Appendix – Honours and Awards

Michael Aggett was awarded a 2003 Council Medal for General Staff Excellence.

Dr Ken Baldwin, Finalist, Eureka Prize for the Promotion of Science.

Dr Annette Berriman was awarded the Australian Institute of Physics 2002 Bragg Gold Medal for the best PhD thesis from an Australian University. In her thesis entitled *Investigating Entrance Channel Effects in Fusion-Fission Dynamics*, Dr Berriman proposed and carried out a challenging program of research to identify and explain new physical processes involved in the fusion-fission of heavy ions. She was presented with the Medal after giving a talk entitled *Nuclear Fusion: Not as simple as you thought!* at the AIP Meeting on 22 May. See photograph at: [http://wwwrsphysse.anu.edu.au/nuclear/text/awards2003.html](http://wwwrsphysse.anu.edu.au/nuclear/text/awards2003.html)

Professor Rod Boswell was awarded a Centenary Medal by the Australian Government.

Professor Rodney Baxter was awarded a Centenary Medal by the Australian Government.

Mr Philip Brydon received the ANU University Medal (Theoretical Physics) awarded at the Degree's Ceremony.

Professor John Carver was awarded a Centenary Medal by the Australian Government.

Professor Bob Crompton was awarded a Centenary Medal by the Australian Government.

Mr Gareth Crook was selected as finalist in the 2003 ACT Training Excellence Awards.

Dr Mukunda Das has been elected as a Fellow of the American Physical Society.

Professor Bob Dewar was awarded a Centenary Medal by the Australian Government.

Professor George Dracoulis was awarded the 2003 Lyle Medal. The Lyle Medal honours the contributions to science of the late Sir Thomas Ranken Lyle. Professor
Dracoulis will be presented with the Medal at the Shine Dome in May 2004, as part of the Australian Academy's of Science 50th Anniversary celebrations. He was also was presented with an RSPhysSE Thirty-Year-Pin for extended services to the School. Professor Dracoulis was awarded a Centenary Medal, "struck to mark the centenary of Federation and the achievements of a broad cross-section of the Australian community at the commencement of the new century". The citation reads: George Dracoulis – For Service to Australian Society and Science in Nuclear Physics

Professor Rob Elliman was elected to Fellowship of the Institute of Physics, UK.

Electronic & Computer Units were awarded the Clare Burton Award for their support of Mr Dean Larkman.

Professor Neville Fletcher was awarded a Centenary Medal by the Australian Government and was appointed Adjunct Professor, School of Physics, University of New South Wales (2003-2004).

Mr Thomas Hanna was awarded the General Sir John Monash Award, enabling his DPhil studies at Oxford University.

Ms Christine Henry has won the CSEM prize for best "Science of Materials" honours thesis in 2003 for her thesis entitled Nanorheology: Dynamic Measurements using the AFM.

Mr Stephen Holgate was selected as finalist in the 2003 ACT Training Excellence Awards.

Professor C. Jagadish was appointed as a member of the International Editorial Advisory Board, Journal of Optical Society of Korea and was appointed as an Associate Editor (Nano-Photonics) of IEEE/OSA Journal of Lightwave Technology. He has been elected as a Fellow of the American Physical Society and an IEEE Lasers and Electro-Optics Society Distinguished Lecturer.

Mr Anthony Jones was awarded with the AusBiotech 2003 Student Excellence Award - ACT winner.
Professor Yuri Kivshar was awarded a Centenary Medal by the Australian Government.

Professor Kenneth Le Couteur was awarded a Centenary Medal by the Australian Government.

Professor Barry Luther-Davies was awarded a Federation Fellowship.

Professors John Newton was awarded a Centenary Medal, struck to mark the centenary of Federation and "the achievements of a broad cross-section of the Australian community at the commencement of the new century". The citation reads: John Newton – For Service to Australian Society and Science in Nuclear Structure Physics

Professor Barry Ninham was awarded the prestigious Humboldt Professorship which he will take up in Regensburg in February and was awarded a Centenary Medal by the Australian Government.

Professor Satomi Ohnishi was awarded the J G Russell Award by the Australian Academy of Science.

Dr Mark Ridgway was awarded the Vice-Chancellor's Award for Excellence in Supervision and was appointed to the International Committee, Radiation Effects in Insulators International Conference Series.

Dr Andre Rode received the "Certificate of Award" for the project "Synthesis of Nano-clustered Materials by Laser Ablation" supported by CNRS (France) and the French Embassy in Australia in 2002 - 2003.

Dr Marek Samoc was appointed a Research Professor in the Institute for Lasers, Photonics and Biophotonics at the University of Buffalo for 3 years to September 2006.

Mr Ilya Shadrivov was awarded the Director's Award for the best student paper (I.V. Shadrivov, A.A. Sukhorukov, and Yu. S. Kivshar, Beam Shaping by a Periodic Structure with Negative Refraction, Appl. Phys. Lett. 82 (2003) 3820-3822) published in a recognized refereed journal during the year 2003. He was also awarded The Dean's Prize for the best talk on theoretical subject in the Annual Graduate Program in Physical
Seminar Series, and received High Distinction in the Annual Graduate Program in the Physical Seminar Series.

Professor Allan Snyder was awarded a Centenary Medal by the Australian Government.

Dr Andrew Truscott was awarded an Australian Academy of Sciences Early Career Researcher Award.

Professor Erich Weigold was awarded a Centenary Medal by the Australian Government.

Professor Jim Williams was awarded a Centenary Medal by the Australian Government.
Appendix – Collaborations and Cooperative Agreements

Collaborations

Dr C.H. Arns
Project: Geostatistical Analysis of Tomographic Data
Partner: Professor D. Stoyan, University of Freiberg, Germany

Project: Velocity-dispersion in Porous Media
Partner: Professor P. Callaghan, University of Wellington, New Zealand

Dr T. Aste
Project: Nanometric Surface Ripples
Partner: Professor U. Valbusa, University of Genoa, Italy

Project: Glass Dynamics and Granular Matter
Partner: Professor A. Coniglio, University of Naples, Italy

Project: Dynamical Maps on Three-valent Networks
Partner: Professor N. Rivier, University of Strasbourg, France

Project: Characterization of Collective Dynamics in Financial Markets and Complex Systems
Partner: Professor R.N. Mantegna, University of Palermo, Italy

Dr T. Aste and Dr T. Di Matteo
Project: High-frequency Dynamics of Financial Markets (Fondo Speciale per lo Sviluppo della Ricerca di Interesse Strategico)

Dr K.G.H. Baldwin and Centre for Quantum-Atom Optics
Project: Metastable Helium Bose-Einstein Condensation
Partners: Professor M. Leduc, École Normale Superieure, Paris, France; Dr W. Vassen, Vrije Universitiet Amsterdam, The Netherlands

Dr R. Ball and Professor R.L. Dewar
Project: Modelling Plasma Turbulence Using the DALF3 Code
Partners: Dr H. Sugama, National Institute for Fusion Science, Japan; Dr A. Kendl and Dr B.D. Scott, Max Planck Institute for Plasma Physics, Germany; Mr R.W. Brown, Australian Partnership for Advanced Computing

Project: Low-order Dynamical Models for Non-linear Fluid Behaviour in Quasi Two-dimensional Plasmas
Partner: Dr F.L. Waelbroeck, University of Texas, USA

Professor F.C. Barker
Project: Levels of $^{11}$N
Partner: Dr V. Guimarães, University of Sao Paulo, Brazil

Project: Diproton Decay Half-life of $^{45}$Fe
Partner: Professor B.A. Brown, Michigan State University, USA

Dr T.T. Barrows
Project: Cosmogenic Isotope Exposure Ages for Tropical Glaciation
Partners: Dr M. Prentice, University of New Hampshire, USA; Professor G. Hope, ANU

Project: Direct Dating of Fossil Bone Using Cosmogenic Cl-36
Partners: Dr L. Reed and R. Wells, Flinders University; Professor D. Ride, ANU

Project: Improving Estimates of Climate Change Using Nearest Analog Methods and Artificial Neural Networks
Partner: Dr S. Juggins, University of Newcastle, UK

Project: Quantifying Climate Change in the Eastern Pacific Ocean
Partner: Dr J.I. Martinez, Universidad EAFIT, Colombia

Professor M.T. Batchelor
Project: Combinatorics and Solvable Models
Partners: Dr J. de Gier, University of Melbourne; Professor B. Nienhuis and Mr S. Mitra, University of Amsterdam, The Netherlands

Project: Quantum Spin Ladders
Partners: Dr Z. Tsuboi, University of Tokyo, Japan; Dr K. Sakai, Tokyo Institute of Technology, Japan
**Project:** Stromalite Morphogenesis  
**Partners:** Dr R. Burne, Faculty of Science; Dr B. Henry, University of New South Wales

**Professor V.V. Bazhanov**  
**Project:** Integrable Structure of Conformal Field Theory  
**Partners:** Professor S.L. Lukyanov and Professor A.B. Zamolodchikov, Rutgers University, USA

**Project:** Algebraic Properties of Solvable Models  
**Partner:** Professor S.M. Khoroshkin, Institute for Experimental and Theoretical Physics, Russia

**Dr B.D. Blackwell and Dr J. Howard**  
**Project:** Soft X-ray Measurements on H-1NF  
**Partner:** A/Professor A.D. Cheetham, University of Canberra

**Professor R.W. Boswell and Dr C. Charles**  
**Project:** Helicon Assisted Reactive Evaporation (HARE)  
**Partners:** Professor D. MacKenzie and Professor M. Bilek, University of Sydney

**Professor R.W. Boswell and Mr O. Sutherland**  
**Project:** High Brightness Ion Source  
**Partner:** FEI Company, USA

**Professor S.J. Buckman**  
**Project:** Low Energy Electron-molecule Scattering  
**Partners:** Dr M.J. Brunger and Professor P.J.O. Teubner, Flinders University

**Project:** Electron Scattering from Molecular Radicals  
**Partners:** Dr M.J. Brunger and Professor W. Lawrance, Flinders University

**Project:** Electron Scattering from Metal Vapours  
**Partners:** Professor P.D. Burrow, University of Nebraska, USA; Professor K. Bartschat, Drake University, USA

**Project:** Electron-molecule Scattering  
**Partners:** Professor H. Tanaka, Sophia University, Japan; Professor H. Cho, Chungnam National University, Korea
Project: Positron Interactions
Partners: Dr A. Hill, CSIRO; Professor B. Lohmann, Griffith University; Professor P.J.O. Teubner and Dr M.J. Brunger, Flinders University; Dr J. Mitroy, Charles Darwin University

Project: Positron Scattering from Atoms and Molecules
Partner: Professor C. Surko, University of California, USA

Professor S.J. Buckman and Professor L.T. Chadderton
Project: Rainbows in Scattering of Electrons from Molecules
Partners: Professor S.A. Cruz, Metropolitan Autonomous University of Mexico, Mexico; Dr A. Tolmachev, Moscow State University, Russia

Dr M. Buda
Project: DFB Lasers
Partners: Dr T.G. van de Roer and Professor G.A. Acket, Eindhoven University of Technology, The Netherlands

Dr A.P. Byrne
Project: Ion Implanter for Radioisotopes
Partners: Dr H. Timmers and A/Professor D.H. Chaplin, ADFA, University of New South Wales

Project: Superallowed Fermi Decays
Partner: A/Professor P.H. Barker, University of Auckland, New Zealand

Dr A.P. Byrne and Dr M.C. Ridgway
Project: PAC Studies of Materials
Partner: Dr R. Vianden, Universität Bonn, Germany

Ms C. Carmody and Professor C. Jagadish
Project: Self Assembled Monolayers on Semiconductor Surfaces
Partners: Dr B. Raguse and Dr V. Braach-Maksyvitis, CSIRO Telecommunications and Industrial Physics

Ms C. Carmody, Dr H.H. Tan and Professor C. Jagadish
Project: Ultrafast Photodetector Materials
Partners: Mr A. Gaarder, Dr S. Anand and Dr S. Marcinkevicius, Royal Institute of Technology, Stockholm, Sweden
Dr S.J. Cavanagh
Project: (e,2e) Experiments on Water
Partner: Professor B. Lohmann, Griffith University

Professor L.T. Chadderton
Project: Atomic Force Microscopy of Fission Fragment Irradiated Quartz, Fullerite, Apatite and Natural Opal
Partners: Professor G. Espinosa and Professor S.A. Cruz, Metropolitan Autonomous University of Mexico, Mexico

Project: Phase Changes in Transition Metal Dichalcogenides Due to GeV Heavy Ion and MeV Fullerene Ion Bombardments: Transmission Electron Microscopy and Surface Force Microscopy
Partner: Dr A. Dunlop, École Polytechnique, Paliseaux, France

Project: Radiation Effects on Polymers and Semiconductors
Partner: Dr D. Fink, Hahn-Meitner Institute, Berlin, Germany

Project: GeV Ion Tracks in Alkali and Alkali Earth Halides
Partner: Dr C. Trautmann, GSI, Germany

Project: Annealing of Fission Tracks in Apatite: Kinetics, Effects of Pressure and Applications in Geothermometry
Partners: Dr R. Jonckeere, University of Freiberg, Germany; Dr A. Wendt, British Antarctic Survey, UK

Professor L.T. Chadderton and Professor E. Gamaly
Project: Studies of Plasma Effects, and Electronic and Nuclear Vicinage in the Stopping of Swift Clusters in Solids
Partner: Professor S.A. Cruz, Metropolitan Autonomous University of Mexico, Mexico

Project: Theory and Practice of Organic Radical Formation and Motion in GeV Ion-irradiated Polymers
Partner: Professor S.A. Cruz, Metropolitan Autonomous University of Mexico, Mexico

Professor L.T. Chadderton and Dr S.Y. Kun
Project: Studies of Ultrafast Coherent Dynamics of Localised Modes in Many-body Systems
Partners: Professor W. Greiner, University of Frankfurt, Germany; Professor S. Haas, University of Strasbourg, France
Professor L.T. Chadderton and Dr A. Stewart
Project: Radioactivity in the Fine Structure of Precious Opal; Exploration and Artificial Opal Synthesis
Partners: Dr B. Senior, Senior and Associates, Canberra; Dr R. Jonckeere, University of Freiberg, Germany

Dr C. Charles and Professor R.W. Boswell
Project: Plasma Deposition of Platinum for Fuel Cells
Partners: Dr P. Brault and Dr A.L. Thomann, University of Orleans-CNRS, France

Project: Helicon Source Modelling
Partners: Professor M. Lieberman, University of Berkeley, USA; Associate Professor S. Cho, Kyonggi University, Korea

Dr Y. Chen
Project: Synthesis of C and BN Nanotubes Using Mechano-thermal Processes
Partner: Dr J. Fitz Gerald, Research School of Earth Sciences

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

Ms V. Coleman, Dr P.N.K. Deenapanray, 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

Ms V. Coleman, Ms P. Lever, Ms K. Stewart, Ms S. Mokkapati, Mr S. Barik, Dr P.N.K. Deenapanray, 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
Dr V. Craig

**Project:** Fundamental Studies of Surfactant and Polymer Adsorption

**Partners:** Dr R. Atkin, Bristol University, UK; Dr E. Wanless, University of Newcastle; Professor S. Biggs, University of Leeds, UK; Dr P. Hartley, CSIRO Molecular Science

**Project:** The Influence of Roughness on Boundary Slip

**Partners:** Dr E. Bonacurrso and Professor H-J. Butt, Max-Planck Institute for Polymer Research, Germany

**Project:** Dynamic Atomic Force Microscope and QCM Studies of Adsorbed Polymer Layers

**Partners:** Professor S. Biggs, University of Leeds, UK; Dr S. Notley, Royal Institute of Technology, Sweden

**Project:** Calibration of Colloid Probe Cantilevers Using the Dynamic Viscous Response of a Confined Liquid

**Partners:** Professor S. Biggs, University of Leeds, UK; Dr S. Notley, Royal Institute of Technology, Sweden

**Project:** Determination of Coupled Solvent Mass in Quartz Crystal Microbalance Measurements

**Partner:** Dr M. Plunkett, Ytkemiska Institutet, Sweden

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Dr V. Craig and Dr D.R.M. Williams

**Project:** Hofmeister Effects in pH Measurements

**Partners:** Dr M. Boström, Linköping Universitat, Sweden; R. Albion, Department of Chemical Engineering; Professor B. Ninham, Institute for Physical and Theoretical Chemistry, Regensburg, Germany

**Project:** Shear Dependent Boundary Slip in Newtonian Liquids

**Partner:** Dr C. Neto, University of Ulm, Germany

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Dr M.P. Das

**Project:** Fluctuations in Mesoscopic Systems

**Partner:** Dr F. Green, University of New South Wales

**Project:** Two-dimensional Interacting Coulomb Systems

**Partner:** Professor K.I. Golden, University of Vermont, USA

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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 Dr D.J. Hinde  
Project: Fusion with Radioactive $^{14}$O  
Partner: Professor S. Kubono, University of Tokyo, Japan

Project: Deep Sub-barrier Fusion  
Partner: Dr K. Hagino, Kyoto University, Japan

Project: Double Folding Calculation of Nuclear Potentials  
Partner: Dr I.I. Gontchar, Omsk State Transport University, Russia

Dr P.N.K. Deenapanray, 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

Professor R.L. Dewar  
Project: Quantum Chaos in the Ideal-MHD Spectrum for Stellarators  
Partners: Dr C. Nuehrenberg, Max Planck Institute for Plasma Physics, Germany; Professor Z. Yoshida, University of Tokyo, Japan; Dr T. Tatsuno, University of Maryland, USA

