

## Appendix – Honours and Awards

**Dr Ken Baldwin** was elected as a member of the Board of Directors of the Optical Society of America. He will commence his three-year term in January 2006.

**Dr Rowena Ball** has been awarded a Lagrange Fellowship to carry out Complex Systems Physics research at Politecnico di Torino, Italy.

**Professor Murray Batchelor** was awarded a grant under the Australian Academy of Science/JSPS Scientific Visits to Japan Program.

**Dr Ying Chen** was elected Fellow of the Australian Institute of Physics.

**Dr Ben Corry** won the Prize for Young Biophysicist of the Year at the joint meeting of the Australian Physiological Society and the Australian Society of Biophysics.

The Australian Academy of Science Pawsey Medal has been awarded to **Dr Mahananda Dasgupta** and will be presented to her at the Annual General Meeting in 2006. The Pawsey Medal recognises the contributions to science in Australia by the late Dr J.L. Pawsey, FAA. Its purpose is to recognise outstanding research in physics by scientists under 40 years of age.

**Dr Matthew Hole** was awarded a grant under the Australian Academy of Science Scientific Visits to Europe Program.

**Dr John Howard** was elected Fellow of the Institute of Physics, UK.

**Professor Stephen Hyde** was elected as Fellow of the Australian Academy of Science.

**Professor Chennupati Jagadish** was elected as Fellow of the Australian Academy of Science.

**Professor Yuri Kivshar** was awarded the 2005 Walter Boas Medal of the Australian Institute of Physics. The aims of the award are to promote excellence in research in physics in Australia and to perpetuate the name of Walter Boas.

**Mr Kevin Lonsdale** was awarded the Chancellor's Medal for Distinguished Contribution to the University.

**Professor John Love** was elected Vice-president of the International Commission for Optics.

**Professor Barry Luther-Davies** was elected to the Fellowship of the Australian Academy of Technological Sciences and Engineering. He was also awarded a Fellowship to the Optical Society of America.

**Dr Dragomir Neshev** was awarded an International Scientific Collaboration Award for travel to the USA by the Australian Academy of Sciences.

**Dr Chiara Neto** was awarded an Australian Colloids and Interface Science (ACIS) travel bursary.

**Professor Barry Ninham** was awarded the AAS Craig Medal.

**Dr Elena Ostrovskaya** was awarded a grant for Scientific Visits to Europe by the Australian Academy of Science as well as a travel grant of the Career Development Fund of the Equity and Diversity Unit, the Australian National University.

**Dr Ilya Shadrivov** has been awarded the Australian Optical Society Postgraduate Prize. He also received the International Union of Radio Science (URSI) Young Scientist Award at the URSI General Assembly held in New Delhi, India, in October 2005. Dr Shadrivov also received the Jagadishwar Mahanty Prize for the best PhD thesis submitted during the period September 2003 to August 2005 at the Research School of Physical Sciences and Engineering, Australian National University.

The Vice-Chancellors Award for Excellence in Innovation and Service Quality for 2004 - 2005 was awarded to the **National Heavy Ion Accelerator Facility Team** of the Department of Nuclear Physics. This award was presented at a special ceremony on 3 November. The Department of Nuclear Physics National Heavy Ion Facility Team includes: Dr David Weisser, Dr Nikolai Lobanov, Dr Gordon Foote, Dr Tibor Kibedi, Dr Paul Davidson, Mr John Bockwinkel, Mr Alan Cooper, Mr Alan Harding, Mr Justin Heighway, Mr John Kennedy, Mr Lorenzo Lariosa, Mr Alistair Muirhead, Mr Robert Turkentine, Mr Howard Wallace and Mrs Marjorie O'Neill.

## **Appendix – Collaborations and Cooperative Agreements**

**Professor N.N. Akhmediev**

**Project:** Soliton as Strange Attractors

**Partner:** Dr J. M. Soto-Crespo, Consejo Superior de Investigaciones Científicas, Spain

**Project:** Optical Bullets in Dissipative Systems

**Partner:** Dr Ph. Grelu, Centre National de Recherche Scientifique, France

**Project:** Multicomponent Nonlinear Schrödinger Equation with Mixed Nonlinearities

**Partner:** Dr T. Kanna, Bharathidasan University, India

**Project:** Dissipative Soliton of the Discrete Complex Cubic–Quintic Ginzburg–Landau Equation

**Partner:** Dr K. Maruno, Kyushu University, Japan

**Project:** Method of Moments in Dissipative Systems

**Partner:** Dr E. Tsoy, Uzbek Academy of Sciences, Uzbekistan

**Dr T. Alexander, Dr E. Ostrovskaya and Professor Yu.S. Kivshar**

**Project:** Bose-Einstein Condensates on a Permanent Magnet Atomic Chip

**Partners:** Dr A. Sidorov and Professor B. Dalton, Swinburne University

**Dr T. Aste**

**Project:** Glasses and Granular Materials

**Partners:** Professor A. Coniglio and Dr M. Nicodemi, University of Naples, Italy

**Project:** Surface Instabilities and Granular Matter

**Partner:** Professor U. Valbusa, University of Genoa, Italy

**Project:** Glassy Behaviours in Complex Matter

**Partner:** Professor D. Sherrington, University of Oxford, UK

**Dr T. Aste and Dr T.J. Senden**

**Project:** Volume Fluctuations and the Temperature of Granular Matter

**Partner:** Professor H.L. Swinney, University of Texas at Austin, USA

**Dr K.G.H. Baldwin**

**Project:** Ultrahigh Resolution OPO Laser Sources

**Partner:** Professor B. Orr, Macquarie University

**Dr K.G.H. Baldwin and Professor B.R. Lewis**

**Project:** High Resolution XUV Laser Spectroscopy of Isotopic Nitrogen

**Partner:** Professor W. Ubachs, Vrije Universiteit Amsterdam, The Netherlands

**Dr R. Ball**

**Project:** Validation and Extension Studies of a Unified Dynamical Model for Plasma Confinement Transitions

**Partner:** Professor F. Porcelli, Politecnico di Torino, Italy

**Project:** Low-order Dynamical Models for Non-linear Fluid Behaviour in Quasi Two-dimensional Plasmas

**Partner:** Professor W. Horton, University of Texas at Austin, USA

**Dr F.C. Barker**

**Project:** Low-lying States in  $^{11}\text{N}$

**Partner:** Dr C. Angulo, Université Catholique de Louvain, Belgium

**Dr T.T. Barrows**

**Project:** Glacier History of New Zealand

**Partners:** Dr P. Almond, Lincoln University, New Zealand; Dr R. Rose, University of Canterbury, New Zealand

**Project:** Glacier History of Mt Giluwe, Papua New Guinea

**Partners:** Dr M. Prentice, University of New Hampshire, USA; Professor G. Hope, Research School of Pacific and Asian Studies, Australian National University

**Project:** Glacier History of Luthers Pass, Sierra Nevada, USA

**Partner:** Dr D. Clark, Western Washington University, USA

**Project:** Exposure Dating of Wolfe Creek Crater, Northern Territory

**Partners:** Professor G. Miller, University of Colorado, USA; Dr J. Magee, Department of Earth and Marine Sciences, Australian National University

**Project:** Long Term Climate Change from Deep-sea Sediments

**Partners:** Professor P. De Deckker and Mr M. Spooner, Department of Earth and Marine Sciences, Australian National University; Dr S. Juggins, University of Newcastle, UK

**Professor M.T. Batchelor**

**Project:** Quantum Spin Ladders

**Partners:** Dr X.-W. Guan and Dr N. Oelkers, Mathematical Sciences Institute, Australian National University; Dr Z. Tsuboi, University of Tokyo, Japan

**Project:** Quantum Gases

**Partners:** Dr M. Bortz, Dr X.-W. Guan and Dr N. Oelkers, Mathematical Sciences Institute, Australian National University; Dr J. Links, University of Queensland

**Project:** Stromatolite Growth

**Partners:** Dr R. Burne, Department of Earth and Marine Sciences, Australian National University; Dr B. Henry, University of New South Wales; Dr J. Kaandorp, Vrije Universiteit Amsterdam, The Netherlands

**Dr B.D. Blackwell and Professor J.H. Harris**

**Project:** Data Mining of MHD Fluctuations on Heliotron-J

**Partner:** Dr K. Nagasaki, Kyoto University, Japan

**Dr B.D. Blackwell and Dr J. Howard**

**Project:** Soft X-ray Measurements on H-1NF

**Partner:** Associate Professor A.D. Cheetham, University of Canberra

**Dr G.G. Borg and Professor J.H. Harris**

**Project:** Plasma Antenna Concept Demonstrator

**Partner:** Dr N.M. Martin, Defence Science and Technology Organisation

**Dr G.G. Borg and Mr P. Linardakis**

**Project:** Plasma Switches for Mobile Phones

**Partner:** Dr R. Scheer, Motorola, USA

**Professor R.W. Boswell, Dr O. Sutherland and Dr A. Aanesland**

**Project:** High Brightness Ion Source

**Partner:** FEI Company, USA

**Professor R.W. Boswell, Dr O. Sutherland and Dr C. Charles**

**Project:** Dual Stage 4 Grid Space Thruster

**Partner:** European Space Agency

**Project:** Instabilities in High Density Plasmas

**Partners:** Dr P. Chabert, Dr C. Corr and Dr N. Plihon, École Polytechnique, Paris, France

**Professor R.W. Boswell and Dr C. Charles**

**Project:** Surface Functionalisation for Bio Applications

**Partners:** Professor D. McKenzie and Professor M. Bilek, University of Sydney

**Project:** Direct Methyl Fuel Cells

**Partners:** Dr A. Dicks and Mr B. Ladewik, University of Queensland

**Project:** Plasma Simulation

**Partner:** Dr J.-P. Boeuf, University of Toulouse, France

**Project:** Double Layers in the Solar Corona

**Partner:** Professor E. Marsch, Max Planck Institut, Göttingen, Germany

**Project:** rf Phase Effects in Plasma Sources

**Partners:** Professor D. McKenzie, Professor M. Bilek and Dr Y. Bin, University of Sydney

**Professor P.J. Bouwknegt and Dr A. Flournoy**

**Project:** Mathematical Foundations of String Theory, in Particular the Study of Symmetries (Dualities) and Underlying Generalizations of Geometry. Gerbes. Twisted K-Theory

**Partners:** Associate Professor V. Mathai and Dr H. Sati, University of Adelaide; Dr K. Hannabuss, Oxford University, UK; Dr J. Evslin, University of Brussels, Belgium; Dr B. Jurco, University of Munich, Germany; Professor K. Pilch, University of Southern California, USA

**Dr J.E. Bradby**

**Project:** International Partnership Program

**Partner:** University of Michigan, USA

**Professor S.J. Buckman**

**Project:** Positron Interactions with Atoms and Molecules

**Partners:** Professor C. Surko, University of California at San Diego, USA; Professor G.F. Gribakin, Queens University of Belfast, Israel

**Project:** Near-threshold Excitation of Helium

**Partners:** Professor K. Bartschat, Drake University, USA; Professor I. Bray and Professor A.T. Stelbovics, Murdoch University

**Project:** Centre for Antimatter-Matter Studies

**Partners:** Professor M. Brunger and Professor P.J.O. Teubner, Flinders University; Professor J. Williams, University of Western Australia; Professor B. Lohmann, Griffith University; Dr S. Smith, ANSTO; Professor I. Bray and Professor A.T. Stelbovics, Murdoch University; Professor C. Surko, University of California at San Diego, USA; Dr T. Rescigno, Lawrence Berkeley Laboratory, USA; Professor A. Orel and Professor B. McCurdy, University of California at Davis, USA; Professor K. Bartschat, Drake University, USA; Professor P. Burrow, University of Nebraska, USA; Professor Y. Nagai, Tohoku University, Japan; Professor N. Mason, Open University, UK

**Project:** Electron Collisions with Atoms and Molecules

**Partners:** Professor H. Tanaka, Sophia University, Japan; Professor H. Cho, Daejeon National University, Korea

**Dr M. Buda**

**Project:** DFB Lasers

**Partners:** Dr T.G. van de Roer and Professor Dr G.A. Acket, Eindhoven University of Technology, Netherlands

**Professor A.P. Byrne**

**Project:** Ion Implanter for Radioisotopes

**Partner:** Dr H. Timmers, ADFA, University of New South Wales

**Project:** Superallowed Fermi Decays

**Partner:** Associate Professor P.H. Barker, University of Auckland, New Zealand

**Professor A.P. Byrne and Dr M.C. Ridgway**

**Project:** PAC Studies of Materials

**Partner:** Dr R. Vianden, Universität Bonn, Germany

**Project:** Materials Modification by Swift Heavy Ion Irradiation  
**Partner:** Professor W. Wesch, University of Jena, Germany

**Dr C. Charles and Professor R.W. Boswell**

**Project:** Plasma Deposition of Palladium

**Partners:** Dr A.L. Thomann and Dr P. Brault, Centre National de Recherche Scientifique, France

**Project:** Helicon Source Modelling

**Partner:** Professor M. Lieberman, University of California at Berkeley, USA

**Project:** Laser Induced Fluorescence Analysis of Double Layers

**Partner:** Professor E. Scime, University of West-Virginia, USA

**Project:** Deposition of Platinum for Fuel Cell Electrodes

**Partner:** Dr P. Brault, Centre National de Recherche Scientifique, France

**Project:** Helicon Double Layers

**Partner:** Professor A. Fredriksen, University of Tromsø, Norway

**Dr C. Charles, Professor R.W. Boswell and Dr O. Sutherland**

**Project:** Helicon Double Layer Thruster

**Partner:** European Space Agency

**Dr Y. Chen**

**Project:** Synthesis of C and BN Nanotubes Using Mechano-thermal Process

**Partner:** Dr J. Fitzgerald, Research School of Earth Sciences, Australian National University

**Project:** Microanalysis of BN Nanotubes

**Partner:** Dr J. Zou, University of Queensland

**Project:** Mossbauer Analysis of Nanotubes

**Partner:** Professor G. Le Caer, University of Rennes, France

**Project:** Mossbauer Study of Metal Catalysts for Nanotube Growth

**Partner:** Professor S. Campbell, ADFA, University of New South Wales

**Dr S.H. Chung**

**Project:** Controlled Adaptive Brownian Dynamics for Modelling Ion Channels

**Partner:** Professor V. Krishnamurthy, University of British Columbia, Canada

**Ms V.A. Coleman, Ms P. Lever, Ms K. Stewart, Mr S. Barik, Dr H.H. Tan, Professor J.S. Williams and Professor C. Jagadish**

**Project:** Cathodoluminescence Studies of Semiconductor Epitaxial Layers and Quantum Structures

**Partner:** Professor M.R. Philips, University of Technology, Sydney

**Ms V.A. Coleman, Dr H.H. Tan, Dr S.O. Kucheyev, Professor J.S. Williams and Professor C. Jagadish**

**Project:** Ion Beam Processing of Zinc Oxide

**Partners:** Professor M. Yano and Professor M. Inoue, Osaka Institute of Technology, Japan

**Dr V.S.J Craig**

**Project:** Boundary Slip in Newtonian Liquids

**Partners:** Professor H.-J. Butt and Dr E. Bonaccorso, Max Plank Institute for Polymers, Mainz, Germany

**Project:** Nanobubbles and Biomolecule Adsorption

**Partner:** Professor H. Jun, Chinese Academy of Sciences, China

**Project:** An AFM Study of the Interaction between Adsorbed PEO Layers

**Partners:** Dr L. Meagher, CSIRO, Melbourne; Mr S. McLean, Ms H. Lioe and Associate Professor M. Gee, University of Melbourne

**Dr T.D.M. Dall**

**Project:** Heavy Ion Stopping in Solids

**Partners:** Professor H.J. Whitlow and Dr K. Stenstrom, University of Lund, Sweden; Dr H. Timmers and Mr S. Shrestha, ADFA, University of New South Wales; Associate Professor D.J. O'Connor, University of Newcastle

**Dr M. Dasgupta**

**Project:** Quantum Tunnelling in Nuclear Fusion

**Partners:** Dr K. Hagino, Kyoto University, Japan; Professor N. Rowley, Strasbourg University, France

**Dr M. Dasgupta and Professor D.J. Hinde**

**Project:** Fusion with Radioactive  $^{14}\text{O}$

**Partners:** Professor S. Kubono and Dr H. Yamaguchi, University of Tokyo, Japan

**Project:** Reaching the Superheavy Elements

**Partners:** Dr F. Liang, Oak Ridge National Laboratory, USA; Dr K.-H. Schmidt, Gesellschaft für Schwerionenforschung, Germany

**Dr A.S. Desyatnikov**

**Project:** Counterpropagating Beams in Biased Photorefractive Crystals: Anisotropic Theory

**Partners:** Dr K. Motzek and Professor F. Kaiser, Darmstadt University of Technology, Germany; Professor M. Belic, Texas A&M University, USA and Institute of Physics, Belgrade, Serbia; Mr T. Richter, Mr Ph. Jander and Professor C. Denz, Westfälische Wilhelms-Universität Münster, Germany

**Project:** Two-dimensional Solitons with Hidden and Explicit Vorticity in Bimodal Cubic-quintic Media

**Partners:** Professor D. Mihalache and Professor D. Mazilu, Institute of Atomic Physics, Bucharest, Romania; Professor B.A. Malomed, Tel Aviv University, Israel; Professor C. Denz, Westfälische



Wilhelms-Universität Münster, Germany; Professor F. Lederer, Friedrich-Schiller Universität Jena, Germany

**Dr A.S. Desyatnikov and Professor Yu.S. Kivshar**

**Project:** Optical Vortices and Vortex Solitons

**Partner:** Professor L. Torner, Universitat Politecnica de Catalunya, Spain

**Dr A.S. Desyatnikov, Dr D.N. Neshev and Professor Yu.S. Kivshar**

**Project:** Nonlinear Photonic Lattices in Anisotropic Nonlocal Self-focusing Media

**Partners:** Ms N. Sagemerten, Mr D. Träger, Mr J. Jägers and Professor C. Denz, Westfälische Wilhelms-Universität Münster, Germany; Dr Y.V. Kartashov, Universitat Politecnica de Catalunya, Spain

**Dr A.S. Desyatnikov, Dr D.N. Neshev, Professor W. Krolikowski and Professor Yu.S. Kivshar**

**Project:** Focusing and Correlation Properties of White-light Optical Vortices

**Partners:** Dr V. Shvedov and Professor A. Volyar, Taurida National University, Ukraine

**Professor R.L. Dewar and Mr R.F. Abdullatif**

**Project:** Variational Principle for Nonlinear Drift Wave Dynamics

**Partners:** Dr F.L. Waelbroeck and Dr P.J. Morrison, University of Texas at Austin, USA

**Professor R.L. Dewar and Dr M.J. Hole**

**Project:** Existence and Stability of a Model for Three-dimensional Toroidal Plasma Equilibria

**Partner:** Dr S.R. Hudson, Princeton University, USA

**Professor R.L. Dewar and Dr B.G. Kenny**

**Project:** Quantum Chaos in the Ideal-MHD Spectrum for Stellarators

**Partners:** Dr C. Nührenberg, Max Planck Institute for Plasma Physics, Germany; Professor Z. Yoshida, University of Tokyo, Japan; Dr T. Tatsuno, University of Maryland, USA; Professor R.S. MacKay, University of Warwick, UK

**Professor R.L. Dewar, Dr R. Ball and Professor M.T. Batchelor**

**Project:** ARC Research Network Application – Complex Open Systems Network (COSNet)

**Partners:** Professor C. Grebogi, University of Sao Paulo, Brazil; Professor R. MacKay, FRS University of Warwick, UK; and 42 participants from the Australian National University and other Australian universities

**Professor R.L. Dewar, Dr R. Ball, Dr R. Numata, Dr J.S. Frederiksen and Mr M. Zidikheri**

**Project:** Studies of Turbulence and Coherent Structures in Quasi Two-dimensional Plasmas and Fluids

**Partner:** Dr B.D. Scott, Max Planck Institute for Plasma Physics, Germany

**Dr T. Di Matteo and Dr T. Aste**

**Project:** Characterization of Collective Dynamics in Financial Markets and Complex Systems

**Partner:** Professor R. Mantegna, University of Palermo, Italy

**Project:** High-frequency Dynamics of Financial Markets (FISR) (funded by the Italian Ministry of Education Research and Technology)

**Partner:** Dr E. Scalas, University of Piemonte Orientale, Italy

**Project:** Relationships between the Structure of Social Networks and Productivity

**Partner:** Professor M. Gallegati, Università Politecnica delle Marche, Italy

**Project:** Multiscaling Behaviours in Financial Markets

**Partner:** Dr M.M. Dacorogna, Converium Ltd Zurich, Switzerland

**Dr T. Di Matteo, Dr T. Aste and Professor S.T. Hyde**

**Project:** European Union (EU) Project: COST P10 "Physics of Risk"

**Partner:** Professor P. Richmond, Trinity College, Ireland

**Professor G.D. Dracoulis**

**Project:** High-K Isomers

**Partners:** Professor P.M. Walker, University of Surrey, UK; Dr F.G. Kondev, Argonne National Laboratory, USA

**Project:** High-K Isomers in Deformed Nuclei near Stability

**Partners:** Dr F.G. Kondev and Dr R. Janssens, Argonne National Laboratory, USA

**Project:** Laser Spectroscopy of Deformed Isomers

**Partners:** Dr J. Billowes, University of Manchester, UK; Professor J.A.R. Griffith, University of Birmingham, UK; Dr P. Dendooven, University of Jyväskylä, Finland

**Professor G.D. Dracoulis and Dr T. Kibédi**

**Project:** Nuclear Structure in the  $N = 74$  Region

**Partner:** Dr A.M. Bruce, University of Brighton, UK

**Professors G.D. Dracoulis, A.P. Byrne and Dr G.J. Lane**

**Project:** Realistic Shell Model Calculations for Trans-lead Nuclei

**Partner:** Professor A. Covello, University of Naples, Italy

**Project:** Neutron Rich Trans-lead Nuclei Using Radioactive Beams

**Partners:** Professor P.M. Walker, University of Surrey, UK; Dr G. de France, Grand Accelérateur National d'Ions, Lourds, France

**Professor G.D. Dracoulis, Dr G.J. Lane and Professor A.P. Byrne**

**Project:** Spectroscopy of Neutron Deficient Lead and Thallium Nuclei

**Partner:** Dr A.O. Macchiavelli, Lawrence Berkeley National Laboratory, USA

**Professor G.D. Dracoulis, Dr G.J. Lane, Professor A.P. Byrne and Dr T. Kibédi**

**Project:** Shape Co-existence in Very Neutron-deficient Pb Nuclei

**Partners:** Dr J. Gerl, Gesellschaft für Schwerionenforschung, Germany; Dr A. Andreyev, University of Liverpool, UK

**Professor R.G. Elliman**

**Project:** Optical Gain in Silicon Nanocrystals

**Partners:** Professor P. Fauchet and Mr J. Ruan, University of Rochester, USA; Professor A. Polman, Foundation for Fundamental Research on Matter, Amsterdam, The Netherlands.

