

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

The 2nd International Conference on Computers and Devices for Communication (CODEC), Kolkotta, India, 1–3 January

Fu, L. — *Quantum Well and Quantum Dot Intermixing for Photonic/Optoelectronic Integrated Circuits*

4th Australasian Conference on General Relativity and Gravitation, Monash University, 7–9 January

Hall, M.J. — *Exact Uncertainty Approach to Quantum Mechanics and Quantum Gravity*

International Summer School New Concepts in Photonics and Optical Communications, University of Burgundy, Dijon, France, 21–25 January

Akhmediev, N.N. — *Dissipative Solitons*

Commercial and Biomedical Applications of Ultrafast Lasers VI Symposium, Photonics West, San Jose, USA, 24–29 January

Rode, A.V., Madsen, N.R., Kolev, V.Z., Gamaly, E.G., Chan, A., Dawes, J.M. and Luther-Davies, B. — *Subpicosecond and Picosecond Laser Ablation of Dental Enamel: Comparative Analysis*

XIII Gaseous Electronics Meeting, Murramarang, 1–5 February

Boswell, R.W. — *Ions in the Fire*

Robson, R.E., Petrovic, Z.Lj.* and Raspopovic, A.* — *Negative Absolute Mobility, Joule Cooling and the Second Law*

White, R.D.*, Robson, R.E., Ness, K.F.*, Petrovic, Z.L.*, Raspopovic, Z.* and Dujko, S.* — *Transient Kinetic Phenomena of Electron Swarms in Electric and Magnetic Fields*

24th Australian Colloid and Surface Science Student Conference, Sunset Cove, 2–6 February

Evans, D. — *NanoRheology: An Atomic Force Microscopy Technique to Dynamically Study Properties of Materials of Small Volumes*

Italian-Australian Specialist Workshop on Plasma Treated Materials, Batemans Bay, 3 February

Boswell, R.W., Charles, C. and Brault, P.* — *High Plasma Density Sputter Deposition of Platinum Clusters for Fuel Cell Electrodes*

28th Annual Condensed Matter and Materials Meeting, Wagga Wagga, 3–6 February

Shadrivov, I., Sukhorukov, A., Zharov, A. and Kivshar, Y.S. — *Left-handed Materials Recent Progress and Perspectives*

Khalil, S.S.*, Stewart, A.M., Ridgway, M.C., Chadderton, L.T., Llewellyn, D.J. and Byrne, A.P. — *Formation of Ion Tracks in Single-Crystal Indium Phosphide Irradiated by Swift Heavy Ions*

International Workshop: Quantum Integrable Systems and Infinite Dimensional Algebras, Kyoto, Japan, 4–10 February

Bazhanov, V.V. — *Higher-level Eigenvalues of Q -operators and Schrödinger Equation*

6th South Australian Physical Chemistry Symposium, University of South Australia, 13 February

Senden, T.J. — *Microcomputed Tomography – Granular Materials, Foams, Rock and Bone*

Short-ranged Interactions in Soft Condensed Matter, Regensburg, Germany, 26 February

Craig, V. — *Specific Ion Effects in Bubble Coalescence*

Functional Ceramics and High Tc Superconductivity, Stockholm, Sweden, 8–12 March

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

The 12th Seoul International Symposium on the Physics of Semiconductors and Applications (ISPSA-2004), Kyungju, Korea, 14–16 March

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

The 2nd International Workshop on Advanced Materials for Information Technology & Applications, Kyung Hee University, South Korea, 17 March

Elliman, R.G. — *Aspects of the Optical Properties of Silicon Nanocrystals*

Correlated Materials, Mesoscale Science and Novel Electronic Materials, Boston, USA, 17–19 March, 2004

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

Samsung Advanced Institute of Technology, Suwon, South Korea, 18 March

Elliman, R.G. — *Light Emission from Silicon Nanocrystals*

Pre-APS Workshop on Nanoscience and Nanostructured Materials, Montreal, Canada, 19–20 March

Jagadish, C. — *Quantum Dots for Optoelectronic Devices*

International Symposium on Novel Materials Processing by Advanced Electromagnetic Energy Sources (MAPEES), Osaka, Japan, 19–22 March