Professor R.L. Dewar and Dr R. Ball  
Project: Studies of Turbulence and Coherent Structures in Quasi two-dimensional Plasmas and Fluids  
Partner: Dr J.S. Frederiksen, CSIRO Atmospheric Research

Professor R.L. Dewar, Professor M.T. Batchelor and Dr R. Ball  
Project: ARC Special Research Initiative Seed-funding Application: Energetically Open Systems Network Study  
Partners: Professor S. Benkadda, University of Provence, France; Professor P.H. Diamond, University of California at San Diego, USA; Professor C. Grebogi, University of Sao Paulo, Brazil; Professor R MacKay, FRS University of Warwick, UK; 22 participants from other Australian universities

Dr T. Di Matteo and Dr T. Aste  
Project: Multiscaling Behaviours in financial Markets
Partner: Dr M.M. Dacorogna, Converium Ltd Zurich, Switzerland

Project: High Frequency Data Dynamics in Financial Markets
Partner: Dr E. Scalas, Universita del Piemonte Orientale, Alessandria, Italy

Project: Relationships Between the Structure of Social Networks and Productivity
Partner: Professor M. Gallegati, Universita Politecnica delle Marche, Italy

Dr T. Di Matteo, Dr T. Aste and Professor S.T. Hyde
Project: EU Project COST P10 "Physics of Risk"
Partner: Professor P. Richmond, Trinity College, Dublin, Ireland

Professor G.D. Dracoulis
Project: Intrinsic and Rotational Bands in $^{180}$Ta
Partners: Professor G. Sletten, University of Copenhagen, Denmark; Euroball Collaboration, Strasbourg, France

Project: High-K Isomers
Partners: Professor P.M. Walker, University of Surrey, UK; Dr D.M. Cullen, University of Liverpool, UK

Project: High-K Isomers in Hafnium
Partners: Dr F.G. Kondev and Dr R. Janssens, Argonne National Laboratory, USA; Dr D. Hartley, University of Tennessee, USA

Project: Nuclear Structure in the N = 74 Region
Partner: Dr A.M. Bruce, University of Brighton, UK

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

Project: Spectroscopy of Heavy Nuclei
Partner: Professor A.R. Poletti, University of Auckland, New Zealand

Professor G.D. Dracoulis, Dr 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, GANIL, France

Project: Spectroscopy of Neutron Deficient Lead and Thallium Nuclei  
Partners: Dr A.M. Baxter, Faculties; Dr A.O. Macchiavelli, Lawrence Berkeley National Laboratory, USA

Professor G.D. Dracoulis, Dr G.J. Lane, Dr A.P. Byrne and Dr T. Kibédi  
Project: Shape Co-existence in Very Neutron-deficient Pb Nuclei  
Partners: Dr J. Gerl, GST, Germany; Dr A. Andreyev, University of Liverpool, UK

Professor G.D. Dracoulis, Dr G.J. Lane, Dr T. Kibédi and Dr A.P. Byrne  
Project: Structure of Multi-quasiparticle Isomers in $^{176}$Lu and $^{177}$Lu  
Partners: Dr F.G. Kondev and Dr R. Janssens, Argonne National Laboratory, USA

Professor R.G. Elliman  
Project: Silicon Based Photonic Devices and Structures  
Partners: Professor J. Linnros, Royal Institute of Technology, Stockholm, Sweden; Dr J. Valenta, Charles University Prague, Czech Republic; Professor E. Krausz, Research School of Chemistry

Project: Optical and Physical Properties of Semiconductor Nanocrystals  
Partner: Professor S-H. Choi, Kyung Hee University, Korea

Project: Light Emission from Silicon Nanocrystals: The Effect of Impurities  
Partner: Professor G. Ross, INRS-Energie et Materiaux, Canada

Project: Mechanical Properties of Silicon Nanostructures  
Partners: K.R. Virwani and A.P. Malshe, University of Arkansas, USA; D.K. Sood, Royal Melbourne Institute of Technology

Project: Ion Beam Mixing of Metallic Thin Films on Ceramic Substrates  
Partners: Dr A. Balogh and Mr W. Berkey, Darmstadt University of Technology, Germany

Professor R.G. Elliman and Mr N. Smith  
Project: Optical Gain in Silicon Nanocrystals  
Partners: Professor P. Fauchet, Mr J. Ruan, University of Rochester, USA; Professor A. Polman, FOM Institute, Amsterdam, The Netherlands
Professor R.G. Elliman and Dr T.D.M. Weijers
Project: Heavy-ion Beam Analysis of Materials
Partners: Dr H. Timmers, ADFA, University of New South Wales; Dr S. Butcher, Macquarie University

Dr L.K. Fifield and AMS Group
Project: Dating of Marine Cores With Carbon-14
Partners: Dr P. De Deckker and Dr B. Opdyke, Geology Department

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, RSES

Project: Landscape Evolution in the Southern Highlands Region of NSW Using $^{10}\text{Be}$ Deposited from the Atmosphere
Partner: Professor R. Wasson, CRES

Project: Studies of Meteorites Using Cosmogenic Isotopes
Partner: Professor G. Herzog, Rutgers University, USA

Project: Dating of Ice in Temperate-region Glaciers with $^{32}\text{Si}$
Partners: Dr U. Morgenstern and Dr A. Zondervan, Geological and Nuclear Sciences, Lower Hutt, New Zealand

Project: Tracing Releases of Plutonium from Nuclear Processing Plants in Russia
Partners: Dr D. Oughton, Agricultural University of Norway; Dr W. Standring, Norwegian Radiation Protection Authority, Norway

Project: Plutonium in the Deep Ocean
Partner: Dr P. Povinec, IAEA Marine Research Laboratory, Monaco

Project: Tracing of Groundwater Flow and Mixing in a Number of Australian Aquifer Systems
Partners: Dr R.G. Cresswell, Dr R. Habermehl and Dr J. Kellett, Bureau of Rural Sciences

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 and Dr R.G. Cresswell, Bureau of Rural Sciences

Project: The Origin of Brines from a Geothermal Area in Mexico
Partner: Dr P. Birkle, Instituto de Investigaciones Electricas, Mexico

Project: Plutonium from Weapons Fallout in an Ice Core from the Attai Mountains, Siberia
Partners: Professor H. Gäggeler and S. Olivier, University of Bern, Switzerland

Project: Basin Wide Erosion Rates in a Tectonic Landscape: The San Bernadino Mountains, California
Partners: Dr W. Phillips and S. Binnie, University of Edinburgh, UK

Project: Glaciation History of the Cairngorms, Scotland
Partners: Dr W. Phillips and R. Mottram, University of Edinburgh, UK

Project: Erosion Rates of a Rapidly-uplifting Mountain Block: The Sierra Nevada Range, Spain
Partners: Professor P. Bishop and L. Reinhardt, University of Glasgow, UK

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, UK

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

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 C. Carmody, Ms V. Coleman, Ms K. Stewart, Ms S. Mokkapati, Mr S. Barik, Dr L. Fu, Dr P.N.K. Deenapanray, 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 and Professor B.R. Lewis
Project: (NASA) Laboratory Measurements of Molecular 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

Project: (NSF) Molecular Photoabsorption Cross Sections in the Ultraviolet: Laboratory Measurements for Atmospheric Analyses
Partners: Professor G. Stark, Wellesley College, USA; Dr P.L. Smith, Harvard-Smithsonian Center for Astrophysics, USA

Project: Thermosphere Ionosphere, Mesosphere, Energetic and Dynamics (TIMED) Mission
Partner: Dr J-H. Yee, Johns Hopkins University, USA

Dr M. Gulacsi
Project: Effects of Phonons on Magnetic Impurities
Partners: Dr A.R. Bishop, Los Almos National Laboratory, USA; Dr A. Bussmann-Holder, Max-Planck Institut, Germany

Project: Correlation Effects in Kondo Lattice Models
Partners: Professor J. Zaanen and Dr I. McCulloch, University of Leiden, The Netherlands

Project: Strip Formation in Two-dimensional Lattices
Partner: Professor Z. Gulacsi, University of Debrecen, Hungary

Project: Impurity Effects in Mesoscopic Systems
Partners: Professor A. Rosengren and Mr A. Juozapavicius, Royal Institute of Technology, Sweden

Professor J.H. Harris and Dr M.G. Shats
Project: Cross Platform Studies of Transport on Tokamaks and Stellarators
Partners: Dr A. Turnbull, Dr M. Austin and Dr T. Evans, General Atomics, USA

Dr D.J. Hinde
Project: Fission Dynamics
Partner: Professor Y. Abe, Kyoto University, Japan
**Project:** Fusion-fission and Fusion-evaporation  
**Partners:** Professor Y. El Masri and Dr Th. Keutgen, Université de Louvain, Belgium; Professor R.J. Charity, Washington University, USA; Professor J.B. Natowitz, Texas A & M University, USA

**Dr D.J. Hinde and Dr M. Dasgupta**  
**Project:** Inhibition of Fusion by Quasi-fission  
**Partner:** Dr A. Mukherjee, Variable Energy Cyclotron Centre, Calcutta, India

**Project:** Fusion with $^{178}$Hf$m^2$  
**Partner:** Professor N. Rowley, Strasbourg University, France

**Dr D.J. Hinde, Dr M. Dasgupta and Dr C.R. Morton**  
**Project:** Transfer and Breakup of $^9$Be  
**Partner:** Professor B.R. Fulton, University of York, UK

**Dr J. Howard**  
**Project:** Spectroscopic Studies of the Plasma Divertor in W7-AS  
**Partners:** Dr R. Konig 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:** Development of Infrared Coherence Imaging Radiometer  
**Partner:** Dr S. Kelly, DSTO, Salisbury

**Project:** Measurement of Electric Field in H-1NF Using Laser Induced Fluorescence Techniques  
**Partners:** Professor B.W. James and Mr D. Andruczyk, University of Sydney

**Dr A. Kheifets**  
**Project:** Convergent Close-coupling Theory of Double Ionization by Photon and Electron Impact  
**Partner:** Professor I. Bray, Murdoch University

**Project:** Electron Impact Double Ionization of the Helium Atom  
**Partners:** Professor A. Lahmam-Bennani, University of Paris–Orsay, France; Dr A. Dorn, University of Freiburg, Germany

**Project:** Theoretical and Experimental Studies of Double Photoionization of He and H$_2$
Partners: Dr L. Avaldi, Consiglio Nazionale delle Ricerche, IMIP, Italy; Professor R. Dörner, University of Frankfurt, Germany

Dr T. Kibédi and Professor G.D. Dracoulis
Project: Internal Conversion Electron Spectrosopy of 0⁺ States
Partners: Dr S. Yates, University of Kentucky, USA; Dr P. Gerrett, Lawrence Livermore Laboratory, USA; Dr R. Julin, University of Jyväskylä, Finland

Professor Y. Kivshar
Partner: Professor G. Agrawal, University of Rochester, USA

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

Project: Nonlinear Effects in Photonic Crystals and Structures
Partner: Professor C. Soukoulis, Ames Laboratories, USA

Project: Linear and Nonlinear Left-handed Metamaterials
Partner: Professor C. Soukoulis, Ames Laboratories, USA

Project: Nonlinear Photonic Crystals: Concepts and Applications
Partner: Dr M. Scalora, US Air Force Research Laboratories, USA

Project: Nonlinear Left-handed Metamaterials
Partner: Professor A. Zharov, Institute for Physics of Microstructures, Russia

Project: Nonlinear Localized Spin Waves
Partner: Professor H. Benner, Technical University of Darmstadt, Germany

Project: Soliton Clusters and Light Bullets
Partner: Professor L. Torner, University of Barcelona, Spain

Project: Discrete Solitons in All-optical Switching in Waveguide Arrays
Partner: Professor M. Molina, University of Santiago, Chile

Professor Y. Kivshar and Dr E. Ostrovskaya
**Project:** Dynamics of the Dispersion-managed Solitons in Fiber Transmission Systems  
**Partners:** Professor D. Anderson and Professor M. Lisak, Chalmers University of Technology, Sweden

**Project:** Multimode Spatial Optical Solitons  
**Partners:** Professor C. Denz and Dr A. Desyatnikov, University of Münster, Germany

**Professor Y. Kivshar and Dr A. Sukhorukov**  
**Project:** Multi-step Harmonic Generation in Nonlinear Photonic Crystals  
**Partner:** Professor S.M. Saltiel, University of Sofia, Bulgaria

**Project:** Parametric Optical Conversion Due to Cascaded Nonlinearities  
**Partner:** Professor S.M. Saltiel, University of Sofia, Bulgaria

**Project:** Self-written Optical Waveguides in Polymerized Materials  
**Partner:** Professor S. Kawata, Osaka University, Japan

**Project:** Stability Analysis of Solitary Waves  
**Partner:** Professor D.E. Pelinovsky, McMaster University, Canada

**Project:** Discrete Solitons in Waveguide Arrays  
**Partners:** Dr R. Morandotti and Professor S. Aitchison, University of Toronto, Canada; Professor Y. Silberberg, Weizmann Institute of Technology, Israel

**Dr M.M. Kohonen**  
**Project:** Wet Granular Materials  
**Partner:** Professor S. Herminghaus, University of Ulm, Germany

**Project:** Thin Film Coalescence  
**Partner:** Dr N. Maeda, University of California, Santa Barbara, USA

**Dr 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 M. 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

**Dr S.Y. Kun**

**Project:** Experimental Test of New Theory of Quantum Chaos in Finite Many-body Systems  
**Partners:** Professor W. Qi, Dr T. Wedong, Mr L. Songlin, Dr J. Zhonghe and Ms D. Yuchuan, Institute of Modern Physics, Lanzhou, China; Professor L. Zhichang, Dr L. Xiuqin, Dr Z. Kui, Dr F. Changbo, Dr L. Jiancheng, Dr J. Hua and Dr H. Guiqing, China Institute of Atomic Energy, China; Professor W. Greiner, Goethe University Frankfurt, Germany

**Project:** Slow Phase Randomisation in Microscopic Systems and Nanostructures  
**Partners:** Professor Y. Abe, Kyoto University, Japan; Professor K. Nakamura, Osaka City University, Japan

**Project:** Cross-symmetry Spectral Correlations in Microscopic Systems and Nanostructures: Beyond Random-matrix Theory  
**Partners:** Dr J. Flores and Dr T. Seligman, University of Mexico, Mexico

**Dr S.Y. Kun and Professor L.T. Chadderton**

**Project:** Schrödinger Cat States in Highly Excited Strongly Interaction Many-body Systems  
**Partners:** Dr L. Benet, University of Mexico, Mexico; Professor S. Greiner, Goethe University Frankfurt, Germany; Dr F. Haas, CNRS and Louis Pasteur University, Strasbourg, France

**Dr S. Kuyucak**

**Project:** Modelling Inward Rectifier Potassium Channels  
**Partner:** Dr T. Takahashi, National Institute for Physiology, Japan

**Project:** Study of Ion Selectivity in KcsA Potassium Channel  
**Partner:** Dr A. Baumgaertner, Forschungs Zentrum Jülich, Germany

**Dr A-K. Larsson**
**Project:** Modulated Structures  
**Partner:** Dr J. Garcia-Garcia, Stockholm University, Sweden

**Project:** Structural Modulations of NiAs-type Phases  
**Partners:** Professor R. Withers and Dr L. Noren, RSC

**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 B.R. Lewis and Dr S.T. Gibson**  
**Project:** Analysis of REMPI Spectra  
**Partners:** Professor M.L. Ginter, University of Maryland, USA; Dr J.S. Morrill, Naval Research Laboratory, USA; Dr R.A. Copeland, SRI International, USA

**Project:** Coupled-channel Calculations of Linewidths for the $b$ State of $N_2$  
**Partners:** Professor H. Lefebvre-Brion, Université de Paris-Sud, Orsay, France; Professor J.-M. Robbe, Université de Lille, France

**Project:** Review of Molecular Oxygen  
**Partners:** Professor M.L. Ginter, University of Maryland, USA; Dr J.S. Morrill, Naval Research Laboratory, USA

**Professor B.R. Lewis and Dr K.G.H. Baldwin**  
**Project:** High Resolution XUV Laser Spectroscopy of Isotopic Nitrogen  
**Partners:** Professor W. Ubachs and Professor W. Hogervorst, Vrije Universiteit Amsterdam, The Netherlands

**Professor B.R. Lewis, Dr K.G.H. Baldwin and Dr M. Kono**  
**Project:** Development of Ultra-high Resolution VUV Laser Sources  
**Partner:** Professor B.J. Orr, Macquarie University

**Mr P. Linardakis, Dr G.G. Borg and Professor J.H. Harris**  
**Project:** Plasma Switches for Mobile Phones  
**Partner:** Dr R. Scheer, Motorola, USA

**Professor J.D. Love**  
**Project:** Planar GRIN Lens
**Partner:** Dr C. Cogswell, University of Colorado at Boulder, USA

**Project:** Undergraduate Book on Guided Wave Photonics

**Partner:** Dr F.P. Payne, University of Oxford, UK

**Project:** EPSRC Grant - Optical Wave Propagation Through Multimode Fibres and Devices

**Partners:** Professor D. Abrahams and Dr E. Perrey-Debain, University of Manchester, UK; Dr T. Munro, University of Southampton, UK; Dr D. Alwright, University of Oxford, UK; Dr J. Lawrie, Brunel University, UK; Dr D. Gallagher, Photon Design, Oxford, UK

**Project:** Fibre Pigtailing to Buried Channel Waveguides

**Partners:** Dr S. Huntington, University of Melbourne; Dr S. Law, University of Sydney; Mr B. Gibson, La Trobe University