**Project:** Semiconductor Nanocrystal Memory Devices

**Partners:** Mr K.H. Cho, Professor W.-C. Yang and Professor H.Y. Cho, Dongguk University, Korea; Professor S.-H. Choi, Kyung Hee University, Korea; Dr C.J. Park, Dr J.H. Han and Dr C. Kim, Samsung Electronics, Korea

**Project:** Mechanical Properties of Silicon Nanostructures

**Partners:** Mr K.R. Virwani and Professor A.P. Malshe, University of Arkansas, USA; Professor D.K. Sood, Royal Melbourne Institute of Technology, Melbourne

**Project:** Ion Beam Modification of Carbon Nanostructures

**Partner:** Dr P. Papakonstantinou, University of Ulster at Jordanstown, Northern Ireland

**Project:** Ion Beam Mixing of Metallic Thin Films on Ceramic Substrates

**Partner:** Dr A. Balogh and Mr S. Gottschalk, Darmstadt University of Technology, Germany

**Professor R.G. Elliman and Dr T.D.M. Dall**

**Project:** Heavy-ion Beam Analysis of Materials

**Partner:** Dr H. Timmers, ADFA, University of New South Wales

**Project:** Silicon Based Photonic Devices and Structures

**Partner:** Professor J. Linnros, Royal Institute of Technology, Stockholm, Sweden; Dr J. Valenta, Charles University, Czech Republic; Professor E. Krausz, Research School of Chemistry, Australian National University

**Professor L.K. Fifield and AMS Group**

**Project:** Dating of Marine Cores with Carbon-14

**Partners:** Dr P. De Deckker and Dr B. Opdyke, Department of Earth and Marine Sciences, Australian National University

**Project:** Measurement of Erosion Rates at a Range of Scales in the Australian Landscape Using *in situ* Produced  $^{10}\text{Be}$

**Partner:** Professor J. Chappell, Research School of Earth Sciences, Australian National University

**Project:** Landscape Evolution in the Southern Highlands Region of NSW Using  $^{10}\text{Be}$  Deposited from the Atmosphere

**Partner:** Professor R. Wasson, Centre for Resource and Environmental Studies, Australian National University

**Project:** Studies of Meteorites Using Cosmogenic Isotopes

**Partner:** Professor G. Herzog, Rutgers University, USA

**Project:** Dating of Ice in Temperate-region and Polar Glaciers with  $^{32}\text{Si}$

**Partners:** Dr U. Morgenstern and Dr A. Zondervan, Geological and Nuclear Sciences, New Zealand

**Project:** Tracing Releases of Plutonium from Nuclear Processing Plants in Russia

**Partners:** Professor D. Oughton, Dr L. Skipperud and Dr O. Lind, Norwegian University of Life Sciences, Norway; Dr W. Standing, Norwegian Radiation Protection Authority, Norway

**Project:** Tracing of Groundwater Flow and Mixing in a Number of Australian Aquifer Systems

**Partners:** Dr R. Habermehl and Dr J. Kellett, Bureau of Rural Sciences; Dr R.G. Cresswell, CSIRO

**Project:** Tracing of Groundwater Flow in a Natural Analogue of a Nuclear Waste Repository Using  $^{36}\text{Cl}$

**Partners:** Dr Y. Mahara, Abiko Research Laboratory, Japan; Dr R. Habermehl, Bureau of Rural Sciences; Dr R.G. Cresswell, CSIRO

**Project:** Exposure Dating of Glacial Landforms in Scotland, and Lava Flows in Hawaii

**Partners:** Professor J. Stone, University of Washington, USA; Professor C. Ballantyne, University of St. Andrews, Scotland

**Project:** Calibration of the Cosmic-ray Production of Chlorine-36 on Iron in Surface Rocks

**Partner:** Professor J. Stone, University of Washington, USA

**Project:** Plutonium as a Tracer of Soil Movement

**Partner:** Dr G. Hancock, CSIRO Land and Water

**Project:** Plutonium Measurements by AMS at Low Energy

**Partner:** Dr L. Wacker, Eidgenössische Technische Hochschule Zürich, Switzerland

**Project:** S.E. Australian Coastal Rock Platforms – When and How Were They Found?

**Partner:** Professor J. Stone, Washington State University, USA

**Mr R. Fischer**

**Project:** Dark Soliton Interactions

**Partner:** Professor J. Hickmann, Universidade Federal de Alagoas, Brazil

**Professor N.H. Fletcher**

**Project:** The Acoustics of the Didjeridu

**Partners:** Associate Professor L. Hollenberg, Melbourne University; Professor J. Wolfe and Dr J. Smith, University of New South Wales

**Project:** Acoustics of Birdsong

**Partners:** Professor R.A. Suthers, Indiana University, USA; Dr T. Riede, Humboldt University, Germany; Dr G.J.L. Beckers, Leiden University, The Netherlands

**Project:** Flute Acoustics

**Partner:** Mr T. McGee, Australian Flutemaker, Canberra

**Mr M. Fraser, Dr M. Gao, Dr L. Fu, Dr H.H. Tan and Professor C. Jagadish**

**Project:** THz Spectroscopy of Compound Semiconductors

**Partners:** Dr M. Johnston and Dr L. Hertz, Oxford University, UK

**Dr L. Fu and Professor C. Jagadish**

**Project:** Analysis of Semiconductor and Insulating Thin Films by XPS

**Partners:** Dr B. Gong and Professor R. Lamb, University of New South Wales

**Dr L. Fu, Dr H.H. Tan, Dr M. Buda and Professor C. Jagadish**

**Project:** Optoelectronic Devices

**Partner:** Dr F. Karouta, Eindhoven University of Technology, The Netherlands

**Mr Q. Gao, Ms P. Lever, Ms V.A. Coleman, Ms K. Stewart, Ms S. Mokkaapati, Mr S. Barik, Dr L. Fu, Dr J. Wong-Leung, Dr M. Buda, Dr H.H. Tan and Professor C. Jagadish**

**Project:** Optical Spectroscopy of Semiconductor Quantum Structures and Devices

**Partners:** Mr P. Reece, Dr B.Q. Sun, Dr M. Zhang and Professor M. Gal, University of New South Wales

**Dr S.T. Gibson**

**Project:** (ACCESS) Australian Centre for Enabling Molecular Sciences

**Partners:** Dr E. Bieske and Dr R. O'Hair, University of Melbourne; Dr M. Brunger and Dr W. Lawrance, Flinders University; Dr M. Buntine and Dr G. Metha, Adelaide University; Dr M. Collins, Research School of Chemistry, Australian National University; Dr J. Gascooke, Adelaide University; Dr P. Gill, Dr M. Jordan, Dr S. Kable, Professor L. Radom and Dr T. Schmidt, Sydney University; Dr D. McNaughton and Dr E. Robertson, Monash University; Dr B. Yates, University of Tasmania

**Project:** (NSAA) Photoabsorption Cross Sections in the Ultraviolet for Planetary Atmospheres Applications

**Partners:** Professor G. Stark, Wellesley College, USA; Dr P.L. Smith, Harvard-Smithsonian Center for Astrophysics, USA

**Dr S.T. Gibson and Professor B.R. Lewis**

**Project:** Remote Sensing of the Thermosphere.

**Partner:** Professor R.R. Meier, George Mason University, USA

**Project:** Photodissociation Mechanisms for Excited Electronic States of Molecular Nitrogen

**Partners:** Professor W. Ubachs, Vrije Universiteit, The Netherlands; Professor G. Stark, Wellesley College, USA; Professor H. Lefebvre-Brion, Université Paris-Sud, France

**Dr M. Gulacsi**

**Project:** Effects of Phonons on Magnetic Impurities

**Partners:** Dr A.R. Bishop, Los Alamos National Laboratory, USA; Dr A. Bussmann-Holder, Max-Planck Institute, Stuttgart, Germany

**Project:** Correlation Effects in Kondo Lattice Models

**Partner:** Dr I. McCulloch, Institute for Theoretical Physics, Aachen, Germany

**Project:** Stripe Formation in Two-Dimensional Lattices

**Partner:** Professor Zs. Gulacsi, University of Debrecen, Hungary

**Project:** Anomalous Properties of Elemental Actinides

**Partners:** Dr J.L. Smith and Dr M. Manley, Los Alamos National Laboratory, USA

**Professor D.J. Hinde**

**Project:** Fission Dynamics

**Partner:** Professor Y. Abe, Kyoto University, Japan

**Professor D.J. Hinde and Dr M. Dasgupta**

**Project:** Double Folding Calculation of Nuclear Potentials

**Partner:** Dr I.I. Gontchar, Omsk State Transport University, Russia

**Project:** Fusion of  $^{16}\text{O}$  with  $^{174}\text{Yb}$

**Partners:** Dr F. Liang and Dr D. Schapira, Oak Ridge National Laboratory, USA

**Project:** Breakup and Fusion of Stable and Radioactive Nuclei

**Partners:** Dr M. Freer, University of Birmingham, UK; Professor. J. Tostevin, University of Surrey, UK; Dr K. Hagino, Tohoku University, Japan

**Project:** Dynamics of Nuclear Fusion

**Partner:** Dr K. Hagino, Tohoku University, Japan

**Project:** Fusion and Breakup in the Reaction of  $^9\text{Be}$  with  $^{144}\text{Sm}$

**Partner:** Professor P. Gomes, University Fluminense, Brazil

**Dr J. Howard**

**Project:** Spectroscopic Studies of the Plasma Divertor in W7-AS

**Partners:** Dr R. König and Mr J. Chung, Max Planck Institute for Plasma Physics, Germany

**Project:** Coherence Imaging on RFX Reversed Field Pinch

**Partner:** Dr M. Valisa, Consorzio RFX, Padova, Italy

**Project:** Measurement of Electric Field in H-1NF Using Laser Induced Fluorescence Techniques

**Partners:** Professor B.W. James and Mr D. Anduczyk, University of Sydney

**Professor S.T. Hyde**

**Project:** Inorganic Self-assembly: Biomorph Growth

**Partners:** Dr J.M. Garcia-Ruiz, Granada University, Spain; Professor W. Kunz, Regensburg University, Germany

**Project:** Electron Tomography of Copolymer Mesophases

**Partner:** Professor H. Hasegawa, Kyoto University, Japan

**Project:** Crystalline Networks and Tiling Theory

**Partner:** Professor M. O'Keeffe, Arizona State University, USA

**Project:** Tricontinuous Morphologies for Mikto-arm Copolymers

**Partner:** Dr C. Oguey, Université Cergy-Pontoise, France

**Project:** Topological Analysis of Protein Folds

**Partner:** Dr Y. Nagai, Kokushikan University, Japan

**Project:** Cubic Membranes in Vivo

**Partner:** Dr Y. Deng, National University of Singapore, Singapore

**Dr R.A. Jarvis**

**Project:** e-beam Irradiation of Chalcogenide Films

**Partner:** Dr S. Garcia Blanco, University of Toronto, Canada

**Project:** Raman Spectroscopy of Chalcogenide Films

**Partner:** Professor K. Richardson, University of Central Florida, USA

**Dr A.S. Kheifets**

**Project:** Convergent Close-coupling Theory of Double Ionization by Photon and Electron Impact

**Partner:** Dr I. Bray, Murdoch University

**Project:** Electron Impact Double Ionization of the Helium Atom

**Partner:** Dr A. Dorn, Max-Planck Institute for Nuclear Physics, Germany

**Project:** Theoretical and Experimental Studies of Double Photoionization of He and H<sub>2</sub>

**Partner:** Dr L. Avaldi, Consiglio Nazionale delle Ricerche, Italy

**Project:** Theory of Electron Correlations in Solids

**Partner:** Dr F. Aryasetiawan, Research Institute for Computational Sciences, Japan

**Dr T. Kibédi and Professor G.D. Dracoulis**

**Project:** Internal Conversion Electron Spectroscopy of 0<sup>+</sup> States

**Partners:** Dr S. Yates, University of Kentucky, USA; Dr P. Garrett, Lawrence Livermore Laboratory, USA; Dr R. Julin, University of Jyväskylä, Finland

**Project:** Tables of Prolate Deformed Nuclear K-isomers

**Partner:** Dr F.G. Kondev, Argonne National Laboratory, USA

**Dr T. Kibédi and Dr P.M. Davidson**

**Project:** Theoretical Conversion Coefficients and EO Electronic Factors

**Partners:** Dr T.W. Burrows, Brookhaven National Laboratory, USA; Dr M.T. Trzhaskovskaya, Petersburg Nuclear Physics Institute, Russia; Dr C.W. Nestor, Jr., Oak Ridge National Laboratory, USA

**Professor Yu.S. Kivshar**

**Project:** Discrete Solitons in Waveguide Arrays

**Partner:** Professor M. Molina, University of Chile, Chile

**Project:** Applications of the Frenkel-Kontova Model

**Partner:** Professor O. Braun, Institute of Physics, Kiev, Ukraine

**Project:** All-optical Circuits in Onlinear Photonic Crystals

**Partner:** Dr S. Mingaleev, University of Central Florida, USA

**Professor Yu.S. Kivshar and Dr A.E. Miroschnichenko**

**Project:** Engineering Fano Resonances in Nonlinear Systems

**Partner:** Dr S. Flach, Max Plank Institute for Complex Systems, Germany

**Professor Yu.S. Kivshar and Dr I.V. Shadrivov**

**Project:** Nonlinear Surface Waves in Left-handed Metamaterials

**Partner:** Professor A. Boardman, University of Salford, UK

**Project:** Goos-Haenchen Effect in Slabs of Metamaterials

**Partner:** Professor R. Ziolkowski, University of Arizona, USA

**Professor Yu.S. Kivshar and Dr A.A. Sukhorukov**

**Project:** Parametric Optical Conversion Due to Cascaded Nonlinearities

**Partner:** Professor S.M. Saltiel, University of Sofia, Bulgaria

**Project:** Stability Analysis of Solitary Waves

**Partner:** Professor D.E. Pelinovsky, McMaster University, Canada

**Project:** Discrete Solitons in Waveguide Arrays

**Partners:** Professor R. Morandotti, University of Quebec, Canada; Professor S. Aitchison, University of Toronto, Canada; Professor Y. Silberberg, Weizmann Institute of Technology, Israel

**Project:** Incoherent Gap Solitons

**Partners:** Dr K. Motzek and Professor F. Kaiser, Darmstadt University of Technology, Germany

**Dr P. Kluth and Dr S. Kluth**

**Project:** Defects and Diffusion in Si-Nanostructures

**Partners:** Professor S. Mantl, Dr J. Moers and Dr Q.-T. Zhao, Forschungszentrum Jülich, Germany

**Professor W. Krolikowski**

**Project:** Optical Beams in Nonlocal Nonlinear Media



**Partners:** Professor O. Bang, Technical University, Denmark; Professor J. Wyller, Norway Agricultural University, Norway; Professor J. Rasmussen, Riso National Laboratory, Denmark

**Project:** Localised Structure in Second Harmonic Generation

**Partner:** Professor M. Saffman, University of Wisconsin, USA

**Project:** Modulational Instability in Photorefractive Media

**Partner:** Professor Mark Saffman, University of Wisconsin, USA

**Project:** Photorefractive Solitons

**Partner:** Professor C. Denz, University of Münster, Germany

**Project:** Discrete Solitons

**Partner:** Professor F. Lederer, University of Jena, Germany

**Project:** No Local Solitons

**Partner:** Professor A. Dreischuh, University of Sofia, Bulgaria

**Project:** Soliton Effects in Optical Lattices.

**Partner:** Professor M. Trippenbach, Warsaw University, Poland

**Project:** Singular Optics

**Partner:** Professor A. Volyar, Taurida National University, Ukraine

**Dr G.J. Lane, Professor G.D. Dracoulis and Professor A.P. Byrne**

**Project:** High-spin States and Shell Model Structure of Neutron-rich Nuclei near  $^{208}\text{Pb}$

**Partners:** Professor R. Broda and Dr B. Fornal, Niewodniczanski Institute of Nuclear Physics, Poland; Professor K.-H. Maier, Hahn-Meitner-Institut, Germany

**Project:** Octupole Correlations and Particle Alignments in Neutron-rich Uranium Nuclei

**Partners:** Professor R. Broda and Dr B. Fornal, Niewodniczanski Institute of Nuclear Physics, Poland; Dr S. Zhu, Professor R.V.F. Janssens and Dr M. Carpenter, Argonne National Laboratory, USA; Dr A.O. Macchiavelli and Dr D. Ward, Lawrence Berkeley National Laboratory, USA

**Ms P. Lever, Dr H.H. Tan and Professor C. Jagadish**

**Project:** Optical Spectroscopy of Quantum Dots

**Partner:** Professor J. Wolter, Eindhoven University of Technology, The Netherlands

**Professor J.D. Love**

**Project:** Scanning Near-field Optical Microscopy

**Partners:** Dr S. Huntington and Dr B. Gibson, University of Melbourne; Dr V. Steblina, VA FutureTech Consulting Pty Ltd, Sydney

**Project:** Propagation in Practical Multimode Fibres and Devices

**Partners:** Professor D. Abrahams and Dr E. Perrey-Debain, University of Manchester, UK

**Project:** Undergraduate Text Book on Optical Fibres, Waveguides and Devices

**Partners:** Associate Professor F. Ladouceur, University of New South Wales; Dr F.P. Payne, University of Oxford, UK

**Professor J.D. Love and Dr A. Ankiewicz**

**Project:** Multimode Waveguides and Devices

**Partner:** Redfern Polymer Optics

**Dr J.C.A. Lower**

**Project:** Electron-impact-induced Ionization of Heavy Atoms

**Partner:** Professor D. Madison, University of Missouri-Rolla, USA

**Project:** Measurement of Multi-particle Fragmentation Processes

**Partner:** Dr A. Dorn, Max-Planck-Institute for Nuclear Physics, Germany

**Project:** Spin Effects in Inner Shell Atomic Ionization

**Partner:** Professor C.T. Whelan, Old Dominion University, USA

**Project:** Electron Impact-induced Ionization/Excitation of Helium

**Partner:** Professor K. Bartschart, Drake University, USA

**Professor B. Luther-Davies**

**Project:** Highly Oriented Nanostructures of Nonlinear Optical Materials for Applications in Polarized Light Emitting Diodes and Optical Devices.

**Partner:** Dr H.B. Schulz, Potsdam University, Germany

**Professor B. Luther-Davies and Professor W. Krolikowski**

**Project:** Centre of Excellence for Ultrahigh Bandwidth Devices for Optical Systems

**Partners:** University of Sydney; Macquarie University; University of Technology, Sydney; Swinburne University of Technology; NSW State Government through Department of State and Regional Development; CSIRO; Osaka University, Japan; University of Central Florida, USA; Lucent Technologies, USA; Institut Fresnel, France

**Professor B. Luther-Davies and Ms A. Smith**

**Project:** Production of Bulk Samples of Novel Chalcogenide Glasses

**Partner:** Professor K. Richardson, University of Central Florida, USA

**Professor N.B. Manson and Dr M. Sellars**

**Project:** Quantum Computing Using the Nitrogen-vacancy Centre in Diamond

**Partners:** Professor M. Scully and Professor P. Hemmer, T & M University, USA, Dr D. Pulford, DSTO, Canberra; Professor S. Praver, University of Melbourne

**Mr A. Matthews**

**Project:** Microexplosion Fabrication of Photonic Crystals

**Partners:** Dr G. Zhou and Professor M. Gu, Swinburne University

**Dr F.P. Mills**

**Project:** Photochemical Modeling of the Venus Middle Atmosphere

**Partners:** Dr M. Allen, NASA Jet Propulsion Laboratory, USA; Professor Y.L. Yung, California Institute of Technology, USA

**Project:** Excited State Oxygen Chemistry in the Venus Atmosphere

**Partner:** Dr T. Slanger, SRI International, USA

**Project:** Ultraviolet Characterization and Remote Sensing of Aerosols

**Partners:** Dr A. Eldering and Dr O. Kalashnikova, NASA Jet Propulsion Laboratory, USA; Dr D. Anderson and Dr B. Forgan, Bureau of Meteorology; Dr R. Mitchell, CSIRO

**Project:** Analysis and Modeling of OH Column Abundances

**Partners:** Dr S.P. Sander, Dr R.P. Cageao, and Dr M. Allen, NASA Jet Propulsion Laboratory, USA; Professor Y.L. Yung, California Institute of Technology, USA

**Dr D.N. Neshev**

**Project:** Optical Solitons and Vortices

**Partner:** Professor A. Dreischuh, Sofia University, Bulgaria

**Project:** Topological Transformation of Discrete Vortices

**Partner:** Professor Z. Chen, San Francisco State University, USA

**Project:** Nonlocal Dark Solitons

**Partner:** Professor O. Bang, Technical University of Denmark, Denmark

**Dr C. Neto**

**Project:** Fingering Instability in Thin Liquid Films

**Partner:** Professor K. Jacobs, Saarland University, Germany

**Project:** Characterisation of Magnetic Nanoparticles

**Partners:** Dr M. Bonini and Professor P. Baglioni, University of Florence, Italy

**Project:** Model for Boundary Slip in Newtonian Liquids

**Partner:** Dr J. Sader, University of Melbourne

**Dr E. Ostrovskaya and Ms B. Dabrowska**

**Project:** Finite Temperature Effects in the Dynamics of Bose-Einstein Condensates in Optical Lattices

**Partners:** Dr M. Davis and Dr A. Bradley, University of Queensland

**Dr M.C. Ridgway, Dr C.J. Glover and Dr S. Kluth**

**Project:** EXAFS Characterisation of Amorphous Semiconductors

**Partners:** Dr G. de Azevedo, Laboratorio Nacional de Luz Sincrotron, Brazil; Dr K.M. Yu, Lawrence Berkeley National Laboratory, USA; Dr G.J. Foran, ANSTO

**Project:** Formation of Dilute GaAs<sub>x</sub>N<sub>1-x</sub> and Ga<sub>x</sub>Mn<sub>1-x</sub>As Alloys by Ion Implantation

**Partners:** Dr O. Dubon, University of California at Berkeley, USA; Dr K.M. Yu, Lawrence Berkeley National Laboratory, USA

