

# Support for international collaborations

The objectives of the Academy's program of international scientific and technological collaborations are to improve Australian access to science and technology and to increase awareness of Australian research.

The Academy's program gives Australian researchers the opportunity to collaborate with foreign colleagues, to widen research perspectives and experience, to exchange ideas, to be recognised in the international arena, to gain information and knowledge of techniques that will stimulate and advance Australian research, and to be involved in large international projects.

There are four types of international programs: short-term visits to Europe, North America or Asia, and long-term postdoctoral fellowships. The programs support collaborative research between Australian scientists and technologists and their colleagues in Europe, Korea, China, Japan, Taiwan, USA, Canada and Mexico. The Academy also administers postdoctoral fellowships with Japan.

The programs are part of DIISR's International Science Linkages – Science Academies Programme and provide funds for living and travelling costs. The French Embassy continues to generously provide travel funds for six Australian grant recipients selected to visit France under the Academy's Europe program.

Full details of all programs are available at [www.science.org.au/internat/programs](http://www.science.org.au/internat/programs).

The following researchers were supported in 2008–09:

## Asia

### China

Researcher	Project	Host institution(s)
Dr Susan Fuller Queensland University of Technology	Russian wheat aphid invasion.	Professor Le Kang Institute of Zoology Chinese Academy of Sciences
Dr Weimin Gao Deakin University	Micro system and its functional formulation for direct energy conversion.	A/Professor Changfeng Yan Guangzhou Institute of Energy Conversion Chinese Academy of Sciences
Dr Baohong Hou Primary Industries and Resources South Australia	Development of new techniques to model and interpret data from integrated geoscientific technologies in exploration for mineral resources.	Professor Kezhang Qin Institute of Geology and Geophysics Chinese Academy of Sciences Professor Xianrong Luo Guilin University of Technology

Researcher	Project	Host institution(s)
Professor Keith Jones University of Newcastle	Beijing–Newcastle collaboration in oocyte cell and molecular biology.	Professor Qing Yuan Sun Institute of Zoology Chinese Academy of Sciences
Dr John Keesing CSIRO Marine Research	Study of impacts on benthic habitats of intensive use of the coastal ecosystem in north eastern China in relation to similar Australian ecosystems which are subject to increasing human usage.	Professor Dongyan Liu Yantai Institute of Coastal Zone Research for Sustainable Development Chinese Academy of Sciences Professor Xinzheng Li Institute of Oceanology Chinese Academy of Sciences
Dr Weihua Li University of Wollongong	Sensing and actuating capabilities of magnetorheological elastomers.	Professor Xinglong Gong University of Science and Technology of China Chinese Academy of Sciences
Professor David Shum Griffith University	Prospective memory in individuals with schizophrenia and schizotypal personality features: an event-related potential analysis.	Professor Raymond Chan Institute of Psychology Chinese Academy of Sciences
Dr Bing Zhang Department of Primary Industries and Fisheries	Develop real time PCR assays applicable for identification and differentiation of Babesia spp.	Professor Guangxiu Liu Cold and Arid Regions Environment and Engineering Research Institute Chinese Academy of Sciences Professor Hong Yin Lanzhou Veterinary Research Institute Chinese Academy of Agricultural Science

### Japan Society for the Promotion of Science bilateral programs

Researcher	Project	Host institution(s)
Dr Ian Bally Queensland Department of Primary Industries and Fisheries	Developing molecular markers for mango.	Dr Chitose Honsho University of Miyazaki Dr Shinya Kanzaki Kinki University Professor Keizo Yonomori Kyoto University

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Dr Zhenxiang Cheng University of Wollongong	Raman and XPS study of the modified novel multiferroic bismuth ferrite thin films.	Professor Hideo Kimura National Institute for Materials Science  Dr Minoru Osada National Institute for Materials Science
Dr Peta Clode University of Western Australia	Skeletal growth patterns of scleractinian corals.	Dr Kotaro Shirai University of Tokyo
Professor Eugene Gamaly Australian National University	Interaction of ultra-short laser beam tight-focused inside a transparent dielectric: controllable moderate and extreme modification of material properties.	Professor Dmitri Goldberg National Institute for Materials Science  Professor Hiroaki Misawa Hokkaido University  A/Professor Saulius Juodkazis Hokkaido University
Dr Xiwen Guan Australian National University	Thermodynamic and magnetic properties of multi-component interacting Fermi gases of ultra-cold atoms.	Professor Atsuo Kuniba University of Tokyo  Professor Masaki Oshikawa University of Tokyo
Dr Ralf Huuck National ICT Australia	Software bug detection in multi-core embedded devices.	Dr Cyrille Artho National Institute of Advanced Industrial Science
Professor Richard Keene James Cook University	Design of catalysts for multi-electron reduction of carbon dioxide.	Professor Yoshihisa Inoue Osaka University  Professor Osamu Ishitani Tokyo Institute of Technology
Dr Mahinda Kuruppu Curtin University of Technology	Influence of water vapour pressure in fracture toughness of rock.	Professor Yuzo Obara Kumamoto University
A/Professor Junwei Lu Griffith University	High performance computing and visualisation technologies for electromagnetic compatibility (EMC) computer.	A/Professor Takeshi Iwashita Kyoto University  Professor Sotoshi Yamada Kanazawa University
A/Professor Wenny Rahayu La Trobe University	Distributed ontologies reuse, contextualisation and strategic maintenance in a semantic grid environment.	A/Professor Bernady Apduhan Kyushu Sangyo University
Dr David Taniar Monash University	High performance parallel processing for semantic grid.	A/Professor Bernady Apduhan Kyushu Sangyo University