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

**Project:** Bend Loss Minimisation in Optical Fibres

**Partner:** J. Katsifolis, La Trobe University

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

**Project:** Investigation into (e,3e) and (e (2e) Processing Using Time-of-flight Techniques and Toroidal Electrostatic Analysers

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

**Project:** Application of Position Sensitive Detectors to Nano-second Timing Experiments

**Partner:** Professor H. Schmidt-Böcking, University of Frankfurt, Germany

**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; UTS; 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 Novell Chalcoguide 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. Prawer, University of Melbourne

Professor R.P. McEachran  
Project: Electron Excitation of Atoms  
Partners: Dr R. Srivastava, Roorke University, India; Professor A.D. Stauffer, York University, Canada

Project: Positron Excitation of Krypton and Xenon  
Partners: Professor A.D. Stauffer, York University, Canada; Dr L.A. Parcell, MacQuarie University

Project: Low Energy Transport Properties in Zinc  
Partners: Dr R. White, James Cook University; Professor K. Bartschat, Drake University, USA

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: Ultraviolet Characterization and Remote Sensing of Aerosols  
Partner: Dr A. Eldering, NASA Jet Propulsion Laboratory, USA

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

Dr D. Neshev  
Project: Discrete Solitons in Two-dimensional Photonic Lattices  
Partner: Professor Z. Chen, San Francisco State University, USA

Project: Optical Signal Processing by Spatial Soliton Arrays and Nonlinear Periodic Structures  
Partner: Professor C. Denz, Universität Münster, Germany
Dr C. Neto
Project: Dewetting of Thin Liquid Films
Partner: Professor K. Jacobs, Saarland University, Germany

Project: Characterisation of Magnetic Nanoparticles
Partners: M. Bonini and Professor P. Baglioni, University of Florence, Italy

Project: Interaction Forces Between Nucleoside-functionalised Lipids
Partners: Dr D. Berti and Professor P. Baglioni, University of Florence, Italy

Dr M. Petravic
Project: Surface Analysis Using a Free Electron Laser
Partners: A/Professor B.V. King, University of Newcastle; Dr M.J. Pelin and Dr J.F. Moore, Argonne National Laboratory, USA

Dr M. Petravic and Dr P.N.K. Deenapanray
Project: Synchrotron-based Photoemission and NEXAFS Studies of Composition Changes on III-N-V Surfaces under Low Energy Ion Bombardment
Partners: Dr B. Kim and Ms K-J. Kim, PAL, Pohang, Korea

Project: Synchrotron-based Photoemission and NEXAFS Studies of Composition Changes on Hydrogenated Semiconductor Surfaces
Partners: Dr B. Kim and Ms K-J. Kim, PAL, Pohang, Korea

Dr M. Ridgway
Project: Formation of Dilute GaAs$_{1-x}$N$_x$ and Ga$_{1-x}$Mn$_x$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. Ridgway and Dr A.P. Byrne
Project: Pd-defect and Pd-dopant Characterisation with Perturbed Angular Correlation
Partner: Dr R. Vianden, University of Bonn, Germany

Dr M. Ridgway, Dr C.J. Glover and Dr S. Kluth
Project: EXAFS Characterisation of Amorphous Semiconductors
Partners: Dr G. Azevedo, Laboratorio Nacional de Luz Sincrotron, Brazil; Dr K.M. Yu, Lawrence Berkeley National Laboratory, USA; Dr G.J. Foran, ANSTO

Project: EXAFS Characterisation of Semiconducting and Metallic Nanocrystals
Partners: Dr G. Azevedo, Laboratorio Nacional de Luz Sincrotron, Brazil; Dr G.J. Foran, ANSTO

Dr M. Ridgway, Dr S. Kluth and Dr C.J. Glover
Project: Implantation-induced Amorphisation of Termary Semiconductors
Partner: Professor W. Wesch, Friedrich-Schiller University, Germany

Dr M. 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, CNRS, France

Dr V. Robins
Project: Topology and Intelligent Data Analysis
Partner: Professor E. Bradley, University of Colorado at Boulder, USA

Project: Signatures of Spatial Morphology in Disordered Media
Partner: Dr K.R. Mecke, University of Stuttgart and Max-Planck-Institut für Metallforschung, Germany

Dr B.A. Robson
Project: Antiproton Scattering
Partner: Professor Zhang Yu-shun, Institute of High Energy Physics, China

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

Dr R.E. Robson
Project: The Electron-hydrogen Vibrational Excitation Cross Section
Partners: Professor M.A. Morrison, University of Oklahoma, USA; Dr R. White, James Cook University

Project: Fluid Equations for Weakly Ionised Plasmas
Partner: Professor Z. Petrovic, Institute of Physics, Belgrade, Serbia
Project: Transport Processes in Weakly Ionised Gases and Plasmas  
Partners: Dr R.D. White, James Cook University; Professor M.A. Morrison, University of Oklahoma, USA; Professor Z. Petrovic, Institute of Physics, Belgrade, Serbia

Project: Transport Processes in Amorphous Semiconductors and Polymers  
Partners: Professor A. Blumen, University Freiburg, Germany; Dr P. Meredity, University of Queensland

Dr A. Rode  
Project: 100-W Laser System for Ultra-fast Pulsed Laser Deposition  
Partners: Dr J. Giesecus and Mr M. Duering, Fraunhofer Institute for Laser Technique Aachen, Germany

Project: Boron Nitride Nanostructures Formed by the High Repetition-rate Laser Ablation  
Partners: Dr D. Golbergand and Professor Y. Bando, National Institute for Material Science, Tsukuba, Japan

Project: Magnetic Properties of Laser-deposited Carbon Nanofoam  
Partners: Dr J. Giapintzakis, Foundation for Research and Technology, Hellas and Institute of Electronic Structure and Lasers, Crete, 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 Tokyshina, Japan

Dr A. Samoc and Dr M. Samoc  
Project: Crystal Structure of the Second Order Nonlinear Optical Addition Complex AsI$_3$*3S$_8$"  
Partners: Dr E.R. Krausz and Dr A.C. Willis, Research School of Chemistry

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, HongKong

Project: Third-order Optical Nonlinearities of Oligomers, Dendrimers and Polymers Derived from Solution Z-Scan Studies  
Partner: Dr M. Humphrey, Department of Chemistry, Faculty of Science
Project: Synthesis and Third-order Nonlinear Optical Properties of End-functionalized Oligophenylenevinylene
Partner: Dr M.S. Wong, Baptist University of 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. Sellars
Project: Diode Laser Frequency Stabilisation via Locking to Spectral Hole
Partners: Professor R. Cone and Dr G. Pryde, Montana State University, USA

Project: Investigation of EIT and Slow Light
Partner: Professor P. Hemmer, Texas A & M University, USA

Dr M.G. Shats
Project: Confinement Studies in Stellarators
Partner: Professor K. Toi, National Institute for Fusion Science, Japan

Project: Turbulent Structures and Transport in Plasmas
Partners: Professor P.H. Diamond and Dr D. Rudakov, University of California, 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 A.E. Stuchbery
Project: Nuclear Moments and Structure Changes in Exotic Nuclei
Partner: Dr P.F. Mantica, Michigan State University, USA

Project: Competing Core and Single Particle Excitations in the $2^+_1$ State of $^{44}$Ca
Partners: Professor N. Benczer-Koller and Dr M.J. Taylor, Rutgers University, USA; Dr C. Beausang, Yale University, USA
Project: Competition Between Proton and Neutron Hole Excitations in $^{96}$Zr
Partners: Dr G. Kumbartzki and Professor N. Benczer-Koller, Rutgers University, USA; Professor K.-H. Speidel, Universität Bonn, Germany; Dr C. Beausang, Yale University, USA

Project: Spin Polarization of $^{37}$K Produced in a Single-proton Pick Up Reaction at Intermediate Energies
Partners: Professor P.F. Mantica and Dr D.E. Groh, Michigan State University, USA

Project: Angular Distributions of $^\gamma$-rays with Intermediate Energy Beams
Partners: H. Olliver and Professor G. Glasmacher, Michigan State University, USA

Project: $^\gamma - ^\gamma$ Angular Correlations from Reactions with Intermediate-energy Beams
Partners: H. Olliver and Professor T. Glasmacher, Michigan State University, USA

Project: Intermediate Energy Coulomb Excitation as a Probe of Nuclear Structure at Radioactive Beam Facilities
Partners: Professor C.A. Bertulani, Dr T.J. Mertzimekis and A.D. Davies, Michigan State University, USA

Project: Systematics of First 2$^+$ State g Factors Around Mass 80
Partners: Dr T.J. Mertzimekis, Michigan State University, USA; Professor N. Benczer-Koller and Dr M.J. Taylor, Rutgers University, USA

Dr A.E. Stuchbery and Dr A.P. Byrne
Project: Hyperfine Interactions Spectrometer
Partners: A/Professor D.H. Chaplin, ADFA, University of New South Wales; Professor H.H. Bolotin, University of Melbourne

Dr H.H. Tan and Professor C. Jagadish
Project: Thermionic Cooling in Semiconductors
Partner: Professor R. Lewis, University of Wollongong

Dr A.G. Truscott and Dr K.G.H. Baldwin
Project: Metastable Helium Bose-Einstein Condensation
Partners: Professor M. Leduc, École Normale Superieure, Paris, France; Dr W. Vassen, Vrije Universiteit Amsterdam, The Netherlands
Dr M. Vos
Project: Comparison of Electron and Neutron Scattering at High Momentum Transfer
Partners: Dr T. Abdul-Redah, ISIS, UK and University of Kent, UK; Professor Dr C.A. Chatzidimitriou-Dreismann and Dr C. Kleiner, Technical University, Berlin, Germany; Dr J. Mayers, ISIS, UK

Dr M. Vos
Project: Electronic Structure of Alloys
Partners: Dr A. Ernst and Dr K. Kouzakov, Max Planck Institute Mikrostrukturphysik, Germany

Dr M. Vos, Dr A. Kheifets and Professor E. Weigold
Project: Electron Correlations in Solids
Partners: Dr F. Aryasetiawan, National Institute of Advanced Industrial Science and Technology, Japan; Dr M. Usuda, Synchrotron Radiation Research Center, Japan

Dr X-H. Wang
Project: Fabrication and Characterization of Two-dimensional Triangular Polymer Based Void-channel Photonic Crystals
Partners: Professor M. Gu, Dr G. Zhou, Dr M.J. Ventura and Dr M. Straub, Swinburne University of Technology

Project: Giant Lamb Shift in 3D Photonic Crystals
Partner: Professor B.Y. Gu, Chinese Academy of Science, China

Professor E. Weigold
Project: Correlations in the Helium Asymptotic Wavefunction
Partner: Professor H. Schmidt-Böcking, University of Frankfurt, Germany

Project: Electron Momentum Spectroscopy of Atoms and Molecules
Partner: Dr M.J. Brunger, Flinders University

Professor E. Weigold and Dr J.C.A. Lower
Project: (e,2e) Processes with Polarized Electrons and Targets
Partners: Dr J. Berakdar, Max Planck Institut für Microstruktur Physik, Germany; Dr S. Mazevet, Los Alamos Laboratory, USA

Dr T.D.M. Weijers and Professor R.G. Elliman
Project: Heavy Ion Stopping in Solids
Partners: Professor H.J. Whitlow, University of Lund, Sweden; Dr H. Timmers and Mr S. Shrestha, ADFA, University of New South Wales; A/Professor D.J. O’Connor, University of Newcastle

Dr A.N. Wilson
Project: High-spin States in Nuclei with A=120 Near the Proton Dripline
Partners: Dr J.F. Smith, Manchester University, UK; Dr C.J. Chiara, Washington University, St Louis, USA; Dr E.S. Paul, Liverpool University, UK

Project: Effective Operators in the No-core Shell Model
Partners: Professor B.R. Barrett and Dr I. Stetcu, University of Arizona, USA

Dr A.N. Wilson, Professor G.D. Dracoulis, Dr G.J. Lane, Dr A.P. Byrne and Dr P.M. Davidson
Project: Superdeformation in Light Pb Isotopes
Partners: Dr A.O. Macchiavelli, Dr P. Fallon, Dr R. Clark and Dr A. Görgen, Lawrence Berkeley National Laboratory, USA

Dr W.S. Woolcock
Project: Phase Shift Analysis of Low Energy Pion-nuclear Scattering Data
Partner: Dr E. Matsinos, Varian, Baden, Switzerland

Project: Electromagnetic Corrections to the Scattering Parameters Obtained from Pionic Hydrogen Experiments
Partners: Professor G. Rasche, University of Zurich, Switzerland; Professor G.C. Oades, University of Aarhus, Denmark

Dr J. Wong-Leung, Dr P.N.K. Deenapanray and Professor C. Jagadish
Project: Defects and Electron Microscopy of Semiconductors
Partners: Professor B.G. Svensson, Dr M. Linnarsson, Dr A. Kuznetsov, Dr A. Hallen, Mr M. Janson and Dr P. Leveque, Royal Institute of Technology, Stockholm, Sweden

Dr J. Wong-Leung, Dr H.H. Tan, Ms C. Carmody, Professor J.S. Williams and Professor C. Jagadish
Project: Electron Microscopy Study of Defects in Ion Implanted Semiconductors
Partners: Dr J. Zou, University of Sydney; Dr J. Fitz Gerald, Research School of Earth Sciences; Professor D.J.H. Cockyane, Oxford University, UK

Dr W. Xu
**Project:** Magnetotransport of Two-dimensional Electron Gases in the Presence of Terahertz Free-electron Laser Radiation  
**Partners:** A/Professor R.A. Lewis, University of Wollongong; Professor P.M. Koenraad, Eindhoven University of Technology, The Netherlands; Professor C.J.G.M. Langerak, FOM Institute for Plasma Physics, The Netherlands

**Project:** Optoelectronic Properties of Semiconductor Nanostructures Under Infrared Free-electron Laser Radiation  
**Partner:** Professor L.B. Lin, Sichuan University, China

**Project:** Electronic and Transport Properties of Spintronic Systems  
**Partners:** Professor P. Vasilopoulos, Concordia University, Canada; Professor C.S. Tang, National Centre for Theoretical Sciences, Taiwan

**Project:** Electronic Subband Structure of the Broken-gap Semiconductor Quantum Wells  
**Partners:** Dr P.A. Folkes, US Army Research Laboratory, USA; Professor G. Gumbs, City University of New York, USA

**International Collaborative/Cooperative Agreements**
The School holds collaborative/cooperative agreements and/or memoranda of understanding with the following institutions and organisations:

- Institute of Nuclear Physics, Belgium
- Department of Communications, Canada
- Beijing University, China
- Shanghai Institute of Technical Physics (SITP), Chinese Academy of Sciences, China
- National Laboratory for Infrared Physics, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China
- Tsinghua University, China
- Institute of Mathematics Modelling, Technical University of Denmark, Denmark
- Physics Department, University of Jyväskylä, Finland
- GANIL IN2P3, France
- L'Ecole Polytechnique, France
- University of Augsburg, Germany
- Hahn-Meitner Institute, Germany
- Institute of Advanced Energy, Kyoto University, Japan
- National Institute for Fusion Science, Japan
• RCNP, Japan
• Samsung Electronics Co. Ltd, Korea
• Telecom Korea, Seoul, Korea
• Agrigenesis Biosciences Ltd, Auckland, New Zealand
• National Accelerator Facility and FRD, South Africa
• The Physics Department, University of Pretoria, South Africa
• Ericsson Components AB, Sweden
• Ericsson Fibre Optic Research Centre, Sweden
• Royal Institute of Technology, Sweden
• COBRA Inter-University Research Institute on Communication Technology, Eindhoven University of Technology, The Netherlands
• ANU-Engineering & Physical Sciences Research Council Agreement (ANU-EPSRC), UK
  (The ANU-EPSRC agreement in effect covers a range of UK universities)
• Cambridge University, UK
• British Telecom Laboratories, UK
• British Telecom Research Laboratories, UK
• Oxford University, UK
• ATLAS Accelerator Facility, Argonne National Laboratory, USA
• Bell Laboratories, USA
• Intel Corporation, USA
• Physics Division, Lawrence Berkeley Laboratory, USA
• Lightwave Microsystems Corporation, USA
• Lucent Technologies, USA
• Motorola, USA
• HHRIF, Oak Ridge National Laboratory, USA
• Lockheed Martin Energy Research Corporation, Oak Ridge National Laboratory, USA
• OFT Associates, USA
• Princeton Plasma Physics Laboratory, Princeton University, USA
• Stanford University, USA
• Stanford Linear Accelerator Center, Stanford Synchrotron Radiation Laboratory, USA

• The European Union-Australia Science & Technology Agreement, DIST
• Deutscher Akademischer Austauschdienst (DAAD) Exchange Service
National Collaborative Agreements

The School holds the following collaborative agreements under the IAS/Other Australian University Collaboration Scheme and has various independent agreements with Australian industries:

- ADC Australia, Canberra
- AGEN Pty Ltd, Brisbane
- Canberra Institute of Technology
- Central Queensland University
- Curtin University of Technology
- Ericsson Australia Pty Ltd, Melbourne
- Flinders University
- Griffith University
- Hypatia Analytic Thought Pty Ltd, Melbourne
- James Cook University
- JDS/Uniphase, Sydney
- La Trobe University
- Macquarie University
- Monash University
- Photonic Technologies Pty Ltd, Sydney
- Royal Melbourne Institute of Technology
- Siemens Ltd, Sydney
- University College, Canberra,
- University of Canberra
- University of Melbourne
- University of New England
- University of New South Wales
- University of Newcastle
- University of Queensland
- University of South Australia
- University of Sydney
- University of Western Australia
- Faculty of Business and Technology, University of Western Sydney
- University of Wollongong
- The Powerhouse Museum of Applied Arts & Sciences, Sydney
Appendix – Grants and Contracts