**Project:** Laser Annealing of Ion-implanted Semiconductors

**Partner:** Professor M. Rao, George Mason University, USA

**Dr M.C. Ridgway, Dr R. Dogra and Professor A.P. Byrne**

**Project:** Pd-defect and Pd-dopant Characterisation with Perturbed Angular Correlation

**Partner:** Dr R. Vianden, University of Bonn, Germany

**Dr M.C. Ridgway and Professor J.S. Williams**

**Project:** Nanocavity Evolution in Si under Ion Irradiation

**Partners:** Professor H. Bernas, Dr M.-O. Ruault and Dr F. Fortuna, Centre National de Recherche Scientifique, France

**Dr M.C. Ridgway, Dr C.J. Glover and Dr P. Kluth**

**Project:** EXAFS Characterisation of Semiconducting and Metallic Nanocrystals

**Partners:** Dr G. de Azevedo, Laboratorio Nacional de Luz Sincrotron, Brazil; Dr G.J. Foran, ANSTO

**Dr M.C. Ridgway, Dr S. Kluth and Dr C.J. Glover**

**Project:** Implantation-induced Amorphisation of Ternary Semiconductors

**Partner:** Professor W. Wesch, Friedrich-Schiller University, Germany

**Dr B.A. Robson**

**Project:** Antiproton Scattering

**Partner:** Professor Y.S. Zhang, Institute of High Energy Physics, P.R. China

**Project:** Deuteron-deuteron Elastic Scattering

**Partner:** Professor Y.S. Zhang, Institute of High Energy Physics, P.R. China

**Project:** Fusion

**Partners:** Dr B. Giraud, Service de Physique Theorique, CEA Saclay, France; Dr K.A. Amos and Dr S. Karataglidis, University of Melbourne

**Professor R.E. Robson**

**Project:** Low Energy Charged Particles in Atomic and Molecular Gases

**Partner:** Professor M. Morrison, University of Oklahoma, USA

**Project:** Electron and Positron Transport in Gaseous and Condensed Matter

**Partner:** Dr R.D. White, James Cook University

**Dr A.V. Rode**

**Project:** Characterization and Analysis of Ultrashort Laser-matter Interaction at Low and Medium Laser Intensities

**Partners:** Laboratoire d'Optique Appliqué, Palaiseau, France; Centre Lasers Intenses et Applications, Bordeaux, France; The Lasers, Plasmas, and Photonic Processes Laboratory, University Aix Marseille-II, France

**Project:** 100-W Laser System for Ultra-fast Pulsed Laser Deposition

**Partners:** Dr J. Gieseckus and Mr M. Duering, Fraunhofer Institute for Laser Technique, Germany

**Project:** Boron Nitride Nanostructures Formed by the High Repetition-rate Laser Ablation

**Partners:** Dr D. Golberg and Professor Y. Bando, National Institute for Material Science, Japan

**Project:** Magnetic Properties of Laser-deposited Carbon Nanofoam

**Partners:** Dr J. Giapintzakis, Foundation for Research and Technology-Hellas, Greece; Dr D. Tomanek, Michigan State University, USA

**Project:** Sub-picosecond Laser Deposition of Optical Films

**Partner:** Professor B.N. Chickov, Laser Zentrum Hannover e.V., Germany

**Project:** Recording and Reading of Three-dimensional Memory in Glasses

**Partners:** Professor H. Mizawa and Dr S. Juodkazis, University of Tokyushina, Japan

**Project:** Structural Characterisation of Carbon Nanoclusters

**Partner:** Professor D. Gomberg, National Institute for Materials Science, Japan

**Project:** Electronic and Magnetic Properties of Carbon Nanostructures Produced by Laser Ablation

**Partner:** Professor D. Arcon, University of Ljubljana, Slovenia

**Project:** Structural Investigation of Carbon Nanofoam

**Partner:** Associate Professor D. McCulloch, Royal Melbourne Institute of Technology

**Dr A. Samoc**

**Project:** Investigations of Second-order Nonlinear Optical Effects in Polymer Films

**Partners:** Dr A. Holland and Dr A. Mitchell, Royal Melbourne Institute of Technology

**Project:** SHG Monitoring of Dipolar Orientation and Relaxation in Disperse Red Type/Derivative Urethane-urea Copolymer

**Partners:** Dr M. Tsuchimori and Dr O. Watanabe, Toyota Central R & D Laboratories, Japan

**Project:** Orientation of Nonlinear Optical Chromophores in Polymer Fibres Investigated in Hyper-Rayleigh Scattering Geometry Using Femtosecond Pulses

**Partner:** Dr M. S. Wong, Baptist University of Hong Kong, Hong Kong

**Project:** Induced and Permanent Second-order Nonlinear Optical Effects in Molecular Materials

**Partner:** Professor S. Schrader, Wildau Technical University, Germany

**Dr A. Samoc and Dr M. Samoc**

**Project:** Crystal Structure of the Second Order Nonlinear Optical Addition Complex  $AsI_3 \cdot 3S_8$

**Partners:** Dr E.R. Krausz and Dr A.C. Willis, Research School of Chemistry, Australian National University

**Dr A. Samoc, Dr M. Samoc and Professor B. Luther-Davies**

**Project:** Nonlinear Optical Properties of Soluble Oligomers of PPV

**Partner:** Dr M.S. Wong, Baptist University, Hong Kong

**Project:** Third-order Optical Nonlinearities of Oligomers, Dendrimers and Polymers Derived from Solution Z-scan Studies

**Partner:** Dr M. Humphrey, Department of Chemistry, Australian National University

**Project:** Synthesis and Third-order Nonlinear Optical Properties of End-functionalized Oligophenylenevinylenes

**Partner:** Dr M.S. Wong, Baptist University, Hong Kong

**Dr M. Samoc**

**Project:** Nonlinear Optics and Nanophotonics

**Partner:** Professor P.N. Prasad, State University of New York at Buffalo, USA

**Project:** Nonlinear Properties of Evaporated Films of Disperse Red

**Partner:** Professor M.O. Tjia, Bandung Institute of Technology, Indonesia

**Dr M.G. Shats**

**Project:** Two-dimensional Turbulence

**Partner:** Professor J. Soria, Monash University

**Project:** Confinement Studies in Stellarators

**Partner:** Professor K. Toi, National Institute for Fusion Science, Japan

**Project:** Turbulent Structures and Transport in Plasmas

**Partner:** Dr D. Rudakov, University of California at San Diego, USA

**Ms K. Stewart, Dr L. Fu, Dr M. Buda, Dr H.H. Tan and Professor C. Jagadish**

**Project:** Tuning of Detection Wavelength of Quantum Dot Infrared Photodetectors

**Partners:** Dr A. Stiff-Roberts and Professor P. Bhattacharya, University of Michigan, USA

**Dr M. Sellars and Dr J. Longdell**

**Project:** Investigation of EIT and Slow Light

**Partner:** Professor P. Hemmer, Texas A & M, USA

**Dr I.V. Shadrivov**

**Project:** Left-handed Metamaterials

**Partners:** Professor A.A. Zharov, Dr N.A. Zharova, Dr A.N. Reznik and Dr M. Gorkunov, Russian Academy of Sciences, Russia; Professor S.A. Gredeskul, Ben-Gurion University, Israel

**Dr A.E. Stuchbery**

**Project:** Shell Model Configurations in the  $2^+_1$  State in  $^{46}\text{Ca}$  from a g-factor Measurement

**Partners:** Dr M.J. Taylor, University of Brighton, UK; Professor N. Benczer-Koller, Rutgers University, USA; Dr L. Bernstein, Lawrence Livermore National Laboratory, USA; Dr M.A. McMahan, Lawrence Berkeley National Laboratory, USA; Professor K.-H. Speidel, Universität Bonn, Germany

**Project:** g-factor Measurements of First  $2^+$  States of Heavy Te Isotopes Based on Nuclear Spin Deorientation for Nuclei Recoiling in Vacuum

**Partners:** Dr M. Danchev and Professor C.R. Bingham, University of Tennessee, USA; Professor N.J. Stone, Dr J.R. Stone and Ms C.L. Timlin, University of Oxford, UK; Dr J. Pavan, Dr C. Baktash, Dr J. Beene and Dr D.C. Radford, Oak Ridge National Laboratory, USA; Professor N. Benczer-Koller and Dr G. Kumbartzki, Rutgers University, USA; Professor N.V. Zamfir, Yale University, USA

**Project:** First Nuclear Moment Measurement with Radioactive Beams by the Recoil-in-vacuum Technique: The g Factor of the  $2^+_1$  State in  $^{132}\text{Te}$

**Partners:** Professor N.J. Stone, Dr J.R. Stone and Ms C.L. Timlin, University of Oxford, UK; Dr J. Pavan, Dr C. Baltash, Dr J. Beene and Dr D.C. Radford, Oak Ridge National Laboratory, USA; Dr M. Danchev and Professor C.R. Bingham, University of Tennessee, USA; Professor N. Benczer-Koller and Dr G. Kumbartzki, Rutgers University, USA; Dr C. Barton and Professor N.V. Zamfir, Yale University, USA; Dr J. Dupak, Institute of Scientific Instruments, Czech Republic

**Project:** Nuclear g Factors and Structure of High-spin Isomers in  $^{190,192,194}\text{Pt}$  and  $^{196,198}\text{Hg}$

**Partner:** Dr A.I. Levon, Institute for Nuclear Research, Kiev, Ukraine

**Dr A.E. Stuchbery and Professor A.P. Byrne**

**Project:** Hyperfine Interactions Spectrometer

**Partners:** Associate Professor D.H. Chaplin, ADFA, University of New South Wales; Professor H.H. Bolotin, University of Melbourne

**Dr A.E. Stuchbery and Dr A.N. Wilson**

**Project:** Electron-configuration-reset-time-differential Recoil-in-vacuum Technique for Excited-state g-factor Measurements on Fast Exotic Beams

**Partner:** Professor P.F. Mantica, Michigan State University, USA

**Dr A.E. Stuchbery, Dr A.N. Wilson and Dr P.M. Davidson**

**Project:** Transient Fields for Mg Ions Traversing Gadolinium Hosts at Velocities above and below the K-shell Electron Velocity

**Partners:** Professor P. F. Mantica and Dr T.J. Mertzimekis, Michigan State University, USA

**Project:** Excited-state Configurations in  $^{38}\text{S}$  and  $^{40}\text{S}$  through Transient-field g-factor Measurements on Fast Fragments. (NSCL Experiment 02020)

**Partners:** Professor P.F. Mantica, Professor A.D. Davies and the NSCL Beta-NMR and Gamma Groups, Michigan State University, USA

**Project:** Gyromagnetic Ratios in  $^{134}\text{Te}$  and  $^{136}\text{Te}$  by the Recoil In Vacuum (RIV) Technique

**Partners:** Dr M. Danchev, University of Tennessee, USA; Dr C. Baktash and the Holfield Radioactive Ion Beam Facility RIV g-factor Collaboration, Oak Ridge National Laboratory, USA

**Dr A. Sukhorukov**

**Project:** Discrete Self-trapping and Wave Transport

**Partners:** Dr S.V. Dmitriev, University of Tokyo, Japan; Professor P.G. Kevrekidis, University of Massachusetts, USA

**Dr J.P. Sullivan**

**Project:** Positron Processes in Materials Science and AMO Physics

**Partners:** Professor C. Surko and Professor T. Rescigno, University of California at Berkeley, USA; Dr Y. Nagai, Tohoku University, Japan

**Project:** Positron Materials Beamline

**Partner:** Dr A. Hill, CSIRO

**Dr H.H. Tan and Professor C. Jagadish**

**Project:** Growth of InP-based Photodiodes and Photodetectors

**Partner:** Professor J. Campbell, University of Texas at Austin, USA

**Project:** Thermionic Cooling in Semiconductors

**Partner:** Professor R. Lewis, University of Wollongong

**Dr M. Vos**

**Project:** Theory of Spectral Function of Solids

**Partner:** Dr F. Aryasetiawan, University of Tsukuba, Japan

**Project:** Quantum Entanglement of Protons

**Partner:** Professor Dr C.A. Chatzidimitriou-Dreismann, Technische Universität Berlin, Germany

**Project:** Electronic Structure of the Si-Cu Interface Studied by EMS

**Partner:** Ms K. Nixon, Flinders University

**Project:** Elastic Scattering of Methane

**Partner:** Dr G. Cooper McMaster, University of Hamilton, Canada

**Dr A.N. Wilson**

**Project:** High-spin States in Nuclei with  $A=120$  near the Proton Dripline

**Partner:** Dr J.F. Smith, Manchester University, UK

**Dr A.N. Wilson and Dr P.M. Davidson**

**Project:** Decay out of Superdeformed Bands in a Two-level Mixing Model

**Partner:** Professor B.R. Barrett, University of Arizona, USA

**Project:** Decay out of Superdeformed Bands

**Partners:** Dr A.J. Sargeant and Professor M.S. Hussein, Universidade de Sao Paulo, Brazil



**Dr A.N. Wilson, Dr P.M. Davidson, Professor G.D. Dracoulis and Professor A.P. Byrne**

**Project:** Superdeformation in Po Isotopes

**Partners:** Dr R.A. Bark and Professor J.F. Sharpey-Schafer, iThemba Laboratories, South Africa; Professor H. Hübel and Dr S. Chmel, Universität Bonn, Germany; Dr R. Julin, Dr J. Uusitalo and Dr P.M. Jones, University of Jyväskylä, Finland

**Dr A.N. Wilson, Dr P.M. Davidson, Professor G.D. Dracoulis, Professor A.P. Byrne and Dr G.J. Lane**

**Project:** Superdeformed  $^{196}\text{Pb}$

**Partners:** Professor H. Hübel and Dr A.K. Singh, Universität Bonn, Germany; Dr A. Korichi, Université Paris-Sud, Orsay, France

**Dr J. Wong-Leung**

**Project:** Ion Implantation and Defect Studies in Silicon Carbide

**Partners:** Professor B.G. Svensson, University of Oslo, Norway; Dr M. Linnarson, Royal Institute of Technology, Sweden; Professor David Cockayne, University of Oxford, UK

**Dr J. Wong-Leung, Dr H.H. Tan, Dr M. Gao, Ms V.A. Coleman, Professor J.S. Williams and Professor C. Jagadish**

**Project:** Electron Microscopy Study of Defects in Ion Implanted Semiconductors

**Partners:** Dr J. Zou, University of Queensland; Dr J. Fitzgerald, Research School of Earth Sciences, Australian National University; Professor D.J.H. Cockayne, Oxford University, UK

**Dr W.S. Woolcock**

**Project:** The Pion-nucleon System at Low Energies

**Partners:** Dr E. Matsinos, Varian Medical Systems, Switzerland; Professor G.C. Oades, Aarhus University, Denmark; Professor G. Rasche, University of Zürich, Switzerland

## **Appendix – Grants and Contracts**

### ***ACT Knowledge Fund***

Mr D. Ramdutt and Professor R.W. Boswell

*Nanotiter Plate for Novel Cell Arrays*

2005 \$ 34,000

### ***The Asian Office of Aerospace Research and Development (AOARD)***

#### **Conference Support**

Professor J.D. Love

*OSA Topical Meeting on Bragg Grating, Poling & Photosensitivity (BGPP)/Australian Conference on Optical Fibre Technology (ACOFT)*

2005 \$ 7,500

### ***AusIndustry***

#### **Innovation Access Program**

Professor J.S. Williams

*Establishment of the Australian Materials Technology Network*

2003 – 2006 \$2,683,520

### ***Australian Academy of Technological Sciences and Engineering (ATSE)***

Professor S.J. Buckman, Dr J.P. Sullivan and Dr A. Hill

*Anti-matter Matters: A Workshop on Positron Applications – From Atoms to Materials to Cells*

2005 \$ 35,640

Professor J.D. Love

*14<sup>th</sup> International Workshop on Optical Waveguide Theory & Numerical Modelling (OWTNM)*

2004 – 2005 \$ 38,830

### ***Australian Nuclear Science & Technology Organisation***

#### **Access to Major Research Facilities Program**

Professor G.D. Dracoulis

*Competition between Octupole and Multi-particle Excitation in Po-212 and At-213*  
2004 – 2005 \$ 12,000

Dr M. Petravac  
*High Resolution EXAFS Characterisation of Nitrogen States in N-doped ZnO*  
2005 \$ 11,300

Dr A.E. Stuchbery  
*Excited State Configurations in <sup>38</sup>S and <sup>40</sup>S through Transient Field g-Factor Measurements on Fast Fragments*  
2004 – 2005 \$ 12,000

**Australian Synchrotron Research Program – ANSTO Travel Grants**

Dr P. Kluth  
*Ion Irradiated Induced Structural Changes in Metallic Nanocrystals Formed by Ion Beam Synthesis Studies with EXAFS*  
2005 \$ 6,830

Dr P. Kluth  
*EXAFS Study of Metal Nanocrystals: Size Dependent Structural Properties and the Influence of Electronic Stopping of High Energy Ion Irradiation*  
2005 \$ 6,830

Dr P. Kluth  
*SAXS/WAXS Analysis of Metal Nanocrystals Generated and Modified by Ion Implantation*  
2005 \$ 9,540

Dr M.C. Ridgway  
*Amorphous Compound Semiconductors – Formation and Relaxation*  
2005 \$ 9,699

Dr M.C. Ridgway  
*Amorphisation of Semiconductors by Swift Heavy-ion Irradiation*

2005 \$ 6,680

***Australian Research Council (ARC) Grants and Awards***

**ARC Centres of Excellence Grants**

Dr K.G.H. Baldwin and Dr A.G. Truscott

*Australian Centre for Quantum-Atom-Optics (ACQAO)*

2003 – 2008 (ANU Total) (\$10,950,000)

*RSPHysSE Project: Metastable BEC*

2003 – 2008 (RSPSE Share) \$1,353,000

Professor S.J. Buckman, Dr J.P. Sullivan, et al

*ARC Centre of Excellence in Antimatter-Matter Studies (CAMS)*

2005 – 2009 \$7,000,000

Professor Y. Kivshar

*ARC Centre of Excellence for Quantum-Atom Optics (ACQAO)*

2003 – 2008 (ANU Total) (\$10,950,000)

*RSPHysSE Project: Optical Lattices*

2003 – 2008 (RSPSE Share) \$ 719,000

Professor Y.S. Kivshar, Dr W. Krolikowski and Professor B. Luther-Davies

*Centre for Ultrahighband Devices for Optical Systems (CUDOS)*

2003 – 2007 (ANU Total) (\$11,513,850)

2003 – 2007 (RSPSE Share) \$2,967,000

University of Queensland Total \$6,380,544

Dr Y. Chen (ANU Participant)

*Australian Centre for Functional Nanomaterials*

2003 – 2007 (ANU Share) \$ 452,256

**ARC Discovery Project Grants**

Professor N.N. Akhmediev

*Multi-soliton Complexes*

2003 – 2005 \$ 245,000

Dr T. Aste and Dr T.J. Senden

*Granular Materials in 3D: Structural, Mechanical and Dynamic Properties from the Grain-scale and Beyond*

2004 – 2006 \$ 294,000

Professor R.W. Boswell and Dr C. Charles

*Development of New Membrane-electrode Assemblies for Low Temperature Fuel Cells*

2005 – 2007 \$ 898,000

Dr B.D. Blackwell and Dr M. Hegland

*High-performance Computational Data-mining Techniques for Feature Detection in Complex Time Series from Large-scale, Networked Plasma Experiments*

2004 – 2006 \$ 195,000

Professor P.G. Bouwknegt and Dr M. Varghese

*Global Aspects of Dualities in String Theory in the Presence of Background Fluxes*

2004 – 2006 \$ 258,000

Professor S.J. Buckman

*Electron Collision Studies with Laser-cooled Metastable Helium-recoil Atom Spectroscopy*

2003 – 2005 \$ 265,000

Professor S.J. Buckman and Dr J. Lower

*A Microscope for Molecular Reactions*

2003 – 2005 \$ 245,000

Dr M. Buda

*Asymmetric InP-based Structures for High Power Laser Diodes at 1400-1500 nm for Pumping Optical Amplifiers Used in Communication Systems*

2003 – 2006 \$ 165,000

Professor J. Chappell and Dr T. Esat (administered by RSES)

*Millennial-scale Instability of Sea Level and the Climate System: New Analysis of Coral Terraces in Papua New Guinea*

2003 – 2005 (\$ 295,000)

Professor J. Chappell, Dr M. Honda, Dr D. Fabel and Dr L.K. Fifield (administered by RSES)

*Production and Transport of Soil and Sediments, Determined by Cosmogenic Radionuclides and Noble Gases*

2003 – 2005 (\$ 295,000)

Dr Y. Chen and Professor L.T. Chadderton

*Formation Mechanism and Controlled Growth of Carbon Nanotubes*

2004 – 2006 \$ 280,000

Professor R.L. Dewar and Dr R. Ball

*Studies of Turbulence and Coherent Structures in Quasi Two-dimensional Plasmas and Fluids*

2003 – 2007 \$ 605,000

Professor R.L. Dewar and Dr S. Hudson

*Existence and Stability of a Model for Three Dimensional Toroidal Plasma Equilibria*

2004 – 2006 \$ 255,000

Dr T. Di Matteo

*Physics of Risk: New Tools to Survey the Australian Market and Beyond*

2005 – 2007 \$ 220,000

Professor G.D. Dracoulis, Professor A.P. Byrne, Dr T. Kibédi, Dr R.A. Bark, Professor P.M. Walker and Dr J. Gerl

*Isomers as Probes of Nuclear Structure and Sources of Energetic Protons*

2003 – 2005 \$ 402,000

Professor G.D. Dracoulis, Dr G. J. Lane and Dr T. Kibédi

*Characterising Nuclei Far from Stability*  
2004 – 2006 \$ 240,000

Professor R.G. Elliman and Dr J. Valenta  
*Novel Silicon-based Photonic Device*  
2003 – 2005 \$ 255,000

Dr S.T. Gibson and Professor B.R. Lewis  
*Reaction Transition States of Halide-cluster Complexes via Velocity-map Imaging of Photoelectrons*  
2004 – 2006 \$ 300,000

Professor J.H. Harris, Dr B.D.Blackwell, Dr J. Howard and Dr M.G. Shats  
*Localised Instabilities in Magnetically Confined Plasmas Heated by Radio Waves*  
2003 – 2005 \$ 162,000

Professor D.J. Hinde, Dr M. Dasgupta and Dr K. Hagino  
*Dynamics of Nuclear Fusion: Evolution through a Complex Multi-Dimensional Landscape*  
2003 – 2005 \$ 575,000

Professor D.J. Hinde, Dr M. Dasgupta, Dr M. Freer, Professor J.A. Tostevin and Dr K. Hagino  
*Breakup and Fusion of Stable and Radioactive Nuclei*  
2005 – 2007 \$ 609,000

