/mech2004/>

## EDITORS' POSTSCRIPT

- **Discussion Forum:** Discussion letters to the editors in response to any article in the newsletter will have the responses published in subsequent editions.
- **Submissions of News** of interest to the Australian community of control engineers are most welcome.
- **A Special issue** of the newsletter may also be worthwhile. Please discuss your initiatives with the editors.
- **Your calls** are always welcome.

All contributions will be reviewed against the Mission Statement of the Committee when editing received material. The editors reserve the right to make changes.

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## CHRISTMAS GREETINGS

The Editor and the National Committee on Automation, Control and Instrumentation would like to take this opportunity to wish all our readers a happy and safe Christmas. We look forward to seeing you in the next edition of the ACI Newsletter.