STUDENTS

Introduction

The School has a significant commitment to postgraduate training. In 2004 we had a total of 89 PhD students, including continuing students and those completing their thesis. A total of 21 postgraduate students (including four MPhil students) commenced their program of study during the year, three of them being women.

The School, in co-operation with the ANU Graduate School, organised various activities aimed at assisting postgraduate students and broadening their education. An introductory seminar for new students was provided and various tours of the School facilities and the Department of Physics, The Faculties, were conducted. The students also met at several social functions.

Several student prizes were presented at Founder’s Day on the 15th of October:

The Director’s Award, for the most outstanding published research paper by a PhD student over the last year was awarded to Scott Edwards from Applied Mathematics for his paper entitled “Double Layers and Interparticle Forces in Colloid Science and Biology: Results for the Effect of Ionic Dispersion Forces”, Physical Review Letters 92, (2004) 248303-1-4.

The Graduate Program in Physical Sciences ran a seminar competition for the eleventh year. Talks were presented by postgraduates from this School, The Faculties and the Australian Defense Force Academy, with the sessions chaired by students. The winners were announced at the conclusion of the program and the prizes were presented at Founder’s Day.

The winner of the John Carver Prize for best talk at the Graduate Student Seminar Series was:

Kallista Stewart, Electronic Materials Engineering, for her talk entitled “Semiconductor Quantum Dot Lasers”.

Winner of the Director’s Prize was:

Sean Farrell, Australian Defense Force Academy, for his talk entitled “Temporal Studies of X-ray Binaries – Black Holes, Neutron Stars & Other X-rayted Sources”.

Winner of the Dean’s Prize was:

Hua Xia, Plasma Research Laboratory, for her talk entitled “Self-organisation: Making Order out of Mess”.

The Robert and Helen Crompton Scholarship for travel in 2004 was awarded jointly to Ms Anna Carnerup, Applied Mathematics and Ms Megan O’Mara, Theoretical Physics.

The award was to enable Anna Carnerup to present her fascinating studies of inorganic abiotic material of life-like morphologies at the International Conference
on Bioastronomy in Reykjavik, Iceland, as well as to take the opportunity to undertake some associated study in Sweden and to attend the workshop on Mesoporous Crystals in Stockholm.

Megan O’Mara’s award was to allow her to present her recent fascinating results on mechanism of ion permeation through bacterial CIC-type chloride channels to the Biophysical Society Conference in Long Beach, California as well as to take the opportunity to make scientific visits to other research groups working in the same field.

The staff of the School also makes a significant contribution to undergraduate education by offering a broad range of courses to enrich the undergraduate teaching program. These courses are offered in The Faculties, in the Physics, Engineering and Chemistry Departments. Also, to provide wider opportunities for ANU undergraduates at research level, the School has in recent years offered honours projects and many undergraduates have taken up this opportunity. The School supports this program by offering honours year scholarships of which there were nine in the current year. It was also pleasing to note that 3 students who held either vacation scholarships, honours scholarships or were visiting scholars in 2003 have continued and enrolled as PhD students in the School in 2004. (2 students who held either vacation scholarships or were visiting scholars in 2003 continued in an honours program)

A large number of international and national visiting scholars, 21 and 23, respectively, spent three months to one year in various departments for the purpose of training and research in 2004. Lists of these scholars are available as an appendix.

Degrees Awarded and Destinations

Mr Ivan Blajer
MSc Thesis: UV Laser Source for Atom Optics Experiments with Metastable Helium
Currently: Software Company, Melbourne

Dr Ira Cooke
Thesis: Structure of Single Polymer Chains in Selective Solvents
Currently: Max-Planck-Institut für Polymerforschung, Mainz, Germany

Dr Robert Dall
Thesis: Optical Guiding with Bright Sources of Cold \(2^3S_1\) Metastable Helium
Currently: Postdoctoral Fellow, Atomic and Molecular Physics Laboratories, RSPhysSE

Mr Fenton Glass
Thesis: Tomographic Visible Spectroscopy of Plasma Emissivity and Ion Temperatures
Currently: IPP Forschungszentrum, Jülich, Germany

Mr Qiang Gao
Thesis: Growth and Characterisation of (In)GaAsN Alloys for Optoelectronic Applications
Currently: Postdoctoral Fellow, Electronic Materials Engineering, RSPhysSE

Mr Vesselin Kolev
Title: Long-optical-resonator Passively Mode-locked Laser Prototype for Ultra-fast Pulsed Laser Ablation and Deposition Installation
Currently: Postdoctoral Fellow, Laser Physics Centre, RSphysSE

Dr Penny Lever
Thesis: Interdiffusion and Metalorganic Vapour Phase Epitaxial Growth of Self-Assembled InGaAs Quantum Dot Structures and Devices
Currently: Postdoctoral Fellow, Electronic Materials Engineering, RSPhysSE

Mr Ben McMillan
Thesis: Global Wavemodes of Dissipative Fluid Models in Strongly Three Dimensional Plasmas
Currently: University of Sydney

Dr Clive Michael
Thesis: Doppler Spectroscopy of Argon Plasmas in H-1NF using a Coherence Imaging Camera
Currently: National Institute for Fusion Science, Japan