Professor C. Jagadish  
*Fabrication and Monolithic Integration of II-V Semiconductor Photonic Devices using Impurity Free Interdiffusion*  
2003 – 2006 \$ 510,000

Professor C. Jagadish and Dr H.H. Tan  
*Selective Area Growth of Semiconductor Quantum Dots for Optoelectronic Applications*  
2004 – 2006 \$ 260,000

Dr A.S. Kheifets

*Two Electron Atomic Photo Ionization in Super Strong Electromagnetic Field*  
2004 – 2006 \$ 225,000

Professor Yu.S. Kivshar  
*Left-handed Metamaterials and Negative Refraction*  
2005 – 2009 \$1,036,308

Professor M.A. Knackstedt, Professor E. Seeman, Dr A.P. Roberts and Dr C.H. Arns  
*Assessing Bone Quality and Health: Experimental Imaging, Structural Characterisation, and Mechanical Modelling of Bone in 3D*  
2004 – 2006 \$ 425,000

Professor W. Krolikowski  
*Solitons and Localized Structures in Nonlocal Nonlinear Media*  
2004 – 2007 \$ 255,000

Professor B.R. Lewis  
*Quantum Mechanics and Planetary Atmospheres*  
2005 – 2007 \$ 300,000

Professor J.D. Love  
*Miniaturised Adiabatic Light Processing Devices*  
2004 – 2006 \$ 220,000

Dr J. Lower  
*Dynamic Correlations and Coherence Effects in Two-electron Emission Processes*  
2003 – 2006 \$ 380,000

Professor B. Luther-Davies and Dr R. Jarvis  
*Integrated Magneto-optic Waveguide Materials and Devices*  
2004 – 2007 \$ 400,000

Professor N. Manson and Dr M.J. Sellars



*Storage of Nonclassical Light in a Solid*

2003 – 2005 \$ 265,000

Dr F.P. Mills

*Photochemistry of the Middle Atmospheres of Venus and the Earth*

2005 – 2007 \$ 260,000

Dr C.R. Morton

*Development of Advanced Detection Systems for Accelerator Mass Spectrometry*

2004 – 2006 \$ 200,000

Professor B. Ninham

*Ionic Dispersion Forces in Physical Chemistry: Implications for pH, Electrochemistry, Nanoparticle Formation and Organic Synthesis*

2003 – 2005 \$ 270,000

Dr M. Petracic and Professor J.S. Williams

*Nanocavities and Nanoparticles in Silicon-base Materials Tailored by Ion Bombardment*

2003 – 2005 \$ 350,000

Dr M.C. Ridgway

*Amorphisation of Semiconductor and Elemental Metallic Nanocrystals by Ion Irradiation*

2005 – 2007 \$ 367,000

Dr A. Rode, Dr A. Christy and Professor B. Luther-Davies

*Nanoclusters with Extraordinary Properties Made out of Ordinary Materials*

2005 – 2007 \$ 362,500

Dr M.C. Ridgway, Professor A.P. Byrne and Dr K.M. Yu

*Atomic-scale Identification of Amorphisation and Relaxation Processes in Compound Semiconductors*

2003 – 2005 \$ 285,000

Dr A. Samoc and Dr M. Samoc

*Polymer Optical Fibres with Controlled Molecular Orientation for Photonic Applications*

2005 – 2007 \$ 388,000

Dr M. Sellars

*Development of a Quantum Computer Based on Solid State Optical Impurity Sites*

2003 – 2005 \$ 130,000

Dr A. Sheppard

*A Dynamic Pore-network Model for Fluid Displacements in Porous Media*

2005 – 2007 \$ 268,000

Dr S.G. Tims, Professor L.K. Fifield, Dr G.J. Hancock, Dr R. Bartley and Dr P. Wallbrink

*Plutonium: A New Tracer of Sediment Transport into the Great Barrier Reef Lagoon*

2005 – 2007 \$ 150,000

Dr M. Vos

*Quantum Entanglement of Protons*

2005 – 2007 \$ 280,000

Dr M. Vos and Dr A.S. Kheifets

*Electron Momentum Spectroscopy of Correlated Nanoscale Structures*

2003 – 2005 \$ 295,000

Dr D.R.M. Williams, Dr E.M. Sevick and Professor B.W. Ninham

*Salt, Sugar and Sequence: The Effect of Molecular Forces on Polymer Conformation*

2004 – 2006 \$ 480,000

Professor J.S. Williams

*Nanoindentation-induced Phase Transformations and Physical Property Changes in Semiconductors*

2004 – 2008 \$ 294,000

A.N. Wilson

*Superdeformed Nuclei and their Decay: Challenging Nuclear Models and Probing Quantum Tunnelling*

2004 – 2006 \$ 140,000

University of New South Wales (Total grant \$312,000)

Professor M.A. Knackstedt (ANU Partner)

*Structures and Properties of Tissue Engineering Matrices for Cartilage and Bone: Imaging, Visualising and Modelling Tissue/Scaffold Constructs in 3D*

2003 – 2005 (ANU share) \$ 211,000

University of New South Wales (Total grant \$288,000)

Dr A. Sakellariou (ANU Partner)

*Growth of Bioartificial Tissue Containing an Inbuilt Blood Supply*

2005 – 2007 (ANU share) \$ 42,000

#### **ARC Discovery Project Grants and Australian Postdoctoral Fellowships**

Dr C. Arns

*Transport Properties from Nuclear Magnetic Resonance*

2005 – 2007 \$ 297,022

Dr T.T. Barrows

*Cosmogenic Isotopes in Glacial Landscapes: Production Rates and Climate Change*

2005 – 2007 \$ 290,000

Professor R.W. Boswell and Dr W. Li (APD Fellowship)

*Preparation of Silica-based Thin Materials with Large Optical Nonlinearity*

2005 – 2007 \$ 315,000

Dr J. Bradby

*Mechanical Deformation of Layered Semiconductor Structures*

2003 – 2005 \$ 234,000

Dr Y. Chen and Ms Y.J. Chen (APD Fellowship) <i>Boron Nitride Nanotube Synthesis and Applications</i> 2004 – 2006	\$ 410,000
Dr V. Craig, Associate Professor S. Biggs and Dr C. Neto (APD Fellowship) <i>Nanorheology: Hydrodynamic Slip in Newtonian Fluids</i> 2003 – 2006	\$ 291,000
Professor R.G. Elliman, Dr E. Krausz, Dr T.D.M. Weijers (APD Fellowship) and Associate Professor S. Choi <i>The Physical and Optical Properties of Self-assembled Si Nanocrystals</i> 2003 – 2005	\$ 318,035
Dr L. Fu <i>Growth and Intermixing of Quantum Dots for Multi Wavelength Infrared Photodetectors</i> 2003 – 2005	\$ 255,000
Dr C.J. Glover <i>Applying Advanced Synchrotron Radiation Based Techniques to Determine the Connection between the Geometric and Electronic Structure of Semiconductor Nanocrystals</i> 2003 – 2005	\$ 249,500
Dr P. Kluth <i>Structural Characterisation of Ion Beam Synthesized Metallic Nanocrystals Using Advanced Synchrotron Based Analytical Techniques</i> 2005 – 2008	\$ 248,000
Dr S. Kluth <i>Ion Implantation Induced Diffusion and Defect Evolution in Si Nanostructures</i> 2003 – 2005	\$ 242,700
Dr M.M. Kohonen <i>Wet Granular Materials: A Three-dimensional Study Using X-ray Microtomography</i>	

2005 – 2007 \$ 280,000

Dr E. Ostrovkaya (APD Fellowship), Professor Y.S. Kivshar and Dr C.M. Savage

*Nonlinear Atom Optics of Bose-Einstein Condensates in Optical Lattices*

2003 – 2005 \$ 193,035

**ARC Discovery Project Grant and Australian Professorial Fellowship**

Professor M.T. Batchelor

*The Mathematics and Physics of Interacting Systems*

2003 – 2007 \$1,122,000

**ARC Discovery Project Grants and Australian Research Fellowships**

Dr V. Craig

*Surface Adsorption, Repulsion and Attraction: A New Experimental Approach to Surface Forces*

2002 – 2006 \$ 573,782

Dr G.J. Lane

*Structure of Exotic Neutron-rich Nuclei Populated Using Novel Reaction Mechanisms*

2003 – 2007 \$ 566,605

Dr D. Neshev (Research Fellowship) and Dr A. Sukhorukov

*Light Control in Nonlinear Periodic Structures*

2004 – 2009 \$ 755,000

Dr T.J. Senden

*Dynamic Force Microscopy of Small Molecular Assemblies*

2002 – 2006 \$ 391,782

Dr J.P. Sullivan

*Experiments with Antimatter: Investigating Positron Interactions with Atoms, Molecules and Materials*

2004 – 2008 \$ 500,000

Dr A.G. Truscott (Research Fellowship) and Dr J.J. Hope  
*How Does a Bose Einstein Condensate Develop Phase?*  
2003 – 2007 \$ 415,000

**ARC Discovery Project Grants and QEII Fellowships**

Professor S.T. Hyde, Dr T. Aste and Dr T. Di Matteo (QEII Fellowship)  
*The Architecture of Networks: Characterisation and Visualisation of Complex Systems as Fluctuating Networks*  
2003 – 2007 \$ 687,275

Dr J. Wong-Leung (QEII Fellowship) and Professor B.G. Svensson  
*Ion Implantation Processing in Silicon Carbide for Microelectronic Applications*  
2002 – 2006 \$ 619,411

Dr W. Xu (Total grant \$354,160)  
*Generation of Coherent-hypersound from Semi-conductor Systems*  
(Transferred from University of Wollongong)  
2002 – 2005 (ANU share) \$ 249,628

**ARC Federation Fellowship**

Professor S. Hyde  
*Self-assembly and Complexity: Networks and Patterns from Materials to Markets*  
2004 – 2009 \$1,519,710

Professor C. Jagadish  
*Ordered Semiconductor Nanostructures for Electronics and Photonics Applications*  
2004 – 2009 \$1,519,710

Professor Y. Kivshar  
*Nonlinear Photonics and All-optical Technologies*  
October 2002 – November 2007 \$1,448,515

Professor B. Luther-Davies

*Creation of a Novel Photonic and Nanostructured Materials by Ablation of Solids with Ultra Fast Lasers*

2002 – 2007 \$1,481,765

**ARC Linkage Infrastructure Equipment and Facilities**

Dr V.S. Craig, Dr E.J. Wanless, Dr G.V. Franks, Dr C. Neto, Dr M.M. Kohonen and Dr G.J. Jameson

*Dynamics at Interfaces: A Facility for the Characterisation of the Dynamics of Structural Reorganisation and Adsorption at Interfaces*

2005 \$ 187,000

Professor G.D. Dracoulis, Professor A.P. Byrne, Professor R.G. Elliman, Associate Professor J. O'Connor, Dr K.S. Butcher and Dr H. Timmers

*National Heavy Ion Accelerator*

2004 – 2005 \$ 508,374

Professor L.K. Fifield, Dr E. Calvo and C. Pelejero

*A New-generation Gas-source Radiocarbon System for Integrated Environmental and Archaeological Research*

2005 \$ 854,354

**ARC Linkage International Award**

Dr R. Ball, Professor R.L. Dewar and Dr F.L. Waelbroeck

*Low-order Dynamical Models for Non-linear Fluid Behaviour in Quasi Two-dimensional Plasmas*

2003 – 2005 \$ 9,000

Professor M.T. Batchelor, Dr A. Kuniba and Dr M. Takahashi

*Physical Properties of Exactly Solved Quantum Spin Systems*

2004 – 2007 \$ 56,000

Professor S.J. Buckman

Jointly with Flinders University (Total \$ 33,000)

*Environmental and Technological Applications of Electron-Driven Processes*

2003 – 2006 (ANU Share) \$ 16,500

Dr A.S. Kheifets

*Multiple Atomic Photoionisation in Superstrong Electromagnetic Field*

2004 – 2007 \$ 13,800

Dr J. P. Sullivan and Professor S.J. Buckman

Jointly with Flinders University

*Positron Processes – From Basic to Applied Science*

2005 – 2007 \$ 26,000

### **ARC Linkage Project Grants**

Professor M. Bilek, Professor J.H. Harris, Professor D. McKenzie, Professor B. James, Dr J. Howard, Dr B. Blackwell, Dr P. Pigram, Dr D. McCulloch, Professor R.W. Boswell, Dr C. Charles and Dr M. Shats

*Interactive Network for Plasma and Surface Analysis* Total (\$ 726,000)

2004 – 2005 (ANU share) \$ 157,389

Dr G.G. Borg, Professor J.H. Harris and Dr H.M Jones

*VHF Wireless Technologies for Last-mile Internet Access in Regional Australia*

2003 – 2006 \$ 138,198

Professor R.W. Boswell

*Development of Inert Gas Ion Beams for Fabrication of Nanostructures*

2003 – 2006 \$ 300,000

Partner Contribution, FEI Corp, USA

2003 – 2006 \$ 220,000

Professor R.G. Elliman

*Implant Isolation of III-V Compound Semiconductor Devices and Structures*

2005 – 2007 \$ 260,000

Professor B. Luther-Davies, Dr R. Charters and Dr D. Kukulj

*Advanced Siloxane Waveguide Devices for Telecommunications*

2005 – 2008 \$ 350,000



Partner Contribution, RPO Pty Ltd  
2005 – 2008 \$ 86,500

Professor B. Luther-Davies and Dr V. Kolev  
*Laser Guide Star Using a High Power Synchronously Pumped Optical Parametric Oscillators*  
2004 – 2007 \$ 330,000

Dr M. Ridgway  
*Amorphisation of Semiconductor and Elemental Metallic Nanocrystals by Ion Irradiation*  
2005 – 2007 \$ 367,000

Professor J.S. Williams  
*Towards a High Density Silicon Phase Change Memory Device*  
2004 – 2007 \$ 665,629

**ARC QEII Research Fellowship**

Dr H.H. Tan  
*Growth, Characterisation and Fabrication of GaInNAs Lasers*  
May 2001 – May 2006 \$ 357,590

**ARC Research Network**

Dr R.L. Dewar (Convenor), Dr T. Aste, Professor S.T. Hyde, Dr A. Sakellariou and other scientists  
*Complex Open Systems Network (COSNet)*  
2004 – 2009 \$1,500,000

Professor C. Jagadish  
Australian Research Council Nanotechnology Network  
2004 – 2009 \$1,900,000

Professor J.S. Williams  
Australian Research Network for Advanced Materials  
2004 – 2009 \$1,500,000

Dr C. Kepert (Convenor, University of Sydney), Dr T. Aste and 48 other scientists

*Molecular and Materials Structure Network*

2004 – 2009 (\$1,500,000)

Associate Professor C. McFarlane (Convenor, University of NSW), Professor M.A. Knackstedt and 48 other scientists

*ARC Research Network for Tissue Engineering*

2004 – 2009 (\$1,500,000)

### **ARC Senior Research Fellowship**

Professor P.G. Bouwknecht

*Mathematical and Physical Aspects of Quasi-particle Excitations in Quantum Many Body Systems*

January 2005 – June 2005 \$ 48,190

### **BASF A.G.**

Dr M.A. Knackstedt

*Fluid Penetration into Paper*

2004 – 2005 \$ 220,000

### **BHP Billiton Petroleum**

Professor W.V. Pinczewski and Dr M.A. Knackstedt

*Digital Core Analysis*

2003 – 2005 \$ 150,000

### **Bluescope Steel**

Dr J. Howard

*Research & Development of Coherence Pyrometry Technology within the Ironmaking Process*

2005 – 2006 \$ 31,500

### **Commonwealth Scientific Industrial Research Organisation**

Dr R. Ball

*Consultancy: Cross Disciplinary Bridges in Complex Systems Science*

2003 – 2005 \$ 18,000

Dr S.-H. Chung

*Dynamics of Ion Permeation*

2005 – 2009 \$ 890,000

***COSNET Seed Funding***

**ANU Summer School**

Dr T. Aste

*Granular Matter*

2005 – 2006 \$ 5,000

***Defence Science and Technology Organisation***

Dr M. Sellars

*Solid State Quantum Computing*

June 2004 – June 2005 \$ 167,000

***Department of Education, Science and Training***

**Innovation Access Program – International Science & Technology**

Dr J. Howard

*Studies of High Temperature Edge Plasma Confinement Physics Using New Hyperspectral Imaging Systems*

2004 – 2006 \$ 173,690

Professor B.R. Lewis

*Fourteenth International Conference on Vacuum Ultraviolet Physics*

2003 – 2005 \$ 55,000

**Externally-led Program**

Professor J.D. Love

*Ultra High Throughput Optical Probes*

2004 – 2006 (ANU Share) \$ 67,500

## ***Department of Industry, Tourism and Resources***

### **CRC for Functional Communication Surfaces**

Professor M.A. Knackstedt, Dr T. Senden, Dr V. Craig, Dr R. Roberts and Dr V. Yaminsky

Program 1: *Fundamental Surface Measurements and Liquid Penetration Sciences*

July 2001 – June 2008 \$2,864,000

Program 6: *Education, Scholarship*

July 2001 – June 2008 \$ 525,000

### **Australian Photonics Cooperative Research Centre**

Professor J.D. Love, Dr A. Ankiewicz and Dr D. Bulla

*Optical Fibre Transmission & Modelling*

July 2004 – June 2005 \$ 120,000

### **National Plasma Fusion Research Facility**

Professor J. Harris *et al.*

*National Plasma Fusion Research Facility*

April 1997 – May 2005

June 2005 – June 2010 \$8,700,000

### **CRC for Satellite Systems**

Dr C. Charles and Professor R.W. Boswell

*Collaboration with CRC for Satellite Systems and AUSPACE – Development of Plasma Thruster for Tests at ESA*

2004 – 2005 \$ 300,000

### ***European Projects***

Dr P. Richmond (Chair), Dr T. Aste, Dr T. Di Matteo and more than 100 scientist from 20 European Countries

*European Union COST – P10 "Physics of Risk"*

2003 – 2007 (\$9,500,000)

### ***Feoder-Lynen Humboldt Fellowship***

Dr P. Kluth  
2003 – 2005 \$ 120,000

***Korean Basic Science Institute***

Dr J. Howard  
*Develop Modulated Coherence Imaging (MCI) System for KSTAR*  
2005 \$ 171,000

***Major Equipment Committee, ANU***

Dr V.S. Craig, Dr E.J. Wanless, Dr G.V. Franks, Dr C. Neto, Dr M.M. Kohonen and Dr G.J. Jameson  
*A Facility for the Investigation of Dynamic Processes at Interfaces*  
2005 \$ 89,000

Professor G.D. Dracoulis, Professor A.P. Byrne, Professor R.G. Elliman, Associate Professor J. O'Connor, Dr K.S. Butcher and Dr H. Timmers  
*National Heavy Ion Accelerator*  
2004 – 2005 \$ 100,000

Professor L.K. Fifield  
*A New Generation Gas Source Radiocarbon System for Integrated Environmental and Archaeological Research*  
2005 \$ 330,278

***National Health & Medical Research Council***

**Project Grant**

Dr S.-H. Chung  
*Theoretical Studies on the Dynamics of Ion Permeation across Membrane Channels*  
2004 – 2008 \$ 373,500

**Fellowship**

Dr S.-H. Chung  
2004 – 2008 \$ 613,750

## ***National Projects***

### **Italian Ministry of Education Research and Technology Project**

Dr R.N. Mantegna, Dr M. Marsili, Dr M. Bernaschi, Dr E. Scalas, Dr G.M. Gallo, Dr M. Gallegati, Dr V. Marinari, Dr G. Susinno, Dr T. Aste and Dr T. Di Matteo

*High-frequency Dynamics of Financial Markets*

2003 – 2006 (\$3,150,000)

### ***Sale of Equipment, Designed and Built In-house***

Mr A. Hyde and Dr A. Stewart

*Friction Measuring Apparatus – for Investigating Interfacial Friction at the Nanometre Level*

*Purchased by University of Napoli, "Federico II"*

2005 \$ 41,000

Mr A. Hyde and Dr. T. Senden

*Low Pressure Plasma Modification Unit*

Dr J. Gooding, UNSW

2005 ARC Collaboration

### ***Teaching Grant Advanced Telecoms***

Dr G. G. Borg

Teaching Grant Advanced Telecoms

2005 \$ 10,000

### ***US Air Force***

Dr M. Samoc

New Materials Techniques and Device Concepts for Organic NLO Chromphone Based Electro-optic Devices

2005 \$ 26,823

### ***Victorian Department of Innovation, Industry & Regional Development (Australian Synchrotron)***

Professor B.R. Lewis

*Fourteenth International Conference on Vacuum Ultraviolet Physics*

2003 – 2005

\$ 22,000

## Appendix – Interactions with the Faculties

**Dr A. Ankewicz** gave lectures and demonstrated for the courses PHYS3060, ENGN4513 and ENGN6520.

**Dr T.T. Barrows** is on the advisory panel of Michelle Spooner, Department of Earth and Marine Sciences.

**Professor M.T. Batchelor** gave 36 lectures and tutorials in *Mathematical Methods* (MATH3322) to 12 students.

**Dr G. Borg** lectured in *Telecommunications Systems* (ENGN3214) and *Radiofrequency Engineering* (ENGN4521) to 3<sup>rd</sup> and 4<sup>th</sup> year undergraduate students in the Faculty of Engineering and Information Technology.

**Professor P.G. Bouwknecht** gave 24 lectures and tutorials in *Partial Differential Equations and Complex Calculus* (MATH2406) to 27 students. He also presented 12 lectures (RQM) and tutorials in *Advanced Theoretical Physics* (PHYS3002) to 19 students.

**Professor A.P. Byrne** holds a joint appointment as Head of the Department of Physics, Faculty of Science.

**Dr C. Charles** lectured in the engineering course *Optical Waveguide Materials* (PHYS3059) to 3<sup>rd</sup> year undergraduate students in physics. Dr C. Charles also supervised two honours students, Laisan Li from the ANU, and Con Costa from Deakin University.

**Dr S.H. Chung** offered the course in *Membrane Biophysics* to 3<sup>rd</sup> year undergraduate students in physics.

**Ms B.J. Dąbrowska** tutored 1<sup>st</sup> year undergraduate students in *Advanced Physics* (PHYS1101 & PHYS1201).

**Dr M. Dasgupta** and **Professor D.J. Hinde** supervised Michael Brown from the Department of Physics in his honours project entitled "Investigating Dynamics of Reaction Forming Heavy Elements".

