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Systems Engineer is new president of the Australian Academy of Science

Professor Brian Anderson, Head of the Australian National University Research School of Information Sciences and Engineering was elected to lead Australia's senior organisation of research scientists and technologists at the Academy's annual general meeting on 30 April. He replaces Sir Gustav Nossal, who completed a four-year term.

Professor Anderson, 57, was elected to Fellowship of the Academy in 1974. Then aged 33, he was one of the youngest researchers to receive the honour. His research has been recognised in Australia and overseas. He is a Fellow of the Royal Society of London (Britain's science academy) and is frequently invited to conferences around the world.

His principal research areas have included electrical networks, communication systems, control systems and signal processing. His current interest include self-adapting control systems, where intelligent controllers are able to change their control strategy by learning something about what they are controlling. He is also studying techniques for the control of systems which include hierarchical and cooperative structures. His other interests include family, wind-surfing, music and reading.



Looking forward to his term as President, Professor Anderson said, "Like my predecessors in the job of President, I will be reminding our leaders and the community of the vital role that basic research plays in underpinning the economics of prosperity in the 21st century. Unless Australia lifts its game in research and industrial innovation we face the real prospect of relative decline. There are now many more countries working towards greater roles in world trade through innovation, and a bigger presence in world science through long-term investment in research. The strong base we have inherited should not be squandered. I will also be pursuing a personal commitment to building bridges between researchers and innovators in industry."

Professor Anderson has been involved in innovation through membership of the Board of Cochlear Ltd, the world's largest supplier of the bionic ear developed by Professor Graeme Clark in Melbourne.

In the past, Professor Anderson has served on the Industrial Research and Development Incentives Board, the Australian Research Grants Committee, the Australian Science, Technology and Engineering Council, the supervisory committee of the Cooperative Research Centres program, and the Prime Minister's Science and Engineering Council.

This text is reprinted courtesy of the Australian Academy of Science.

On behalf of the Australian control community we wish to congratulate Brian for this extraordinary achievement.

Towards a New 'ACI Society Second Update

As reported in the previous Newsletters, it is proposed that an 'ACI Society' be formed from the coalescence of the present National Committee (NCACI) and the existing Process Control Society (If you missed the details of the original proposal and the subsequent Newsletter (June 1998) discussion of the issues involved in this move please contact Trish Grice at IEAust by telephone (02 6270 6548), fax (02 6273 2358) or email (tgrice@eol.ieaust.org.au)). The principal objective of this change is to provide better service to members.

We can now report matters have progressed to the stage of formal proposal and this may be viewed at: <<http://www.usq.edu.au/users/hancockn/ACISocD2.htm>>.

However matters to do with funding remain unresolved at this time so this document remains a draft. The critical issue is that under current IEAust regulations a society is required to be self-supporting. However a National Committee receives administrative support from the Institution and in the case of NCACI this is central to its operation and the continued delivery of services, both for the benefit of members of the new society, and also for the ACI profession at large. Clearly it is essential to determine and agree funding arrangements before proceeding to the formation of the merged society so that momentum is not lost.

The issue, put simply, is that without some professional administrative support the load on the volunteer members - the office-bearers in the society - would be considerable and experience in recent years indicates that there are fewer and fewer active engineers able to give the time required. Alternatively, of course, administrative support can be externally purchased but this cost would need to be passed on to members in increased society fees.

These matters are addressed (in principle) in the draft proposal but, as indicated above, funding issues are still the subject of debate.

Your thoughts, comments or suggestions on any of this would be welcome.

Nigel Hancock, Chair, NCACI
(hancockn@usq.edu.au)

John Lear, Chair PCS (JBL2@orica.com.au)

NCACI Committee Member Profile

Trish Grice is the Committee Administrator servicing the Committees and Panels of the Electrical and Biomedical Colleges as well as



Women in Engineering. Trish was born in Lithgow NSW and moved to Wollongong when she was eight. After obtaining her HSC from Wollongong High School, she worked in various jobs gaining experience and a wide range of skills before settling down with Bonds Wear, first of all at their Port Kembla mill and then the Unanderra mill as office manager for nine years. Trish and her husband Bob bought a 100 acre property in Cooma on the Southern tablelands to satisfy their yearning to 'live on the land' and five years ago moved to Canberra to be closer to the property, with the intention of 'retiring' to the farm once the house was built. After doing some temporary work at Parliament House with the Public Works Committee, Trish started work with the Institution four years ago and dreams of retiring to the farm seem to keep drifting away in the busy life of looking after seven committees and panels and travelling all over Australia attending meetings and organising seminars and the occasional trip to Woomera to launch rockets. She finds time to get to the property only a few times per year and once a year has a hilarious time with her husband shearing the few sheep and goats they have to keep the grass down.