Boswell, R.W., Charles, C. and Brault, P.* — *High Plasma Density Sputter Deposition of Platinum Clusters for Fuel Cell Electrodes*

March Meeting of the American Physical Society, Montreal, Canada, 23–26 March

Hernandez-Zapata, E. — *Conformations of a Semi-flexible Diblock Copolymer in a Poor Solvent Solution*

Jagadish, C. — *Quantum Dot Intermixing for Optoelectronic Device Integration*

International Symposium on Musical Acoustics, ISMA 2004, Nara, Japan, 31 March – 3 April

Fletcher, N.H. — *The Leaf-reed: The Simplest Woodwind Instrument?*

HRIBF Workshop on In Beam Gamma-Ray Spectroscopy, Oak Ridge National Laboratory, USA, 5–7 April

Stuchbery, A.E. — *Transient Field and Recoil-in-vacuum Techniques for g-factor Measurements on Radioactive Ion Beams*

High-Power Laser Ablation 2004, Taos, USA, 25–30 April

Luther-Davies, B., Gamaly, E.G., Rode, A.V., Kolev, V.Z., Madsen, N.R., Duering, M.* and Gieseckus, J.* — *Applications of High-power Slow Mode-locked Lasers for Ablation and Nonlinear Optics*

International Quantum Electronics Conference (IQEC), San Francisco, USA, 17–21 May

White, R.T.*, He, Y.*, Orr, B.J.*, Kono M. and Baldwin, K.G.H. — *Chirp Characterization of a High Resolution, Low-Chirp, ns-Pulsed Optical Parametric Oscillator/Amplifier*

Baldwin, K.G.H., Sprengers, J.P.*, Ubachs, W.*, Lewis, B.R. and Gibson, S.T. — *Ultrahigh Resolution Pulsed XUV Laser Applications: Lifetimes for the Excited $^1\Pi_{uu}$ States of Molecular Nitrogen*

Baldwin, K.G.H., Uhlmann, L.J., Dall, R.G., Truscott, A.G. and Buckman, S.J. — *A High Density Metastable Helium MOT for Electron-Atom Collision Studies*

5th International Symposium on MEMS and Nanotechnology (ISMAN), Costa Mesa, USA, 7–10 June

Tan, H.H. — *Growth and Characterisation of InGaAs and InAs Quantum Dot Structures and Devices*

DSTO Workshop on Optical Communications and Optoelectronics, Adelaide, 10–11 June

Jagadish, C. — Tutorial Lecture on *Semiconductor Optoelectronic Devices*

VII International Workshop on Nonlinear Optics Applications, Konstancin, Poland, 17–20 June

Sukhorukov, A. — *Optical Vortices in Nonlinear Periodic Lattices*

Chaotic Transport and Complexity in Fluids and Plasma, Carry Le Rouet, France, 20–26 June

Dewar, R.L. — *Quantum Chaos Analysis of Plasma Wave Spectra*

Ball, R. — *Dynamical Systems Modelling of Turbulence-shear Flow Interactions in Magnetized Fusion Plasmas*

International Conference on Impurity Effects in Mesoscopic Systems, Stockholm, Sweden, 21–25 June

Gulacsi, M. — *Kondo Lattices*

StatPhys-Taiwan 2004: Biologically Motivated Statistical Physics and Related Problems, Academia Sinica, Taiwan, 22–26 June

Batchelor M.T. — *Statistical Physics and Microbial Mats: New Perspectives on an Ancient Dilemma*

INPC 2004, International Nuclear Physics Conference, Goteborg, Sweden, 27 June – 2 July

Dracoulis, G.D. — *High-K Isomerism*

31st European Physical Society Conference on Plasma Physics, London, 28 June – 2 July

Harris, J.H. — *Small to Mid-sized Stellarator Experiments: Topology, Confinement, and Turbulence*

7th Asia Pacific Conference on Plasma Science and Technology, Fukuoka, Japan, 29 June – 2 July

Boswell, R.W. and Charles, C. — *Current Free Double Layers in the Laboratory and their Application to Space Plasmas*

Nonequilibrium Statistical Physics of Complex Systems, Institute for Advanced Study, Korea, 29 June – 2 July