**Professor R.G. Elliman** gave guest lectures and lab tours for the courses ENGN2224 and ENGN4519.

**Professor L.K. Fifield** continues collaborations with Professor P. De Deckker and Dr B. Opdyke of the Department of Earth and Marine Sciences and is co-supervisor of Daniel Wilkins, a joint PhD student, with Professor De Dekker. Professor Fifield is collaborating with Dr D. Kirste and PhD student, Matt Lenehan of the Department of Earth and Marine Sciences using chlorine-36 to study salt transport in a dryland salinity area near Cootamundra

**Professor N.H. Fletcher** gave a course of 25 lectures in the School of Music during the first semester titled *Acoustics and Music*.

**Dr M. Gulacsi** offered and taught *Statistical Physics and Quantum Field Theory*, a 4<sup>th</sup> year honours course.



**Dr M.J. Hole** lectured the 3<sup>rd</sup> year course *Theoretical Physics* (PHYS3002) segment on *Classical Mechanics*.

**Professor S. Hyde** delivered guest lectures to 3<sup>rd</sup> year physics students on *Biomorphs and Ancient Nanofossils*. He also supervised PhB student Ben Weise.

**Professor C. Jagadish, Dr. H.H. Tan and Dr. L. Fu** gave a series of guest lectures for the course *Microelectronics and Optoelectronics* (ENGN4519).

**Dr T. Kibédi** supervised Daniel Imrich, an exchange student from the University of Vienna, in his non-degree course entitled "Development of Si-Array for Conversion Electrons".

**Dr M. Kohonen** lectured on *Wetting and Capillarity* to honours students in the Department of Chemistry.

**Dr G. J. Lane** supervised Justin Werner from the Department of Physics in his honours project entitled "Structure of High-spin Isomers in <sup>184</sup>W".

**Professor J.D. Love** is the convenor for photonics teaching in the Department of Physics and the Department of Engineering, covering courses PHYS3051, PHY3053, PHYS3058, PHYS3059, PHYS3060, ENGN4513 & ENGN6520. He is also the convenor for photonics distance learning courses PHYS8510 & PHYS8511 in the Master of Contemporary Science degree and for students studying for the Master of Photonics degree. He also gave a series of first-year lectures in optics for PHYS1201.

**Dr P. Kluth and Dr S. Kluth** presented a course on *Microelectronic & Photonic Technology* (ENGN4507).

**Dr F.P. Mills** lectured in a preparatory workshop for *Independent Research Projects* (SRES3015) to 3<sup>rd</sup> year undergraduate students in environmental studies.

**Dr D. Neshev** supervised two undergraduate students from the Engineering Faculty: Mr. Michael Chen and Ms Anna E. Webster in their honours projects.

**Dr C. Neto** lectured on *Wetting and Capillarity* to honours students in chemistry.

**Dr M.C. Ridgway and Dr C.J. Glover** organised and ran a 4<sup>th</sup> year physics course on *Synchrotron Science* at the Faculty of Science.

**Dr M.G. Shats** lectured in *Plasma Physics* (PHYS3041) to 3<sup>rd</sup> year undergraduate students in physics.

**Dr H.H. Tan** gave a series of guest lectures for the course on *Optical Waveguide Materials* (PHYS3052).

**Dr A.N. Wilson** holds a joint appointment with the Department of Physics, Faculty of Science and supervises Michael East, Department of Physics in his honours project entitled "High-spin states in <sup>192</sup>Pb". Dr Wilson also supervised advanced studies course projects for Michael Hush and Kimberley Heenan and co-supervised John Bartholomew and Jen Yee Lee with **Dr P.M. Davidson**.

## Appendix – Internal Management

### School Committees

#### *Faculty Board*

Together with meetings of Heads of Departments, Faculty Board is the principal mechanism for advising the Director on a regular basis. It reports to the Board of the Institute of Advanced Studies. The Board spends a significant proportion of its time on issues affecting the environment in which the School operates — especially funding and the impact of industrial and other legislation — rather than on strictly academic issues. Members are:

Professor Jim Williams (Chair)  
Professor Rod Boswell (Chair of Faculty)  
Professor Stephen Buckman, Associate Director (Academic) (until November)  
Dr Ken Baldwin, Deputy Director (from November)  
Professor Neil Manson, Associate Director (Students)  
Dr David Williams (Head, AM) (until October)  
Professor Mark Knackstedt (Head, AM) (from October)  
Professor Brenton Lewis (Head, AMPL)  
Professor Allan Snyder (Head, CfM)  
Professor John Mitchell (Deputy Head, CfM)  
Professor Rob Elliman (Head, EME)  
Professor Barry Luther-Davies (Head, LPC)  
Professor Yuri Kivshar (Head, NLPC)  
Professor George Dracoulis (Head, NP)  
Professor John Love (Head, OSG)  
Professor Jeffrey Harris (Head, PRL) (until July)  
Dr Boyd Blackwell (Head, PRL-Toro) (from August)  
Professor Rod Boswell (Head, PRL-SP3) (from August)  
Professor Vladimir Bazhanov (Head, TP) (until May)  
Professor Murray Batchelor (Head, TP) (from June)  
Mr Rana Ganguly (School Manager)  
Mr Kevin Lonsdale (Technical Services Manager)  
Mr Andrew James (Finance Manager)  
Mrs Gayle Samuel (HR Manager)  
Mr Devin Ramdutt (Student Representative)  
Ms Helen Hawes (General Staff Representative)

### ***Faculty***

The Faculty of the School consists of all academic staff, including long-term visitors and postgraduate students. Faculty functions as a means for informing academic staff on activities within the School.

Professor R.W. Boswell (Chair)  
Mrs Gayle Samuel (Secretary)

### ***Heads of Departments***

Heads of Departments met with the Director throughout the year and, where appropriate, senior administrative staff attended. Aspects of the School budget and strategic planning dominated the meetings.

Professor Jim Williams (Chair)  
Professor Stephen Buckman, Associate Director (Academic) (until November)  
Dr Ken Baldwin, Deputy Director (from November)  
Professor Neil Manson, Associate Director (Students)  
Mr Rana Ganguly, School Manager  
Heads of Departments/Centres

## **Other School Advisory Groups and Committees**

### ***Budget Strategy Advisory Group***

Professor Jim Williams (Chair)  
Professor Stephen Buckman  
Mr Rana Ganguly  
Mr Andrew James

### ***Commercialisation Advisory Group***

Dr Tim Senden (Chair)  
Professor Rod Boswell  
Mr Tony Cooke (Anutech representative)  
Professor Jeffrey Harris  
Professor Barry Luther-Davies  
Professor Jim Williams

### ***Colloquium Committee***

Professor C. Jagadish (Chair)  
Professor Hans Bachor  
Dr Rowena Ball

Professor Robert Crompton  
Professor Rob Elliman  
Professor Neville Fletcher  
Dr Miklos Gulascsi  
Professor David Hinde  
Dr Matthew Sellars  
Dr Tim Senden  
Ms Laura Walmsley

***Computing Policy Advisory Committee***

Dr Boyd Blackwell (Chair)  
Dr Gordon Foote  
Dr Stephen Gibson  
Professor John Mitchell  
Dr Elena Ostrovskaya  
Dr Marek Samoc  
Dr Adrian Sheppard  
Dr Hark Hoe Tan  
*Executive members:*  
Mr Rana Ganguly  
Mr Kevin Lonsdale  
Dr Shiu Tin

***Fixed-Term Academic Appointments Committee***

*To increase flexibility the Chair may second other School staff if required. Core members are:*

Professor Stephen Buckman (Chair) (until November)  
Dr Ken Baldwin (Chair) (from November)  
Dr Nanda Dasgupta  
Dr David Hinde  
Professor John Love  
Dr David Williams

***General Staff & Facilities Advisory Group***

Professor Stephen Buckman (Chair) (until November)  
Dr Ken Baldwin (Chair) (from November)  
Ms Julie Dalco  
Dr Keith Fifield  
Mr Rana Ganguly  
Mr Ian McRae  
Dr David Weisser  
Ms Renee Vercoe

Mrs Gayle Samuel  
Mr Kevin Lonsdale

***Local Promotions Committee***

Professor Jim Williams, Director (Chair)  
Professor Hans Bachor  
Professor Rob Elliman  
Professor Adrienne Hardham (RSBS)  
Dr David Hinde  
Professor Neil Manson  
Mrs Gayle Samuel

***Major Equipment & LIEF Advisory Group***

Professor Brenton Lewis (Chair)  
Professor Robert Elliman  
Dr Keith Fifield  
Professor John Love

***Occupational Health & Safety Committee***

Mr Anthony Hyde (Chair)  
Mr David Anderson  
Mr Michael Blacksell  
Mr Alan Cooper  
Professor Keith Fifield  
Mr Kevin Lonsdale  
Mr Gary Picker  
Dr Maarten Vos  
*By invitation:*  
Mr Roy Schmid (ANU OH&S Unit)  
Mr Tom Halstead

***School Awards and Nominations Committee***

Professor C. Jagadish (Chair)  
Professor Bob Crompton  
Professor Neville Fletcher  
Professor Yuri Kivshar  
Dr David Williams

***School Environmental Committee***

Mr Kevin Lonsdale (Chair)

Mr Rana Ganguly  
Ms Helen Hawes  
Mr David Kelly  
Mrs Marj O'Neill  
Ms Lyndell Paseka  
Dr Adrian Sheppard  
Mr Nathanael Smith  
Mr Ken Staples  
*By Invitation:*  
Mr John Sullivan (ANU Facilities and Services)

***School Resource Review Committee***

Professor Stephen Buckman  
Professor George Dracoulis  
Professor Robert Elliman  
Professor Brenton Lewis  
Professor Jeffrey Harris  
Professor Murray Batchelor  
Mr Ian McRae  
Mr Kevin Lonsdale  
Mr Rana Ganguly

***Student Advisory Group***

Professor Neil Manson (Chair)  
Ms Anna Cirjak  
Professor Aidan Byrne  
Dr Mark Ridgway  
Dr Nanda Dasgupta  
Dr John Howard

## Appendix – Invited Conference Presentations & Lectures

Legend: *Presenter of contributed paper is underlined*

**SPIE International Symposium on Electronic Imaging**, San Jose, USA, 16 – 20 January

Fu, L. — *Towards Quantum Dot-based Photonic Integrated Circuits*

**16<sup>th</sup> National Congress of Australian Institute of Physics**, Australian National University, Canberra, 30 January – 4 February

Akhmediev, N.N. — *Multiple Dissipative Soliton Interactions in a Passively Mode-locked Fiber Laser*

Das, M.P. — *Where is Dissipation in a Ballistic Quantum Point Contact?*

Dasgupta, M. — *Fusion Mechanisms of Light Weakly Bound Nuclei*

Di Matteo, T. — *Econophysics: from Statistical Physics to Economics*

Dracoulis, G.D. — *Deformed Nuclear Isomers*

Hinde, D.J. — *Reaching the Super-heavies*

Kivshar, Yu.S. — *Nonlinear Light Propagation in Periodic Structures: Experiment vs Theory*

Rode, A.V., Gamaly, E.G., Madsen, N.R., Luther-Davies, B., Hyde, S.T., Christy, A.G., Elliman, R.G. and Giapintzakis, J. — *Magnetic Carbon Nanofoam*

**The 2<sup>nd</sup> International Conference on Advanced Materials and Nanotechnology** (AMN-2), Queenstown, New Zealand, 6 – 11 February

Williams, J.S. — *Novel Silicon-based Materials and Nanotechnology Applications*

Craig, V. — *Boundary Slip in Newtonian Fluids: Implications for Microfluidics*

**2<sup>nd</sup> Italian-Australian Workshop on Future Directions in Spectroscopy and Imaging with Synchrotron Radiation**, Trieste, Italy, 9 – 11 February

Ridgway, M.C. — *Structure in Amorphous Semiconductors Probed with EXAFS*

Sullivan, J.P. — *Using the Time Structure of Synchrotrons to Probe Atomic Physics Processes*

**Conference on Solitons in Bose-Einstein Condensates (SOLIBEC)**, Almagro, Spain, 9 – 12 February

Alexander, T.J. — *Gap Vortices and 3D Localized Structures in Lattices*

**The 2<sup>nd</sup> International Conference on the Frontiers of Plasma Physics and Technology**, Goa, India, 21 – 25 February

Ball, R. — *Shear Flows and Turbulence – A Dynamical Systems Treatment of Plasma Confinement Transitions*

**Korea/Australia Workshop**, YongPyong, Korea, 22 – 24 February

Boswell, R.W. — *High Plasma Density Sputter Deposition of Platinum Clusters for Fuel Cell Electrodes – Next Generation of Plasma Sources for Nano and Bio-active Material Processing*

**National Conference on Nonlinear Systems and Dynamics**, Uttar Pradesh, India, 23 – 26 February

Ball, R. — *Trapped Singularities in a Dynamical Model for Plasma Confinement Transitions*

**2<sup>nd</sup> IAEA Technical Meeting on the Theory of Plasma Instabilities: Transport, Stability and their Interaction**, Trieste, Italy, 2 – 4 March

Ball, R. — *The Case of the Trapped Singularities*

**International Meeting on Non-commutative Geometry, K-Theory and Physics**, Tokyo, Japan, 4 – 7 March

Bouwknegt, P.G. — *D-Branes, Gerbes and (twisted) K-Theory*

**International Workshop on Hydrogen Technologies for a Sustainable Energy Future**, Melbourne, 20 – 23 March

Boswell, R.W. — *High Plasma Density Sputter Deposition of Platinum Clusters for Fuel Cell Electrodes*

**American Physical Society March Meeting**, Los Angeles, USA, 21 – 25 March

Sukhorukov, A.A., Shadrivov, I.V., Zharov, A. and Kivshar, Yu.S. — *Nonlinear Effects in Left-handed Metamaterials and Related Structures*



**International Workshop on DNA Photonics**, Hawaii, USA, 27 – 31 March

Samoc, M. and Samoc, A. — *DNA Photonics at the ANU: Plans and Thoughts*

**Spring Meeting of the Materials Research Society, Symposium V: Rare-Earth Doping for Optoelectronic Applications**, San Francisco, 28 March – 1 April

Forcales, M. — *Pump-probe Experiments in Er-doped Silicon-rich Oxide Slab Waveguides*

Williams, J.S. — *Nanoindentation of Semiconductors*

**The 24<sup>th</sup> Biennial Conference of the Society for Crystallographers in Australia and New Zealand**, Marysville, 29 March – 1 April

Hyde, S.T. — *Knotted Nets and Weavings*

**The 4<sup>th</sup> IMACS International Conference Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory**, Athens, USA, 11 – 14 April

Krolikowski, W. — *Ring Vortex Solitons in Self-focusing Nonlocal Media*

**Geometry and Physics in Honour of Keith Hannabuss' 60<sup>th</sup> Birthday**, University of Adelaide, 11 – 12 April

Bouwknegt, P.G. — *Generalized Geometry, Mirror Symmetry and T-Duality*

**8<sup>th</sup> International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM)**, Cancun, Mexico, 22 – 28 April

Samoc, M., Samoc, A., Luther-Davies, B., Diez, I. and Schulz, B. — *Cubic Nonlinear Optical Properties of  $\pi$ -conjugated Polymers from Reflection-mode Measurements*

**Workshop on Correlated Electron Effects for Anomalous Properties of Elemental Actinides**, Los Alamos, USA, May

Gulacsi, M. — *Mean-field Theory of Phonon Softening*

**International Symposium on Photonics, Biophotonics and Nanophotonics**, Nanjing, China, 14 – 18 May

Samoc, M., Humphrey, M.G. and Cifuentes, M.P. — *Nonlinear Absorption and Nonlinear Refraction in Ruthenium Alkynyl Complexes*

**The National Centre for Nonlinear Studies' 25<sup>th</sup> Annual International Conference – 50 Years of the Fermi – Pasta, Santa Fe, USA, 16 – 20 May**

Kivshar, Yu.S. — *Ulam Problem: Legacy, Impact, and Beyond*

**36<sup>th</sup> Meeting of the Division of Atomic, Molecular and Optical Physics, Lincoln, USA, 17 – 21 May**

Kheifets, A.S. — *Convergent Close-coupling Calculations of Atomic Double Ionization*

**CSIRO Network Topology and Dynamics Workshop, Canberra, 18 May**

Ball, R. — *Singularities and Bifurcations of Dynamical Systems*

**International Workshop on Computational Material Science, Lanzhou, China, 23 – 25 May**

Das, M. — *Mesoscopic Transport and Noise*

**Third SPIE International Symposium on Fluctuations and Noise, Austin, USA 23 – 26 May**

Di Matteo, T. — *Correlation Filtering in Financial Time Series*

**Scientific School on Physics and Applications of Microwaves, Moscow, Russia, 23 – 27 May**

Sukhorukov, A.A., Shadrivov, I.V. and Kivshar, Yu.S. — *Materials with Negative Refractive Index*

**7<sup>th</sup> Mediterranean Workshop and Topical Meeting on Novel Optical Materials and Applications (NOMA'05), Cetraro, Italy, 29 May – 4 June**

Sukhorukov, A.A., Shadrivov, I.V. and Kivshar, Yu.S. — *Complete Bandgaps in One-dimensional Left-handed Periodic Structures*

**16<sup>th</sup> Meeting of the Nuclear Structure and Decay Data Network, McMaster University, Canada, 6 – 10 June**

Kibédi, T. — *BrIcc – Band-Raman Conversion Coefficients*

**Joint Conference on Lasers and Electro-Optics and European Quantum Electronics Conference (CLEO EUROPE/EQEC'05), Munich, Germany, 12 – 17 June**

Ostrovskaya, E.A. — *Bose-Einstein Condensates in Optical Lattices: Band-gap Structure, Solitons, and Vortices*

**International Conference on Finite Fermionic Systems: Nilsson Model 50 Years,**  
Lund, Sweden, 14 – 18 June

Dracoulis, G.D. — *Multi-quasiparticle Intrinsic States in Deformed Yb and Lu Nuclei Near Stability*

**The 17<sup>th</sup> International Conference on Laser Spectroscopy (ICOLS'05),** Aviemore,  
UK, 19 – 24 June

Ostrovskaya, E.A. — *Nonlinear Dynamics of Matter Waves In Optical Lattices*

**International Symposium on Photonic and Electromagnetic Crystal Structures (PECS VI),** Crete, Greece, 19 – 24 June

Kivshar, Yu.S. — *Optically-induced Photonic Lattices: An Analog of Nonlinear Photonic Crystals*

**Asia-Oceania Geosciences Society 2<sup>nd</sup> Annual Meeting,** Singapore, 20 – 24 June

Lewis, B.R. — *Quantum Mechanics and Planetary Atmospheres*

**6<sup>th</sup> International Conference Symmetry in Nonlinear Mathematical Physics,** Kiev,  
Ukraine, 20 – 26 June

Kun, S.Yu. — *Slow Phase Relaxation Can Prevent Meltdown in Quantum Computers*

Biernert, M., Flores, J., Kun, S.Yu. and Seligman, T.H. — *Anomalously Slow Cross Symmetry Phase Relaxation, Thermalized Non-equilibrated Matter and Quantum Computing Beyond the Quantum Chaos Border*

**Nuclear Structure Physics Near the Coulomb Barrier: Into the 21<sup>st</sup> Century,** Yale  
University, USA, 23 – 25 June

Dracoulis, G.D. — *Single-particle and Collective Effects in the Light Pb Isotopes*

Stuchbery, A.E. — *Radioactive Beam g-factor Measurements: The Role of Tandem Laboratories*

**Early Life in the Pilbara Craton and the Link to Mars,** Fremantle, 25 June – 3 July

Carnerup, A., Christy, A., Larsson, A., Welham, N., Garcia Ruiz, J.M., Hyde, S.T. — *Biomorphs vs. Microfossils*

**European Union Workshop on Electron and Positron Induced Chemistry**, Viterbo, Italy, 26 – 30 June

Buckman, S.J. — *The Australian Positron Beamline – A Facility for AMO Physics, Materials Science and Bioscience Studies*

**6<sup>th</sup> Liquid Matter Conference of the European Physical Society**, Utrecht, The Netherlands, 2 – 6 July

Neto, C. — *Boundary Slip in Newtonian Liquids: An Experimental Approach*

**Gordon Research Conference on Nuclear Chemistry**, New London, USA, 26 June – 1 July

Dracoulis, G.D. — *High-K Isomers: Spectroscopy and Nuclear Structure*

Stuchbery, A.E. — *Magnetic Moments as a Probe of Shell Structure in Neutron-rich Nuclei*

**International Conference on Materials for Advanced technologies**, Singapore, 3 – 8 July

Jagadish, C. — *Quantum Dots for Integrated Optoelectronics*

**8<sup>th</sup> International Workshop on the Interrelationship between Plasma Experiments in Laboratory and Space**, Tromsø, Norway, 4 – 8 July

Ball, R. — *Dynamics of Coupled Magnetosphere-ionosphere Energy Subsystems*

Boswell, R.W. — *Possible Application of Current-free Double-layers to Space Plasmas*

**Bragg Gratings, Poling & Photosensitivity / 30th Australian Conference on Optical Fibre Technology (ACOFT/BGPP 2005)**, Sydney, 4 – 8 July

Kivshar, Yu.S., Neshev, D.N., Sukhorukov, A.A. and Krolikowski, W. — *Optically Induced Lattices as Nonlinear Photonic Crystals*

**International Workshop on Photonic Crystals: Fundamentals to Devices**, Sydney, 7 – 8 July

Sukhorukov, A.A., Neshev, D.N., Rosberg, C.R., Hanna, B., Garanovich, I., Krolikowski, W. and Kivshar, Yu.S. — *Spatial Beam Switching in Low-index Nonlinear Photonic Structures*

**Counting Complexity – An International Workshop on Statistical Mechanics and Combinatorics**, Dunk Island, Queensland, 10 – 15 July

Batchelor, M.T. — *The Cool World of Ultracold Bose and Fermi Gases*

**Categories in Algebra, Geometry and Mathematical Physics: Conference in Honour of Ross Street's 60<sup>th</sup> Birthday**, Macquarie University, Sydney, 10 – 17 July

Bouwknegt, P.G. — *D-branes and Generalized Geometry*

**The 1<sup>st</sup> Workshop on Thin Films Applied to Superconducting RF**, Jefferson Lab, USA, 17 – 18 July

Lobanov, N. — *Superconducting Films Deposition at ANU*

**International Workshop on Nanotechnology**, Perth, 17 – 20 July

Jagadish, C. — *Quantum Dots for Optoelectronic Device Applications*

**17<sup>th</sup> International Conference on Phenomena in Ionized Gases**, Eindhoven, The Netherlands, 17 – 22 July

Aanesland A., Charles, C., Boswell, R.W. and Lieberman, M.A. — *Radio Frequency and Direct Current Potential Formation in High Density Plasmas Driven by Bare, Immersed Antennas*