Apart from looking after the National Committee on Automation, Control and Instrumentation, Trish also looks after the

National Committee on Electric Energy, the National Committee on Space Engineering, the National Committee on Rehabilitation Engineering, the National Panel on Clinical Engineering, the National Panel on Biomechanics of Impact Injury and the National Committee on Women in Engineering. This has engendered an interest in the issues facing engineers as well as a respect for the many faceted areas of engineering and the impact it has on our daily life. The job as Committee Administrator is an interesting and varied role, there is always something new to learn and new challenges to face and dealing with such a wide range of engineers has also put her skills as a negotiator and organiser to the test. No wonder with such an interesting job, dreams of early retirement to Cooma are still just dreams.



Geoff Munday was born and raised in the working class industrial town of Kwinana where he gained an appreciation for refineries and a desire for higher education. In his final years of high school his family moved to the Telfer Gold Project in the heart of the Great Sandy Desert and he moved to boarding school to complete his secondary education at Port Hedland.

After surviving a wild boarding school and a high school with class sizes averaging six students, he moved to Perth to pursue tertiary education. He lived at the infamous flat 13 on campus and worked the bars of Fremantle during the Americas Cup to earn a living. In 1987 he graduated from Curtin University with a degree in Chemical Engineering and proceeded to make a career in process control and automation.

On graduation, he accepted a position with Rosemount Instruments initially in an engineering role and subsequently in a sales role. In addition to the selection and specification of field instrumentation, and DCS configuration, his role in the WA branch was as the specialist in analytical, flow and nuclear measurement with the position of radiation safety officer. The position was an opportunity to travel the expanse of Western Australia and gain valuable experience in a large number of industries.

Working on contract, Geoff moved to Clough Engineering on the Pagerungan Project, an onshore gas processing facility. Responsibilities included DCS configuration, shutdown and loadshedding logic and the evaluation and selection of the emergency shutdown valves. Following the Pagerungan Project, he moved to Western Mining on the Nickel Refinery Upgrade where as a Project Instrument Engineer he was responsible for the retrofit of pneumatics with electronic instrumentation and the addition of a new control philosophy in five plant areas.

After the Nickel Refinery Upgrade he worked for Process Control Technology on various projects as a Systems Engineer, Project Engineer and occasionally as a Process Engineer. An appointment to a business development role for PCT was the beginning of a significant career change.

The challenge was to promote process control solutions at a technical level in the market. Easier said than done, as ACI professionals we all see the benefits of automation and control, other professionals however are usually focussed on other issues with more tangible exposure.

The challenge now defined, he moved to his current position at Motherwell Information Systems where he promotes control, automation and information system solutions to the Oil and Gas industry. This was a departure from the technical sell as a process control professional with the focus now on full business information technology solutions. This still includes traditional ACI activities as the main core, however it is also integrates with SCADA, Enterprise Resource Planning and Supply Chain Optimisation.

Geoff and his wife Lesley who is a Social Worker, live in Carine with their four point five children and are active in community groups. Geoff is also an active contributor to our industry as a committee member for the Perth Chapter of the Australian Pipeline Industry Association, a committee member for the I.E Aust Perth Electrical Panel and now is a committee member for the NCACI. Geoff is keen to serve the ACI profession and would like to hear from those with constructive input so that he can be the vehicle for information to the committee. Geoff can be contacted on Ph: 08 9322 1812; Mobile: 0419 843 174; e-mail: g_munday@motherwell.com.au

Presentation of the 1997 Under-graduate Thesis Prize

(comprising a Medal, a Certificate and a cheque for \$1000)

A presentation of the 1997 Undergraduate Thesis Prize to its winner, Mr James Welsh of



the University of Newcastle was held in Perth on 27 July at the M A Sargent Medal Award.