Researcher	Project	Host institution(s)
Dr Carden Wallace Queensland University of Technology	High latitude reef corals of Australia and Japan: comparison of species diversity, molecular biology and response to global climate change.	Dr Hironobu Fukami Kyoto University

### Japan Society for the Promotion of Science Invitation Fellowships (short-term)

Researcher	Project	Host institution(s)
Dr Timothy Baldwin University of Melbourne	Domain tuning of preprocessors for information extraction in the biomedical domain.	Professor Junichi Tsujii University of Tokyo
Professor Hubert Chanson University of Queensland	Turbulence and turbulent mixing in estuarine zones and shallow- water bays.	Professor Shinichi Aoki Toyohashi University of Technology
Professor Cristobal dos Remedios University of Sydney	A functional analysis of the ageing human heart by the spontaneously oscillatory contraction (SPOC) technique using frozen human heart myofibrils.	Professor Shinichi Ishiwata Waseda University
Professor Mark Humphrey Australian National University	Electroabsorption studies of multimetallic complexes with multipolar charge distributions.	Dr Takashi Isoshima RIKEN (The Institute of Physical and Chemical Research)
Professor David Jans Monash University	Regulation of nuclear transport in health and disease.	Professor Yoshihiro Yoneda Osaka University
Dr Christopher McSweeney CSIRO Livestock Industries	Microbial ecology of hydrogenotrophic rumen microorganisms in response to methane inhibitors.	Dr Makoto Mitsumori National Institute of Livestock and Grassland Science
Professor Michael Negnevitsky University of Tasmania	Soft computing with practical applications in power industry.	Professor Kaoru Hirota Tokyo Institute of Technology
Dr Steve Swain CSIRO Plant Industry	Regulation of plant hormone levels in developing fruits in response to seed set.	Dr Shinjiro Yamaguchi RIKEN (The Institute of Physical and Chemical Research)

### Japan Society for the Promotion of Science Postdoctoral Fellowships

Researcher	Project	Host institution(s)
Dr Matthew Flood Department of Agriculture, Fisheries and Forestry	Improving welfare of farmed salmonid fish through behavioural investigation and use of self feeders.	Professor Mitsuo Tabata Teikyo University of Science and Technology

Researcher	Project	Host institution(s)
Dr Jillian Healy Deakin University	Investigation of the model of ion uptake in the esophagus of the euryhaline eel, <i>Anguilla japonica</i> .	Professor Yoshio Takei Ocean Research Institute
Mr Darryl Jones Flinders University	Molecular frame electron momentum spectroscopy.	Dr Masahiko Takahashi Tohoku University
Mr Santhosh Kumar Australian National University	Experimental investigations of anomalous heating during magnetic reconnection.	Professor Yasushi Ono University of Tokyo
Dr Elena Kupriyanova University of Adelaide	Species composition and distribution of serpulid polychaetes reported from both Australia and Japan.	A/Professor Eijiroh Nishi Yokohama National University
Mr Hao Wen Lin University of South Australia	Development of an intelligent manufacturing information system for Australian manufacturers using advanced Japanese manufacturing management technologies.	Dr Tomohiro Murata Waseda University
Mr Simon Mathew Flinders University	Improving cytotoxicity and tumour selectivity of photodynamic therapeutics through multifunctional macromolecular design.	Professor Dr Hiroshi Imahori Kyoto University
Mr Terry Rose University of Western Australia	Investigation into physiological mechanisms and molecular biology of P-deficiency tolerance in rice.	Dr Matthias Wissuwa Japan International Research Center for Agricultural Sciences
Dr Nicholas Shepherd University of Queensland	Catalytic, asymmetric synthesis of highly substituted 1,2-diaminoacetate derivatives.	Professor Masakatsu Shibasaki University of Tokyo

## Korea

Researcher	Project	Host institution(s)
Dr Duk Yong Choi Australian National University	Fabrication of nanophotonic structures by e-beam lithography.	Professor Yong Hee Lee Korea Advanced Institute of Science and Technology
A/Professor Richard Lai La Trobe University	Developing a method for estimating the system-level size of a component-based software system.	Professor Kyo Chul Kang Department of Computer Science and Engineering

Researcher	Project	Host institution(s)
Dr Gianluca Ranzi University of Sydney	Behaviour of restrained composite steel-concrete floor beams at elevated temperatures.	Professor Sang Hyo Kim Yonsei University  Dr Hyun Joon Shin Korea Institute of Construction Technology
Professor Richard Speare James Cook University	Providing evidence for the management of the serious amphibian disease chytridiomycosis in Korean amphibians.	Professor Se Chang Park Seoul National University