Boswell, R.W. — *Current-free Double-layers in the Laboratory and their Applications to Space Plasmas*

Brault, P., Caillard, A., Thomann, A.L., Charles, C., Boswell, R.W., Durand, J., Roualdes, S., Sauvage, T., Coutanceau, C. and Leger, J.M. — *Fuel Cell Synthesis by High Density Plasma*

Charles, C., Boswell, R.W., Alexander, P., Meige, A., Gesto, F., Blackwell, B.D., West, M., Gowlett, P., Sutherland, O. and Aanesland, A. — *Current-free Double-layers in Expanding Plasmas*

Charles, C. — *Helicon Double Layer Thrusters*

**New Frontiers in Exactly Solved Models**, ANU, 21 – 22 July

Batchelor, M.T. — *Integrable Interacting Fermi Gas*

**1<sup>st</sup> China-Korea Workshop on Low Temperature Plasma Physics and Applications**, Zhang JaiJi, Korea, 26 – 28 July

Boswell, R.W. — *Possible Application of Current-free Double-layers to Space Plasmas*

**14<sup>th</sup> International Symposium on Electron-Molecule Collisions and Swarms,**  
Campinas, Brazil, 27 – 30 July

Buckman, S.J. — *Benchmark in Experimental Studies of Electron(positron) - Molecule(atom) Scattering*

Kheifets, A.S. — *Double Photoionization of H<sub>2</sub> and Ne at Unequal Energy Sharing*

**International Workshop on Supersymmetries and Quantum Symmetries,** Dubna,  
Russia, 27 – 31 July

Bazhanov, V.V. — *Zamolodchikov's Tetrahedron Equation and Hidden Structure of Quantum Groups*

**International Symposium on (e,2e), Double Photoionization and Related Topics,**  
Buenos Aires, Argentina, 28 – 30 July

Lower, J.C.A. — *Ionization of Atoms with Spin-polarised Electrons*

**50<sup>th</sup> Annual Meeting of SPIE-International Society for Optical Engineering,** San  
Diego, USA, 31 July – 4 August

Jagadish, C. — *Quantum Dots and Nanowires for Photonics Applications*

**Soliton Workshop,** Dresden, Germany, August

Krolikowski, W. — *Nonlocal Solitons*

**Workshop for Nonlocal, Collisionless Electron Transport in Plasmas,** Princeton,  
USA, 2 – 4 August

Boswell, R.W., Sutherland, O., Charles, C. and Lieberman, M.A. — *Sub-Bohm Diffusion in a High Beta Helicon Plasma*

**International School of Contemporary Physics-III,** Ulaanbaator, Mongolia, 8 – 15  
August

Kibédi, T. — *Internal Conversion Coefficient: How Good Are They Now?*

**String Theories and Supersymmetric Gauge Theories,** Paris, France, 8 – 19 August

Bazhanov, V.V. — *Eight-vertex Model and Painleve Theory*

**ANU Workshop on Integrability, Spin Systems and Ultracold Quantum Gases,**  
University of Tokyo, Japan, 11 August

Batchelor, M.T. — *Integrable Quantum Fermi Gas*

**Gerbes, Twisted K-Theory and Conformal Field Theory Workshop,** Oberwolfach,  
Germany, 13 – 21 August

Bouwknegt, P.G. — *Generalized Geometry, Mirror Symmetry and T-duality*

**Australian Science Festival,** Canberra, 16 August

Byrne, A.P. — *Future of Nuclear Power in Australia*

**XXIII International Conference of Differential Geometric Methods in Theoretical  
Physics,** Tianjin, China, 20 – 25 August

Batchelor, M.T. — *Integrable Quantum Gases*

**XIV International Materials Research Congress: Materials World Network: The  
Next Ten Years,** Cancun, Mexico, 22 – 24 August

Williams, J.S. — *Historical Background – Development of the Materials World Network,  
Overview on Hawaii*

**Swedish Microelectronics Research Program Conference,** Linköping, Sweden, 23 –  
27 August

Jagadish, C. — *Quantum Dots and Nanowires for Optoelectronics Applications*

**XX Congress of the International Union of Crystallography,** Florence, Italy, 23 – 31  
August

Hyde, S.T., Ramsden, S. and Robins, V. — *Knotted Nets and Weavings: From 2D  
Hyperbolic to 3D Euclidean Patterns*

**17<sup>th</sup> International Conference on Ion-Surface Interactions,** Zvenigorod, Russia, 25 –  
29 August

Williams, J.S. — *Nanocavities and Nanoparticles Formed in Silicon by Ion Irradiation*

**SPIE International Congress on Optics and Optoelectronics,** Warsaw, Poland, 28  
August – 2 September

Kivshar, Yu.S. — *Nonlocal Solitons*

Krolikowski, W. — *Solitons in Nonlocal Nonlinear Media*

Sukhorukov, A.A. and Kivshar, Yu.S. — *Soliton Mobility in Nonlinear Lattices*

**International Conference on Capture Gamma-Ray Spectroscopy (CGS-12)**, Indiana, USA, 4 – 9 September

Dracoulis, G.D. — *Isomers and Aspects of Nuclear Structure*

**14<sup>th</sup> International Conference on Surface Modification of Materials by Ion Beams**, Kusadasi, Turkey, 4 – 9 September

Williams, J.S. — *Ion-beam-induced Formation of Nanocavities and Nanoparticles of Controlled Size in Si and SiO<sub>2</sub>*

**The Seventh International Conference on Correlation Optics**, Chernivtsi, Ukraine, 6 – 9 September

Kivshar, Yu.S. — *Partially Incoherent Optical Vortices*

**European Scientific Foundation Conferences Bose-Einstein Condensation EuroConference on Ultracold Gases and their Applications**, Costa Brava, Spain, 10 – 15 September

Kivshar, Yu.S. — *Matter-wave Gap Solitons and Vortices in Optical Lattices*

**Conference on Laser Ablation (COLA'05)**, Banff, Canada, 11 – 16 September

Rode, A.V., Madsen, N.R., Gamaly, E.G., Christy, A.G. and Luther-Davies, B. — *Cluster Growth in High-power Picosecond MHz-rate Laser Ablation*

**The Fifth Asian-European International Conference on Plasma Surface Engineering (AEPSE 2005)**, Qingdao City, China, 12 – 16 September

Li, W-T., Boswell, R.W. and Bulla, D. — *Surface Oxidation of Al Masks for Deep Dry-etch of Silica Optical*

**International Conference on Advanced Optoelectronics and Lasers (CAOL)**, Yalta, Ukraine, 12 – 17 September

Tan, H.H. — *Quantum Dot Optoelectronic Devices*

**International Conference on Super-Strong Fields in Plasma**, Varenna, Italy, 19 – 24 September



Gamaly, E.G., Uteza, O.P., Rode, A.V., Samoc, M. and Luther-Davies, B. — *Non-equilibrium Transformations of Solids Induced by Femtosecond Laser Pulses*

**Australian Mathematical Society Steering and Council Meetings, 49<sup>th</sup> Annual Conference of the Australian Mathematical Society**, University of Western Australia, Perth, 24 – 29 September

Bouwknegt, P.G. — *Generalized Geometry, Mirror Symmetry and T-Duality*

**12<sup>th</sup> Laser-Aided Plasma Diagnostics Symposium**, Salt Lake City, USA, 25 September – 2 October

Howard, J. — *Coherence Imaging for Time-resolved 2-d Plasma Spectroscopy*

**15<sup>th</sup> International Stellarator Workshop**, Madrid, Spain, 3 – 7 October

Blackwell, B. — *Recent Results from the H-1 Helic*

**2<sup>nd</sup> China Australian Symposium**, Beijing, China, 9 – 13 October

Williams, J.S. — *Nanoscience and Nanotechnology: Materials and Photonics Research at the ANU*

**North Eastern Accelerator Personnel and Heavy Ion Accelerator Technology Conference**, Brookhaven National Laboratory, USA, 16 – 20 October

Weisser, D.C. — *A Novel Rotational Tuner for Multi-stub Resonators*

Weisser, D.C. — *A Gas Cathode for the ANU Version of a SNICSII*

Weisser, D.C. — *Far-field Electrodes for a 3 Frequency Gridded Buncher*

**SPIRAL2 – Workshop on Reactions**, Strasbourg, France, 19 – 21 October

Hinde, D.J. — *Breakup of Weakly Bound Nuclei at Sub-barrier Energies*

**18<sup>th</sup> Annual Meeting of the IEEE Lasers and Electro-Optics Society (LEOS)**, Sydney, 23 – 27 October

Jagadish, C. — *Quantum Dot Lasers and Optoelectronic Device Integration*

Neshev, D.N., Rosberg, C.R., Fischer, C., Sukhorukov, A.A., Desyatnikov, A.S., Ostrovskaya, E.A., Alexander, T.J., Krolikowski, W. and Kivshar, Yu.S. — *Optically-Induced Lattices as Tunable Nonlinear Photonic Crystals*

Sukhorukov, A.A., Shadrivov, I.V. and Kivshar, Yu.S. — *Confinement of Light in Left-handed Periodic Structures*

**International Workshop Energy Relaxation versus Phase Relaxation in Quantum Many Body Systems**, Cuernavaca, Mexico, 24 October – 4 November

Kun, S.Yu. — *Anomalously Slow Phase Relaxation in Quantum Many-body Systems*

**11<sup>th</sup> MicroOptics Conference**, Tokyo, Japan, 30 October – 2 November

Gao, Q. — *Quantum Dot Optoelectronic Devices*

**Materials & Testing Science, Technology and Application Conference**, Fremantle, 30 October – 2 November

Chen, Y. — *One-dimensional Nanomaterials: Synthesis, Characterization and Properties*

Williams, J.S. — *Nanoindentation of Semiconductors*

**Noncommutative Geometry and Physics Workshop 2005**, Sendai University, Japan, 1 – 4 November,

Bouwknegt, P.G. — *Generalized Geometry, Mirror Symmetry and T-duality*

**International Workshop on Non-commutative Geometry and Physics**, Beijing, China, 7 – 10 November

Bouwknegt, P.G. — *Global Aspects of T-duality*

**Antimatter Matters: A Workshop on Positron Applications from Atoms to Materials to Cells**, Australian National University, Canberra, 9 – 11 November

Buckman, S.J. — *Atomic, Molecular & Bioscience Studies at the Australian Positron Beamline*

Sullivan, J.P. — *The Australian Positron Beamline Facility*

McEachran, R.P. — *Positron Excitation Processes – Two Golden Ages*

**14<sup>th</sup> AINSE Conference on Nuclear and Complementary Techniques of Analysis**, Wellington, New Zealand, 20 – 22 November

Elliman, R.G. — *Stress and Stress Relief in Dielectric Thin Films – the Role of Hydrogen*

**Materials Research Society Fall Meeting**, Boston, USA, 28 November – 2 December

Williams, J.S. — *Controlling the Size of Nanocavities and Nanoparticles in Si and SiO<sub>2</sub> Using Ion Irradiation*

**The 2<sup>nd</sup> ARC Centre for Functional Nanomaterials Annual Conference**, Brisbane, 30 November – 3 December

Gao, Q. — *Quantum Dots and Nanowires for Optoelectronic Device Applications*

Li, C.-P. — *Synthesis of Silicon Oxycarbide Nanowires and Silicon Carbide Nanowires on Carbon Nanotube Template*

**International Conference on Computational Experimental Science and Technology at IIT**, Chennai, India, 1 – 5 December

Das, M. — *Mesosopic Transport and Noise*

**HRIBF Workshop – Near and Sub-barrier Fusion of Radioactive Ions with Medium and Heavy Targets**, Oak Ridge National Laboratory, USA, 2 – 3 December

Hinde, D.J. — *The Role of Nuclear Structure in Sub Barrier Fusion*

Hinde, D.J. — *Enhancement and Suppression of Fusion in Reactions Forming Heavy Nuclei*

**6<sup>th</sup> Symposium on Nano-Technology and Plasma Application for Next Generation Processing**, Jeju, Korea, 4 – 7 December

Balcon, N., Aanesland, A. and Boswell, R.W. — *Atmospheric Plasma Processing at the ANU*

**7<sup>th</sup> Australia-Japan Plasma Diagnostics Workshop**, Toki, Japan, 6 – 8 December

Blackwell, B. — *Application of Novel Datamining Techniques to H-1 Mirnov Data*

**SPIE International Symposium on Microelectronics (MEMS)**, Brisbane, 11 – 14 December

Tan, H.H. — *Quantum Dot Optoelectronic Devices Grown by MOCVD*

Aste, T. and Di Matteo, T. — *Materials and Complexity*

Di Matteo, T. and Aste, T. — *Mapping Complex Systems into Hyperbolic Networks*

**4<sup>th</sup> International Conference on Optical Communications and Networks**, Bangkok, Thailand, 14 – 16 December

Akhmediev, N.N. — *(3+1)-Dissipative Solitons: Numerical Studies*

**International Conference Econophysics Colloquium**, The Australian National University, Canberra, 14 – 18 December

Di Matteo, T. and Aste, T. — *Constrained Dynamics of Financial Correlations*

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**Non-refereed conference papers.**

**The 41<sup>st</sup> Applied Mathematics Conference (ANZIAM 2005)**, Hawkes Bay, New Zealand, 30 January – 3 February

Shadrivov, I.V. — *Nonlinear Properties of Left-handed Composites*

**Second International Conference on Advanced Materials and Nanotechnology (AMN-2)**, Queenstown, New Zealand, 6 – 11 February

Shadrivov, I.V., Sukhorukov, A.A. and Kivshar, Yu.S. — *Two-Dimensional Bandgap in One-Dimensional Negative-Index Periodic Structures*

Shadrivov, I.V., Zharova, N.A., Zharov, A.A. and Kivshar, Yu.S. — *Towards Nonlinear Left-handed Metamaterials*

**ICONO/LAT 2005**, St Petersburg, Russia, 11 – 15 May

Sukhorukov, A.A., Neshev, D.N., Krolikowski, W. and Kivshar, Yu.S. — *All-optical Switching in Low-index Nonlinear Bandgap Structures*

Shadrivov, I.V., Sukhorukov, A.A. and Kivshar, Yu.S. — *Two-dimensional Bandgap in One-dimensional Negative-index Periodic Structures*

**7<sup>th</sup> Mediterranean Workshop and Topical Meeting on Novel Optical Materials and Applications (NOMA'05)**, Cetraro, Italy, 29 May – 4 June

Sukhorukov, A.A., Shadrivov, I.V. and Kivshar, Yu.S. — *Complete Bandgaps in One-dimensional Left-handed Periodic Structures*

**The 5<sup>th</sup> International Conference on Photonics, Devices and Systems (Photonics Prague 2005)**, Prague, Czech Republic, 8 – 11 June

Sukhorukov, A.A., Neshev, D.N., Krolikowski, W. and Kivshar, Yu.S. — *Optically-induced Photonic Lattices: An Analog of Nonlinear Photonic Crystals*

**Photonic Crystals: Fundamentals to Devices and 14<sup>th</sup> International Workshop on Optical Waveguide Theory and Numerical Modelling**, Sydney, 7 – 8 July,

Sukhorukov, A.A. — *Spatial Beam Switching in Low-index Nonlinear Photonic Structures*

**12<sup>th</sup> European Conference on Integrated Optics (ECIO'05)**, Grenoble, France, 6 – 8 April

Morrison, S. and Kivshar Yu.S. — *Free Space Beaming of Light from Photonic Crystals*

**International Symposium on Photonic and Electromagnetic Crystal Structures (PECS VI)**, Crete, Greece, 19 – 24 June

Mingaleev, S.F., Miroschnichenko, A.E., Kivshar, Yu.S. and Busch, K. — *Analytical Examination of Fano Resonances in Photonic Crystal Devices*

Shadrivov, I.V., Zharov, A.A., Zharova, N.A. and Kivshar, Yu.S. — *Discrete Effects in Left-handed Metamaterials*

Rosberg, C.R., Sukhorukov, A.A., Neshev, D.N., Krolikowski, W. and Kivshar, Yu.S. — *Tunable Negative Refraction in Photonic Lattices*

**OWTNM 2005 – 3<sup>th</sup> International Workshop on Optical Waveguide Theory and Numerical Modelling**, Grenoble, France, 8 – 9 April

Morrison, S. and Kivshar, Yu.S. — *Modelling the Beaming Effect of Light from Photonic-crystal Waveguides*

**16<sup>th</sup> National Congress of Australian Institute of Physics**, Canberra, 30 January – 4 February

Peterson, D.E., Krolikowski, W., Neshev, D.N., Bang, O. and Wyller, J. — *Dark Soliton Formation and Interaction in Nonlocal Nonlinear Thermal Media*

Shadrivov, I.V., Zharova, N.A., Zharov, A.A. and Kivshar, Yu.S. — *Nonlinear Left-handed Metamaterials*

Sukhorukov, A.A., Ku, T.-S., Shih, M.-F. and Kivshar, Yu.S. — *Coherence Controlled Soliton Interactions*

Miroschnichenko, A.I., Kivshar Yu.S. and Mingaleev, S.V. — *Fano Resonance with Photonic Crystals*

Neshev, D.N., Sukhorukov, A.A., Hanna, B., Krolikowski, W. and Kivshar, Yu.S. — *Control and Steering of Gap Solitons in Optically-induced Lattices*

Lee, R.-K., Ostrovskaya, E.A., Kivshar, Yu.S. and Lai, Y. — *Squeezed Matter-wave Gap Solitons in Optical Lattices*

Desyatnikov, A.S., Neshev, D.N., Kivshar, Yu.S., Sagemerten, N. #, Traeger, D. #, Jaegers, J. # and Denz, C. # — *Two-dimensional Optically Induced Anisotropic Nonlinear Photonic Lattices*

Feise, M.W., Shadrivov, I.V. and Kivshar, Yu.S. — *Bistability and Diode Action in Left-handed Band-gap Structures*

Dabrowska, B., Ostrovskaya, E.A. and Kivshar, Yu.S. — *Interaction of Matter-wave Gap Solitons in Optical Lattices*

## Appendix – Outreach Activities

### *Individual Outreach Activities*

**Dr Tomaso Aste** gave an invited Colloquium Seminar on *Investigating Non-crystalline Structures and Granular Matter* at the University of Melbourne in September.

**Dr Rowena Ball** presented a lecture titled *A Unified Dynamical Model for Plasma Confinement Transitions* at Dipartimento di Energetica, Politecnico di Torino, Italy in October. Dr Ball also gave two lectures in December, one at UKAEA/Euratom Fusion Association, Culham Science Centre, Abingdon, UK, titled *A Unified Dynamical Model for Plasma Confinement Transitions: The Case of the Trapped Singularities* and the other at Equipe Dynamique des Systèmes Complexes, CNRS-Université de Provence, Marseille, France, titled *Singularity Theory Approach to Low Dimensional Modelling*.

**Professor Murray Batchelor** presented talks at the Chinese Academy of Science, Beijing and at the Qingdao University, Qingdao, China and as part of the Australian Academy of Science/JSPS Visitor Program he traveled to Tokyo and presented a series of lectures.

**Dr Gerard Borg** provided a BushLAN test link to Canberra Cuboree in January. The link was from Camp Cottermouth to Mt Stromlo.

**Dr Boyd Blackwell** was invited to give a presentation on *Fusion Energy* at the Bennelong Symposium on Future Energy, Ryde, 4 August.

**Professor Rod Boswell** gave invited lectures at KAIST and Jusong Engineering, in Korea in February; at ESTEC, TU Eindhoven, the Netherlands, in April; and Tsinghua University Beijing, China, also in April.

**Professor Peter Bouwknecht** supervised two PhD students from the University of Adelaide.

**Professor Aidan Byrne** participated in a Forum discussion on the *Future of Nuclear Power* as part of the Australian Science Festival on 16 August. He also made presentations on this issue to the University of the Third Age in August and October. In October he presented the evening talk for the annual Siemens Science School on *Issues in Nuclear Power*.

**Dr Christine Charles** gave an invited public lecture at The Australian National Museum in Melbourne in August and was involved in the ANU brand advertising.

**Dr Vince Craig** delivered a lecture to a joint meeting of the Australian Pulp and Paper Institute Technical Association (APPITA) and the Surface Coatings Association of Australia (SCAA), Melbourne, 19<sup>th</sup> September 2005. He also prepared information for the traveling show "Innovation: A showcase of Australia-Japan Cooperation" see [www.innovationshowcase.org](http://www.innovationshowcase.org)

**Dr Mukunda Das** gave a plenary talk at the Golden Jubilee BARC Solid State Physics Symposium, India, presented seminars at the Interdisciplinary Centre for Theoretical Studies, Chinese Academy of Science, Peking University, National University of Singapore, KAIST, South Korea, Korean Institute of Advanced Studies, Seoul National University, National Physical Laboratory, India, and the Institute of Math Science, India. He also gave a series of eight talks on Mesoscopic Transport Physics at the Asia-Pacific Centre for Theoretical Physics, South Korea and gave talks at the S.N. Bose National Centre for Basic Sciences, Kolkata and Fudan University, China. During November he was a Chief Speaker at the Teachers' Refresher Course at Institute of Physics.

**Professor George Dracoulis** gave a lecture on the subject of *Metastable Nuclear States, Structure and Application* at the May meeting of the Victorian Branch of the Australian Institute of Physics, on the occasion of the presentation of his award, the 2004 Walter Boas Medal.

In August, **Professor George Dracoulis and Professor Aidan Byrne** and **Dr Ian Smith** (CEO, ANSTO) were discussion leaders at an Australian Academy of Science *Soiree* on the topic of *Nuclear Power and Related Matters*.

**Professor Rob Elliman** presented a Colloquium at Melbourne University, School of Physics in November.

**Dr Matthew Hole, Professor John O'Connor (University of Newcastle) and Dr Boyd Blackwell** gave evidence to the House of Representatives Standing Committee on Industry and Resources Inquiry into *Developing Australia's Non-fossil Fuel Energy Industry*.

**Professor C. Jagadish** gave IEEE LEOS Distinguished Lecturer Seminars at various parts of the World.

**Dr Sergey Kun** has continued to be Visiting Professor at the Center for Physical Sciences, National University of Mexico (UNAM), Cuernavaca, Mexico.

**Dr Dragomir Neshev** gave a seminar at the Department of Physics and Astronomy at San Francisco State University, USA.

**Dr Mark Ridgway** presented the seminar *The Australian Synchrotron – A Huge Opportunity for the Science Industry* as part of the Science Industry Australia Seminar Series, Canberra.