**ABB Transmission and Distribution Pty Ltd & Transgrid**
Dr A. Samoc

*Fibre Optic Voltage Sensor*
April 1999 – April 2003 $ 30,000

**ACT Government Knowledge Fund**
Dr G.G. Borg and Professor J.H. Harris

*BushLAN Development of Novel VHF Wireless Internet Technology for Rural Australia*
2002 – 2003 $ 25,000

Dr J. Howard

*Development of Absolute Thermal Imaging Systems for Industrial Process Monitoring and Control*
2002 – 2003 $ 40,000

**ACT R&D Grant**
Professor J.S. Williams

*Developing Technology Prototype Products & Markets for Semiconductor Lasers*
September 2001 – April 2003 $ 350,000

**AusIndustry**

**Innovation Access Program**
Professor J.S. Williams

*Establishment of the Australian Materials Technology Network*
2003 – 2006 $ 2,683,520
### Australian Academy of Science

Dr S.Y. Kun

**Research Visit to Japan**

April 2002 – March 2003  $ 8,300

Dr S.Y. Kun

**Research Visit to France**

July 2002 – June 2003  $ 2,500

Dr D. Neshev

**Research Visit to Germany**

2003  $ 7,000

### Australian-German Joint Research Co-operation Scheme

Professor S. Hyde

**Signatures of Spatial Morphology in Ordered and Disordered Media**

2002 – 2004  $ 17,100

Professor B. Luther-Davies

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

2002 – 2004  $ 16,400

Dr M. Ridgway

**Application of the Perturbed Angular Correlation Technique for the Microstructural Identification of Implantation-Induced Disorder in Compound Semiconductors for Improved Optoelectronic Device Performance** with R. Vianden (University of Bonn, Germany)
<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 – 2003</td>
<td>$7,520</td>
<td>Dr A. Rode, Investigations into Atomic Collisions through the Development of Advanced Technologies</td>
</tr>
<tr>
<td>2001 – 2003</td>
<td>$19,380</td>
<td>Professor E. Weigold and Dr J. Lower, ANU Commercialisation (Venture Capital) Fund</td>
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<tr>
<td>March 2000 onwards</td>
<td>$500,000</td>
<td>ANU General Staff Development Fund, General Contingency Fund: Develop Stage 1 of Acton Lasers</td>
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<td>2003</td>
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<td>Dr N.R. Lobanov, Attendance of the 11th Workshop on RF-Superconductivity SRF2003, Lübeck/Travemünde, Germany</td>
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<td>2003</td>
<td>$1,500</td>
<td>Dr B. Blackwell, ANU Major Equipment Grant</td>
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</table>
Interactive Computational Physics Cluster

2003 $ 133,900

Dr J. Howard

A Voltage-Tunable High Power Millimetre-Wave Source for Time-Resolved Plasma Tomography and Transport Studies

2003 $ 110,000

Ms Anita Smith, Professor N. Manson and Dr M Sellars

Crystal Growth Facilities for Quantum Information Processing

2003 $ 99,200

Australian Institute of Nuclear Science & Engineering Grant

Dr M.C. Ridgway

Nanocavity Formation Mechanisms in Si Substrates Studied with In-situ Transmission Electron Microscopy

2003 $ 4,601

Australian Nuclear Science and Technology Organisation

Access to Major Research Facilities Program

Professor G.D. Dracoulis and Dr G.J. Lane

Structure of Multi-quasiparticle States in Lu-176 and Lu-177

2003 $ 12,000

Dr M. Petravic and Dr P.N.K. Deenapanray

Photoemission Studies of Composition Changes on III-N-V Compounds under Ion Bombardment; and FEL-based Resonance Ionisation Spectrometry of Impurities from Semiconductor Surfaces

2003 $ 12,000
Dr M.C. Ridgway

**EXAFS Characterisation of Implantation-induced Disorder in Compound Semiconductors and Structural Perturbations in Elemental Nanocrystals**

2003 $ 7,350

**Australian Synchrotron Research Program**

Dr C.J. Glover

**EXAFS Measurements of the Local Structure of Ferromagnetic GaMnAs Alloys**

2003 $ 4,370

Dr P. Kluth

**Ion Irradiation Induced Preferential Amorphisation of Metallic Nanocrystals in Silica Measured with EXAFS**

2003 $ 4,280

Dr P. Kluth

**Structural Characterisation of Ion Irradiated Metallic Nanocrystals in Silica using EXAFS**

2003 $ 4,380

Dr P. Kluth and Dr M. Ridgway

**Structural Properties of Metallic Nanocrystals Formed by Ion Implantation into SiO2 Measured with Temperature Dependant EXAFS**

2003 $ 4,480

Dr M. Ridgway and Dr C.J. Glover

**Electronic Structure and Interface Effect of Ge Nanocrystals in a SiO₂ Matrix**

2003 $ 6,850
Dr M. Ridgway

*Irradiation-induced Preferential Amorphisation of Semiconducting and Metallic Nanocrystals in SiO$_2$ Measured with EXAFS*

2003 $4,370

Dr M. Ridgway and Dr C.J. Glover

*Local Structural Characterisation of Amorphised and Annealed InP and GaP*

2003 $5,801

Dr M. Ridgway

*Amorphous Compound Semiconductors*

2003 $6,830

**Australian Partnership for Advanced Computation**

Dr Shin-Ho Chung

*Studies on Biological Ion Channels*

2001 – 2003 $119,048

Professor S.T. Hyde and Dr M.A. Knackstedt

*Mesoscale Physics Computation*

2001 – 2003 $250,000

**Australian Photonics Pty Ltd**

Professor J.D. Love and Dr A. Ankiewicz

Consultancy: *Feasibility Study of a Planar Waveguide Grating AWG*

2003 $36,263
Professor B. Luther-Davies and Dr W. Krolikowski, Ms R.M. Krolikowska, Mr J. Bottega, Mr I. McRae and Mr C. Macleod

*Polymer Waveguides and Integrated Optics Projects (Redfern Polymer Optics)*

- June 2002 – May 2003 $160,296
- June 2003 – May 2004 $108,000

Dr A. Samoc

*Nonlinear Polymers*

- 2002 – 2003 $183,447

Dr M. Sellars and Professor B. Luther-Davies

*Real-time Optoelectronic Spectrum Analyser System*

- 2002 – 2003 $30,000

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

**ARC Australian Postgraduate Awards (Industry)**

Dr S. Huntington, Professor J.D. Love and Dr A. Carter (Nufern Inc)

Mr P. Pace

- December 2001 – November 2004 $86,598
- Nufern contribution $15,000

**ARC Australian Senior Research Fellowship**

Dr D.R.M. Williams (transferred 2003 from University of Sydney)

*Deformation and Dynamics of Single Polymer Chains*

- 2003 – 2004 $179,032

**ARC Centre for Excellence**

Professor B. Luther-Davies, Professor Y.S. Kivshar and Dr W. Krolikowski
Centre for Ultrahighband Devices for Optical Systems (CUDOS)
(Total $11,513,850)
2003 – 2007 (RSPSE Share) $2,967,000

Professor Y. Kivshar

ARC Centre of Excellence for Quantum-Atom Optics (ACQAO)
RSPhysSE Project: Optical Lattices
(Total $10,950,000)
2003 – 2008 (Project Share) $719,000

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

ARC Centre of Excellence for Quantum-Atom Optics (ACQAO)
RSPhysSE Project: Metastable BEC
(Total $10,950,000)
2003 – 2008 (Project Share) $1,203,000

University of Queensland
Dr Y. Chen (ANU Partner)
Australian Centre for Functional Nanomaterials
(Total $6,380,544)
2003 – 2007 (RSPSE Share) $452,256

ARC Discovery Project Grants
Professor N.N. Akhmediev
Multi-soliton Complexes
2003 – 2005 $245,000

Professor V.V. Bazhanov and Professor R.J. Baxter
Solvable Models on Regular and Random Lattices in Statistical Mechanics and Field Theory
2002 – 2004 $ 318,000

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)

Millenial-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 Shin-Ho Chung

Theoretical Studies on the KcsA Potassium Channel and L-type Calcium Channels
2002 – 2004 $ 231,000
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 G.D. Dracoulis, Dr 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 R.G. Elliman and Dr J. Valenta

*Novel Silicon-based Photonic Device*

2003 – 2005 $ 290,000

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

Dr 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 C. Jagadish

*Fabrication and Monolithic Integration of II-V Semiconductor Photonic Devices using Impurity Free Interdiffusion*

2003 – 2006 $ 510,000

Professor N. Manson and Dr M.J. Sellars
Storage of Nonclassical Light in a Solid
2003 – 2005 $265,000
Professor B. Ninham

Ionic Dispersion Forces in Physical Chemistry: Implications for pH, Electrochemistry, Nanoparticle Formation and Organic Synthesis
2003 – 2005 $270,000
Dr M. Petravic and Professor J.S. Williams

Nanocavities and Nanoparticles in Silicon-base Materials Tailored by Ion Bombardment
2003 – 2005 $350,000
Dr M.C. Ridgway and Professor H. Bernas

Nanocavities in Si: Structural Evolution and Metal Gettering
2002 – 2004 $183,000
Dr M.C. Ridgway, Dr A.P. Byrne and Dr K.M. Yu

Atomic-scale Identification of Amorphisation and Relaxation Processes in Compound Semiconductors
2003 – 2005 $285,000
Dr M. Sellars

Development of a Quantum Computer Based on Solid State Optical Impurity Sites
2003 – 2005 $130,000
Dr M. Vos, Professor E. Weigold and Dr A.S. Kheifets

Electron Momentum Spectroscopy of Correlated Nanoscale Structures
2003 – 2005 $295,000
University of Melbourne
Professor N. Fletcher (ANU Partner)
*Acoustics of the Didjeridu*
2002 – 2004 ($253,000)

University of New South Wales ()
Dr 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*
(Total $312,000)
2003 – 2005 (ANU share) $211,000

University of Queensland
Professor V.V. Bazhanov, and Professor R.J. Baxter (ANU Partners)
*Algebraic Structures in Mathematical Physics and their Applications*
(Total $457,836)
2002 – 2004 (ANU share) $92,000

University of Sydney
Professor A. Snyder (ANU Partner)
*The Physics of Network Computation: Mathematical Modelling of the Nonconscious*
2002 – 2004 ($203,000)

University of Sydney
Professor J.S. Williams (ANU Partner)
*Characterisation of Structural Defects in Ion-beam Processed III-V Nitrides*
2001 – 2003 ($208,126)
ARC Discovery Project Grants and Australian Postdoctoral Fellowships (APD)

Dr M. Boström (Relinquished August 2003)

*Intermolecular Interactions Revisited - Flaws in the Fabric and Applications to Lower Dimensional Structures*

2003 – 2005 (Total $ 205,035)

2003 $ 68,345

Dr J. Bradby

*Mechanical Deformation of Layered Semiconductor Structures*

2003 – 2005 $ 234,000

Dr V. Craig, A/Professor S. Biggs and Dr C. Neto (APD)

*Nanorheology: Hydrodynamic Slip in Newtonian Fluids*

2003 – 2006 $ 291,000

Professor R.G. Elliman, Dr E. Krausz, Dr T.D.M. Weijers (APD) and A/Professor S. Choi

*The Physical and Optical Properties of Self-Assembled Si Nanocrystals*

2003- 2005 $ 318,035

Dr L. Fu

*Growth and Intermixing of Quantum Dots for Multi Wavelength Infrared Photodetectors*

2003- 2005 $ 255,000

Dr C.J. Glover

*Applying Advanced Synchrotron Radiation Based Techniques to Determine the Connection between the Geometric and Electronic Structure of Semiconductor Nanocrystals*

2003- 2005 $ 249,500
Dr S. Kluth

*Ion Implantation Induced Diffusion and Defect Evolution in Si Nanostructures*

2003-2005 $242,700

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

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

2003–2005 (Total $353,035)

2003–2005 $193,035

Fellowship only, project component relinquished as of 1.1.03 due to overlap with CoE research program.

**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 (ARF)**

Dr V. Craig

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

2002–2006 $573,782

Dr T.J. Senden

*Dynamic Force Microscopy of Small Molecular Assemblies*

2002–2006 $391,782

Dr G.J. Lane

*Structure of Exotic Neutron-Rich Nuclei Populated using Novel Reaction Mechanisms*
Dr A.G. Truscott (ARF) and Dr J.J. Hope

*How Does a Bose Einstein Condensate Develop Phase?*

2003 – 2007 $ 566,605

2003 – 2007 $ 401,605

Fellowship only, project component relinquished as of 1.1.03 due to overlap with CoE research program

**ARC Discovery Project Grants and QEII Fellowships (QEII)**

Professor S.T. Hyde, Dr. T. Aste and Dr T. Di Matteo (QEII)

*The Architecture of Networks: Characterisation and Visualisation of Complex Systems as Fluctuating Networks*

2003 – 2007 $ 687,275

Dr S. Ohnishi

*Friction and Capillary Forces*

2003 – 2008 $ 548,000

Dr J. Wong-Leung (QEII) and Professor B.G. Svensson

*Ion Implantation Processing in Silicon Carbide for Microelectronic Applications*

2002 – 2006 $ 619,411

Dr W. Xu (Transferred from University of Wollongong)

*Generation of Coherent-hypersound from Semi-conductor Systems*  
(Total $ 354,160)

2002 – 2005 (ANU share) $ 249,628
ARC Federation Fellowship

Professor Y. Kivshar

*Nonlinear Photonics and All-Optical Technologies*

2002 – 2006  $ 1,448,515

Professor B. Luther-Davies

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

2003 – 2007  $ 1,481,765

ARC Large Grants

Dr M.A. Knackstedt

*Three Dimensional Image Analysis*

2001 – 2003  $ 164,961

Dr D.R.M. Williams

*Specific Ion Effects in Colloid, Surface and Polimer Science*

2001 – 2003  $ 70,139

Dr D.R.M. Williams

*Size-seperation of Polymers in Ordered Obstacle Assemblies: DNA Electrophoresis in Microlithographic Arrays*

2003  $ 5,762

ARC Linkage – Infrastructure Equipment and Facilities

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

*Infrastructure for Wireless Internet Technology Development for Rural Australia*

2003  $ 100,000
2003 (Major Equipment Committee, ANU) $ 47,500

Professor A.W. Snyder, Professor M.V. Srinivasan and Professor W.A. Foley

*Intelligent Computer System to Access Information Directly from the Brain using High Resolution Electroencephalography and Repetitive Transcranial Magnetic Stimulation*

2003 $ 115,490

2003 (Major Equipment Committee, ANU) $ 57,745

University of Sydney

Dr M.C. Ridgway (ANU Partner)

*Fluorescence Detector for the Australian National Beamline Facility*

2003 (Total $ 530,000)

2003 (Major Equipment Committee, ANU) $ 15,000

**ARC Linkage International Award**

Dr R. Ball and Professor R.L. Dewar

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

2003 – 2005 $ 9,000

Professor S.J. Buckman (Jointly with Flinders University)

*Environmental and Technological Applications of Electron-Driven Processes*

(Total $ 33,000)

2003 – 2005 (ANU Share) $ 16,500

Dr W. Xu

*Optoelectronic Properties of Los-dimensional Semiconductor Systems and Semiconductor Nanostructures under Terahertz Free Electron Laser Radiation*

2003 – 2004 $ 28,800
ARC Linkage International Fellowship (IF)
Professor E. Weigold, Professor S.J. Buckman and Dr M. Lange (IF)
Investigating Near-threshold Atomic and Molecular Collision Processes with Multiparameter Detection Techniques
2003 – 2004 $ 77,649

ARC Linkage Project
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. Boswell
Development of Inert Gas Ion Beams for Fabrication of Nanostructures
2003 – 2006 $ 300,000

Professor B. Luther-Davies
Polymer Optical Fibre Drawing Tower Facility
2003 $ 20,000

University of Sydney
Professor A. Snyder (ANU Participant)
What Makes a Corporate Champion?
2002 – 2004 (Total $ 210,000)

ARC Postdoctoral Research Fellowship
Dr R. Ball
Turbulence and Anomalous Transport in Magnetically Confined Plasmas: A Theoretical and Computational Study of Transport Barrier Bifurcations

2000 – 2003 $ 177,009

Dr S.J. Cavanagh

Photodissociation Dynamics of Diatomic Sulphur, S2, and its Role in Environmentally Friendly Energy Efficient Lamps

2001 –2004 $ 195,261

Dr P.N.K. Deenapanray

Defect Engineering of Quantum Well Interdiffusion for Optoelectronic Device Applications

2001 – 2004 $ 168,702

Dr M. Hoyles

Postdoctoral Fellowship

2000 – 2003 $ 166,131

Dr C.R. Morton

Mechanisms for Formation of Heavy Elements

2000 – 2003 $ 179,769

ARC QEII Research Fellowship

Dr M. Dasgupta

Fusion Barrier Distributions: A New Approach to Understanding Complex Nuclear Interactions

1998 – 2003 $ 360,000

Dr H.H. Tan

Growth, Characterisation and Fabrication of GaInNAs Lasers

2001 – 2006 $ 357,590
ARC Special Research Initiatives

Research Networks Seed Funding

Dr K. Baldwin

*Network for Optical and Quantum Science and Technology*

2003 $ 30,000

Professor R.L. Dewar

*Energetically Open Systems Research Network Study*

2003 – 2004 $ 10,000

Professor C. Jagadish

*Australian Semiconductor Nanotechnology Network*

2003 – 2004 $ 10,000

Professor J.S. Williams

*Innovative Materials Production, Processing and Analysis Network*

2003 – 2004 $ 30,000

ARC Strategic Partnerships with Industry, Research and Training Scheme (SPIRT)