Batchelor M.T. — *Application of the Statistical Physics of Evolving Surfaces to the Growth and Form of Microbial Mats and Laminated Structures*

Day on Diffraction 2004, St Petersburg, Russia, 29 June – 2 July

Shadrivov, I., Kivshar, Y.S., Zharov, A. and Zharova, N. — *Left-handed Metamaterials and Negative Refraction*

International Conference on Electron and Photon Impact Ionization and Related Topics, Louvain-la-Neuve, Belgium, 1–3 July

Vos, M., Cooper, G.* and Chatzidimitiou-Dreismann, C.A.* — *Elastic Scattering at High Momentum Transfer, a Possible Probe of Quantum Entanglement*

ESS – Electron Scattering in Solids, from Fundamental Concepts to Practical Applications, International Workshop sponsored by the International Union for Vacuum Science, Technique, and Applications (IUVSTA), Debrecen, Hungary, 4–8 July

Vos, M. — *Modeling of Electron Energy Loss in Coincidence Experiments*

International Symposium on Quantum Fluids and Solids (QFS04), Trento, Italy, 5–9 July

Ostrovskaya, E. — *Nonlinear Dynamics and Solitons in Optically-trapped Bose-Einstein Condensates*

CRC SmartPrint Conference, Melbourne, 6–7 July

Evans, D. — *NanoRheology: A Dynamic Atomic Force Microscopy Technique to Study Interfacial Properties of Materials*

Workshop on Evolution and Predictability of Earth System, The 21st Century Earth Science COE Program, University of Tokyo, Japan, 7–9 July

Esat, T. — *Principles of Uranium-Thorium Dating and its Application to Corals from Tectonically Active Margines*

Optical Society of Korea Summer Meeting, Muju Resort, Korea, 8–9 July

Jagadish, C. — *Quantum Dots for Optoelectronic Devices*

International Conference on Statistical Physics of Quantum Systems, Sendai, Japan, 16–20 July

Batchelor M.T. — *Weakly Repulsive Interacting Bosons and Strongly Interacting Cooper Pairs and their Link via the Bethe Equations of Integrable Models*

International School of Radiation Effects in Solids, Erice, Italy, 17–29 July

Khalil, S.S.*, Llewellyn, D.J., Ridgway, M.C., Chadderton, L.T., Stewart, A.M. and Byrne, A.P. — *Track Formation and Surface Evolution in Swift Heavy Ion Irradiated Indium Phosphide*

Workshop on Mathematical Ideas in Nonlinear Optics, Guided Waves in Inhomogenous Nonlinear Media, Edinburgh, Scotland, 19–23 July

Akhmediev, N.N. — *Dissipative Solitons*

14th Vacuum Ultra Violet Conference, Cairns, Queensland, 19–23 July

White R.D.*, McEachran, R.P., Robson, R.E., Elford, M.T. and Bartschat, K.* — *Cross Sections and Transport Coefficients for Electrons in Zn Vapour*

Recent Progress in Solvable Lattice Models, Research Institute for Mathematical Sciences, Kyoto, Japan, 20–23 July

Batchelor M.T. — *Real Applications of Solvable Lattice Models*

Workshop on Dynamics of Fluids at Interfaces, Lyon, France, 26–29 July

Neto, C. and Craig, V.S.J. — *Boundary Slip in Newtonian Liquids: An Experimental Approach*

Nuclei at the Limits, International Conference, Argonne National Laboratory, USA, 26–30 July

Dracoulis, G.D. — *High-K Isomers in the Region of ^{177}Lu*

4th Australian Mars Exploration Conference, Adelaide, 31 July – 1 August

Charles, C. — *The Helicon Double Layer Thruster: The newest Space Plasma Engine*

Conference on Microscopy and Microanalysis 2004, Savannah, USA, 1–5 August

Khalil, S.S.*, Llewellyn, D.J., Ridgway, M.C., Chadderton, L.T., Stewart, A.M. and Byrne, A.P. — *Track Formation and Surface Evolution in Swift Heavy Ion Irradiated Indium Phosphide*

Arns, C.H., Knackstedt, M.A. and Mecke, K.R.* — *Euler-Poincare Characteristics of Disordered Media: An Application in Effective Medium Theories*