Ms Megan O’Mara
Thesis: Computational Modelling of Ion Cannels and Channel Permeation
Currently: Postdoctoral Fellow, Biophysics Group, RSPhysSE

Dr Ray Roberts
Thesis: Liquid Penetration into Paper
Currently: Applied Mathematics, RSPhysSE

Mr Darryl Scott
MSc Thesis: All-Optical Real time RF Signal Processing in Rare Earth Ion Doped Crystals
Destination: Royal Australian Navy

Dr Kylie Waring
Thesis: Perturbations in the \(B^3\Sigma_u^+\) State of Molecular Oxygen
Currently: Australian Government Department, Canberra
Postgraduate Students

Sources of Funding:
ADFA Australian Defence Force Academy
ASS ANU Supplementary Scholarship
ANU/MPhil ANU Master Scholarship
ANUPS Australian National University Postgraduate Scholarship
ANUPTS Australian National University Postgraduate and Tuition Fee Scholarship
APA Australian Postgraduate Award
APA(I) Australian Postgraduate Award (Industry)
CRC Cooperative Research Centre
CSIRO Supported by the Commonwealth Scientific & Industrial Research Organisation
GSS Graduate School Scholarship
IPRS International Postgraduate Research Scholarship
SPIRT ARC SPIRT Grant
RMIT Royal Melbourne Institute of Technology
VC Vice Chancellor’s Supplementary Scholarship
WS RSPhysSE Supplementary Scholarship for Women

The lists include first year students who were not enrolled for the full year and continuing students who have not yet graduated.

Mr Farzand Abdullatif, MSc ANU, AUSAID
Mr Marko Alat, BSc WSydney, ANU/MPhip
Ms Annabel Alexander, BSc ANU, APA/ASS
Mr Michael Anderson, BEng ANU, APA/ASS (from January)
Ms Vicki Au, BA BSc Melbourne, ANUPS
Mr Radek Bagien, ANU/MPhip (from January)
Mr Nicholas Balcon, BSc Galilee, France, ANUPS (from June)
Mr Satyanarayan Barik, BSc Vidyasagar, India, ANUPS
Mr Ivan Blajer, BSc Melb, ANUPS (until April)
Mr Cameron Bowles, BSc Flinders, ANUPS/GSS
Mr David Brett, BSc Melb, ANUPS
Mr Phillip Brydon, BSc ANU, APA/ANU/ASS
Ms Anna Carnerup, BSc Malmö, ANUPS, IPRS
Mr Toen Castle, BSc(Adv) UNE, BSc(Hons) ANU, ANUPS/ASS (from March)
Mr Yung-Kai Chan, BSc ANU, self-funded
Mr Cheng Chen, BSc (Hons) Flinders, ANUPS/GSS (until September)
Ms Victoria Coleman, BSc Flinders, APA/ASS
Mr Massimiliano Colla, MSc Pisa, OPRS/ANUPS
Mr Scott Collis, BSc Sydney, ANUPS
Ms Beata Dabrowska, BSc Warsaw, ANUPS/ASS