Professor J.H. Harris, Dr G.G. Borg, Dr N.M. Martin, Dr D. Thorncraft and Mr L. Lungu

**CEA Technologies and Neolite Neon**

*The Application of Plasma Antennas to Communications and Radar*

2000 – 2003 $ 63,240

*BASF A.G.*

Dr M.A. Knackstedt
Characterization of Foam Morphology and Simulation of Mechanical and Thermal Foam Properties
2002 – 2004 $ 75,000

BusinessACT
Professor J.D. Love
Biophotonics Development
2003 – 2004 $ 75,000

Commonwealth Scientific Industrial Research Organisation
Dr R. Ball
Consultancy: Cross Disciplinary Bridges in Complex Systems Science
2003 – 2005 $ 18,000

Professor L. Chadderton
Swift Ions Project
1998 – 2003 $ 150,000

Consorzio RFX, Padova, Italy
Dr J. Howard
Development of Single-channel Coherence Imaging System for Plasma Spectroscopy
2003 $ 74,000

Defence Advanced Research Project Agency, USA
Professor N. B. Manson, Professor M.S. Scully and Dr P. Hemmer
Texas A & M University
Spin-based Lattice-gas Quantum Computers in Solids using Optical Addressing
2001 – 2004 US $ 240,000

**Defence Science and Technology Organisation**

**Materials Research Laboratory**

Professor C. Jagadish

*Research in Novel Opto-electronic Device Fabrication*

2003 – 2004 $ 44,000

**Weapons Systems Research Laboratory**

Professor C. Jagadish

*Feasibility Study on the Use of Stacked Array Detectors to EO Threat Warning*

2003 $ 55,000

Professor N.B. Manson and Dr M. Sellars

*Deliverables for ANU/DSTO Joint Collaboration*

2002 – 2003 $ 50,000

Dr M. Sellars

*Real-time Optoelectronic Spectrum Analyser System*

2002 – 2003 $ 30,000

**Department of Defence – Defence Signals Directorate**

Professor N.B. Manson and Dr M. Sellars

*Quantum Computing and Quantum Cryptography Research*

2003 $ 53,900
**Department of Education Science & Training**

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

Professor R.W. Boswell

*Visit of NASA Astronaut*

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<th>Year</th>
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<td>2003</td>
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Professor J. Harris and Dr M. Shats

*Cross Platform Studies of Fusion Plasma Confinement in Tokamaks and Stellarators*

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Professor B.R. Lewis

*Fourteenth International Conference on Vacuum Ultraviolet Physics*

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<td>2003–2005</td>
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**Department of Industry, Tourism and Resources**

Professor J. Harris *et al.*

*National Plasma Fusion Research Facility*

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<th>Year</th>
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<td>December 1995 to December 2003</td>
<td>$8,700,000</td>
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**Australian Photonics Cooperative Research Centre**

Professor J.D. Love & Dr A. Ankiewicz

*Modelling & Design of Light Processing Devices*

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<th>Year</th>
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<td>May 1999 – April 2005</td>
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**CRC for Functional Communication Surfaces**

Dr M.A. Knackstedt, Dr T. Senden, Dr V. Craig, Mr 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

**Ericsson Australia Pty Ltd**
Professor J.D. Love and Dr A. Ankiewicz
*Planar Waveguide Design and Fabrication*
2002 – 2003  $ 77,000

**French Embassy, Canberra**
Dr S.Y. Kun
*Experimental Test of Quantum Dots*
2002 – 2003  $ 5,950

Dr M.C. Ridgway
*Nanocavity Evolution under Ion Irradiation*
2002 – 2003  $ 3,480

**Japan Society for Promotion of Science**
Dr S.Y. Kun
*Slow Phase Randomisation in Nanostructures*
2002 – 2003  $ 11,200

**Lawrence Livermore National Laboratory**
Dr J. Bradby
*Nanoindentation of Films*
2003

**Max Planck Institut für Plasma Physik, Germany**
Dr J. Howard

*Development of Coherence Imaging System for Edge Plasma Studies*

2002 – 2003 $ 155,000

**McKinsey and Company**
Professor A. Snyder

*What Makes a Corporate Champion?*

2002 – 2004 $ 60,000

**MOTOROLA Inc (USA)**
Dr G.G. Borg and Professor J.H. Harris

*Application of Plasma Switches to Mobile Personal Communication Systems*

2003 US $ 54,826

**National Health & Medical Research Council Grant**
Dr Shin-Ho Chung

*Investigation of Biological Ion Channels: Theoretical Formulation, Computer Simulation and Experimental Verification*

2002 – 2004 $ 620,000

**Parliament of Australia**
Professor J.H. Harris and Dr G.G. Borg

*Report on Parliamentary Enquiry for Wireless Broadband*
2003 $ 20,000

*Redfern Polymer Optics*
Professor B. Luther-Davies *et al*
*Industry Funded PhD Scholarship*
2001 – 2004 $ 90,000

*US Army Research Office (Far East)*
Professor N. Akhmediev
*Modelling of Active Optical Systems with Nonlinear Amplifiers*
2002 – 2003 $ 20,000

*US Air Force Office (Far East)*
Professor Y. Kivshar
*Nonlinear Photonic Crystals: Concepts and Applications*
2002 – 2003 $ 15,000

*Vice-Chancellor's Plan for Growth*
Professor S.T. Hyde
2001 – 2003 $ 287,000

*Recruitment and Training of Technical Staff*
2001 – 2003 $ 157,500

*Victorian Department of Innovation, Industry & Regional Development*
Professor B.R. Lewis
Fourteenth International Conference on Vacuum Ultraviolet Physics
2003 – 2005 $ 22,000

Dr M.C. Ridgway
Australian Synchrotron Summer School
2003 $ 30,000

Vimed Biosciences Pty, Ltd
Dr T.J. Senden
Vimed Collaborative Research and Development Agreement
2002 – 2003 $ 444,800
**General Endowments**

*Donation from Personal Estate*

June 1997 – indefinite $ 222,896

**Named Scholarships and Prizes**

*Jagadishwar Mahanty Prize* $ 16,840

To be confirmed by Andrew James
Appendix – Interactions with the Faculties

**Professor N. Akhmediev** lectured *Nonlinear Dynamics* (PHYS3002) to 3rd year undergraduate students.

**Dr K. Baldwin** presented a short course in *Lasers in Semiconductor Technology* to 3rd year engineering students.

**Dr R. Ball** supervised a 4th year honours project in the Department of Physics and Theoretical Physics, The Faculties.

**Professor M.T. Batchelor** lectured the 3rd year mathematics course *Mathematical Methods Honours* (MATH3322); supervised an advanced studies project in the PhB Program and acted as a student mentor in the PhB program; and gave a joint seminar with Dr R.V. Burne on "The Natural History of Conophyton" in the Department of Geology, Faculty of Science.

**Dr A.M. Baxter** of the Department of Physics, Faculty of Science, carried out research on nuclear spectroscopy in the Department of Nuclear Physics.

**Dr B.R. Barrett**, a visitor from the University of Arizona, gave a short lecture series on "The Interacting Boson Model and Rotational Model" in the Department which formed part of the 4th year *Nuclear Spectroscopy* course for students from the Department of Physics, Faculty of Science.

**Dr T.T. Barrows** collaborated with Dr L. Reed and R. Wells, Flinders University and Professor D. Ride, Geology Department, The Faculties on "Direct Dating of Fossil Bone Using Cosmogenic Cl-36".

**Dr G. Borg** is supervising three honours students in their research projects on BushLAN. These students are Rhys Goodwin, Chris Brooke and Robert May, all from Faculty of Engineering and Information Technology.

**Dr M. Buda, Dr H.H. Tan and Professor C. Jagadish** supervised a Physics Special Topics student in the Faculties.
Dr A.P. Byrne holds a joint appointment with the Department of Nuclear Physics and the Department of Physics, Faculty of Science. He was Acting Head of the Department of Physics, Faculty of Science until August.

Dr Y. Chen gave lectures in "Nanotechnology" to undergraduate students from the Faculties.

Professor R. Elliman was a member of PhD Supervisory Panel for Mr Helmut Mackel.; gave lectures for course ENG4057 Ion Implantation Technology delivered as part of a Semiconductor course for 4th year students at the Faculties; and contributed to PHY3033, Nuclear Physics and Reactions, consisting of one lecture and six laboratory classes in Ion Beam Analysis of Materials for 3rd/4th year students at the Faculties.

Dr T. Esat holds a joint appointment with the Research School of Earth Sciences from July.

Dr L.K. Fifield continues collaborations with Dr Bradley Opdyke and two students, Helen Bostock and Siwan Rees, of the Department of Geology.

Dr S. Gibson supervised Ashley Norris, a 3rd year student, in Physics Special Topics, and Owen Dive, Distinguished Scholar Program in Science.

Dr M. Gulacsi taught Statistical Physics and Quantum Field Theory at the Department of Physics and Theoretical Physics, The Faculties.

Professor J. Harris presented an 18-lecture course on Plasma Physics to 3rd year students, Department of Physics, The Faculties.

Professor J. Harris, Dr B. Blackwell and Dr K. Walshe presented an 18-lecture and laboratory course in Power Electronics and Applications (ENGN4506) for 4th year engineering students in the Faculty of Engineering and Information Technology.

Professor S. Hyde delivered an illustrated lecture on "Geometry" to visual arts undergraduates at the National Institute for the Arts.

Professor Jagadish gave guest lectures on "Epitaxial Growth and Optoelectronic Devices" to 4th year students in the Department of Engineering, FEIT; and designed and gave an elective course on Semiconductor and Optoelectronic Devices (ENGN4519).
**Dr G.J. Lane** taught half of the *Nuclear Physics* course (PHY3033) for 3rd year students in the Department of Physics, Faculty of Science.

From 1 July 2003, **Professor J. Love** was appointed 25% to the Department of Physics, Faculty of Science, with responsibility as Convenor for undergraduate and graduate photonics teaching up to the Masters level; presented the 18-lecture course *Optical Fibre and Waveguide Transmission* (PHYS3050) during the first half of second semester to 11 engineering and physics students; presented a lecture for the physics course PHYS1020 *Photonics Today*; and a lecture for the engineering course ENG4507 *Microelectronics & Photonics Technology*.

**Professor J. Love and Dr A. Ankiewicz** presented the 18-lecture course *Fibre and Waveguide Devices for Optical Systems and Networks* (PHYS3051) during the second half of second semester to 11 engineering and physics students.

**Professor J. Love & Dr S. Tomljenovic-Hanic** developed an Electronic Photonics module in collaboration with the Faculty of Science as part of the new Master of Contemporary Science degree.

**Dr R.E. Robson** gave a lecture course on *Life Physics* (PH1004) in the Department of Physics and Theoretical Physics, The Faculties.

**Dr A. Rode** collaborated with Dr A. Christy, Department of Geology, on "Mass-Spectroscopy of Carbon Nanostructures".

**Dr A. Samoc** continued her collaborations with Professor M. Humphrey and Dr. M. P. Cifuentes, Department of Chemistry, on "Investigations of Third-order Optical Nonlinearities of Dendrimers"; and presented "Principles and Demonstrations of the Use of a Prism Coupler" for engineering students.

**Dr A. Samoc, Dr M. Samoc and Professor B. Luther-Davies** continued their collaborations on "Third-order Optical Nonlinearities of Oligomers, Dendrimers and Polymers Derived from Solution Z-scan Studies" with Dr M. Humphrey, Department of Chemistry, Faculty of Science.

**Dr M. Samoc and Professor B. Luther-Davies** collaborated with Dr Mark G. Humphrey, Department of Chemistry, on "NLO Properties of Organometallics".
Dr A.G. Truscott gave an honours course on Atom Optics which was delivered to students in Physics, The Faculties.

Dr A.N. Wilson taught the 3rd year Special Research Topics course in Particle Physics (PHYS3041) in the Department of Physics, Faculty of Science and was an Advanced Studies Instructor for the PhB courses SCNC1101 and SCNC1102.
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)
Professor Neil Manson, Associate Director (Students)

Heads of Departments
Dr David Williams, AM
Professor Brenton Lewis, AMPL
Professor John Love, DU
Professor Yuri Kivshar, DU
Professor Rob Elliman, EME (also Faculty Representative on BIAS)
Professor Barry Luther-Davies, LPC
Professor George Dracoulis, NP
Professor Allan Snyder, OSC
Professor John Mitchell, Deputy Head, OSC
Professor Jeffrey Harris, PRL
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.

Chair – Professor R.W. Boswell
Secretary – Mrs Gayle Samuel

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. Because of the School's requirements for major items of equipment, consideration of bids to the ARC Linkage Infrastructure, Equipment and Facilities (LIEF) and the University Major Equipment Committee was again given high priority. Issues concerning the Institute Planning Committee grants and the Vice-Chancellor's Plan for Growth Fund were also of importance.

Professor Jim Williams (Chair)
Professor Stephen Buckman, Associate Director (Academic)
Professor Neil Manson, Associate Director (Students)
Advisory Groups
At the beginning of 1998 the Director established a number of internal groups to offer advice regarding major School activities to optimise the academic functions of the School. Together with the Heads of Departments meetings, they prove extremely effective in formulating a cohesive approach to School management.

Academic Staffing Advisory Group
Professor Stephen Buchman (Chair)
Professor George Dracoulis
Professor Stephen Hyde
Professor Bob Dewar
Professor C. Jagadish
Secretary – Mrs Gayle Samuel

Budget Strategy Advisory Group
Professor Jim Williams (Chair)
Professor Stephen Buckman
Mrs Judith Huppatz (until May)
Mr Rana Ganguly (from June)
Ms Maree Kearns

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
Secretary – Ms Martina Landsmann

External Grants Advisory Group
Professor Stephen Buckman (Chair)
Professor Rob Elliman
Professor Jeffrey Harris
Dr David Hinde
Professor Yuri Kivshar
Professor Barry Luther-Davies
Dr Mark Ridgway

Major Equipment & LIEF Advisory Group
Professor Brenton Lewis (Chair)
Professor Stephen Buckman
Professor Robert Elliman
Dr Keith Fifield
Professor John Love

General Staff & Facilities Advisory Group
Professor Stephen Buckman (Chair)
Ms Julie Dalco
Dr Keith Fifield
Mr Rana Ganguly (from June)
Mr Kevin Lonsdale
Mr Ian McRae
Dr David Weisser
Secretary – Mrs Gayle Samuel

**Student Advisory Group**
Professor Neil Manson (Chair) and Convenor, Graduate Program in Physics
Dr Aidan Byrne
Dr Steve Gibson
Dr John Howard
Professor Chennupati Jagadish
Professor John Love
Dr Tim Wetherell
Ms Megan O'Mara (Student Representative, Faculty Board) (until September)
Mr Devin Ramdutt (Student Representative, Faculty Board) (from September)
Secretary – Ms Gillian Harman

**Other School Committees (alphabetically)**

**Colloquium Committee**
Professor C. Jagadish (Chair)
Professor Hans Bachor
Dr Rowena Ball
Professor Robert Crompton
Professor Rob Elliman
Professor Neville Fletcher
Dr Miklos Gulascsi
Dr Tim Senden
Ms Laura Walmsley – Secretary

**Computing Policy Advisory Committee**
Dr Boyd Blackwell (Chair)
Dr Gordon Foote
Dr Stephen Gibson
Mr Heinz Horn
Professor John Mitchell
Dr Elena Ostrovskaya
Dr Marek Samoc
Dr Adrian Sheppard
Dr Hark Hoe Tan

*Executive members:*
Mrs Judith Huppatz (until May)
Mr Rana Ganguly (from June)
Mr Kevin Lonsdale
Dr Shiu Tin

**Annual Report Committee**
Professor Jim Williams
Professor Steve Buckman
Dr Keith Fifield
Dr Mark Knackstedt
Professor Brenton Lewis
Dr Timothy Wetherell
Ms Martina Landsmann

**Fixed-Term Academic Appointments Committee**

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

Professor Stephen Buckman (Chair)
Dr Nanda Dasgupta
Professor Rob Elliman
Professor Jeffrey Harris
Professor John Love

**Occupational Health & Safety Committee**

Mr Anthony Hyde (Chair)
Dr Keith Fifield (Deputy-Chair)
Mr Michael Blacksell
Mr Alan Cooper
Mr Kevin Lonsdale
Mr Gary Picker
Dr Maarten Vos

*By invitation:*

Mr Stephen Altree-Williams (ANU OH&S Unit)
Mr Tom Halstead

**Public Relations Committee**

Dr Tim Wetherell (Chair)
Professor Rod Boswell
Dr Aidan Byrne
Dr Stephen Gibson
Dr Miklos Gulacsi
Dr John Howard
Professor John Love
Professor Neil Manson
Dr Tim Senden
Professor Jim Williams
Ms Elena Wilson (Student representative)

Local Promotions Committee
Professor Jim Williams, Director (Chair)
Professor Rob Elliman
Professor Adrienne Hardham (RSBS)
Professor Stephen Hyde
Professor Neil Manson
Professor Leo Radom (RSC)
Secretary — Mrs Gayle Samuel
Appendix – Invited Conference Presentations & Lectures

Legend:  
* External to the University  
# Member of another area of this University other than this School  
Presenter of contributed paper is underlined

Petrotech-2003: 5th International Petroleum Conference and Exhibition, New Delhi, India, 9-12 January


International Conference on Phonons in Condensed Materials, Bhopal, India, 20-23 January

