

Welcome: New MIC and PCG executive directors

■ Professor Jonathan Manton

The ARC's new Executive Director, Mathematics, Information and Communication Sciences, Professor Jonathan Manton, comes to the ARC from the Research School of Information Sciences and Engineering at the Australian National University. A former Queen Elizabeth II Fellow, Professor Manton is also an honorary Professorial Fellow in the Department of Electrical and Electronic Engineering at the University of Melbourne.



"I'm very excited about the challenges and opportunities offered by my new role at the ARC," Professor Manton says. "I am keen to further contribute to Australia's research efforts in a wide variety of ways, including promoting the importance of research to the community, drawing international attention to research in Australia, contributing to the national research agenda, and playing a part in ensuring Australian researchers are well funded and acknowledged as world class.

"I have a particular interest in encouraging younger people to get involved in mathematics and improving the level of mathematics knowledge that students have when they reach university. I recently became a member of the ACT Secondary School Board Mathematics Panel and hope to be able to extend my efforts to enhance community awareness of the importance of mathematics research through my ARC activities."

Professor Manton's research interests include signal processing, wireless communications, optimisation on manifolds, estimation theory, stochastic filtering theory, and applications of commutative algebra, algebraic geometry and differential geometry.

For example, one of his long-term projects involves the application of differential and algebraic geometries to non-linear signal processing problems. "Traditionally, the signal processing community approached non-linear problems by clever, but ad-hoc, manipulations and approximations, usually with the aim of reducing the problems to linear ones, but this resulted in sub-optimal solutions," he says. "In fact, certain classes of non-linear problems can be solved exactly using differential geometry or algebraic geometry."

Professor Manton has a BSc Mathematics, BE (Hons, Class I) in Electrical and Electronic Engineering and a PhD in Electrical and Electronic Engineering, all from The University of Melbourne. He is a Senior Member of the Institute of Electrical and Electronic Engineers and a Member of the Australian Mathematical Society, the Society for Industrial and Applied Mathematics and the American Mathematical Society.

Photograph by Arthur Mostead.

■ Dr David Falvey

Dr David Falvey will return to Australia from the UK to take up the position of ARC Executive Director, Physics, Chemistry and Geoscience. Since 1998, Dr Falvey has served as Executive Director at the British Geological Survey (BGS), a public sector research agency within the UK's Natural Environment Research Council.



With an annual budget of A\$135 million, half of which is won competitively, BGS is recognised worldwide. It routinely wins international contracts from the World Bank, European Commission and the Department for International Development to provide services and surveys in several developing nations in Africa and Asia, including Afghanistan and Papua New Guinea. It has also won competitive service and survey contracts from national governments in the United Arab Emirates, Saudi Arabia, Cyprus, Canada, Greece, Morocco, Botswana and Ireland.

Under Dr Falvey's stewardship, the BGS has moved from traditional, 2D (map-based) geological survey, into 3D digital modelling, hazard research, groundwater research, soils and contaminated land research, the urban environment, and 'e-science'. A study of the economic benefits of the BGS to the UK community has shown a direct benefit/cost ratio of 10:1.

Dr Falvey has a BSc (Hons, Class 1) from The University of Sydney and a PhD in marine geophysics from The University of New South Wales. He is a Fellow of the Geological Society of London and has received an honorary science doctorate from Nottingham Trent University for his contribution to Earth science.

Dr Falvey is a visiting Professor at the University of Leicester, Member of the European Commission Advisory Council on Zero Carbon Emission Power Plants, Governor of Integrated Ocean Drilling Program Management International and a Companion of the Chartered Management Institute.

In 2001, he was the runner-up in a UK competition, sponsored by British Telecom and Business Sunday, to find the most visionary public or private sector leaders. BGS was recognised as one of Britain's one hundred most visionary organisations.

Other positions Dr Falvey has held include: Director Ocean Drilling Programs, Joint Oceanographic Institutions, Inc. Washington, DC; Associate Director, Australian Geological Survey Organisation; Chief, Division of Marine Geosciences and Petroleum Geology, Australian Bureau of Mineral Resources; Senior Lecturer in Geophysics at The University of Sydney; and Exploration Geophysicist, Shell Development (Australia) Pty Ltd.

Photograph courtesy of Dr David Falvey.