### Australia–Korea Foundation Early Korea Researchers Programme

Researcher	Project	Host institute	Australian mentor
Dr Nathan Faggian University of Melbourne	Magnetic resonance microscopy of the human brain in vivo: a new approach using high-resolution high field magnetic resonance imaging.	Professor Zang-Hee Cho Gachon University of Medicine and Science	A/Professor Gary Egan University of Melbourne
Dr Peter King CSIRO Materials Science and Engineering	Mechanism of bonding of cold spray copper particles to an aluminium substrate.	Professor Changhee Lee Hanyang University	Dr Mahnaz Jahedi CSIRO Materials Science and Engineering
Dr Sajjad Mahmood La Trobe University	Incorporating business perspective in a component-based system development requirements analysis process.	Professor Kyo Chul Kang Pohang University of Science and Technology	A/Professor Richard Lai La Trobe University
Dr Gianluca Ranzi University of Sydney	Behaviour and design of innovative composite steel-concrete systems.	Professor Sang Hyo Kim Yonsei University	Professor Mark Bradford University of New South Wales
Dr Sihai Zhou University of Wollongong	Study of MgB <sub>2</sub> superconductor.	Professor Jaimoo Yoo Korea Institute of Materials Science	Professor Shixue Dou University of Wollongong

## Taiwan

Researcher	Project	Host institution(s)
Dr Timothy Payne Australian Nuclear Science and Technology Organisation	Assessment of contaminant retention properties of geologic materials: integration and optimisation of characterisation techniques to facilitate best practice in site selection.	Professor Chin Pan National Tsing Hua University
Dr Zhonghua Sun Curtin University of Technology	Optimisation of imaging parameters in digital chest radiography: a comparison of computed radiography and direct radiography.	Dr Cheng Sun Lin Central Taiwan University of Science and Technology
A/Professor Paul Taylor University of Melbourne	Molecular mechanisms of chickpea defence to pathogens.	Professor Kai Wun Yeh National Taiwan University

## Europe

### Australia–Italy Award 2009

Researcher	Project	Host institution(s)
Mr Tsu Tsung Li Department of Engineering Australian National University	Amorphous silicon based films for solar cell applications.	Dr Mario Tucci Photovoltaic R&D Laboratories ENEA Casaccia Research Centre
Dr Marco Martorella Dipartimento di Ingegneria dell'Informazione University of Pisa	Multistatic inverse synthetic aperture radar for target classification and recognition.	Professor Bevan Bates School of Electrical and Electronic Engineering University of Adelaide
Dr Luka Pravica Department of Physics University of Western Australia	Spectroscopy of biological molecules and resonant two- photon ionisation of atoms and molecules.	Dr Lorenzo Avaldi Institute of Inorganic Methodologies and Plasmas
Dr Tiziana Stomeo Distretto Tecnologico-ISUFI Università del Salento	Investigation of AlGaIn/GaN carrier properties for deep-UV sensor applications.	Professor Laurie Faraone WA Centre for Semiconductor Optoelectronics and Microsystems

### Bede Morris Fellowship

Researcher	Project	Host institution(s)
Professor Arne Dahle University of Queensland	Shear behaviour of solidifying aluminium alloys.	Professor Michel Suery Science et Ingenierie des Materiaux et Procèdes France

## COST Action

Researcher	Project	Hosts
Professor Marek Bialkowski School of Information Technology and Electrical Engineering University of Queensland	Antenna systems for communications and medical applications.	Professor Juan Mosig École Polytechnique Fédérale de Lausanne Switzerland  Dr Ian Craddock University of Bristol UK  A/Professor Pawel Kabacik Wroclaw University of Technology Poland  Professor Mikael Persson Chalmers University of Technology Sweden
Dr Pietro Celi Faculty of Veterinary Science University of Sydney	Participation in COST Action FA0702 meeting on maternal interactions with gametes and embryos and discuss future research programs with Dr Fazeli and colleagues.	Dr Alireza Fazeli University of Sheffield UK
Dr Naveen Chilamkurti Department of Computer Science and Computer Engineering La Trobe University	An enhanced uplink scheduling scheme for WiMAX based metropolitan area networks.	Professor Apostolos Georgiadis Parc Mediterrani de la Tecnologia Spain
Dr Vincent Daria Department of Physics Australian National University	Multi-site non-linear absorption via the modified generalised phase contrast method.	Professor Jesper Gluckstad Technical University of Denmark Denmark  Professor Monika Ritsch-Marte Medizinische für Physiologie und Medizinische Austria  Professor Francesco Simoni Universita Politecnica delle Marche Italy
A/Professor Mark Dowton Department of Biology University of Wollongong	Understanding the inheritance of the mitochondrial genome in <i>Globodera pallida</i> .	Dr Vivian Blok Scottish Crop Research Institute UK
Ms Lesley Francis Department of Innovative Forest Products, Horticulture and Forestry Science	Evaluating plantation hardwood quality: durability and extractives.	Professor Dr Joseph Gril University Montpellier II France