## **Appendix – Service to Outside Organisations**

### **Professor N.N. Akhmediev**

Member, Scientific Program Committee and Chair, Mini-symposium, 4<sup>th</sup> IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena, Georgia, USA, April  
Member, Conference Committee, Nonlinear Guided Waves and Their Applications, Dresden, Germany, September  
Associate Editor, Optics Express

### **Dr T. Aste**

Organiser, Italy-Australia Science Forum in the ACT "Materials and Complexity", Research School of Physical Sciences and Engineering, The Australian National University, March  
Member, Scientific Committee, International Conference Complex Systems, part of the SPIE International Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane, December  
Member, Scientific Committee, International Conference Econophysics Colloquium, The Research School of Physical Sciences, The Australian National University, Canberra, November  
Member, Scientific Committee, Association pour L'Etude de la Micromécanique des Milieux Granulaires (AEMMG)

### **Dr K.G.H. Baldwin**

Chair, International Council on Quantum Electronics  
Chair, Australian Institute of Physics Congress  
Member, Liaison Committee, Australian Conference on Optics, Lasers and Spectroscopy  
Member, Australian Optical Society Council  
Chair, Science Policy Committee, Federation of Australian Scientific and Technological Societies  
Member, Australasian Council on Quantum Electronics  
Director at Large, Board, Optical Society of America  
Member, Program Committee, NZ & Australian Quantum-Atom Optics Workshop, Queenstown, 28 November – 1 December

### **Dr T.T. Barrows**

Member, Committee, Australasian Quaternary Association  
Member, National Committee for Quaternary Research, Academy of Sciences

### **Professor M.T. Batchelor**

Member, Editorial Board, Journal of Physics A: Mathematical and General  
Member, Editorial Board, Journal of Statistical Mechanics  
Member, Program Committee, Australian Institute of Physics Congress  
Organiser, New Frontiers in Exactly Solved Models, Australian National University  
Organiser, Integrability, Spin Systems and Ultracold Quantum Gases, University of Tokyo/Australian National University Workshop, Tokyo, Japan  
Member, International Advisory and Organisation Committee, First Australian/Italian Workshop on Statistical Physics – Statistical Systems out of Equilibrium: Random Systems and Complex Fluids, Gold Coast

**Dr B.D. Blackwell**

Member, Commission on Plasma Physics (C16), International Union for Pure and Applied Physics  
Member, Executive Committee, International Energy Agency Implementing Agreement for Research on Stellarators

**Dr G.G. Borg**

Editor, Czech Journal of Physics

**Professor R.W. Boswell**

Chair and Convenor, Asia Pacific Conference on Plasma Science and Technology  
Member, Forum for Europe and Australian Science and Technology  
Member, Foreign Relations Committee, ATSE  
President, Australia France Association of Scientific and Technical Experts

**Professor P. Bouwknegt**

Member, Council, Australian Mathematical Society (until September 2005)  
Vice President, Australian Mathematical Society, Annual Conferences  
Member, Accreditation Committee, Australian Mathematical Society  
Member, Committee, International Union of Pure and Applied Physics, C18 Commission of Mathematical Physics (Vice-Chair since October 2005)

**Professor S.J. Buckman**

Chair, ACT Fulbright Alumni Association

**Professor A.P. Byrne**

Member, Australian Academy of Science Physics Panel  
Member, Organising and Program Committees, 16<sup>th</sup> Biennial Congress of the Australian Institute of Physics, Canberra  
Member, Committee (Secretary/Treasurer), Nuclear and Particle Physics Group (NUPP), Australian Institute of Physics  
Referee, The Engineering and Physical Sciences Research Council (EPSRC), UK proposals  
Member, Australian Academy of Science National Committee for Physics

**Dr C. Charles**

Organisor, Helicon Double Layer Workshop, Australian National University, March

**Dr Y. Chen**

Program Leader, ARC Centre of Functional Nanomaterials.  
Member, Organising Committee, Conference of Advances in Functional Nanomaterials  
Member, Committee, Institute of Physics, ACT Branch  
Member, Instrument Advisory Team, ANSTO  
Ozreader, Australian Research Council  
Reviewer, European Young Investigator Awards  
Reviewer, Canadian Research Development Grants  
Reviewer, Research Grants for Department of Energy, USA  
Reviewer, US-Israel Collaborative Research Programs

Reviewer, Chuen Hui Projects, Department of Science and Technology, China

**Dr V. Craig**

Chair, Organising Committee, 8<sup>th</sup> Japan-Australia Colloid and Interface Gakki, Terrigal, NSW  
ACT Representative, Colloid and Surface Science Division, RACI

**Dr T. Dall**

Tutor, School of Physical, Environmental and Mathematical Sciences (formerly School of Physics),  
Australian Defence Force Academy

**Dr M. Das**

Member, Editorial Advisory Board, Journal of Physics, Condensed Matter  
Member, International Advisory Board, Workshop on Condensed Matter Theories, Kyoto, Japan

**Dr M. Dasgupta**

Member, Committee, Nuclear and Particle Physics Group, Australian Institute of Physics  
Member, International Advisory Committee, Nuclear Structure, Astrophysics and Reactions  
International Conference, Surrey, UK, January  
Member, Organising Committee, Symposium on Science with Rare Isotope Beams, Honolulu,  
December  
Member, International Advisory Committee, Seventh International Conference on Radioactive  
Nuclear Beams (RNB7), Italy, July 2006

**Professor R.L. Dewar**

Editorial Board, Plasma and Fusion Research, Japan Society of Plasma Science and Nuclear Fusion  
Research  
Member, IUPAP C16 Commission on Plasma Physics  
Member, International Advisory Committee, International Congress on Plasma Physics 2006  
Member, International Advisory Committee, Asia-Pacific Plasma Theory Conference (APPTC'05)

**Dr T. Di Matteo**

Co-Organiser, Italy-Australia Science Forum in the ACT "Materials and Complexity", Research  
School of Physical Sciences and Engineering, The Australian National University, March  
Member, Scientific Committee, International Conference Complex Systems, part of the SPIE  
International Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane, December  
Member, Scientific Committee, International Conference Econophysics Colloquium, The Research  
School of Physical Sciences, The Australian National University, Canberra, November  
Member, Scientific Committee, International Conference, Noise and Fluctuations in Econophysics  
and Finance, part of the Third SPIE International Symposium on Fluctuations and Noise, Austin,  
USA, May  
Member, Scientific Committee, Association pour L'Etude de la Micromécanique des Milieux  
Granulaires (AEMMG)  
Member, Management Committee, EU collaboration, COST P10 "Physics of Risk" (2003–2007)

**Professor G.D. Dracoulis**

Member, Committee, Nuclear and Particle Physics Group, Australian Institute of Physics

Member, North America Committee, Australian Academy of Science, International Program of Scientific visits

Member, Australian Academy of Science, Reactor Working Group

ANU Representative, Engineering and Physical Sciences Research Council (UK), ANU-EP SRC Agreement: Beam Time Allocation

Referee, Engineering and Physical Sciences Research Council (UK), Senior Research Fellowship Scheme

Expert Referee, Engineering and Physical Sciences Research Council (UK), Research Grants; Nuclear Physics Program

Evaluator, Foundation for Research Development (South Africa) – Evaluation of Research Outputs of Principal Grant Holders

Reader, Physical and Earth Sciences, Australian Research Council

Discussion Leader, Australian Academy of Science *Soiree* on Advances in Nuclear Energy, August

Member, Expert Subcommittee, National Collaborative Research Infrastructure Scheme (NCRIS), Department of Education, Science and Training

### **Professor R. Elliman**

Immediate Past President, Australian Institute of Physics

Member, ACT Branch Committee, Australian Institute of Physics

Member, International Committee, International Conference on Ion Beam Modification of Materials

Member, International Committee, International Conference on Ion Beam Analysis

Member, International Committee, International Conference on Atomic Collisions in Solids

Member, Editorial Advisory Board, Vacuum

Member, External Review Committee, Surrey Ion Beam Centre, Surrey University, UK

Member, Divisional Committee, Electronic Materials and Processing Division, International Union of Vacuum Science Techniques and Applications (IUVSTA)

OzReader, Australian Research Council

Reviewer, ASTAR, Singapore

Reviewer, National Science Foundation, USA

Reviewer, Academic Research Fund, National University of Singapore

Reviewer, Natural Sciences and Engineering Research Council (NSERC), Canada

Member, Organising and Program Committees, 16<sup>th</sup> Australian Institute of Physics Biennial Congress

Member, Program Committee, 17<sup>th</sup> International Conference on Ion Beam Analysis, Seville, Spain

Member, Organising and Program Committee, 14<sup>th</sup> AINSE Conference on Nuclear and Complementary Techniques of Analysis, Wellington, New Zealand, November

Member, Program Committee, SPIE Conference on Microelectronics, MEMS and Nanotechnology, Brisbane, December

### **Dr L.K. Fifield**

Referee, Major Grant Proposal, Scottish Higher Education Funding Council

ANU Nominee, ACT Radiation Council

### **Professor N. Fletcher**

Associate Editor, Journal of the Acoustical Society of America

Member, Editorial Board, Journal of Sound and Vibration

Member, House Committee, Australian Academy of Science  
Independent Chair, ARC Nanotechnology Network

**Dr S.T. Gibson**

Website Database Manager, Australian Optical Society

**Dr M. Gulacsi**

Associate Editor, Philosophical Magazine

**Professor J.H. Harris**

Member, Stellarator Physics Advisory Committee, Princeton Plasma Physics Laboratory, Princeton, USA

Member, Plasma Specialist Committee, AINSE

Member, Executive Committee, International Energy Agency Implementing Agreement for Research on Stellarators

Member, Program Committee, 16<sup>th</sup> Australian Institute of Physics Congress

**Professor D.J. Hinde**

Member, International Advisory Committee, Ninth International Conference on Nucleus-Nucleus Collisions, Brazil, 2006

Member, International Advisory Committee, FUSION06 International Conference, Italy 2006

Member, Program Committee, 17<sup>th</sup> Biennial Congress of the Australian Institute of Physics, Brisbane, December 2006

Member, Committee, Nuclear and Particle Physics Group (NUPP), Australian Institute of Physics

Convenor, NUPP Contribution to the AIP Congress, Brisbane, December 2006

**Dr J. Howard**

Member, Editorial Board, Plasma Physics and Controlled Fusion

Treasurer, 16<sup>th</sup> Australian Institute of Physics Congress

Member, Program Committee, 16<sup>th</sup> Australian Institute of Physics Congress

**Professor S.T. Hyde**

Consultant, International Union of Crystallography Mathematical Crystallography Commission

Commissioning Editor, Current Opinion in Colloid and Interface Science, Liquid Crystals section

**Professor C. Jagadish**

Chair, IEEE Australian Chapter of Electron Devices and Lasers & Electro-Optics Societies

Member, Meetings Committee, IEEE Electron Devices Society, USA

Associate Editor, Journal of Nanoscience and Nanotechnology

Member, AdCom, IEEE Nanotechnology Council

Chair, IEEE Nano-Optoelectronics and Nano-Photonics Technical Committee, Nanotechnology Council

Member, IEEE Spintronics Technical Committee, Nanotechnology Council

Member, Editorial Board, Journal of Materials Science for Electronics

Member, International Editorial Advisory Board, Journal of the Optical Society of Korea

Associate Editor, Journal of Lightwave Technology

Member, Electronics Division Executive Committee, The Electrochemical Society, Inc.  
Vice-President (Publications), IEEE Nanotechnology Council  
Member, Executive Committee, IEEE Nanotechnology Council  
Member, Editorial Advisory Board, Electrochemical and Solid State Letters  
Member, IEEE Ethics and Member Conduct Committee, Hearing Panel  
Member, Editorial Advisory Board, Nanotech Briefs  
Member, Nano-Photonics Technical Committee, IEEE Lasers and Electro-Optics Society  
Member, Award Committee, IEEE Lasers and Electro-Optics Society Distinguished Lecturer  
Member, Award Committee, IEEE Lasers and Electro-Optics Society Aaron Kressel  
Member, Working Group on Nanotechnology, Prime Minister's Science, Engineering and Innovation Council  
Member, Nick Holonyak, Jr. Award Committee, Optical Society of America  
Member, International Advisory Board, IEE Proceedings on Circuits, Devices and Systems  
Chair, Publications Committee, IEEE Nanotechnology Council  
Member, Australian Government Reference Group on Nanotechnology  
Member, Editorial Board, Nanoscale Research Letters  
Member, Editorial Board, Ethics in Nanotechnology  
Member, International Advisory Committee, COBRA, Inter University Research Institute for Communications Technology, Eindhoven University of Technology, The Netherlands  
Member, International Advisory Board, The MacDiarmid Institute for Advanced Materials and Nanotechnology, Centre of Research Excellence, Victoria University of Wellington and University of Canterbury, New Zealand  
Member, Review Committee, Nanostructural Analysis Network Organisation (NANO), Major National Research Facility  
International Expert Reviewer, Swedish Microelectronics Research Program, Swedish Foundation for Strategic Research  
International Reader, Australian Research Council  
Reviewer, Grants Program, Nanyang Technological University of Singapore  
Reviewer, Agency for Science, Technology and Research, Singapore  
Member, College of Reviewers, Natural Sciences and Engineering Research Council of Canada  
Member, EPSRC Peer Review College, UK  
Reviewer, Hong Kong Research Grants Council, HK  
Reviewer, Marsden Fund, New Zealand  
Member, Program Committee, Materials and Nanotechnologies, 20<sup>th</sup> Congress of the International Commission for Optics-Challenging Optics in Science and Technology, China, August  
Member, Program Committee, Nanotechnology II, SPIE's Second International Symposium on Microtechnologies for the New Millennium 2005, Seville, Spain, May  
Member, Technical Program Committee, OSA Topical Meeting on Information Photonics, Hyannis, USA  
Member, International Advisory Committee, Symposium M: Photonic Materials and Devices, 3<sup>rd</sup> International Conference on Materials for Advanced Technology (ICMAT 2005), Singapore, July  
Member, International Advisory Committee, International Conference on Optics and Optoelectronics (ICOL 2005), Dehradun, India, December  
Member, Program Committee, First IEEE International Workshop on Design and Test of Defect-Tolerant Nanoscale Architectures (NanoArch 05), Palm Springs, USA, April  
Member, Program Committee, 2005 IEEE Nanotechnology Conference, Nagoya, Japan, July

Member, International Program Committee, 2<sup>nd</sup> International Conference on Advanced Materials and Nanotechnology, Queenstown, New Zealand, February

Co-Chair, Program Committee, Conference on BioMEMS and Nanotechnology II, SPIE International Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane, December

Co-Chair, Program Committee, Conference on Device and Process Technologies for Microelectronics, MEMS and Photonics II, SPIE International Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane, December

Member, Program Committee, Conference on Photonics: Design, Technology and Packaging II, SPIE International Symposium on Microelectronics, MEMS and Nanotechnology, Brisbane, December

Chair, Local Organising Committee, Annual Meeting of the IEEE Lasers and Electro-Optics Society, Sydney, October

Member, International Advisory Board, BioNano – The Next Frontier, 2005 Sir Mark Oliphant Conference, Brisbane, December

Member, International Advisory Committee, International Conference on Advanced Optoelectronics and Lasers, Yalta, Crimea, Ukraine, September

#### **Dr. T. Kibédi**

Australian Representative, International Network of Nuclear Structure and Decay Data (NSDD) Evaluators, IAEA

Honorary Treasurer, ACT Branch of the Australian Institute of Physics

#### **Professor Yu.S. Kivshar**

Member, US-Canada-Mexico Travel Grant Committee, Australia Academy of Science

Member, Election Committee, Australian Academy of Science

Co-chair, SPIE Meeting (Brisbane, Australia)

Member, International Program Committee, Photons'05, UK

Member, Sub-committee, OSA Topical Meeting on Nonlinear Guided Waves and Applications

Member, Nonlinear Optics Committee, LEOS Annual Conference, Sydney

Member, Editorial Board, Optics Communications

Member, Advisory Board, Chaos: Interdisciplinary Journal of Nonlinear Science

Project Reviewer, National Science Foundation

Project Reviewer, Israeli-Germany Collaborative Grant

Project Reviewer, Singapore Research Council

Project Reviewer, Dutch Research Council

Project Reviewer, Canadian Research Council

Project Reviewer, Chilean Research Foundation

#### **Professor B.R. Lewis**

Independent Expert, DEST Review of the Australian Synchrotron Research Program M NRF

#### **Professor J.D. Love**

Chair, Steering Committee, Australian Conference on Optical Fibre Technology

Chair, 14<sup>th</sup> International Workshop on Optical; Waveguide Theory, Sydney, July

Chair, Organising Committee, 21<sup>st</sup> International Congress on Optics/Australian Optical Society Conference/OptoElectronics Communication Conference/Australian Conference on Optical Fibre Technology, Sydney, July 2008

Co-Chair, International Conference on Materials for Advanced Technologies, Singapore, July 2007

Director, ACT Siemens Science & Engineering Experience

Director, Education & Training, Australian Photonics CRC

Group Head ANU, Australian Photonics CRC

International Advisor, Network Technology Research Centre, Nanyang Technological University, Singapore

Member, Long Range Advisory Committee, International Conference on Education & Training in Optics & Photonics

Member, International Advisory Committee, European Conference on Optical Communications

Member, International Commission for Optics Bureau

Member, Korea-Australia Photonics Association Committee

Member, Council of the Australian Optical Society

Member, Executive Committee, Australian Photonics CRC

Member, Organising Committee, OSA Topical Meeting on Bragg Gratings, Poling & Photosensitivity & Australian Conference on Optical Fibre Technology Conference Sydney, July

Member, Organising Committee, Australian Institute of Physics Congress, Canberra

Member, International Advisory Committee, OptoElectronics & Communications Conference

Reader & Assessor, Australian Research Council

Reader & Assessor, Hong Kong Research Council

Reader & Assessor, Singapore Research Council

Reader & Assessor, Engineering & Physical Sciences Research Council (UK)

Vice-President, International Commission for Optics

### **Mr A. Matthews**

Member, Council, University of Canberra

### **Dr F.P. Mills**

Member, National Committee, Astronomy Decadal Plan Working Group for Stars and Planets

Member, ACT Chapter Committee, Australian Meteorological and Oceanographic Society

### **Dr M.C. Ridgway**

Member, International Committee, Radiation Effects in Insulators International Conference Series

Chair, Photon Factory Specialist Committee, Australian Synchrotron Research Program

Member, Coordinating Committee, Australian Synchrotron Research Program

Member, Photon Factory Steering Committee, Australian Synchrotron Research Program

Member, National Scientific Advisory Committee, Australian Synchrotron Project

Chair, Beamline Advisory Panel (X-ray Absorption Spectroscopy), Australian Synchrotron Project

Member, Beamlines Advisory Group, Australian Synchrotron Project

Member, National Committee on Scientific Directions in Synchrotron-based Science, Australian Synchrotron Research Program/Australian Synchrotron Project

Member, Program Committee, 16<sup>th</sup> Australian Institute of Physics Congress

Member, Organising Committee/Program Committee, 2005 Australian Synchrotron Research Program/Australian Synchrotron Users Meeting



**Dr M.G. Shats**

Co-Chair, Organising Committee, Workshop on Turbulence and Coherent Structures, Canberra 2006  
Convenor, 19<sup>th</sup> International Canberra Summer School Turbulence and Coherent Structures in Fluids, Turbulence and Granular Flows, January 2006

**Dr A.E. Stuchbery**

Chair, Nuclear and Particle Physics Group (NUPP), Australian Institute of Physics

**Dr A.A. Sukhorukov**

Member, Program Sub-committee, Nonlinear Periodic Systems, OSA Topical Meeting on Nonlinear Guided Waves and their Applications, Dresden, Germany, September  
Session Chair, International Workshop New Trends in Nonlinear Optics and Beyond, Dresden, Germany, September

**Dr J.P. Sullivan**

Member, International Organising Committee, International Workshop on Low Energy Positron and Positronium Physics

**Dr H.H. Tan**

Senior Member, Institute of Electrical and Electronics Engineering (IEEE)  
Vice Chair, IEEE ACT Section  
Distinguished Lecturer, IEEE Electron Devices Society  
Member, Technical Committee, Nano-Optoelectronics and Nano-Photonics, IEEE Nanotechnology Council  
Member, Program Sub-committee, Annual Meeting, IEEE Lasers and Electro-Optics Society, Sydney  
Member, Program Committee, Conference on Optoelectronic and Microelectronic Materials and Devices (COMMAD), Brisbane  
Member, Program Committee, SPIE Conference on Nano and Microtechnology: Materials, Processes, Packaging and Systems I, Sydney  
OzReader, Australian Research Council

**Dr D.C. Weisser**

Expert Mission, UN International Atomic Energy Agency to Autoridad Regulatoria Nuclear (ARN), Buenos Aires, Argentina

**Professor J.S. Williams**

President, Australian Materials Research Society  
Member, Board, Australian Materials Research Institute  
Member, Board, CRC for Functional Communication Services  
Member, Board, National Youth Science Forum Council  
Member, Board, Australian Photonics CRC  
Member, Adhering Body Commission, International Union of Materials Research Society  
Member, International Union of Materials Research Society Commission on Membership Affairs  
Member, Board, Australian Materials Technology Network

Member, Board, Materials Australia

Member, WRiota Pty Ltd

Member, Panel, Assessment of the Quality of Research Output of the University of Queensland  
School of Physical Sciences

Member, Advisory Committee, University of Sydney Solar Science Pty Ltd (USSS)

Director, Acton Semiconductors Pty Ltd

**Dr A.N. Wilson**

Deputy Chair, Meetings Secretary and Web Editor, Australian Institute of Physics

Member, Organising and Program Committees, 16<sup>th</sup> Biennial Congress of the Australian Institute of  
Physics, Canberra

## **Appendix – Postdoctoral Fellowship Completions and Destinations**

Dr Manuel Forcales completed his term in October and took up a position at the Institut de Ciències Fotòniques Parc Mediterrani de la Tecnologia, Barcelona, Spain.

Dr Chris Glover completed his term in July and is now working on the Australian Synchrotron Project in Melbourne, Australia.

Dr Mika Kohonen moved onto an Australian Research Fellowship at the Australian National University.

Dr Jun Matsumoto finished in September and took up a position at RIKEN, Japan.

Dr Megan O'Mara completed her term in September and took up a position in the Department of Biological Sciences at the University of Calgary, Canada.

