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At 7:30pm on Tuesday May 14th 2002 in Union Hall at the University of Adelaide

"Quantum Information Science"

by A/Prof Michael Nielsen **Principal Research Fellow** Dept. of Physics, University of Queensland and Program Manager (Quantum information theory) **Centre for Quantum Computer Technology**



Abstract:

What is information? Quantum information science begins with the insight that quantum mechanics may be harnessed to perform information processing tasks. Quantum processors are strikingly different from conventional devices. In the lecture I describe how this has led to deep new understandings both of information and quantum mechanics.

Biography:

Associate Professor Nielsen undertook a Master of Science (Physics) at the University of Queensland, a Ph.D. (Physics) at the University of New Mexico and a postdoctoral position at CalTech. His research interests are in Quantum information theory, entanglement, quantum computation, statistical mechanics and quantum phase transitions. His publications include the book "Quantum Computation and Quantum Information".

The 2001 AIP Bronze Bragg medal and certificates of merit will be presented prior to the lecture. These are awarded by the SA branch of the AIP for achievement in the 2001 Year-12 Physics examination.