Researcher	Project	Host institution(s)
Dr Alexander Fuerbach Department of Physics Macquarie University	One dimensional metallic photonic crystals.	Dr Maurizio Ferrari University of Trento Italy  A/Professor Kurt Hingerl Johannes Kepler Universität Austria  Dr Nigel Johnson University of Glasgow UK
Dr Matthew Hayes School of Agriculture and Wine University of Adelaide	Identification of key tartaric acid biosynthetic and storage genes to accelerate breeding of high acid grapevines.	Dr Charles Romieu Institut National de la Recherche Agronomique France  Dr Laurent Torregrosa Institut National de la Recherche Agronomique France  Professor Serge Delrot Université Bordeaux France
Professor Yuri Kivshar Research School of Physical Sciences and Engineering Australian National University	Nonlinear optics and localisation in periodic photonic structures and metamaterials.	Dr Bjorn Maes Ghent University Belgium  Professor Marian Marciniak National Institute of Telecommunications Poland
Dr Marta Krasowska Ian Wark Research Institute University of South Australia	Influence of electric charge and solid surface hydrophobicity on wetting film stability under static and dynamic conditions.	Professor Kazimierz Malysa Institute of Catalysis and Surface Chemistry Poland
Professor Wieslaw Krolikowski Research School of Physical Sciences and Engineering Australian National University	Optical micro-manipulation by nonlinear nanophotonics.	Professor Antonio Sasso Universita di Napoli Federico II Italy
A/Professor Cristina Mattinez-Fernandez Urban Research Centre University of Western Sydney	Cities regrowing smaller: fostering knowledge on regeneration strategies in shrinking cities across Europe.	Dr Thorsten Wiechmann Brandenburg University of Technology Germany
Dr Gregory Metha Department of Chemistry University of Adelaide	Spectroscopy and chemical reactivity of size-selected metal-carbide clusters.	Professor Ulrich Heiz Technical University Munich Germany

Researcher	Project	Host institution(s)
Professor Phillip Slee Department of Education Flinders University	Cyberbullying: coping with negative and enhancing positive uses of new technologies in relationships in educational settings.	Professor Peter Smith University of London UK
Professor Roger Stone Office of the Pro-Vice Chancellor University of Southern Queensland	To participate in COST Action ES0601 and provide Australian input into important climate homogenisation systems developments of value to Australia and COST.	Dr Rob Allen Hadley Centre for Climate Research UK  Dr Olivier Mestre Ecole Nationale de la Météorologie France
Dr Catherine Whitby Ian Wark Research Institute University of South Australia	Effect of water or wet particles and oil soluble surfactant on the oil–water interface.	Dr Libero Liggieri CNR, Institute for Energetics and Interphases Italy

## French Embassy

Researcher	Project	Host institution(s)
Dr Ashley Buckle Monash University	High throughput analysis of autoantigen–antibody interactions using SPR imaging.	Professor Malcolm Buckle Centre National de la Recherche Scientifique France
Professor Arne Dahle University of Queensland	Shear behaviour of solidifying aluminium alloys.	Professor Michel Suery Science et Ingenierie des Materiaux et Procédes France
Dr Justin Leontini Monash University	Numerical simulation of transitions and instabilities in fluid flow.	Dr Michael le Bars Institut de Recherche sur les Phénomènes Hors Equilibre France
Professor Stephen Powles University of Western Australia	Unravelling herbicide resistance evolution and mechanisms in plants.	Dr Xavier Reboud Institut National De La Recherche Agronomique France
Dr Andrei Rode Australian National University	X-ray probing of transient state of matter excited by ultrafast laser pulses.	Dr Antoine Rousse Laboratoire d'Optique Appliquée France

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Dr Hala Zreiqat University of Sydney	Engineered articular cartilage using novel composite 3D scaffolds.	Professor Veronique Miggyon Université Paris Nord France  Professor Patrick Netter Laboratoire de Pharmacologie et de Physiopathologie Articulaire France

## International Research Staff Exchange Scheme

<b>Researcher</b>	<b>Project</b>	<b>Host institution</b>
Dr Luis Mejias Alvarez School of Engineering Systems Queensland University of Technology	International cooperation program for unmanned aerial systems research and development.	Professor Pascual Campoy Cervera Universidad Politecnica de Madrid Spain
A/Professor Muthupandian Ashokkumar Department of Chemistry University of Melbourne	Ultrasonic synthesis of protein microcapsules for biomedical applications.	Dr Gareth Price University of Bath UK  Dr Francesca Cavalieri University of Rome Tor Vergata Italy
Dr Damien Batstone Advanced Water Management Centre University of Queensland	ANAMIX: a two year exchange program on anaerobic mixed cultures to study and improve biological generation of chemicals and energy carriers from organic residues generated by agro-industrial activities.	Professor Jean Philippe Steyer Institut National de la Recherche Agronomique France  Dr Robbert Kleerebezem Technical University of Delft The Netherlands
Dr Michael Battaglia CSIRO Sustainable Ecosystems	TRANZFOR: transferring research between EU and Australia–New Zealand on forestry and climate change.	Dr Jean Michel Carnus Institut National de la Recherche Agronomique France
Dr Shelley Brown Advanced Water Management Centre University of Queensland	ANAMIX: a two year exchange program on anaerobic mixed cultures to study and improve biological generation of chemicals and energy carriers from organic residues generated by agro-industrial activities.	Dr Robbert Kleerebezem Technical University of Delft Netherlands  Professor Jean Philippe Steyer Institut National de la Recherche Agronomique France