## Appendix – Students

### *Other Supervised Undergraduate Students*

<u>Name</u>	<u>Home University/ANU Faculty</u>	<u>Host Department</u>
Mr John Altin	Physics Department, ANU	TP
Mr Roshan Banan	Faculty of Engineering and IT, ANU	PRL-Toro
Mr John Bartholomew	Department of Physics, ANU	NP/TP
Mr Gaurav Bhatnagar	Department of Engineering, ANU	OSG
Ms Rachel Blaker	Physics Department, ANU	TP
Mr James Boxall	Department of Engineering, ANU	OSG
Mr Michael Chen	Physics Department, ANU	NLPC
Ms Lai San Chu	Physics Department, ANU	PRL-SP3
Mr Bhaskar Dantuliri	Department of Computer Sciences, ANU	PRL-Toro
Mr Graham Dennis	Physics Department, ANU	TP
Mr Nathan Deutscher	Department of Mathematics, ANU	AM
Mr Si Chao Du	Department of Physics, ANU	OSG
Ms Myfanwy Evans	Department of Mathematics, ANU	AM
Mr Stefan Foudoulis	Faculty of Engineering and IT, ANU	PRL-Toro
Mr Simon Franklin	Faculty of Engineering and IT, ANU	EME
Mr Mark Gwynneth	Faculty of Engineering and IT, ANU	PRL-Toro
Ms Kimberley Heenan	Physics Department, ANU	TP
Ms Kersten Helfrich	Physics Department, ANU	TP
Mr Ho Ka Ho	Department of Engineering, ANU	AM
Mr Ben Hoy	Faculty of Engineering and IT, ANU	EME
Mr Michael Hush	Department of Physics, ANU	NP
Mr Daniel Imrich	University of Vienna, Austria	NP
Ms Priscilla Kan-John	Faculty of Engineering and IT, ANU	PRL-Toro
Mr Peter Kuffner	Faculty of Engineering and IT, ANU	EME
Mr Jen-Yee Lee	Physics Department, ANU	NP/TP
Mr Michael O'Connor	Faculty of Engineering and IT, ANU	EME
Mr Rishni Ratnam	Mathematical Sciences Institute	TP
Mr Peter Row	Department of Engineering, ANU	AM

Mr Robert Saye	Mathematical Sciences Institute	TP
Mr Sonam Shelly	Earth Sciences, ANU	AM
Ms Erin Stonestreet	Department of Engineering, ANU	OSG
Ms Melissa Tacy	Physics Department, ANU	TP
Ms Monica Trench	Department of Engineering, ANU	AM
Mr Tim Trudgian	Mathematical Sciences Institute	TP
Ms Anna Elizabeth Webster	Physics Department, ANU	NLPC
Mr Sebastian Yuen	Mathematical Sciences Institute	TP

### *Summer/Winter Scholars*

<u>Name</u>	<u>Home University</u>	<u>Host Department</u>
Ms Reanna Albion	Australian National University	EME
Ms Sheon Chua	Australian National University	LPC
Mr Chris Colyer	Australian National University	AMPL
Mr Bhaskar Dantuluri	Australian National University	PRL-Toro
Ms Rosemary Forecast	Monash University	LPC/OSG
Mr Mario Hasanakos	Monash University	LPC
Mr Morgan Hedges	Wollongong University	LPC
Mr Adric Jones	Australian National University	AMPL
Ms Priscilla Kan-John	Australian National University	PRL-Toro
Ms Emma Kirby	Australian National University	TP
Mr Niraj Lal	Australian National University	TP
Mr Jen Yee Lee	Australian National University	TP
Mr Peter Liddicoat	Australian National University	EME
Ms Ruth Mills	Australian National University	TP
Mr Jin Ng	University of Sydney	NP
Ms Aroon O'Brien	Canterbury, NZ	TP
Mr Rishni Ratnam	Australian National University	TP
Mr Nicholas Taylor	Australian National University	PRL-Toro
Mr Tim Trudgian	Australian National University	TP
Mr Andrew Vicquerat	Sydney University	PRL-SP3
Mr Felix White	University of Sydney	AM

### *Visiting Scholars*

<u>Name</u>	<u>Home University</u>	<u>Host Department</u>
Ms Chancle Abdiprancto	University of Wollongong	NP
Mr Mattias Abelsson	Chalmers University, Sweden	PRL-Toro
Mr Phill Anderson	Canterbury Univeristy, UK	EME
Ms Zoe Bladwin	University of Wollongong	NP
Mr Laure Bouguen	Ecole Polytechnique, France	EME
Mr Boris Breidenbach	MPI für Metallforschung, Germany	AM
Mr Tom Brown	University of York, UK	NP
Mr Hammond Buckland	University of Wollongong	NP
Mr Amael Caillard	Université d'Orleans, France	PRL-SP3
Mr Stephen Campain	University of Wollongong	NP
Mr Peter Carlsson	Chalmers University, Sweden	PRL-Toro
Mr Fabio Clementi	University La Sapienza, Italy	AM
Ms Alyssia Crook	University of Wollongong	NP
Ms Casa Dalton	University of Southern Queensland	AM
Mr Malte Duering,	Fraunhofer Institute of Technology, Germany	LPC
Mr David Duniec	University of Uppsala, Sweden	NP
Ms Claudia Engelhardt	University of Bonn, Germany	NP
Mr Chris Foster	University of QLD	NLPC
Mr Diego Garlaschelli	University La Sapienza, Italy	AM
Mr Ben Gay	INSA Lyon, France	NP
Mr Abid Ghous	University of New South Wales	AM
Mr Stewart Griffin	University of Wollongong	NP
Ms Bianca Haberl	University of Augsburg, Germany	EME
Mr Chris Harlin	University of Surrey, UK	NP
Ms Kim-Jana Henz	University of British Columbia, Canada	AM
Mr Aert van de Hulsbeek	Technical University of Eindhoven, Netherlands	EME
Mr Jonathan Hindmarsh	University of Wollongong	NP
Ms Nicole Humble	University of Wollongong	NP

Mr Steven Huth	University of Augsburg, Germany	EME
Mr Michael Jameson	University of Wollongong	NP
Mr Dan Judson	University of Brighton, UK	NP
Mr Andrew Kelly	University of Wollongong	NP
Mr Myungki Kim	KAIST, Korea	EME
Mr Peter Larsen	Technical University of Denmark	LPC
Mr Michael Leung	Flinders University	EME
Ms Teo Tang Lin	National University of Singapore	LPC
Mr Servando Lopez- Aguayo	ITESM, Monterey, Mexico	NLPC
Mr Daniel McClure	University of Wollongong	NP
Mr Michal Matuszewski	Warsaw University, Poland	LPC
Mr Michael May	University of Wollongong	NP
Ms Kate Merrick	University of Wollongong	NP
Mr David Mitchell	University of Wollongong	NP
Mr Vaughan Moutri	University of Wollongong	NP
Mr Paul Mumby-Croft	University of York, UK	NP
Mr Avnish Nainawattee	Indian Institute of Technology	NP
Mr Markus Nyman	University of Jyvaskyla, Finland	NP
Mr Matt Perry	University of Wollongong	NP
Mr Nicolas Plihon	École Polytechnique, Paris, France	PRL-SP3
Mr Dave Price	University of Birmingham, UK.	NP
Mr Jesper Serbin	Swinburne University of Technology	NLPC
Mr Santosh Shrestha	ADFA, University of New South Wales	NP
Mr Lex Simons	University of Wollongong	NP
Mr Takayuki Takehi	Tohoku University, Japan	NP
Ms Chiara Testa	University of Genova, Switzerland	AM
Mr Esben Thormann	University of Southern Denmark	AM
Ms Verena Tobias	University of Augsburg, Germany	EME
Mr Denis Traeger	Institute of Nonlinear Physics, Germany	NLPC
Ms Henrike Trompeter	University of Jena, Germany	LPC
Mr Adem Uckan	University of Wollongong	NP
Mr Thomas Uehlinger	ETH Zurich, Switzerland	NP
Mr Nicolas Urvois	Université d'Orleans, France	PRL-SP3

Ms Kelly Vaughan	University of York, UK	NP
Mr Nenad Vukmirovic	University of Leeds, UK	EME
Mr Kouhei Washiyama	Tohoku University, Japan	NP
Mr Jonathon Wilkins	University of Wollongong	NP
Ms Nicole Willetts	University of Wollongong	NP
Ms Anthea Woolaston	University of Wollongong	NP
Mr Muhammad Zamrun	Tohoku University, Japan	NP

### ***Work Experience***

<u>Name</u>	<u>School/College</u>	<u>Host Department</u>
Mr Jeremie Daelen	Erindale College	LPC
Mr Jens Huft	Jena Technical Institute, Germany	AMPL
Mr Benton Maxted	Erindale College	LPC
Mr Andrew Micallef	Melrose High School	EME
Ms Charlotte Petersen		AMPL



## **Appendix – University and School Services**

*Membership of regular School Committees is given under Internal Management  
(taken from Faculty Board Minutes)*

**Dr K. Baldwin**

Deputy Director (from November)

**Dr T.T. Barrows**

Member, Board, National Institute for the Environment

**Professor M.T. Batchelor**

Member, Promotions Committee, Mathematical Sciences Institute

Member, Board, Mathematical Sciences Institute

Coordinator, Mathematical Physics Program, Mathematical Sciences Institute

Member, Management Committee, COSNet

**Professor R.W. Boswell**

Chair, Faculty RSPHysSE

Member, Tenure Committee RSPHysSE

**Professor S.J. Buckman**

Associate Director (until November)

Member, University Research Committee

**Professor A.P. Byrne**

Member, Staff Selection Panels, Faculty of Science

Member, Staff Selection Panels, Department of Nuclear Physics

Convener, Workshop in Nuclear Techniques (September)

Member, ANU Scholarships Selection Panel

Coordinating Radiation Safety Officer, Faculty of Science

Member, Research Committee, Faculty of Science

Member, Local Promotions Committee, Faculty of Science

Member, Working for Establishment of ANU Secondary College

**Dr S.H. Chung**

Member, NH&MRC Equipment Grant Committee

**Mr A.K. Cooper**

Occupational Health and Safety Officer, Department of Nuclear Physics

Deputy Chief Fire Warden, Department of Nuclear Physics

**Dr M. Das**

Member, IAS Forum

**Dr M. Dasgupta**

Member, Staff Selection Panel, Faculty of Science  
Assistant Coordinator, Graduate Student Program, RSPHYSSE

**Mr G.C.J. Davies**

Member, Radiation Committee

**Professor G.D. Dracoulis**

Member, Staff Selection Panels, Department of Nuclear Physics

**Professor R.G. Elliman**

Member, ANU Academic Board  
Member, ANU Vice Chancellor's Awards Committee  
Member, ANU Physical Sciences Library Committee (PhysLAC)  
Member, ANU Major Equipment Committee (MEC)  
Member, ANU Microscopy Strategic Advisory Group (MSTAG)  
Member, ANU Leadership Program Steering Committee  
Chair, RSPHYSSE Space Utilisation Committee

**Dr L.K. Fifield**

Chair, Radiation Safety Sub-committee, ANU Occupational Health and Safety Policy Committee  
Radiation Officer, Department of Nuclear Physics  
Member, Reclassification Sub-committee, RSPHYSSE  
Member, Selection Committee for Standard Position in Seismology, RSES

**Dr S.T. Gibson**

Member, Board of Studies

**Professor J.H. Harris**

Member, ANU Research Committee  
Referee, IAS Performance and Planning Fund  
IAS Representative, Review of the Faculties

**Dr J. Howard**

School Honours Coordinator

**Professor C. Jagadish**

Member, University Promotions Committee  
Member, Management Board, National Institute of Engineering and Information Science  
Chair, School Seminar Program Committee

**Dr T. Kibédi**

Librarian, Department of Nuclear Physics Library

**Dr G.J. Lane**

Member, Staff Selection Panels, Department of Nuclear Physics

**Professor B.R. Lewis**

Member, Science Library Advisory Committee

Member, Campus Planning and Development Committee

Member, Institute of Advanced Studies Forum

Member, Faculties Forum

Member, Divisional Information Committee Science, Health and Engineering

**Dr N. Lobanov**

Chief Fire Warden, Department of Nuclear Physics

**Dr F.P. Mills**

Member, Centre for Resource and Environmental Studies Faculty Board Member

Member, Divisional Scholarship Sub-Committee for APA awards

**Mrs M.F. O'Neill**

Occupational Strains Liaison Officer, Department of Nuclear Physics

**Dr M.C. Ridgway**

Member, Steering Committee, Centre for the Science and Engineering of Materials

Member, Board of Studies, Graduate Program in Physics

Member, Board of Studies, Graduate Program in Environment

**Dr M.G. Shats**

Member, Physics Library Advisory Committee

**Ms A. Smith**

Member, RSPHYSSE Area Classification Advisory Committee

Member, ANU Career Development Scheme

**Dr A.E. Stuchbery**

Member, Physical Sciences Library Advisory Committee (PhysLAC)

**Dr H.H. Tan**

Member, Board of Graduate Studies in Engineering and Information Sciences

**Dr S.G. Tims**

Deputy Radiation Officer, Department of Nuclear Physics

**Mr R.B. Turkentine**

Member, Tender Evaluation Committee, supply of Liquid Nitrogen and Compressed Gases

**Mr H.J. Wallace**

First Aid Officer, Department of Nuclear Physics

**Dr D.C. Weisser**

Chair, Reclassification Advisory Committee, RSPHysSE

Member, Staff Selection Panel, RSPHysSE

**Professor J.S. Williams**

Convenor, National Institute for Physical Sciences

Chair, Board Science ANU

Member, BIAS

Member, ANU Deans & Directors

Member, RSAA Advisory Board

Member, University Committee on Research Policy (UCRP)

Member, Divisional Planning Committee – Science, Health and Engineering

Member, Divisional Research Committee - Science, Health and Engineering

Member, ANU Promotions Working Party

Member, Advisory Board, ARC Centre of Excellence for Ultra-high bandwidth Devices for Optical Systems (CUDOS)

**Dr A.N. Wilson**

Academic Sub-Editor, RSPHysSE Annual Report

Editor, Department of Nuclear Physics Annual Report

## Appendix – Visitors

Name	Home University/Institute	Host Department
Professor Y. Abe	Kyoto University, Japan	NP
Dr M. Adler	Institut de Physique du Globe de Paris, France	AM
Dr P. Adler	Université de Marne La Vallée, France	AM
Dr V. Aimez	University of Sherbrooke, Canada	EME
Mr D. Andruczyk	University of Sydney	PRL-Toro
Dr N. Ashwood	University of Birmingham, UK	NP
Professor O. Bang	Technical University of Denmark	LPC
Professor P. Barker	University of Auckland, NZ	NP
Professor B. Barrett	University of Arizona, USA	NP
Dr P. Belov	Samsung, Soeul, Korea	NLPC
Professor C. Bender	Washington University, USA	TP
Professor S. Benkadda	Kyoto University, Japan	TP
Professor F.A. Bias	University of Amsterdam, Netherlands	TP
Dr D. Boschetto	École Polytechnique, Palaiseau, France	LPC
Dr M. Brik	Kwansei Gakuin University, Japan	LPC
Professor J. Brindley	Leeds University, UK	TP
Dr A. Bruce	University of Brighton, UK	NP
Mr D. Carlucci	Laboratori Nazionali di Legnaro, Italy	NP
Dr W. Catford	University of Surrey, UK	NP
Dr R. Cavell	University of Alberta, Canada	EME
Mr W. Chang	University of Auckland, New Zealand	OSG
Professor P. Charette	University of Sherbrooke, Canada	EME
Professor M. Charlton	University of Wales at Swansea, UK	AMPL
Professor Z. Chen	Fudan University, China	EME
Professor S.-H. Choi	Kyung Hee University, Korea	EME
Dr N. Clisby	University of Melbourne	TP
Dr N. Curtis	University of Birmingham, UK	NP
Professor L. Dai	University of Dayton, USA	EME
Dr B. Dalton	Swinburne University of Technology	NLPC
Dr O. Delgado-Friedrichs	Arizona State University, USA	AM
Dr Y. Deng	Singapore National University, Singapore	AM
Professor S. Dmitriev	University of Tokyo, Japan	NLPC
Dr M.C. Elias	ADC Australia Pty Ltd	OSG
Professor P. Fauchet	Rochester University, USA	EME
Dr J. Fernández Niello	Laboratorio TANDAR – CNEA, Argentina	NP
Dr S. Fox	University of York, UK	NP
Professor A. Fredriksen	Tromsø University, Sweden	PRL-SP3
Dr M. Freer	University of Birmingham, UK	NP
Professor B. Fulton	University of York, UK	NP
Dr J. R. Gascooke	University of Adelaide	AMPL

Professor M. Gibson	Argonne National Laboratory, USA	EME
Professor R. Goldston	Princeton University, USA	PRL-Toro
Dr R. Greaves	First Point Scientific, USA	AMPL
Dr I. Grojnowski	University of Cambridge, UK	TP
Dr S. Gunner	Flinders University	AM
Mr G. Hagelaar	University of Paul Sabatier, France	PRL-SP3
Dr K. Hagino	Tohoku University, Japan	NP
Dr L. Hallo	Université Bordeaux 1, France	LPC
Dr N. Halmagyi	University of Southern California, USA	TP
Dr M. Hammar	Royal Institute of Technology, Sweden	EME
Dr P. Harrowell	Sydney University	AM
Dr L. Hertz	University of Oxford, UK	EME
Mr M. Hoefer	University of Colorado, USA	OSG
Professor K. Jacobs	Saarland University, Germany	AM
Mr P. Jagpal	University of Birmingham, UK	NP
Professor R. Jain	University of New Mexico, USA	EME
Mr B. Johnston	World Bank Washington, USA	EME
Dr M. Johnston	University of Oxford, UK	EME
Mr G. Joshi	Bhaba Atomic Research Centre, India	NP
Dr K. Kannangara	University of Western Sydney	EME
Dr F. Karouta	Technical University of Eindhoven, Netherlands	EME
Professor B.G. Kenny	University of Western Australia	TP
Dr G. Kentwell	Citigroup	TP
Professor J. Kirschner	Max-Planck-Institut, Halle, Germany	AMPL
Dr F. Kondev	Argonne National Laboratory, USA	NP
Professor S. Korn	University of Connecticut, USA	TP
Professor B. Krantz	University of Cincinnati, USA	AM
Professor V. Krishnamurthy	University of British Columbia, Canada	TP
Dr S. Kuzenko	University of Western Australia	TP
Dr A. Laird	University of York, UK	NP
Mr M. Lay	University of Melbourne	EME
Professor E.-H. Lee	INHA University, South Korea	EME
Professor Y.-H. Lee	KAIST, Korea	EME
Dr C. Legendy	Retired, New York, USA	PRL-SP3
Dr H.C. Liu	National Research Council, Canada	EME
Professor R. MacKay	University of Warwick, UK	NLPC
Dr K.-H. Maier	Hahn-Meitner-Institut, Germany	NP
Dr G. Manduchi	EURATOM/ENEA Consorzio RFX, Italy	PRL-Toro
Dr K.-I. Maruno	Kyushu University, Japan	OSG
Dr A. Milev	University of Western Sydney	EME
Professor A. Miniewicz	Wroclaw University of Technology, Poland	LPC
Professor I.M. Mitchell	University of Western Ontario, Canada	EME
Professor R. Morandotti	INRS-EMT, Canada	NLPC
Dr P. Morrison	University of Texas, USA	TP
Dr A. Murphy	University of York, UK	NP
Professor Y. Nagai	Kokushikan University, Japan	AM

Professor J. Newton	Nuclear Physics, ANU	NP
Dr M. Nicodemi	Universita' degli Studi di Napoli Federico II, Italy	AM
Dr M. Norgren	Mid Sweden University, Sweden	AM
Professor J. O'Brien	University of Southern California, USA	EME
Professor C. Oguey	Université de Cergy-Pontoise, France	AM
Professor M. O'Keefe	Arizona State University, USA	AM
Mr M. Paladugu	University of Queensland	EME
Dr P. Papka	University of York, UK	NP
Professor L. Pavesi	Universita' di Trento, Italy	EME
Professor J. Penner-Hahn	University of Michigan, USA	EME
Professor I. Pinkevych	University of New South Wales	NLPC
Dr E. Radlinska	University of Warsaw, Poland	AM
Professor T. Rescigno	Lawrence Berkeley Laboratory, USA	AMPL
Mr D. Ridout	University of Adelaide	TP
Professor J. Sader	University of Melbourne	AM
Dr M. Saffman	University of Wisconsin, USA	LPC
Professor C. Sarkar	Jadavpur University, India	EME
Dr H. Sati	University of Adelaide	TP
Dr E. Scalas	Universita' del Piemonte Orientale, Italy	AM
Professor E. Scime	West Virginia University, USA	PRL-SP3
Professor D. Sherrington	University of Oxford, UK	AM
Dr M. Shiroishi	University of Tokyo, Japan	TP
Professor A. Sidorov	Swinburne University of Technology	NLPC
Dr S. Skupin	Univeristy of Jena, Germany	LPC
Dr N. Smyth	University of Edinburgh, UK	NLPC
Professor J. Soria	Monash University	PRL-Toro
Professor C. Soukoulis	Iowa State University, USA	NLPC
Dr V. Steblina	VA FutureTech Consulting Pty Ltd	OSG
Dr J. Stone	University of Washington, USA	NP
Dr K. Sugitani	Nagoya University, Japan	AM
Mrs C. Sujo	Bhaba Atomic Research Centre, India	NP
Professor C.M. Surko	University of California at San Diego, USA	AMPL
Professor M. Takahashi	University of Tokyo, Japan	TP
Professor N. Takigawa	Tohoku University, Japan	NP
Professor S. Tanaka	Sophia University, Japan	AMPL
Professor D. Thouless	University of Western Australia	TP
Dr H. Timmers	ADFA, University of New South Wales	NP/EME
Dr A. Tordesillas	University of Melbourne	TP
Dr D. Träger	University of Münster, Germany	LPC
Mr A. van de Hulsbeek	Technical University of Eindhoven, Netherlands	EME
Dr M. van Kranendonk	Geological Survey of WA	AM
Professor L. Wang	Beijing University of Technology, China	LPC
Dr J. Warburton	Desert Research Institute, USA	EME
Dr G. Warr	University of Sydney	PRL-Toro
Dr D. Watson	University of York, UK	NP
Dr F. Wietfeldt	Tulane University, USA	NP

Dr B. Williams	University of Amsterdam, Netherlands	TP
Professor. J.Wyller	Agricultural University of Norway	LPC/NLPC
Professor R. Yerushalmi-Rozen	Ben-Gurion University of the Negev, Israel	AM
Professor J.H. Yoon	Kangwon National University, Korea	EME
Professor A. Yu	University of New South Wales	EME
Dr L. Yuguo	Shandong Normal University, China	EME
Dr W.-D. Zeitz	Hahn-Meitner-Institut, Germany	NP
Professor C. Zhang	University of Wollongong	EME
Professor X. Zhang	Shanghai Jiaotong University, China	AM
Dr P. Zory	University of Florida, USA	EME
Dr J. Zou	University of Queensland	EME