Gordon Conference on Laser Interaction with Metals, Proctor Academy, USA, 1–6 August

Rode, A.V. — *Ultra-fast Laser Interaction with Metals: Equilibrium vs Non-thermal Processes*

Gamaly, E.G., Juodkasis, S., A. V. Rode, Luther-Davies, B. and Misawa, H.* — *3-D Memory Bits Recording and Reading with Femtosecond Laser*

4th International Symposium on Modern Optics and its Applications, ISMOA 2004, Bandung, Indonesia, 9–13 August

Akhmediev, N.N. — *Dissipative Solitons*

International Symposium on Quantum Chaos in the 21st Century, Cuernavac, Mexico, 16–20 August

Kun, S.Y. — *Quantum Chaos Does Not Need to Lead to Meltdown in Quantum Computers*

13th International Conference on the Discrete Simulation of Fluid Dynamics, Cambridge, USA, 16–20 August

Craig, V. — *Measurements of Boundary Slip in Newtonian Fluids*

4th International Conference on Synchrotron Radiation in Materials Science, Grenoble, France, 23–25 August

Ridgway, M. — *Structure in Amorphous Semiconductors*

EPS Europhoton Conference, Lausanne, Switzerland, 29 August – 3 September

Luther-Davies, B., Ruan, Y., Li, W., Freeman, D., Rode, A., Madsen, N.R., Jarvis, R., Gamaly, E.G., Madden, S. and Kolev, V.Z. — *Chalcogenide Glass Waveguide: Basic Properties and Emerging Applications*

2004 OZ-INTIMATE Workshop, ANSTO, Sydney, 6–7 September

Barrows, T.T. — *Late Pleistocene Glaciation of Australia*

Strongly Correlated Systems Summer School, Debrecen, Hungary, 6–11 September

Gulacis, M. — *Kondo Lattices*

First Bonzenfreies Colloquium on Market Dynamics and Quantitative Economics, Alessandria, Italy, 9–10 September

Di Matteo, T. — *Interest Rates Hierarchical Structure*

Japan-Australia Colloid and Interface Science Symposium, Yamaguchi, Japan, 9–11 September

Craig, V. — *Measurements of Boundary Slip in Newtonian Fluids*

Nanoscale Properties of Condensed Matter Workshop, Stuttgart, Germany, 14–17 September

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

18th European Colloid and Interface Society Conference, Almerimar, Spain, 19–24 September

Evans, D. — *Nanorheology: Fluid Dynamics in Confined Systems*

13th Semi-conducting and Insulating Materials Conference (SIMC) 2004, Beijing, China, 20–25 September

Fu, L. — *Impurity Free Vacancy Disordering of Quantum Wells and Quantum Dots for Optoelectronic/Photonic Integrated Circuits*

International Conference on Nuclear Data for Science and Technology, Santa Fe, New Mexico, 26 September – 1 October

Kibédi, T. and Spear, R.H. — *Electric Monopole Transitions between 0^+ States for Nuclei throughout the Periodic Table*

International Conference on Nanoscale Heterogeneities, Rome, Italy, 26 September – 1 October

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

The Second International School of Advanced Plasma Technology, Varenna, Italy, 27 September – 1 October

Boswell, R.W. — *Electric Double Layers and their Applications*

Boswell, R.W. and Charles, C. — *Astrophysical Significance of Field Aligned Current-free Double-layers*

48th Annual Meeting of the Australian Mathematical Society, RMIT, 28 September – 1 October

Batchelor, M.T. — *Modelling Microbial Mats and Stromatolites*

EC NETIAM Forum on New and Emerging Themes in Applied Mathematics, Kaiserslautern, Germany, 29–30 September

Sheppard, A.P. — *Challenges in Visualisation, Simulation and Design of Virtual Materials*

206th Meeting of the Electrochemical Society, Inc., Honolulu, USA, 3–8 October

Tan, H.H. — *Interdiffusion Techniques for Quantum Dot Photonic Integrated Circuits*

3rd Nordic Symposium on Plasma Physics, Lyesbu, Oslo, Norway, 4–7 October

Charles, C., Boswell, R.W., Alexander, P., Meige, A., Gesto, F., Blackwell, B.D., West, M., Gowlett, P., Sutherland, O. and Aanesland, A. — *Current-free Double-layers in Expanding Plasmas*