Das, M.P. — Coupled Plasmon-phonon Modes in a Two Dimensional Electron Gas in Presence of Spin-orbit Interaction

NUPP Summer School 2003, Victor Harbor, 20-24 January

Byrne, A.P. — Shell Model Approaches to Multiparticle States in Heavy Nuclei

Dasgupta, M. — Nuclear Fusion: Towards the Driplines

Hinde, D.J. — Nuclear Fusion: Towards Superheavy Elements

Sydney University XAFS Workshop, Sydney, 28 January

Ridgway, M.C. — An EXAFS Beamline for the Australian Synchrotron
1st Australian Synchrotron Users Workshop, Melbourne, 29-31 January

Ridgway, M.C. — An EXAFS Beamline for the Australian Synchrotron

Centre of Nonlinear Studies Workshop: Advances in Raman-Based, High Speed Photonics: Raman Amplifies, Data Transmission and Signal Processing, Los Alamos, USA, 3-5 February

Akhmediev, N.N. — Dissipative Solitons

Conference on Advanced Materials and Nanotechnology, Wellington, New Zealand, 10-14 February

Jagadish, C. — Atomic Interdiffusion for Photonic Integrated Circuits

TMS 2003: 132nd Annual Meeting & Exhibition, San Diego, USA, 2-6 March

Williams, J.S. — Ion-irradiation of Electronic Materials: Defects and Microstructures

International Workshop: Chaos in Nuclei from a Dynamical Point of View, Beijing, China, 12-15 March

Kun, S.Yu. — Critical Phenomena in Finite Quantum Many-body Systems

International Electric Propulsion Conference, Toulouse, France, 17-21 March

Charles, C. and Boswell, R.W. — The Helicon Double Layer Plasma Thruster

Number Theory and Combinatorics in Physics, Gainesville, USA, 21-23 March

Batchelor, M.T. — The XXZ Spin Chain and Combinatorics
Current Trends in International Fusion Research: Review and Assessment, Washington, USA, 23-29 March

Sen, S. — Transport Barrier by RF Waves

11th International Workshop on Optical Waveguide Theory & Numerical Modelling, Prague, Czech Republic, 4-5 April

Love, J.D. — Passive Planar Devices for Light Processing in Telecommunications

Materials Research Society Spring Meeting, San Francisco, USA, 21-25 April


Luo, X., Zha, C. and Luther-Davies, B. — Anhydrous Sol-gel Synthesis of Zirconia-doped Siloxane Polymer for Integrated Optics


CSIRO Centre for Complex Systems Science Workshop, Canberra, 10-12 June

Ball, R. — *Stability and Control of Complex Dynamical Systems*

5th Dublin Differential Equations Conference, Dublin, Ireland, 10-14 June

Love, J.D. — *Differential Equations for Optical Communications – Rays, Modes & Light Processing*

7th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM), Bucharest, Romania, 10-15 June

Samoc, A., Samoc, M., Luther-Davies, B., Kelly, J.F.*, Krausz E.*, and Willis A.C.* — *New Second-order Nonlinear Octupolar Molecules*


International Conference on Dynamic Inhomogeneities in Complex Systems, Bled, Slovenia, 14-20 June

Gulacsi, M. — *Competing Interactions of Spin and Lattice in the Kondo Model*

The VIII International Conference on Nucleus-Nucleus Collisions, Moscow, Russia, 17-21 June

Dasgupta, M., Hinde, D.J., Morton, C.R. and Newton, J.O. — *Importance of Entrance Channel Dynamics on Heavy Element Formation*

CLEO-Europe 2003, Munich, Germany, 22-27 June

**European Quantum Electronics Conference**, Munich, Germany, 22-27 June


**Materials Science & Ion Beams**, Ontario, Canada, 25-27 June

Williams, J.S. — *Stitching: Cotton Buds and Scotchtape*

**5th International Conference on Transparent Optical Networks**, Warsaw, Poland, 29 June to 3 July

Tomljenovic-Hanic, S. — *Symmetry-selecting Gratings and their Applications*

**5th International Congress on Industrial and Applied Mathematics**, Sydney, 7-11 July

Akhmediev, N.N. — *Nonlinear Schrödinger Equation and its Varieties: Integrable, Hamiltonian and Dissipative Systems*

Sen, S. — *Effect of Parallel Flow on Ballooning Modes*

**20th International Conference on Organometallic Chemistry**, Corfu, Greece, 7-12 July

Australian Conference on Optical Fibre Technology 2003 (COIN/ACOFT), Melbourne, 13-16 July


Ruan, Y., Luther-Davies, B., Li, W.T., Rode, A.V. and Krolikowski, W. — *Fabrication and Characterisation of As$_2$S$_3$ Waveguides Etched by a Helicon Plasma*

NATO Advanced Research Workshop Nonlinear Waves: Classical and Quantum Aspects, Estoril, Portugal, 13-17 July

Akhmediev, N.N. — *Dissipative Solitons*

Space Futures Conference, Melbourne, 14-17 July

Charles, C., Boswell, R.W. and Sutherland, O. — *To Mars and Beyond, Plasma Thrusting into the Future*

23rd International Conference, on Photonic Electronic and Atomic Collisions, Stockholm, Sweden, 23-29 July

Buckman, S.J. — *Electron-molecule Collisions at Low Incident Energies*

Lower, J.C.A. — *Developments in Quantum State Resolved (e,2e) Experiments*

8th International Meeting on Hole Burning, Single Molecule and Related Spectroscopies: Science and Applications, Bozeman, USA, 27-31 July

Sellars, M., Longdell, J.J., Fraval, E.L. and Manson, N.B. — *Rare Earth Quantum Computing*
International Symposium on (e,2e) Double Photoionization and Related Topics, Königsstein, Germany, 30 July to 2 August

Kheifets, A.S. — *Double Photoionization: Beyond Helium Atom*

International Symposium on Electron-Molecule Collisions and Swarms, Prague, Czech Republic, 30 July to 2 August


Linear and Nonlinear Optics of Organic Materials III, San Diego, USA, 4 August


Sagamore XIV, International Conference on Charge, Spin and Momentum Densities, Broome, 13-18 August


International Workshop on Energy Storage and other Opportunities with Nuclear Isomers, Idaho, USA, 14-15 August

Dracoulis, G.D. — Nuclear Structure Aspects of Isomer Formation

XII International Workshop on Sol-gel Science and Technology, Sydney, 25-29 August

Luo, X., Zha, C. and Luther-Davies, B. — *Anhydrous Sol-gel Synthesis of Titania-doped Siloxane Polymer for Integrated Optics*
CSIRO Complex Systems Science Symposium and Project Development Workshop.
Sydney, 27-29 August

Ball, R. — *Cross-disciplinary Bridges in Complex Systems Science*

12th International Conference on Radiation Effects in Insulators, Gramado, Brazil, 31 August to 5 September

Ridgway, M.C. — *Structural Perturbations and Amorphisation of Semiconductor Nanocrystals in a Silica Matrix*

3rd European Conference on Neutron Scattering, Montpellier, France, 3-6 September

Vos, M., Abdul-Redah, T.*, Kleiner, C.* and Chatzidimitrious-Dreismann, C.A.* — *Anomalous Neutron Compton Scattering from Entangled Protons of a Solid Polymer*

New Laser Technologies and Applications, Patras, Greece, 5-8 September


Joint Meeting of the 14th World Congress on Animal, Plant and Microbial Toxins and Australian Society of Biophysics, Adelaide, 14-19 September

Chung, S.-H. — *Plenary Lecture*

X International Nicolas Cabrera Summer School, New Trends in Ion Beam Physics and Applications: A Road to Nanotechnologies Miraflores de la Sierra, Madrid, Spain, 15-19 September
Elliman, R.G. — *Production of Si Nanocrystals by Ion-implantation in SiO₂ and Heavy-ion Elastic Recoil Detection Analysis*

**The 27th International Workshop on Condensed Matter Theories**, Toulouse, France, 15-20 September

Das, M.P. — *Landauer Formula without Landauer's Assumptions*

**International Conference on Advances in Optoelectronics and Lasers**, Alushta, Ukraine, 16-19 September

Jagadish, C. — *Quantum Well and Dot Intermixing for Photonic Integrated Circuits*

**NATO Advanced Research Workshop on Molecular Nanowires and other Quantum Objects**, Bled, Slovenia, 20-24 September

Gulacsi, M. — *Finite Temperature Luttinger Liquids*

**17th European Colloid and Interface Society Meeting**, Florence, Italy, 21-26 September

Hyde, S.T. — *Formation of Silica-carbonate Biomorphs*

**14th International Stellarator Workshop**, Greifswald, Germany, 22 September to 1 October


Shats, M.G., Punzmann, H., Xia, H. and Solomon, W.M. — *L-H Bifurcations as Phase Transitions, the Role of Zonal Flows and the Spectral Energy Transfer*

**Dynamics Days Conference**, Palma de Majorca, Spain, 23-26 September
Akhmediev, N.N. — Dissipative Solitons

Materials 2003: Adaptive Materials for a Modern Society, Sydney, 1-3 October

Williams, J.S. — AMTN – The Vision

NATO Advanced Research Workshop on Symmetry and Heterogeneity in High Temperature Superconductors, Erice, Italy, 4-10 October

Gulacsi, M. — High Temperature Superconductivity: The Attractive Up Regime

Frontiers in Optics: The 87th OSA Annual Meeting and Exhibit Laser Science X1X, Tuscon, USA, 5-9 October

Kivshar, Yu.S. — Optical vs Matter-wave Solitons: Difference and Similarities

Kivshar, Yu.S. — Solitons in Optical and de Broglie Waves 11

Conference on Laser Ablation COLA’03, Crete, Greece, 6-10 October


The 8th IUMRS International Conference on Advanced Materials, Yokohama, Japan 8-13 October

Williams, J.S. — Materials Research, Education and Networking in Australia

PIERS 2003, Hawaii, USA, 13-16 October

Kivshar, Yu.S. — Nonlinear Photonic Crystals and Circuits: Towards All-optical Technologies
2nd IFIP-TC6 International Conference on Optical Communications and Networks
Bangalore India, 20-22 October

Ankiewicz, A. — Substantial Sidelobe Suppression in Optical Bandpass Filtering Using Grating-assisted and Apodized Directional Coupler

57th Gaseous Electronics Conference, San Francisco, USA, 21-24 October

Buckman, S.J. — Collisions with Laser-cooled Metastable He Atoms

Herrick, A., Perry, A. and Boswell, R.W. — Etching Silicon by SF6 in a Continuous and Pulsed Power Helicon Reactor

CONSEA*ACT 2003: Working Scientifically – Teaching and Experience, CSIRO, Canberra, 23-24 October

Williams, J.S. — Nanoscience and Nanotechnology

International Exposition and 73rd Annual Meeting of the Society of Exploration Geophysicists, Dallas, USA, 27-31 October


American Physical Society Division of Nuclear Physics Fall Meeting (DNP03), Tucson, USA, 29 October to 1 November
Lane, G.J. — *Structure of Neutron-rich Nuclei Near and Above Pb-208 Populated Using a Variety of Reaction Techniques*

**International Network of Nuclear Structure and Decay Data Evaluators.** Vienna, Austria, 10-14 November

Kibédi, T. and Spear, R.H. — *Electric Monopole Transitions*

Kibédi, T. — *ENSDFtools and Spectools*

**FUSION03: From a Tunneling Nuclear Microscope to Nuclear Processes in Matter.** Miyagi, Japan, 12-15 November

Dasgupta, M. — *The Nuclear Potential in Heavy Ion Fusion*

Hinde, D.J., Dasgupta, M., Morton, C.R. and Newton, J.O. — *Three Steps to Fusion*

**Asia Pacific Nanotechnology Forum, Oz Nano'03.** Cairns, 19-21 November

Elliman, R.G. — *Light Emission from Si Nanocrystals – Size Does Matter*


**Workshop on Future Directions in Condensed Matter Physics.** Melbourne, 26-27 November

Das, M.P. — *Condensed Matter Theory: Revolution Continues*
13th Nuclear Techniques of Analysis & 8th Vacuum Society of Australia Congress, Sydney, 26-28 November

Elliman, R.G. — Light Emission from Silicon Nanocrystals – Mechanisms and Applications

Australian Conference on Lasers, Optics, and Spectroscopy ACOLS'03, Melbourne, 30 November – 4 December


Jarvis, R.A., Rode A.V. and Luther-Davies B. — Laser-written Waveguides in As$_2$S$_3$ Chalcogenide Glass

First International Symposium on Radiation Physics, Mexico, 1-3 December

Chadderton, L.T. — Opening and Inaugural Presentation: The Nanotechnological World of Charged Particle Tracks in Solids

Materials Research Society Fall Meeting, Boston, USA, 1-5 December

Deenapanray, P.N.K. — Defect Engineering and Atomic Relocation Processes in Impurity-Free Disordered GaAs for Optoelectronic Devices Applications (presented by Jagadish, C.)

13th Gordon-Godfrey Condensed Matter Workshop, Sydney, 3-4 December

Das, M.P. — Physics of Mesoscopic Organic Transistors
International Conference on Materials Advances and Technology, Singapore, 7-12 December

Tan, H.H. — Interdiffusion in Quantum Wells and Quantum Dots and its Application to Optoelectronic Devices

International Toki Conference, Toki City, Japan, 9-12 December


5th CLEO Pacific Rim Conference, Taipei, Taiwan, 15-19 December

Akhmediev, N.N., Soto-Crespo, J.M.* — Composite Soliton Generation in Systems with Two Peak Spectral Filtering


Love, J.D. — Novel Adiabatic & Grating-Based Devices for WDM Wavelength Add/Drop Applications

Maruno, K.-I., Ankiewicz, A., Akhmediev, N.N. — Dissipative Solitons in Discrete Systems

IEEE Conference on Electron Devices and Solid State Circuits, Hong Kong, 16-18 December

Lan, F. — Spatial Selectivity of Impurity Free Vacancy Disordering Using Different Layers for Photonic/Optoelectronic Integrated Circuits
Appendix – Outreach Activities

*Individual Outreach Activities*

Murray Batchelor supervised a student as part of the CSIRO Student Research Scheme.

Aidan Byrne presented a lecture on physics to groups of year-3-6 students at Wanniassa School and conducted a tour of the Department of Nuclear Physics Heavy Ion Facility for students from Canberra Girls Grammar. *Photos available*

Anna Carnerup, Scott Collis, Ira Cooke, Fenton Glass, Lydia Knüfing and Gerd Schröder participated in the Adopt-a-Physicist program, visiting different schools in Canberra, talking about their work and what it is like to be a scientist:

Sam Moreau from St Gregory's College, Campbelltown spent one week in the Department of Nuclear Physics to undertake a Vocational Education Work Placement in "Computer Aided Design and Machine Tool Production” supervised by Alan Cooper and other members of the Technical Team.

Mahananda Dasgupta conducted a tour of the Department of Nuclear Physics Heavy Ion Facility for approximately 20 students from Narrabundah College in October. *Photos available*

Keith Fifield conducted a lecture and a laboratory session for the ADFA Environmental Physics course students in May and jointly with Dr Steve Tims supervised two year-10 work experience students, Sue Xu and Brad Pillans, both from Canberra High School, for a period of one week during May.

Stephen Hyde delivered a public lecture, "Animal, Vegetable or Mineral: An Astrobiologist's Journey from Marble Bar to Mars", co-organised by the National Institutes for Physical Sciences and Biological Sciences, at the National Museum of
Australia. This work was also featured in a number of national and international radio and newspaper interviews in November.

**Stephen Hyde** and **Andy Christy** took part in the ABC documentary, "Alien Underworld", screened nationally for Science Week in August.

**C. Jagadish** visited IEEE Lasers and Electro-Optics Society chapters in Ukraine, Scotland, Turkey, Italy, Benelux, Dallas, Albuquerque, Denver, Boston, Baltimore, Norfolk, New Delhi and gave distinguished lecture seminars on "Quantum Well and Quantum Dot Intermixing for Integration of Optoelectronic Devices". He also gave an overview of the Research School and National Institute of Physical Sciences.

Scott McLachlan (B. Physics Engineering) and Sulabh Jain (B. Software Engineering) both final year students at Canberra University visited the Department of Nuclear Physics from March to November to undertake a "LINAC Cryogenics Control" project to develop a graphical user interface program, supervised by **Tibor Kibédi**.

**Dr S. Kuyucak** lectured the Honours Course "Electrodynamics" at the School of Physics, Sydney University

**Greg Lane** spoke at the National Youth Science Forum on "How I Became a Scientist" in January and supervised students Beina Wei (Hawker College) and Sudipto Pal (Narrabundah College) on a project "Magnetic Moments in Radioactive Lead Nuclei" as part of the CSIRO Student Research Scheme.

**John Love** gave a talk on photonics to the National Science Teachers Summer School at ANU in January. He presented introductory lectures on photonics at ANU to undergraduates in the Department of Physics in March and in the Department of Engineering in May. He supported the ANU and Photonics Institute involvement in the National Science Festival in Canberra and an Engineering Careers evening at University House. He organised the ACT Siemens Science & Engineering Experience involving ANU, University of Canberra and the CIT, which ran from 29 September to 1 October.
Anna Samoc provided laboratory tours for participants of the CUDOS Workshop in November and summer students.

Andrew Stevenson was a speaker and industry partner for the National Youth Science Forum held at the University of Canberra in January and a speaker and laboratory presenter for the ACT Siemens Science & Engineering Experience in September.

Steve Tims, Aidan Byrne, Greg Lane, Nanda Dasgupta, David Hinde and Anna Wilson ran workshops and conducted tours of the School's Heavy-Ion Facility for the Rio Tinto National Science Forum, the Siemens Winter School and the National Science Teacher's Summer School.