Researcher	Project	Host institution(s)
Dr Edoardo Daly Department of Civil Engineering Monash University	Study of the impact of changes on rainfall and concomitant replenishment of usable water supplies (eg ground and stream water) given their high priority to any future water resource planning.	Professor Davide Poggi Politecnico di Torino Italy  Dr Paolo Perona Eidgenössische Technische Hochschule Zürich Switzerland
Professor Michael Dopita Research School of Astronomy and Astrophysics Australian National University	ACCESS: a complete census of star-formation and nuclear activity in the Shapley super-cluster.	Dr Paola Merluzzi Istituto Nazionale di Astrofisica Italy
Mr Pillar Eng School of Engineering Systems Queensland University of Technology	Path planning and control for unmanned aircraft forced landing.	Professor Pascual Campoy Cervera Universidad Politecnica de Madrid Spain
Dr Biju George Department of Civil and Environmental Engineering University of Melbourne	Impacts of climate change on water security.	Dr Claps Pierluigi Politechnic of Torino Italy
Mr Jim Gould CSIRO Sustainable Ecosystems	Application of fire behaviour and fuel management in blue gum ( <i>Eucalyptus globulus</i> ) plantations.	Dr Francisco Castro Rego Instituto Superior de Agronomia Portugal
Professor Paul Lant Advanced Water Management Centre University of Queensland	ANAMIX: a two year exchange program on anaerobic mixed cultures to study and improve biological generation of chemicals and energy carriers from organic residues generated by agro-industrial activities.	Professor Jean Philippe Steyer Institut National de la Recherche Agronomique France
Professor Alex McBratney Faculty of Agriculture, Food and Natural Resources University of Sydney	ECOTOOL: improving tools for sustainability assessment in forestry, agriculture and environment technologies: the issue of measuring and monitoring soil quality.	Professor Veronique Bellon-Maurel Montpellier SupAgro France
Mr Steven Mills Australian Research Centre for Aerospace Automation Queensland University of Technology	Navigation, guidance and trajectory planning for unmanned aerial vehicles.	Mr Nabil Aouf Cranfield University UK

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Dr Hassan Obied School of Biomedical Sciences Charles Sturt University	Use of nanomaterials for environmental and agricultural applications.	Dr Antonio de Martino University of Naples Federico II Italy
Dr Murray Peel Department of Civil and Environmental Engineering University of Melbourne	Basin and large scale floods and water balance modelling.	Professor Günter Blöschl Technische Universität Wien Austria
Dr Paul Prenzler School of Agricultural and Wine Sciences Charles Sturt University	Use of nanomaterials for environmental and agricultural applications.	Professor Juan Cornejo Instituto de Recursos Naturalesy Agrobiologia de Sevilla Spain
Dr Adam Rennie Department of Mathematics Australian National University	Novel geometric structures.	Professor Tomasz Brzezinski University of Wales UK  Professor Piotr Hajac Polish Academy of Sciences Poland
Dr Danielle Ryan School of Agricultural and Wine Sciences Charles Sturt University	Use of nanomaterials for environmental and agricultural applications.	Dr Antonio de Martino University of Naples Federico II Italy
A/Professor Andrew Western Department of Civil and Environmental Engineering University of Melbourne	Modelling and forecasting of hydroclimatic variables in space and time.	Professor Günter Blöschl Technische Universität Wien Austria
Dr Harry Wu CSIRO Plant Industry	Virtual genes.	Dr Leopoldo Sanchez Institut National de la Recherche Agronomique France

### Europe participants 2009–10

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Dr David Abdo Department of Fisheries	Hidden diversity in the waters of the western Mediterranean sea.	Dr Mikel Becerro Centre for Advanced Studies Spain
Dr Lisa Alleva Australian National University	Establishing an accurate method for quantification of the inflammatory protein high mobility group box 1 (HMGB1).	Dr Reinhard Voll Universität Erlangen-Nürnberg Germany

Researcher	Project	Host institution(s)
Dr Fernando Alonso-Marroquin University of Queensland	3D discrete element modelling of geological materials: merging molecular dynamics and computational geometry.	Professor Dr Stefan Luding University of Twente The Netherlands  Professor Frederic Donze Grenoble Joseph Fourier University France
Dr Virginia Best University of Sydney	Auditory grouping and cochlear implants.	Dr Bernhard Laback Austrian Academy of Sciences Austria
Dr Helen Blanchard Griffith University	Probing carbohydrate recognition by proteins that are critical in orchestrating disease.	Professor Anne Imberty Centre de Recherches sur les Macromolécules Vegetales France
Dr Anna Brooks Southern Cross University	Body perception: neural correlates of gender discrimination.	Professor Olaf Blanke Brain Mind Institute Switzerland
A/Professor Michael Brown University of Adelaide	Novel in vivo targeting of dead tumour cells exerts potent bystander killing effects.	Professor Richard Begent Cancer Research UK Targeting and Imaging UK
Dr Scott Brown University of Newcastle	Integrating mathematical models of human cognition with neurophysiological data from functional magnetic resonance imaging.	A/Professor Eric-Jan Wagenmakers University van Amsterdam The Netherlands
Dr Ashley Buckle Monash University	High throughput analysis of autoantigen–antibody interactions using SPR imaging.	Professor Malcolm Buckle Centre National de la Recherche Scientifique France
Dr Conrad Burden Australian National University	Developing practical algorithms for microarray data from physico-chemical models.	Dr Hans Binder Universität Leipzig Germany  Dr Enrico Carlom Institute for Theoretical Physics Belgium  Professor Simon Tavaré University of Cambridge UK
Dr Olivier Buzzi University of Newcastle	X-ray micro tomography of natural Australian expansive soils.	Professor Gioachino Viggiani University Joseph Fourier France

