

External Research Grants 2005

Project Grants

This is a list of external research grants obtained by School staff. Note that in some cases, as indicated, grants also involve staff from other institutions.

Baldock C

Development of ultrasound computerised tomography scanner for the acoustic evaluation of radiation therapy dose distributions using radiation sensitive polymer gels

Clive and Vera Ramaciotti Foundation, \$30k

Bartlett, S, Spekkens R, Terno D

Relative Quantum Information

ARC Linkage International Project, \$13k

Bedding T

Asteroseismology as a window to stellar interiors

ARC Discovery Project, \$77k

Bedding T, Kjeldsen, Christensen-Dalsgaard J

An Australian space telescope on a Danish satellite: oscillating stars as a test of stellar evolution theories

ARC Linkage International Project, \$9k

Bilek M

Plasma based techniques for the modification of surfaces for biotechnology and aerospace application

ARC Federation Fellowship, \$310k

Bilek M

Surface modification of plastic films by Plasma Immersed Ion Implantation (PIII)

Toppan Printing Co. Japan, \$20k

Bilek M, McCulloch D, Cockayne D

Interface engineering of multilayer nanostructures

ARC Discovery Project, \$94k

Bilek M, Ng N, Pigram P, Collins R

The surface science of vacuum glazing

ARC Linkage Project, research partner Nippon Sheet Glass, \$179k

Borland M

High Temperature Selective Surfaces

USSS Pty Ltd, \$101k

Bosi S

Low Temperature Selective Surfaces

USSS Pty Ltd, \$169k

Cairns I

Critical issues in space physics

ARC Discovery Project, Australian Professorial Fellowship, \$204k

Cairns I, Robinson PA

Field Statistics of Space and Astrophysical Phenomena

ARC Discovery Project, \$102k

De Sterke CM, Eggleton BJ, Blows JL, McPhedran R, Botten LC

Centre for Ultrahigh bandwidth Devices for Optical Systems

ARC Special Research Centre, \$1.2M

De Sterke CM, Eggleton B, Blows JL, McPhedran R, Botten LC
NSW Government funding supporting ARC Centre of Excellence CUDOS
Department of Business and Regional Development – NSW Research Project, \$123k

Dey C
Developing a triple bottom line approach to Australia's red meat industries
Meat and Livestock Australia Research and Development Program R&D Grant, \$40k

Doherty A, Bartlett, S
Entanglement as resource for quantum technology
ARC Discovery Project (shared with University of Queensland) \$50k

Eggleton BJ
Engineered optical fibre device structures for next generation telecommunication systems
ARC Federation Fellowship, \$310k

Eggleton BJ, Grillet C, Savvides N
Microfluidic photonic systems
ARC Discovery Project, \$186k

Fulton R, Meikle S, Baldock C
Motion compensation in FDG PET imaging for improved cancer diagnosis and treatment
Cancer Council NSW, \$82k

Gaensler B
The Origin and Evolution of Cosmic Magnetism
ARC Federation Fellowship, \$281k

Green A, Leche A, Parfitt A
Development of a new wideband feed for a cylindrical reflector antenna
ARC Linkage Project, research partner Argus Technology, \$101k

Green AJ, Hunstead R
Our Galaxy: the last billion years
ARC Discovery Project, \$167k

Hopkins A
A New Approach to Understanding Galaxy Evolution
ARC Discovery Project, \$133k

Hopkins A
A new approach to understanding galaxy evolution
Australian Academy of Science, \$4k

Hunstead R
The most distant galaxies: probing the early universe
ARC Discovery Project, \$118k

Kuyucak S
Realistic models of permeation in ion channels
ARC Discovery Project, \$73k

Kuyucak S, Bastug T
Hierarchical modeling of protein interactions
ARC Discovery Project, \$65k

Lenzen M, Lundie S, Bilek M
Development of the ecological footprint for environmental reporting of companies
ARC Linkage Project, research partner Sydney Water, \$152k

Gibson BK, Lattanzio JC, Da Costa GS, Tout CA, Chieffi A, Lewis GF
Calibrating cosmology: the near-field approach to galaxy formation
ARC Discovery Project (shared with Swinburne University), \$4k

Lewis GF, Wheatland M, Bedding T
Building the future of theoretical astrophysics: Views of the virtual Universe
ARC Discovery Project, \$84k

McKenzie D
Centre for Quantum Computer Technology
ARC Special Research Centre (based at UNSW), \$71k

Yarovskiy I, Treutlein H, McKenzie D, Carver J, Bilek M
Response of Proteins to External Non-Ionising Radiation: an Experimental and Computer Modelling Investigation
ARC Linkage, research partner Cytopia Pty Ltd, \$ 34k

McKenzie D, Fleming S
Fibre optic dosimeters for medical and environmental applications
ARC Linkage Project, research partner The Sydney Cancer Institute, \$84k