International Symposium on Advances and Trends in Fiber Optics and Applications, ATFO, Chongqing, China, 11–15 October

Love, J.D. — *Modal Adiabaticity in Optical Fibres, Waveguides and Devices*

Symposium of North Eastern Accelerator Personnel SNEAP 2004, Ontario, Canada, 17–21 October

Weisser, D.C. — *Differentially Pumped Gas Cathode for an NEC SNICSII*

International Workshop on Volatility of Financial Markets: Theoretical Models, Forecasting and Trading, Leiden, The Netherlands, 18–29 October

Di Matteo, T. — *Wealth, Productivity and Hyperbolic Networks*

The International Symposium on Sample Returns from Solar System Minor Bodies – The First Hayabusa Symposium, Kanagawa, Japan, 20–23 October

Esat, T. — *Viability of Ng and Si Isotope Measurements in Samples Expected from the Hayabusa Mission to Asteroid Itokawa*

Workshop on Applications of Cosmogenic Isotope Analysis in Geomorphology and Quaternary Science, University of Edinburgh, Scotland, 22–25 October

Fifield, L.K. — *Applications of Cosmogenic Isotopes in Geoscience: Setting the Scene*

International Workshop on the Electric Fields, Structures, and Relaxation in Plasmas, Nice, France, 26–27 October

Shats, M.G. — *Physics of the Pedestal Formation during Confinement Transitions*

12th International Conference on Plasma Physics, Nice, France, 26–29 October

Boswell, R.W. and Charles, C. — *Current Free Double Layers in the Laboratory and their Application to Space Plasmas*

Nanophotonics, Nanostructure, and Nanometrology, SPIE, Beijing, China, 8–10 November

Wang, X.-H., Gu, B.-Y. and Kivshar, Y.S. — *Emission Decay and Lame Shift in Photonic Crystals*

IEEE LEOS Annual Meeting, San Juan, Puerto Rico, 8–11 November

Luther-Davies, B., Freeman, D., Ruan, Y., Madsen, N.R., Madden, S., Jarvis, R., Rode, A.V. and Samoc, M. — *Chalcogenide Glass Photonic Devices*

Materials Research Society Fall Meeting, Boston, USA, 29 November – 3 December

Jagadish, C. — *InAs Quantum Dots for Optoelectronic Device Applications*

AMSI Workshop: Foundation and Methodologies in Mathematical Physics, Coolangatta, 30 November – 1 December

Bazhanov, V.V., Sergeev, S.M. — *New Solutions of Tetrahedron Equation*

Bazhanov, V.V., Mangazeev, V. — *Eight-vertex Model and Non-stationary Lame Equation*

Bazhanov, V.V. — *Eight-vertex Model and Dilute Polymers*

Modern Developments in Lie Theory, Quantum Theory and Statistical Mechanics, Coolangatta, 2–4 December

Batchelor M.T. — *Integrable Attractive Bosons*

Knowledge Foundation's International Conference, Lithium Mobile Power 2004, Miami Beach, USA, 6–7 December

Chen, Y. — *Advances in Lithium Battery Technologies for Mobile Applications*

DAE-BRNS Symposium on Nuclear Physics, Banaras Hindu University, Varanasi, India, 6–10 December

Hinde, D.J. and Dasgupta, M. — *Current Questions in Nuclear Fusion*

Photonics 2004, Kochi, Japan, 8–11 December

Tan, H.H. — *Growth and Interdiffusion of Semiconductor Quantum Dots for Optoelectronic Integrated Circuit Applications*

7th International Conference on Optoelectronics, Fiber Optics and Photonics, Photoics 2004, Kochin, India, 9–11 December

Akhmediev, N. — *Dissipative Solitons in Photonics*

Conference on Laser Cleaning, Macquarie University, Sydney, 14–17 December.

Boswell, R.W. and Charles, C. — *Plasma Cleaning of Surfaces*

Asia Pacific Microwave Conference (APMC), New Delhi, India, 15–18 December

Tan, H.H. — *Interdiffusion Techniques and their Applications to the Integration of Semiconductor Quantum Well and Quantum Dot Devices*