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Professor Chris Carter University of Tasmania	Nutrition based strategies for fish meal and oil replacement in aquaculture feeds.	Professor Gro-Ingunn Hemre National Institute of Nutrition and Seafood Norway
Professor Arne Dahle University of Queensland	Shear behaviour of solidifying aluminium alloys.	Professor Michel Suery Science et Ingénierie des Matériaux et Procédés France
Dr Pierre Dilda University of New South Wales	Identification of cancer patients that will better respond to treatment with GSAO.	Professor Alfonso Pompella University of Pisa Medical School Italy
A/Professor Mark Downton University of Wollongong	Tracing evolutionary transitions among the Hymenoptera, using mitochondrial genome sequences.	Professor Birgit Schlick-Steiner University of Natural Resources and Applied Life Sciences Austria  Dr Florian Steiner University of Natural Resources and Applied Life Sciences Austria
Dr Russell Drysdale University of Newcastle	Developing the capacity in Australia for measuring the isotopic composition of speleothem fluid inclusions for palaeotemperature reconstruction.	Dr Hubert Vonhof Vrije Universiteit Amsterdam The Netherlands
A/Professor Qipeng Guo Deakin University	Unique insights into polymer structure using spectroscopic imaging.	Professor Sergei Kazarian Imperial College London UK  Dr Geoffrey Moggridge University of Cambridge UK
Professor Vadim Kamenetsky University of Tasmania	Application of a single-crystal x-ray and other microbeam techniques to compositions of mantle and crustal fluids included in minerals and glasses.	Professor Leonid Dubrovinsky University of Bayreuth Germany
Dr Sergei Kozlov University of Queensland	Recruitment of ATM kinase to the sites of DNA damage induced by heavy ions.	Dr Burkhard Jakob Gesellschaft für Schwerionenforschung Germany

Researcher	Project	Host institution(s)
Dr Kypros Kypri University of Newcastle	Investigation of performance biases in clinical trials of health behaviour interventions.	Dr Jim McCambridge Department of Public Health and Policy UK
Dr Bradley Ladewig ARC Centre for Functional Nanomaterials	Platform technologies for the rapid development of high performance nanocomposite membranes.	Professor Suzana Nunes GKSS Research Centre Germany  Dr Wilhelm Meulenberg Forschungszentrum Juelich GmbH Germany
Dr Justin Leontini Monash University	Numerical simulation of transitions and instabilities in fluid flow.	Dr Michael le Bars Institut de Recherche sur les Phénomènes Hors Equilibre France
Dr Mike Manefield University of New South Wales	The role of redox potential in carbon flow in microbial communities.	Dr Tillman Leuders Institute of Groundwater Ecology Germany  Dr David Schleheck University of Konstanz Germany
Dr Neilson Martin Curtin University of Technology	Educational outcomes for children with attention deficit hyperactivity disorder (ADHD).	Professor Peter Tymms University of Durham UK
Professor Dougal McCulloch RMIT University	Developing tools for exploring the nano-world.	Professor David Cockayne University of Oxford UK
Adjunct Professor Nunzio Motta Queensland University of Technology	Growth of nanotubes on patterned substrates.	Professor Maurizio de Crescenzi Università di Roma Tor Vergata Italy
Dr Simon Moulton ARC Centre of Excellence for Electromaterials Science	Aligned carbon nanotube biomaterial structures.	Professor Eric Anglaret Université Montpellier II France  Dr Philippe Poulin Centre de Recherche Paul Pascal France
Professor Paul Mulvaney University of Melbourne	Plasmonic superstructures: light coupling and sensing.	Professor Javier de Abajo Instituto de Optica Spain

Researcher	Project	Host institution(s)
A/Professor John Murray University of New South Wales	Identification of mechanisms affecting stability and clearance rates of hepatitis B virions in chronically infected individuals by using the uPA chimera mouse model of infection with hepatitis B viruses.	A/Professor Jorg Petersen Universitätsklinikum Hamburg-Eppendorf Germany
Dr Dragomir Neshev Australian National University	Nonlinear photonics, plasmonics and metamaterials.	Professor Thomas Pertsch Friedrich Schiller University Jena Germany
A/Professor Graham Nicholson University of Technology Sydney	Developing peptide toxins as biopesticides and therapeutics.	Dr Pierre Escoubas Institute de Pharmacologie Moleculaire et Cellulaire France
Professor Stephen Powles University of Western Australia	Unravelling herbicide resistance evolution and mechanisms in plants.	Dr Xavier Reboud Institut National De La Recherche Agronomique France
Dr Andrei Rode Australian National University	X-ray probing of transient state of matter excited by ultrafast laser pulses.	Dr Antoine Rousse Laboratoire d'Optique Appliquée France
Dr Frances Separovic University of Melbourne	Synchrotron radiation circular dichroism studies of antimicrobial peptides.	Professor Bonnie Wallace University of London UK  Professor Anthony Watts University of Oxford UK
A/Professor Sergey Shabala University of Tasmania	Revealing mechanisms of osmotic stress signalling by combining MIFE and confocal imaging microscopy techniques.	Professor Stefano Mancuso University of Florence Italy
Dr Jan Slapeta University of Sydney	Iron requirements of <i>Chromera velia</i> .	Professor Jean-Michel Camadro Institut Jacques Monod France
Dr Daniel Terno Macquarie University	Applications of non-completely positive maps to quantum tomography.	Professor Karol Zyczkowski Jagiellonian University Poland
Dr Miriam Welgampola Royal Prince Alfred Hospital	Extra-ocular muscles mediating the sound-evoked vestibulo-ocular reflex.	Professor Krister Branterg Karolinska Hospital Sweden