James has carried out his thesis, entitled "Auto Tuner for PID Controllers", under the supervision of Prof. Graham Goodwin. The thesis involved the development of novel PID auto tuning techniques that work automatically and robustly on a very wide range of applications encountered in industry and with very minimal disturbance to the plant's steady state conditions. The project included the development of new fundamental theory and complex real-time software and hardware development. James is currently continuing this work as part of his PhD research, and is tackling the extensions for the multiple-input/multiple-output plant situation.

For details about the 1998 Undergraduate Thesis Prize please contact Trish Grice at IEAust HQ by telephone (02 6270 6548), fax (02 6273 2358) or email (tgrice@eol.ieaust.org.au).

CALL FOR PARTICIPATION

Information, Decision and Control '99

February 8 - 10, 1999

Adelaide, Australia

<http://idc99.cssip.edu.au>

<http://www.IDC99.gmu.edu> (USA Mirror Site)

Information, Decision and Control '99, IDC-99 is an exciting opportunity for practitioners and researchers to meet and advance understanding and knowledge in an important emerging area. The IDC-99 Organising Committee invites you to participate in this innovative event.

IDC-99 will provide a focus for scientists, engineers and mathematicians working across the disciplines of signal processing and communications, decision and control, and data and information fusion. It will be an international forum with papers submitted from Australia, Belarus, Finland, India, Japan, Korea, China, Poland, Russia, Singapore, Spain, Sweden, Taiwan, UAE, UK and USA.

The technical program will be led by: three outstanding keynote speakers, Professor Shankar Sastry from University of California, Berkeley, Professor Brian Anderson from the Australian National University, and Professor Jim Llinas from the State University of New York at Buffalo; and will include lectures by three prominent plenary speakers, Professor Graham Goodwin from the University of Newcastle, Professor Bobby Hunt from University of Arizona, and Dr. Geoffrey McLachlan from the University of Queensland.

The Program Committee has produced an exciting 3 day program of over 100 papers. Morning plenary sessions will address cutting edge issues critical to our understanding of modern complex systems. These are followed by parallel afternoon sessions focussing on key technical challenges in the three core areas of decision and control, signal processing and communication, and data and information fusion. A panel session will bring together researchers and practitioners to define major industry challenges in the design and testing of distributed information and decision systems and to expose relevant and fertile lines of research.

Tutorials in each of the three core disciplines are also offered as an additional learning resource. James Llinas (SUNY Buffalo) will present a two day tutorial on Data Fusion Concepts and Techniques, Situation Assessment, and Information Warfare. Vikram Krishnamurthy (U Melbourne) will present a one day tutorial on Stochastic Control and Sensor Scheduling. Bobby Hunt (U Arizona) will present a one day tutorial on Image Restoration, Reconstruction and Super-Resolution. Prof. Shankar Sastry (UC Berkley) and Prof. Iven Mareels (U Melbourne) will present a one day tutorial on Modeling, Analysis and Control of Hybrid Systems.

For registration details and more information see our web sites at <http://idc99.cssip.edu.au> and <http://www.IDC99.gmu.edu> (USA Mirror Site).

STANDARDS AUSTRALIA

Technical Committee Vacancies

As IEAust members are probably aware, the Institution provides a nominee to many of the technical committees of Standards Australia. Several of these are in the ACI area and currently there are vacancies on two of them. These are:

ME/49 - Oil & Gas Measurement; and
ME/61 - Pressure and Vacuum Gauges.

If you have an interest (and of course the appropriate knowledge) to serve on one of these committees please contact Trish Grice at IEAust HQ by telephone (02 6270 6548), fax (02 6273 2358) or email (tgrice@eol.ieaust.org.au). It is of course necessary to be a full member of the Institution for the nomination to go forward.

Nigel Hancock

Christmas Greetings.

The Editors 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.

No Control 1999

The NCACI would like to advise readers that because of the abundance of major control engineering related events occurring in 1999 and 2000, there will be no Control '99. The conferences include:

- ◆ IDC '99 - Information, Decision and Control in Feb 1999 in Adelaide.
- ◆ CDC 2000 - IEEE Decision and Control Conference in Dec 2000 at Darling Harbour.
- ◆ IEEE Symposium on Advances in Control Education at the Gold Coast.
- ◆ IFAC World Congress in 1999.

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 are 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).

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