Mr Robert G. Dall, BSc CQld, APA (until April)
Mr Gulliver Dalton, BSc ANU, ANUPS/ASS (from February)
Mr Brendan Dobson, BSc ANU, ANUPS (from March)
Mr Scott Edwards, BSc, Cert. of Adv. Studies, Tripos Cambridge, APA/ASS
Mr Drew Evans, BSc ANU, ANUPS/ASS
Mr Michael Fraser, BSc ANU, APA/ASS
Mr Elliot Fraval, BEng (Elec) BSc (Physi) UC, BSc ANU, ANUPS
Mr Darren Freeman BSc Flinders, APA/ASS/VC (from May)
Mr Qiang Gao, MS BSc Northeastern University, China, IPRS/ANUPS (until April)
Mr Paulus Gareso, BSc Hasanuddin, MSc Macq, AusAID
Ms Laura Gladkis MSc Buenos Aires, ANUPS
Mr Fenton Glass, BSc Qld, ANUPS
Ms Sangeetha Gnanapragasam, BSc MSc MPhip Madras, ANUPS
Mr Brendan Hanna, BSc UNSW, ANU/MPhip (until March), ANUPS (from April)
Ms Joanne Harrison, BSc Adelaide, BSc, APA/ASS
Ms Judith Hazel, DipSci BSc MSc Otago, ANUPS
Mr Ben Heslop, BE ANU, ANU/MPhip
Mr Shaun Howard, BSc Cincinnati, ANUPS (from July)
Mr Richard Hughes, MPhys Surrey, ANUPS/ANUPS (from December)
Mr Zohair Hussain, ANU/MPhip
Ms Milica Jelisavcic BSc Belgrade, ANUPS
Mr Bernt Johannessen, BSc Auckland, BSc (Hons) ANU, ANUPS/IPRS (from May)
Mr Greg Jolley, BA Engineering NTU, ANUPS (from April)
Mr Anthony Jones, BE/BSc ANU, ANUPS
Mr Ali Khalil, BSc MSc Cairo, ANUPS
Ms Lydia Knuefing, BA BSc Wuppertal, ANUPS
Mr Santhosh Kumar, MSc Pune, ANUPS (ARC Discovery)
Ms Vanessa Leung, BSc Massey, GSS/ASS/WS (jointly with University of Bonn)
Ms Penelope Lever, BE Canterbury, GSS/ASS (until April)
Mr Peter Linardakis, BE/BIT ANU, APA/ASS
Ms Pearl Louis, BSc (Hons) ANU, ANUPS
Mr Liviu Lungu, MSc PU Bucharest, SPIRT/APA(I) (until June)
Mrs Lily Luo, BSc Nanchang, APA/ASS
Mr Nathan Madsen, BSc (Hons) UQ, APA/ASS
Mr Aaron Matthews, BSc Canberra, GDipSc, ANUPS/ASS (from December)
Mr Glen McCarthy, BSc(Hons) UNSW, Dip Ed UNSW, ANUPS
Mr Ben McMillan, BSc Melb, APA/ASS (until October)
Mr Roger McMurtrie, BAppSc UC, ANU/MPhil
Mr Albert Meige, BSc Galilee, France, ANUTPS
Ms Sudha Mokkapati, BSc Usmania, MSc Kanpur, India, ANUPS (from March)
Mr Joseph Morrall, BSc ANU, ANUPS
Mr Steven Morrison, BEng(Hons) Griffith, APA/ASS (from April)
Ms Eleni Notaras, B ABSc, (Redfern Polymer Optics)
Ms Megan O’Mara, BApSc, BSc ANU, GSS/ASS (until September)
Ms Judit O’Vari, BE (Elec) BSc (Math/Psysch) Adelaide, ANU/MPhil (from February)
Mr Norman Oelkers, DipPhys Heidelberg, IPRS/DAAD, EES(GSS) (jointly with MSI)
Mr David Oliver, BSc, UWgong, APA/ASS
Mr Dan-Erik Petersen, ANUPS/ASS (from April)
Mr Benjamin Powell, BSc BLM, CQU, ANU/MPhil (from August)
Mr David Pretty, BSc Melb, ANUPS
Mr Horst Punzmann, BSc Polytech Regensburg, ANUPS
Mr Devin Ramdutt BSc UWgong, GSS/ASS

Mr Edward H. Roberts, BE BSc NSW, MBA Deak, FIE(Aust), APA/ASS
Mr Ray Roberts, BSc(For), ANUPTS/ASS (CRC funded) (until May)
Mr Christian Rosberg, MSc TU Denmark, ANUPTS/ASS (from December)
Ms Yinlan Ruan, BSc MSc HUST China, ANUPS
Mr Mohammad Saadatfar, BSc Mazandaran MSc IASBS, ANUTPS
Mr Gerd Schröder, Dipl-Phys Cologne, ANUTPS
Mr Ilya Shadrivov, MSc, Nizhny Novgorod, ANU/IPRS/ASS
Mr Nat Smith, BSc ANU, ANUPS
Mr Marc Spooner, BSc Ottawa, MSc Western Ontario, ANUTPS
Ms Kallista Stewart, BSc BE, ANU, ANUPS/ASS (Endowment for Excellence)
Mr Andrew Sullivan, BAppSc Victoria, ANUPS/CSIRO (from January)

Mr Orson Sutherland, BE ANU, APA/ASS
Mr James A. Swansson, BA MSc Melb, APA/ASS
Mr. Michael Turner, BSc Canberra, APA/ASS
Ms Linda J. Uhlmann, BAppSci CQld, APA/ASS
Mr Jeta Vedi, BE BCom, APA/ASS
Ms Taira Vora, BSc ANU, ANUTPS
Mr Klaus Wilcken, MSc Turku, IPRS ANUPS
Mr Daniel Wilkins, BSc ANU, (Department of Geology), ANUPS
Mr Andrew Wilkinson, BE BSc ANU, APA/ASS
Ms Elena Wilson, BSc Biebsk State, ANUPS
Mr Stephan Winkler, MSc Vienna, ANUPS/ANUTFS
Ms Hua Xia, MSc Chongquing University, China, ANUTPS
Ms Jun Yu, BSc Wuxi, China, ANU/MPhil (from October)
Mr Meelis Zidikheri, BSc GradDipE Melbourne, ANUPS/ASS/CSIRO (from May)

Graduate Diploma Student
Name             Home University       Host Department

Mr Michael Lane* Australian National University NP

Honours Students
Name              Home University       Host Department

Adrian D’Alfonso  Melbourne University TP
Sarah Everett*    University of Wollongong EME
Mostyn Gale*      Flinders University AMPL
Aaron Matthews*   Australian National University NLPC
Andrew Molloy*    University of Newcastle OSG
David Oliver*     Flinders University EME
Thomas Pask*      Griffith University AMPL
Wilson Pok*       Sydney University EME
Sonam Shelley*    ANU AMPL/RSES
Andy Setiawan*   University of South Australia AMPL
Peter Smythe      University of Wollongong LPC
Michelle Wu       University of Wollongong AM

* received a RSPhysSE Honours Scholarship