McKenzie D, Griesser H, Remedios C
Electric field induced surface attachment & detachment of proteins
ARC Discovery Project, \$76k

McKenzie D, James N, Swain M
New materials for an implantable blood pump
ARC Linkage Project, research partner Ventricor, \$211k

Melrose D
Plasma astrophysics under extreme conditions
ARC Discovery Project, \$88k

Melrose D
Plasma astrophysics under extreme conditions
ARC Australian Professorial Fellowship, \$73k

Melrose DB, Ball LT, Luo Q, Johnston S, Wan G
Relativistic Plasma Astrophysics: Pulsars, IDVs and transients
ARC Discovery Project, \$231k

Murray J, Lenzen M, Bilek M
Development and pilot of sustainability reporting for organisations
Environment Protection Authority NSW Environmental Trust (Research), \$138k

Taylor G, Sevier ME, Tovey SN, Varvell KE, Peak LS
Frontier Experiments in High Energy Physics
ARC Discovery Project (with University of Melbourne), \$85k

Robinson P
Physics of self-organisation: from space plasmas to brain dynamics
ARC Federation Fellowship, \$310k

Robinson P
Quantitative Brain Dynamics
ARC Discovery Project, \$102k

Sadler E
Timescales for radio galaxies

ARC Discovery Project, \$225k

Stampfl CM

Application of first principles theory in condensed matter physics, surface physics, chemistry, and engineering: coatings, catalysis, and devices

ARC Federation Fellowship, \$310k

Stampfl CM

Advances in theoretical methodologies in surface and materials science

ARC Linkage International Project, \$19k

Stampfl CM, Scheffler MR, Freeman AJ

Ab initio theory in complex materials & surfaces: prediction & design of functional structures

ARC Discovery Project, \$261k

Tuthill PG

Imaging circumstellar matter at high resolution

ARC Discovery Project, \$28k

Tuthill PG

Imaging circumstellar matter at high resolution

ARC Queen Elizabeth II Fellowship, \$86k

Tuthill PG

Time evolution of circumstellar matter at high angular resolution - Keck Observatory, Hawaii, USA

AINSE, Australian Synchrotron Research Program, \$4.5k

Tuthill PG

The atmospheres of red giant stars: theory and observation

ARC Linkage International Project, \$9k

Tuthill PG, Davis J, Tango WJ

The basic physics of stars: determination of sizes, shapes, masses, temperatures and distances with very high resolution optical interferometry

ARC Discovery Project, \$118k

Vladimirov S

Collective processes in turbulent and complex plasmas

ARC Australian Professorial Fellowship, \$118k

Vladimirov S, Ostrikov K

Self-organised complex ionised gas systems for ordered nanometre-scale assemblies - QEII (Ostrikov)

ARC Discovery Project, \$188k

Wheatland MS

Energy Storage and Release in Solar Active Regions

ARC Queen Elizabeth II Fellowship, \$113k

White A, Bartlett S, Doherty A, Gilchrist A, O'Brien J, Pryde G

Controlling quantum technologies

ARC Discovery Project (shared with University of Queensland) \$26k

Yin Y

Large Area Precision Plasma Technology

USSS Pty Ltd, \$145k

Yin Y

Low Temperature Passivation Technology for Silicon cells

USSS Pty Ltd, \$84k

ARC Linkage Infrastructure and Equipment Grants

These multi-institution grants involve one or more staff from the School of Physics

Prof PA Lay; A/Prof SP Ringer; A/Prof RS Armstrong; Dr D McNaughton; Dr J Beardall; Dr MA Stevens-Kalceff; A/Prof EM Goldys; Prof SK Bhargava; Prof J Drennan; Prof Dr T Maschmeyer; Dr JR Aldrich-Wright, Prof TC Sorrell; Prof DR McKenzie; Prof BJ Eggleton; A/Prof SC Fleming
Vibrational Spectroscopy Microprobe/FESEM/AFM Imaging of Cells, Tissues and Materials, \$902k

Robertson JG, Sackett PD, Couch WJ, Webster RL, Boyle BJ, Forbes DA, Carter BD, Lattanzio JC, Drinkwater MJ
Australian Membership of the International Gemini Partnership, \$1.5M

Pigram PJ, Hogan CF, Brack N, Peele AG, Liesegang J, Riley JD, Bilek MM, McKenzie DR, Forsyth M, MacFarlane DR, Finlayson TR, Simon GP
Advanced Surface Imaging and Spectroscopy Facility, \$407k

Taylor GN, Sevier ME, Barberio E, Tovey SN, Varvell KE, Peak LS, Rozenfeld AB
Support for the Australian Experimental High Energy Physics Program, \$362

Webster RL, Green AJ, Drinkwater MJ, Killeen NE, Francis PJ, Couch WJ, Appelbe WF, Bailes M, Abramson DA
Australian Virtual Observatory, \$142k