Researcher	Project	Host institution(s)
Dr Duanne White Macquarie University	Novel application of in situ cosmogenic $^{14}\text{C}$ to assess the influence of clast recycling on our understanding of the history of the east Antarctic ice sheet.	Professor Paul Bishop University of Glasgow Scotland
Dr Jane Williamson Macquarie University	The impact of ocean acidification on early life history characteristics of marine invertebrates.	Dr Sam Dupont University of Gothenburg Sweden  Professor Jon Havenhand University of Gothenburg Sweden
Dr Elaine Wong University of Melbourne	Compact VCSEL base-stations for optical-wireless integrated networks.	Professor Markus Christian Amann Technical University of Munich Germany
Dr Dong Yang Wu CSIRO Materials Science and Engineering	Develop fundamental understanding on fracture properties and healing mechanism of novel self-healing epoxy systems and their composite laminates for structural applications.	Professor Monika Bauer Fraunhofer Intitute Germany
Dr John Zaunders University of New South Wales	Identification of SIV-specific follicular helper T cells in lymph nodes during acute SIV infection in macaques.	Dr Jerome Estaquier Institut National de la Santé et de la Recherche Médicale France
Dr Hala Zreiqat University of Sydney	Engineered articular cartilage using novel composite 3D scaffolds.	Professor Veronique Miggony Université Paris Nord France  Professor Patrick Netter Laboratoire de Pharmacologie et de Physiopathologie Articulaires France

### Adam J Berry Memorial Fund

Researcher	Project	Host institution(s)
Ms Yee Kei Leung University of Tasmania	The electrophysiological study on the neuro-glia interaction after brain injury.	Professor Douglas Fields Nervous System Development and Plasticity Section National Institutes of Health

## East Asia and Pacific Summer Program for US Graduate Students

Researcher	Project	Host institution
Ms Melissa Brandon University of Wisconsin-Madison	Implicit learning of auditory temporal patterns (MARCS Auditory Laboratories).	Dr Catherine Stevens University of Western Sydney
Mr Dylan Burge Duke University	Evolution of nickel hyper-accumulation in the plant genus <i>Stackhousia</i> (Delastaceae).	Dr Bill Barker State Herbarium of South Australia
Ms Kayla Calvert Purdue University	Nanomechanical and structural characterisation of hydroxyapatite coatings on ultra-fine grained titanium.	Professor Mark Hoffman University of New South Wales
Ms Dawn Carone University of Connecticut	The role of RNA in centromere drive within marsupial interspecific hybrids.	Professor Marilyn Renfree University of Melbourne
Ms Kristen Casalenuovo Virginia Commonwealth University	Optimisation of hybrid basis set for tin quantum dots.	Mr Dirk Koenig ARC Photovoltaics Centre of Excellence
Mr Jeffrey Case University of California Santa Barbara	Splitting theorems in Lorentzian geometry.	Professor Robert Bartnik Monash University  Dr Pengzi Miao Monash University
Mr Christopher Drupieski University of Virginia	Representations and cohomology of algebraic and quantum groups.	A/Professor Jie Du University of New South Wales
Mr Steven Gray Rutgers University	Ensuring the sustainability of fisheries and marine biodiversity through effective and informed management.	Dr James Scandol NSW Department of Primary Industries
Mr Micah Hamady University of Colorado at Boulder	Practical chimera detection for high-throughput sequencing methods.	Dr Gavin Huttley Australian National University
Ms Mary la Russa University of Alabama at Birmingham	Inverse modelling of a multi-layer aquifer system in the Willunga Basin, South Australia.	Dr Michael Teubner University of Adelaide
Mr Stephen Levas Ohio State University	Synergistic impacts of coastal eutrophication and elevated ocean temperature on corals and overlying reef seawater chemistry.	Dr Kenneth Anthony University of Queensland

Researcher	Project	Host institution
Mr Christopher MacDonald University of California	Novel method of cell patterning to study glial signalling pathways.	Professor Marcela Bilek University of Sydney  Professor Anthony Weiss University of Sydney
Ms Samantha Meenach University of Kentucky	Fabrication and characterisation of novel degradable magnetic hydrogel nanocomposites based on polyvinyl alcohol and iron oxide.	Dr Laura Poole-Warren University of New South Wales  Dr Penny Martens University of New South Wales
Mr David Murphy Georgia Institute of Technology	Hydrodynamic efficiency of krill schooling.	Dr So Kawaguchi Australian Antarctic Division
Mr Todd Otanicar Arizona State University	Infrared thermography of a micro-solar thermal collector for methanol decomposition.	Dr Gary Rosengarten University of New South Wales
Ms Heidi Renninger Boston University	Embolisms in palms and the role of phloem in embolism reversal under tension.	Dr David Tissue University of Western Sydney  Professor David Ellsworth University of Western Sydney
Ms Kimberly Sablon University of Arkansas	A new approach: nanodisks and nanorods on a semi-conductor matrix by molecular beam epitaxy.	Professor Chennupati Jagadish Australian National University
Ms Jennifer Sartor University of Texas at Austin	Compressing data in memory for space savings.	Dr Steve Blackburn Australian National University
Mr Nicholas Swanson-Hysell Princeton University	Sulphur cycling prior to the first Neoproterozoic glacial event: a field and geochemical study.	Professor Galen Halverson University of Adelaide
Mr David Widenski Louisiana State University	Modelling and optimisation of antisolvent cooling crystallisation processes.	Dr Ali Abbas University of Sydney