Tessica Weijers presented tutorials at the School of Physical, Environmental and Mathematical Sciences (formerly School of Physics) at the Australian Defence Force Academy, University of NSW.

Anna Wilson was closely involved in arranging the Women in Physics Lecture in Canberra, which is primarily aimed at high school students, in the hope of encouraging them to study physics at a higher level.
Appendix – Service to Outside Organisations

Professor N. Akhmediev
Member, Scientific Program Committee, 3rd IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena, Georgia, USA, April 2003
Member, Sub-committee, Nonlinear Guided Waves and Their Applications Conference, Toronto, Canada, March 2003

Dr A. Ankiewicz
Member, Technical Committee, Australian Conference on Optical Fibre Technology, Melbourne, July 2003
Member, Technical Committee, European Conference on Optical Communications, Italy, September 2003

Dr T. Aste
Founding Member and Member, Board of "ARIA-Canberra", the Association for the development of collaborative research between Italy and Australia
Founding Member, "Marie Curie national Group" for Australia
Member, EU collaboration, COST P10 Physics of Risk network (September 2003 – December 2007)

Dr K.G.H. Baldwin
Member, Australian Research Council Expert Advisory Committee: Mathematics, Information and Communication Sciences
Chair, International Council on Quantum Electronics
Chair, Australian Institute of Physics Congress, Canberra, 2005
Member, General Organising Committee, International Conference on Laser Spectroscopy 2003
Treasurer, Vacuum Ultraviolet Conference XIV, Cairns, 2004
Member, Liaison Committee, Australian Conference on Optics, Lasers and Spectroscopy
Member, National Committee for Spectroscopy, Australian Academy of Science
Member, National Committee for Physics, Australian Academy of Science
Chair, Science Policy Committee, Federation of Australian Scientific and Technological Societies
Member, Australasian Council on Quantum Electronics

Dr R. Ball
Minutes Secretary, ACT Branch of the Australian Institute of Physics
Liaison Officer, Forum for European-Australian Science and Technology Cooperations (FEAST-France)
Member, WISENET
Member, ANZIAM

Dr T.T. Barrows
Member, Committee Australasian Quaternary Association
Member, Committee National Institute for the Environment
Regional Coordinator, MARGO Project (Multiproxy Approach for the Reconstruction of the Glacial Ocean Surface)

Professor M.T. Batchelor
Member, Advisory Board, Journal Physics A
Referee, Grant Application, NSF, USA
Member, AIP Congress 2005 Program Committee

Dr G.G. Borg
Editor, Czech Journal of Physics

Professor R.W. Boswell
Member, Asia Pacific Conference on Plasma Science and Technology
Member, Forum for Europe and Australian Science and Technology
Member, Foreign Relations Committee, ATSE

Professor S. Buckman
Member, Editorial Board, New Journal of Physics
Chair, ACT Chapter, Fulbright Alumni Association
Member, Scientific Committee, International Conference on Electron Molecule Scattering
Member, International Scientific Committee, Symposium on the Physics of Ionized Gases (SPIG 21)
Member, Futures Committee, International Conference on Photonic, Electronic and Atomic Collisions
Member, Will Allis Prize Committee, American Physical Society

Professor A.P. Byrne
Member, Committee ACT Branch, Australian Institute of Physics
Member, Organising and Program Committees, 16th Biennial Congress of the Australian Institute of Physics, Canberra, 30 January – 4 February 2005
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

**Dr S.J. Cavanagh**
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004

**Professor L.T. Chadderton**
Founding Editor, International Journal of Radiation Effects and Defects in Solids
Member, Editorial Advisory Board, Nuclear Tracks and Radiation Measurement
Member, Editorial Advisory Board, International Materials Science Forum
Member, Steering Committee, Bilateral Science & Technology Agreement, Mexico and the Federal Government of Australia
Member, United Nations Committee on Photovoltaic Applications in Less-Developed Countries, UN Centre for Science & Technology for Development
Member, International Committee, Biennial Conference Series on Radiation Effects in Insulators
Honorary Life Member, International Nuclear Track Society, and International Committee, Biennial Conference Series on Particle Tracks in Solids
Member, International Committee, Biennial Conference Series on Quantum Electrodynamics and Statistical Physics
Member, Advisory Committee, International Conference on Radiation Physics, Government of Mexico, Mexico DF
Member, Advisory Committee, Instituto de Petrolleo Mexicana, Mexico DF

**Dr Y. Chen**
Program Leader, ARC Centre of Excellence in Functional Nanomaterials
Member, Editorial Board, International Journals of Indian Nanotechnology
Regional Editor, Journal of Asian Pacific Nanotechnology Forum
Co-chair, Nanomaterials Program, 2003 Annual Conference of the Australian National Nanotechnology Network (NanoOz 03)

**Professor R.W. Crompton**
Vice-president, Australian Fulbright Association, ACT Chapter Convenor
Member, International Advisory Board, International Conferences on Atomic and Molecular Data and their Applications

**Dr M P. Das**

Member, Editorial Advisory Board, Journal of Physics: Condensed Matter  
Member, Editorial Board, International Journal of Condensed Matter and Materials Communications  
Co-convenor, Annual Gordon-Godfrey Research Workshops on Condensed Matter Physics  
Member, International Advisory Committee, International Workshops on Condensed Matter Theories  
Member, International Advisory Committee, International Conference on Phonons in Condensed Materials, Bhopal, India, January 2003

**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 2005

**Professor R.L. Dewar**

Member, Commission 16, International Union of Pure and Applied Physics  
Member, National Committee for Physics  
Chair, ACT Branch Committee, Australian Institute of Physics  
Member, International Advisory Committee, International Congress on Plasma Physics, Nice, France, October 2004  
Member, Program Committee, International Toki Conference, Toki, Japan, December 2003  
Alternate, Executive Committee, IEA Implementing Agreement on the Development of the Stellarator Concept  
Member, Board of CSIRO Complex Systems Science Centre  
Member, AIP Congress 2005 Organising Committee

**Dr T. Di Matteo**

Founding Member and Member, Board of "ARIA-Canberra", the Association for the development of collaborative research between Italy and Australia  
Member, EU collaboration, COST P10 Physics of Risk network (September 2003 – December 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, Program Advisory Committee, 88-inch Cyclotron (including Gammasphere), Lawrence Berkeley National Laboratory
Member, Australian Academy of Science, Reactor Working Group
Member, 19th AINSE Nuclear and Particle Physics Program Committee, (in association with the AIP Congress), Sydney
Member, International Advisory Committee, Conference on Nuclear Structure, Crete, July 2003
Member, International Advisory Committee, Conference on Radioactive nuclear Beams RNB6, Argonne National Laboratory, USA, September 2003
Member, International Advisory Committee, 8th International Spring Seminar on Nuclear Physics, Paestrum, Italy, May 2004
ANU Representative, Engineering and Physical Sciences Research Council (UK), ANU-EPSRC 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

Professor R.G. Elliman
President, 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, ACT Branch Committee, Australian Institute of Physics
Member, Program Review Committee, Accelerator Applications Program, Australian Nuclear Science and Technology Organisation
Member, External Advisory Board, Microanalytical Research Centre, University of Melbourne
Member, Divisional Committee, Electronic Materials and Processing Division, International Union of Vacuum Science Techniques and Applications
Co-chair and Co-organiser, Symposium on Group IV Optoelectronics, MRS Spring Meeting, 2003
Member, Program Committee, Nuclear Techniques of Analysis Conference, Sydney, 26-28 November, 2003

Dr L.K. Fifield
Member, Scientific Advisory Committee, 17th International Radiocarbon Conference, Wellington, New Zealand, September 2003
Major Grant Proposal Referee, United States NSF major facilities proposal 2003
ANU nominee, ACT Radiation Council
International member, AMS Strategy Group of the UK National Environment Research Council (NERC)
Major Grant Proposal Referee, NERC (UK)

**Professor N. Fletcher**
Representative, Academy of Science and Academy of Technological Sciences and Engineering, on the Board of FEAST (the Forum for Europe-Australia Science and Technology collaboration)
Member, Selection Committee, Australia-Europe senior travel awards
Member, Selection Committee, Australia-USA travel awards for young researchers
Editor, Acoustics Australia
Associate Editor, Journal of the Acoustical Society of America

**Dr S.T. Gibson**
Council and web membership database administrator, Australian Optical Society
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004

**Dr M. Gulacsi**
Associate Editor, Philosophical Magazine, UK
Deputy Director General, International Biographical Center, UK

**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

**Dr D.J. Hinde**
Member, International Advisory Committee, 8th International Conference on Nucleus-Nucleus Collisions, Moscow, 2003
Member, International Advisory Committee, FUSION03 International Conference, Japan, November 2003
Reader, Physical, Chemical and Earth Sciences, Australian Research Council
**Dr J. Howard**  
Member, Editorial Board, Plasma Physics and Controlled Fusion  
Member, 11th International Congress on Plasma Physics Program Committee  
Treasurer, Australian Institute of Physics Congress, 2005

**Professor C. Jagadish**  
Chair, IEEE Australian Chapter of Electron Devices and Lasers & Electro-Optics Societies  
Member, Publications Committee, IEEE Electron Devices Society, USA  
Member, Meetings Committee, IEEE Electron Devices Society, USA  
Chair, Optoelectronic Devices Technical Committee of the IEEE Electron Devices Society, USA  
Elected Member, Administrative Committee, IEEE Electron Devices Society, USA  
Member, IEEE Compound Semiconductor Devices and Circuits Technical Committee, Electron Devices Society  
Member, IEEE Nanotechnology Technical Committee, Electron Devices Society  
Member, IEEE Lasers and Electro-Optics Society Quantum Electronics Award Selection Committee  
Member, Administrative Committee, IEEE Nanotechnology Council  
Chair, IEEE Nano-Optoelectronics and Nano-Photonics Technical Committee, Nanotechnology Council  
Member, Dielectric Science & Technology Division Executive Committee, The Electrochemical Society, Inc.  
Member, Electronics Division Executive Committee, The Electrochemical Society, Inc.  
Associate Editor, IEEE/OSA Journal of Lightwave Technology  
Associate Editor, Journal of Nanoscience and Nanotechnology, American Scientific Publishers  
Member, Steering Committee, IEEE Journal of Lightwave Technology  
Member, Editorial Board, Journal of Materials Sciences, Materials for Electronics, Kluwer  
Member, International Editorial Advisory Board, Journal of Optical Society of Korea  
Chair, Technical Program Committee, 3rd IEEE Conference on Nanotechnology, San Francisco, August 2003  
Member, Program Sub-Committee on Active and Compound Semiconductor Devices, OSA Integrated Photonics Research Conference (IPRC 2003), Washington, USA, July 2003  
Member, IEEE Lasers and Electro-Optics Society Annual Meeting, Optoelectronic Materials and Processing Program Committee, Tucson, USA, October 2003  
Member, International Advisory Committee, IEEE Electron Devices and Solid State Circuits Conferences, Hong Kong, December 2003
Member, Steering Committee, IEEE 24th International Conference on Microelectronics, Nis, Yugoslavia, May 2004
Member, Scientific Advisory Committee, 2004 Conference on Optoelectronic and Microelectronic Materials and Devices, Australia, December 2004
Member, Program Committee, 13th International Semiconducting and Insulating Materials Conference, September 2004, Beijing, China
Member, International Advisory Committee, Photonics 2004, 7th International Conference on Optoelectronics, Fibre Optics and Photonics, Cochin, India, December 2004
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, Expert Steering Committee, Nanotechnology Benchmarking Project, Australian Academy of Science
Professional Advisor, LEDEX Corporation
Director, Acton Semiconductors Pty Ltd
Reader, Australian Research Council

Dr A.S. Kheifets
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004
Editor, Proceedings of the 14th International Conference on Vacuum Ultraviolet Physics

Professor Y.S. Kivshar
Referee, Physics Letters A
Referee, Physica D
Referee, Optics Letters
Referee, Optics Communications
Referee, National Science Foundation, USA
Referee, Research Foundation of Singapore
Reader and Referee, Australian Research Council

Dr M. Kono
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004

Dr W. Krolikowski
Referee, Physical Review Letters and Physical Review A & E
Referee, Journal of the Optical Society of America B
Referee, Optics Letters, Optics Express & Optics Communications
Referee, Acta Physica Polonica A

Dr K. Kumar
Member, Editorial Board, Transport Theory and Statistical Mechanics

Professor B.R. Lewis
Chairman, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004
Associate Editor, Journal of Quantitative Spectroscopy and Radiative Transfer

Professor J.D. Love
Advisory Member, Far East & Australia, European Conference on Optical Communications, Italy, September 2003
Member, International Advisory Committee, OptoElectronics & Communications Conference (OECC)
Convenor, Singapore-Australia Photonics School, Singapore, September 2003
Convenor, China-Australia Photonics School, Wuhan, September 2004
Convenor, 2nd Korea-Australia Photonics School, Busan, October 2004
Convenor, 13th International Workshop on Optical Waveguide Theory & Numerical Modelling, Kiama, July 2004
Convenor, Physics in Industry Workshop, ANU, January 2005
Co-convenor, Education & Training Workshop, CRC Association Conference, Canberra, May 2003
Co-chair, Australian Conference on Optical Fibre Technology/Bragg Grating, Poling & Photosensitivity Conference (ACOFT/BGPP), Sydney, July 2005
Director, ACT Siemens Science & Engineering Experience
Director, Education & Training, Australian Photonics CRC
Director, Photonics Institute Pty Ltd, Sydney
Director, Australian Optical Society
General Chair, International Congress on Optics, Australian Conference on Optical Fibre Technology, Australian Conference on Optics, Lasers & Spectroscopy (ICO/ACOFT/ACOLS), Sydney, July 2008
Group Head, Australian Photonics CRC, ANU
Honorary Ambassador for Canberra
International Advisor, Network Technology Research Centre, Nanyang Technological University, Singapore
Member, ACT Government, Knowledge Based Economy Board
Member, ACT Government, Knowledge Fund Panel
Member, Korea-Australia Photonics Association Committee
Member, Organising Committee, Australian Conference on Optical Fibre Technology (ACOFT)/Conference on the Optical Internet (COIN), Melbourne, July 2003
Member, Organising Committee, Australian Institute of Physics Congress, Canberra, 2005
Member, Steering Committee, Australian Conference on Optical Fibre Technology (ACOFT)
Member, Technical Subcommittee, 5th Pacific Rim Conference on Lasers & Electro-Optics, Taipei, July 2003
Member, Advisory Committee, International Symposium on Advances & Trends in Fibre Optics & Applications, Chongqing, China, October 2004
Member, Organising Committee, Australian Conference on Optical Fibre Technology/Australian Optical Society Conference (ACOFT/AOS), ANU, July 2004
Postgraduate research student supervisor, La Trobe University
Postgraduate research student supervisor: University of Melbourne
Postgraduate research student supervisor: University of Sydney
Program Manager, Photonic Integrated Circuits, Australian Photonics CRC
Reader, Australian Research Council
Referee, Engineering & Physical Sciences Research Council, UK
Referee, Research Grants Council, Hong Kong
Referee, Agency for Science, Technology And Research, Singapore
Referee, Journal of Lightwave Technology
Referee, Optics Letters
Referee, Optical & Quantum Electronics
Referee, Journal of Physics
Senior Vice-president Education, Photonics Institute, Bruce, ACT

Dr J.C.A. Lower
Member, General Committee, International Conference on Photonic, Electronics, and Atomic Collisions (ICPEAC)

Professor B. Luther-Davies
Research Director, Australian Photonics CRC - Canberra Node to October 2003
Director, Board of Australian Photonics Pty Ltd.

Dr D. Neshev
Referee, Optics Letters

Emeritus Professor B.W. Ninham
Co-founder ANU Emeritus Faculty; Italian National Chair of Chemistry, Universities of Florence and Cagliari
Co-organiser, 17th International Conference of European Colloid and Interface Society

Dr E. Ostrovskaya
Referee, Physical Review Letters
Referee, Physical Review A

Dr M. Petravic
Member, Local Organising Committee, First Australian Synchrotron Summer School

Dr M.C. Ridgway
Member, Organising Committee/Program Committee, 14th International Conference on Vacuum Ultraviolet Radiation Physics, Australia 2004
Member, Organising Committee/Program Committee, 1st Australian Synchrotron Users Workshop, Australia 2003
Member, International Committee, Radiation Effects in Insulators International Conference Series
Chair, Photon Factory Specialist Committee, Australian Synchrotron Research Program
Member, Executive Committee, Australian Synchrotron Research Program
Chair, EXAFS Beamline Development Committee, Australian Synchrotron Project
Member, National Scientific Advisory Committee, Australian Synchrotron Project
Co-Chair, 1st Australian Synchrotron Summer School, Canberra, Australia 2004

Dr B.A. Robson
Member, Australian-French Association for Science and Technology (ACT) Incorporated

Dr R.E. Robson
National secretary, Australian Association of von Humboldt Fellows

Dr T.J. Senden
Board Member, The Rio Tinto Australian Sciences Olympiads
Consultant, Vita Life Sciences assisting with FDA submission
Member, Program Committee, biophysics representative, 2005 AIP Physics Congress

Dr M.G. Shats
Member, Program Committee, 11th International Congress on Plasma Physics

Dr A. Stevenson
General Manager and Advisory Committee Chair, Photonics Institute, Bruce, ACT
Member, Program Reference Group, and consultant on new course development, Faculty of Science and Technology, Canberra Institute of Technology
Co-convenor, CRC Education & Training Managers Meeting, CRCA Conference, Canberra, May 2003
Member, ACT Branch Committee, Australian Institute of Physics

Dr A.E. Stuchbery
Chair, Nuclear and Particle Physics Group (NUPP), Australian Institute of Physics
Reader, Physical, Chemical and Earth Sciences, Australian Research Council

Dr M. Vos
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004

Professor E. Weigold
Member, International Scientific Committee, International Conferences on X-Ray and Inner Shell Processes
Member, International Scientific Advisory Committee, International Symposium on (e,2e) Double Photoionization and Related Topics, Frankfurt, Germany
Member, International Organising Committee, Sagamore (International Conference on Charge, Spin and Momentum Densities)
Member, Australian Academy of Science Committee, Major National Research Facilities
Member, Finance Committee, Australian Academy of Science
Member, International Scientific Committee, Electron and Photon Impact Ionization and Related Topics, Louvain-la-Neuve, Belgium, July 2004
Member, International Advisory Committee, Spectroscopies in Novel Superconductors, Sitges, Spain, July 2004
Chair, Innovation Access Program – International Science and Technology Competitive Grants Assessment Panel
Chair, Australian Academy of Science 50th Anniversary Committee
Member, Local Organising Committee, 14th International Conference on Vacuum Ultraviolet Physics, Cairns, 2004

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 Phototonics CRC
Member, Adhering Body Commission, International Union of Materials Research Society
Member, Board Australian Materials Technology Network
Member, Board Australian Maths Science Institute
Member, 2004 Pawsey Medal Selection Committee, Australian Academy of Science
Member, 2004 Selby Fellowship Selection Committee, Australian Academy of Science
Professional Advisor, LEDEX Corp, Taiwan
Director, Acton Semiconductors Pty Ltd

Dr A.N. Wilson
Member, Meetings Secretary, ACT Branch of Australian Institute of Physics
Coordinator, Australian Institute of Physics Women in Physics Lecture (Canberra)
Member, Organising Committee, Australian Institute of Physics Congress 2005
Appendix – Postdoctoral Fellowship Completions and Destinations

Dr Turgut Bastug completed his term in December and took up a position at the University of Sydney.

Dr Radmila Panajotovic completed her term in November and took up a position at the University of Sherbrooke, Canada.

Dr Vladimir Sashin left in June and took up a position in medical physics at Geelong Hospital.
### Other Supervised Undergraduate Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Home University/ANU Faculty</th>
<th>Host Department</th>
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</thead>
<tbody>
<tr>
<td>Ms Reanna Albion</td>
<td>Physics Department</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Christopher Brooke</td>
<td>FEIT</td>
<td>PRL</td>
</tr>
<tr>
<td>Mr Toen Castle</td>
<td>Mathematics Department</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Owen Dive</td>
<td>Physics Department</td>
<td>AMPL</td>
</tr>
<tr>
<td>Mr Matthew Duggan</td>
<td>FEIT</td>
<td>EME</td>
</tr>
<tr>
<td>Mr Stanton Hooley</td>
<td>Physics Department</td>
<td>EME</td>
</tr>
<tr>
<td>Mr Bernt Johannessen</td>
<td>Physics Department</td>
<td>EME</td>
</tr>
<tr>
<td>Mr Ashley Norris</td>
<td>Physics Department</td>
<td>AMPL</td>
</tr>
<tr>
<td>Mr Martin Raynor</td>
<td>Physics Department</td>
<td>NP</td>
</tr>
<tr>
<td>Ms Tracy Slatyer</td>
<td>Physics Department</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Khu Vu</td>
<td>Monash University</td>
<td>LPC</td>
</tr>
<tr>
<td>Mr Nan Ye</td>
<td>Engineering</td>
<td>AM</td>
</tr>
</tbody>
</table>

### Summer/Winter Scholars

<table>
<thead>
<tr>
<th>Name</th>
<th>Home University</th>
<th>Host Department</th>
</tr>
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<tbody>
<tr>
<td>Ms Reanna Albion</td>
<td>Australian National University</td>
<td>EME</td>
</tr>
<tr>
<td>Mr Gerard Atkinson</td>
<td>Australian National University</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Christopher Brooke</td>
<td>Australian National University</td>
<td>PRL</td>
</tr>
<tr>
<td>Ms Eireann Cosgriffe</td>
<td>Melbourne University</td>
<td>TP</td>
</tr>
<tr>
<td>Mr Rhys Goodwin</td>
<td>Australian National University</td>
<td>PRL</td>
</tr>
<tr>
<td>Ms Katrina Hahn</td>
<td>Australian National University</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Thomas Hanna</td>
<td>Australian National University</td>
<td>AMPL</td>
</tr>
<tr>
<td>Mr James Hanna</td>
<td>University of Otago, NZ</td>
<td>PRL</td>
</tr>
<tr>
<td>Mr Chris Hollins</td>
<td>Australian National University</td>
<td>PRL</td>
</tr>
<tr>
<td>Mr Matthew Jeppersen</td>
<td>Melbourne University</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Peter Liddicoat</td>
<td>Australian National University</td>
<td>EME</td>
</tr>
</tbody>
</table>
Mr Robert May  Australian National University  PRL
Ms Olivia Morrison  Australian National University  AM
Mr Joseph Nixon  Australian National University  PRL
Mr Nick Pak  University of Otago, NZ  LPC
Mr Lawrence Pashley  Australian National University  AM
Mr Thomas Pask  Brisbane University  AMPL
Ms Kathryn Pilypas  Flinders University  LPC
Mr James Ridgeway  Australian National University  PRL
Mr Michael Sheather  Australian National University  PRL
Ms Susie Sheehy  Melbourne University  NP
Mr Anthony Sinderman  Australian National University  PRL
Ms Erin Stonestreet  Australian National University  APG
Ms Melissa Tacy  Australian National University  TP
Mr Byron Villis  Melbourne University  LPC
Mr Andrew Walter  LaTrobe University  AMPL
Mr David Watts  Melbourne University  PRL
Mr Michael West  Sydney University  PRL

**Visiting Scholars**

<table>
<thead>
<tr>
<th>Name</th>
<th>Home University</th>
<th>Host Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Ghous Abid</td>
<td>University of NSW</td>
<td>AM</td>
</tr>
<tr>
<td>Ms Saher Ahmed</td>
<td>University of Birmingham, UK</td>
<td>NP</td>
</tr>
<tr>
<td>Mrs Ji-Youn Arns</td>
<td>University of NSW</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Nick Ashwood</td>
<td>University of Birmingham, UK</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Uli Assmann</td>
<td>University of Augsburg, Germany</td>
<td>EME</td>
</tr>
<tr>
<td>Mr Michael Baker</td>
<td>University of Wollongong</td>
<td>NP</td>
</tr>
<tr>
<td>Ms Tamara Baldwin</td>
<td>University of Surrey, UK</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Steve Binnie</td>
<td>University of Edinburgh, UK</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Alex Bissember</td>
<td>University of Wollongong</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Massimo Bonini</td>
<td>University of Florence, Italy</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Boris Breidenbach</td>
<td>MPI für Metallforschung, Germany</td>
<td>AM</td>
</tr>
<tr>
<td>Mr Tom Brown</td>
<td>University of York, UK</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Mark Bucci</td>
<td>University of Wollongong</td>
<td>NP</td>
</tr>
<tr>
<td>Mr Jinil Chung</td>
<td>MPI, Greifswald, Germany</td>
<td>PRL</td>
</tr>
<tr>
<td>Mr Neil Curtis</td>
<td>University of Birmingham, UK</td>
<td>NP</td>
</tr>
</tbody>
</table>
Mr Andrew Davies Michigan State University, USA NP
Mr Malte Deuring Frauenhofer Institute, Aachen, Germany LPC
Ms Hasna El-Masri University of Surrey, UK NP
Mr Maurits Evers Australian National University TP
Ms Pearl Gallagher University of Wollongong NP
Mr Javier Garcia Garcia Stockholm University, Sweden AM
Mr Fernando Gesto Australian National University PRL
Mr Brant. Gibson La Trobe University APG
Mr Darren Groombridge University of York, UK NP
Mr Nick Hardcastle University of Wollongong NP
Mr Sulabh Jain University of Canberra NP
Ms Kellie Jericho Flinders University AM
Mr Jim Katsifolis La Trobe University APG
Mr Jeroen Koelemeij Vrije Universiteit, The Netherlands AMPL/LPC
Mr Michael Lane Australian National University NP
Mr Tobias Langenbruch Australian National University TP
Mr Francai Le Meur University of NSW AM
Mr Sean Liddick Michigan State University, USA NP
Mr Ole Christian Lind Agricultural University of Norway NP
Mr Paul McEwan University of Birmingham, UK NP
Mr Scott McLachlan University of Canberra NP
Mr Kristian Motzek Darmstadt University of Tech, Germany NPG
Mr Luis Munoz University of Wollongong NP
Ms Johanna Nes Vrije Universiteit, The Netherlands AMPL/LPC
Mr Viet Nguyen University of NSW AM
Mr Nikolai Nikolov Technical University of Denmark NPG
Ms Susanne Olivier University of Berne, Switzerland NP
Mr Shannon Orbons Flinders University EME
Mr Peter Pace Melbourne University APG
Ms Rebecca Pitkin University of York, UK NP
Ms Meivy Ratchaithong University of Melbourne AM
Ms Erin Redfearn University of Wollongong NP
Mr Tom Ryan Sydney University APG
Mr Etienne Sandre Ecole Polytechnique, France EME
Mr Jochen Schröder Münster University, Germany LPC
Mr Thomas Senn EPFL, Switzerland AMPL
Mr Santosh Kumar Shresta ADFA, University of NSW NP
Ms Lindis Skipperud Agricultural University of Norway NP
Mr Mathias Smolarski  University of Frankfurt, Germany  AMPL
Mr Arjan Sprengers  Vrije Universiteit, The Netherlands  AMPL
Mr David Sprouster  University of Wollongong  NP
Ms Tania Tehovnik  University of Wollongong  NP
Mr Cozmin Timis  University of Surrey, UK  NP
Mr Brian Tomlin  Michigan State University, USA  NP
Ms Sarah Turek  University of Wollongong  NP
Mr Russell Wood  University of Surrey, UK  NP
Mr Tony Young  University of Wollongong  NP

**Work Experience**

<table>
<thead>
<tr>
<th>Name</th>
<th>School/College</th>
<th>Host Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Claire Li</td>
<td>Ginninderra College</td>
<td>LPC</td>
</tr>
<tr>
<td>Mr Geoffrey Pillans</td>
<td>Canberra High School</td>
<td>NP</td>
</tr>
<tr>
<td>Ms Sue Xueyu Xu</td>
<td>Canberra High School</td>
<td>NP</td>
</tr>
</tbody>
</table>
Appendix – University and School Services

Membership of regular School Committees is given under Internal Management

Dr A. Ankiewicz
Member, Physics Library Advisory Committee
Member, Cyclists' Reference Group

Dr K. Baldwin
Member, RSPhysSE Careers Development Group
Member, Physics Library Advisory Committee

Professor M.T. Batchelor
Deputy Coordinator, Centre for Complex Systems
Coordinator, Mathematical Physics Program, MSI
Promotions Committee, MSI
Board, MSI
Board of Studies Graduate Program in Mathematical Sciences

Dr B.D. Blackwell
Member, ANU Information Technology Sponsors Committee

Professor S.J. Buckman
Associate Director (Academic), RSPhysSE

Dr A.P. Byrne
Member, Staff Selection Panels, Faculty of Science
Member, Staff Selection Panels, Department of Nuclear Physics
Convenor, Board of Studies, Graduate Program in Physical Sciences
Member, National Institute of Physical Sciences Management Committee
Convenor, Workshop in Nuclear Techniques, September 2003
Member, ANU Scholarships Selection Panel

Dr M. Dasgupta
Member, Staff Selection Panels, Department of Nuclear Physics
Assistant Coordinator, Graduate Student Program for RSPhysSE (since August)
Mr G.C.J. Davies  
Member, Radiation Committee

Professor R.L. Dewar  
Coordinator, Centre for Complex Systems

Professor G.D. Dracoulis  
Member, Staff Selection Panels, Department of Nuclear Physics

Professor R. Elliman  
Member, ANU Board of the Institute of Advanced Study (BIAS)  
Member, ANU Physical Sciences Library Committee (Physlac)  
Member, ANU Major Equipment Committee (MEC)  
Member, ANU Leadership Program Steering Committee  
Member, RSPhysSE Equipment and Facilities Advisory Committee  
Member, Physics Library Advisory Committee

Dr L.K. Fifield  
Chair, Radiation Safety Sub-committee, ANU Occupational Health and Safety Policy Committee  
Radiation Officer, Department of Nuclear Physics

Professor N. Fletcher  
Member, Board, ANU Centre for Complex Systems

Dr S.T. Gibson  
Member, Board of Studies, Graduate Program in Physical Sciences  
Local IT Contact Representative, RSPhysSE  
Member, Sub-committee evaluation and tender for RSPhysSE Computer Cluster  
AMPL coordinator - group visits:  
  National Science Teacher's Summer School  
  National Youth Science Forum  
  Students of the Australian National Physics Competition.

Professor J.H. Harris  
Member, ANU Research Committee  
Member, ANU Board of the Institute of Advanced Study (BIAS) (until August)  
Referee, IAS Performance and Planning Fund
IAS Representative, Review of the Faculties

Dr D.J. Hinde
Member, Staff Selection Panels, Department of Nuclear Physics

Dr J. Howard
School Honours Coordinator

Professor S. Hyde
Member, School Promotions Committee
Member, Advisory Committee of the High Performance Computing Facility, ANU
Member, Advisory Committee for the ANU Centre for Science and Engineering of Materials

Professor C. Jagadish
Member, Management Board, National Institute of Engineering and Information Science
Member, Academic Staffing Advisory Group

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, Faculty, Research School of Astronomy and Astrophysics
Member, Scholarly Information Services Committee
Member, Information Strategy Committee
Member, Board of the Institute of Advanced Studies
Member, Physics Library Advisory Committee
Member, Science Library Advisory Committee
IAS Representative, Board of Faculties (from December)

Professor N. Manson
Associate Director (Students), RSPhysSE
Advisor, Graduate Program in Physics
ANU Laser Safety Officer
Dr F.P. Mills
Member, Faculty Board, Centre for Resource and Environmental Sciences

Dr M. Ridgway
Advisor, Graduate Program in the Science and Engineering of Materials
Member, Board of Studies, Graduate Program in Physics
Member, Board of Studies, Graduate Program in Environment
Chair, Cross-Campus Activities Committee, National Institute of Physical Sciences
Member, Steering Committee, Centre for the Science and Engineering of Materials
Editor, 2002 Annual Report, Research School of Physical Sciences and Engineering

Dr B.A. Robson
RSPhysSE Advisor on Integrity in Research
Convenor, Working Party, Jagadishwar Mahanty Prize

Dr M.G. Shats
Member, Physics Library Advisory Committee
Member, RSPhysSE Web Committee

Ms A. Smith
Member, RSPhysSE Area Classification Advisory Committee
Participant, ANU Career Development Scheme

Dr S.G. Tims
Deputy Radiation Officer, Department of Nuclear Physics

Mr R.B. Turkentine
Member, Tender Evaluation Committee for the supply of Liquid Nitrogen and Compressed Gases

Professor J.S. Williams
Convenor, National Institute for Physical Sciences
Chair, Board Science ANU
Member, BIAS
Member, ANU Deans & Directors
Member, Research Committee
Member, Research Policy Option Working Group
Member, University Insurance User Group
Member, Research Services Office User Group
Member, ANU Enterprise Bargaining Negotiating Team
Member, Advisory Board, ARC Centre of Excellence for Ultra-high bandwidth Devices for Optical Systems (CUDOS)
Member, Selection Committee, Fellow/Senior Fellow, Research School of Astronomy and Astrophysics
Member, Selection Committee, DVC(R)
Member, Selection Committee, Dean – Research School of Chemistry

Dr A.N. Wilson
Editor, Department of Nuclear Physics Annual Report
# Appendix – Visitors

<table>
<thead>
<tr>
<th>Name</th>
<th>Home University/Institute</th>
<th>Host Department</th>
</tr>
</thead>
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<tr>
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Appendix – Workshops and Conferences

The International Congress on Industrial and Applied Mathematics (ICIAM 2003) was held in Sydney from 7-11 July. Professor Dewar organised a minisymposium on Spectral Problems in MHD Wave and Instability Theory as part of ICIAM 2003.

The 3rd Annual Workshop on Nuclear Techniques, organised by Dr Aidan Byrne, was held from 22-25 September in the Department of Nuclear Physics. Eleven undergraduate students from the University of Wollongong's Medical Physics program participated in this year's workshop. The workshop program is designed to actively engage students in the fundamentals of the measurements of nuclear radiations and the elements of isotope production using accelerator facilities. Students participated in an intensive four-day program that included experiments on the 14UD heavy-ion accelerator. Topics covered included radiation safety, detector design and operation, isotope production, accelerator operation.


The Department of Applied Mathematics hosted the New Materials and Complexity Conference in Kioloa from 3-9 November. The conference was supported by the Edith and Joy London Foundation and the Scientific Attaché of the Italian Embassy. Participants attended from Italy, Germany, France, Japan, New Zealand, Sweden and the UK.

The 30th Annual Australian Statistical Mechanics Meeting was held from 1-2 December and organised by Professor M.T. Batchelor.

The 13th Gordon-Godfrey Workshop on Condensed Matter Physics: Condensed Matter, was held from 3-4 December at the Coogee Bay Hotel, Sydney, and was organised by Dr M.P. Das.