## North America

Researcher	Project	Host institution(s)
Dr Stewart Allen Bureau of Meteorology	Using observations from deep ocean buoys to improve tsunami forecasts and warnings.	Dr Vasily Titov National Centre for Tsunami Research, USA
Dr Peter Anderson Flinders University	Activation of plant disease resistance proteins.	Professor Brian Staskawic University of California Berkeley, USA

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
A/Professor Muthupandian Ashokkumar University of Melbourne	Sonochemically synthesised composite nanomaterials as catalysts in fuel cells.	Professor Prashant Kamat University of Notre Dame, USA
Dr Mark Bayley Australian Wetlands Pty Ltd	Bayou Bienvenue Wetland Restoration Project: strategies for coastal wetland rehabilitation for multiple use and benefit.	Professor Douglas Meffert Tulane University, USA  Dr Elizabeth Mossop Louisiana State University, USA
Dr Michael Beard University of Adelaide	Identification and characterisation of host genes that control replication of hepatitis C virus using novel cell culture models.	Professor Robert Lanford Southwest Foundation for Biomedical Research, USA  Professor Dr Stanley Lemon University of Texas Medical Branch, USA
Dr Lee Bowling NSW Department of Water and Energy	Cyanobacterial research in Quebec.	Ms Sylvie Blais Ministère du Développement durable, de l'Environnement et des Parcs, Canada
Dr Jaclyn Brown CSIRO Marine Research	Understanding El Niño and drought in a warmer climate.	Dr Anand Gnanadesikan Princeton University, USA
Dr Sheree Cairney Charles Darwin University	Assessing sophisticated neuroscientific techniques for the assessment, treatment and education of indigenous substance abusers.	Professor Richard Goldberg Rhode Island University, USA  Professor Peter Snyder Brown University, USA
Professor Alan Carey Mathematical Sciences Institute Australian National University	Operator algebras and noncommutative geometry.	Professor Ian Putnam University of Victoria, Canada
Dr Shaokoon Cheng University of New South Wales	Computational model of the upper airway to understand the pathophysiology of obstructive sleep apnoea.	A/Professor Atul Malhotra Harvard Medical School, USA
Dr Nicolas Cherbuin Australian National University	A study of corpus callosum shape variability in the context of handedness, cognition and healthy ageing.	Professor Arthur Toga University of California Los Angeles, USA
Professor Geoffrey Clarke University of Sydney	The tectonic significance of regional flat-lying rock fabrics in orogenic belts.	Professor Keith Klepeis University of Vermont, USA  Dr Stuart Thompson University of Arizona, USA

Researcher	Project	Host institution(s)
Dr Belinda Ferrari University of New South Wales	Development of pathogen detection and isolation strategies through analysis at the single-cell level: a bimolecular approach.	Professor Howard Shapiro The Centre for Cytometry, USA
Dr Paul Gribben University of Technology Sydney	Global responses of invasive and native species to climate change.	Dr James Byres University of Georgia, USA
Professor Brendan Griffin University of Western Australia	Characterisation of the information content of Rutherford backscattered ions and ion-induced secondary electron imaging using the new He ion scanning microscope.	Professor David Joy Oak Ridge National Laboratory, USA
Dr Vanessa Hayes University of New South Wales	Genome sequencing for preservation of the Tasmanian devil.	Professor Stephan Schuster Pennsylvania State University, USA
Professor Yinghe He James Cook University	Production of designer particles from liquid and solid starting materials.	Professor Osman Basaran Purdue University, USA Professor James Litster Purdue University, USA
Dr Anita Hill CSIRO Materials Science and Engineering	Membranes as sensors.	Professor Benny Freeman University of Texas at Austin, USA Professor Allan Hoffman University of Washington, USA
Dr Helen Irving-Rodgers University of Adelaide	Preserving the fertility of women with cancer.	Professor Teresa Woodruff Northwestern University, USA
Dr Denisa Jurcakova University of Queensland	Carbon electrode materials for high-performance supercapacitors.	Professor Teresa Bandosz The City University of New York, USA Professor Yury Gogotsi Drexel University, USA
Dr Kourosh Kalantar-Zadeh RMIT University	Hybrid polymeric and metal oxide nanostructured fuel cells.	Professor Sossina Hailes California Institute of Technology, USA Professor Richard Kaner University of California Los Angeles, USA

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Professor Anatoli Kheifets Australian National University	Multiple atomic ionisation in strong electromagnetic field.	Professor David Tannor University of California Santa Barbara, USA  Professor C William McCurdy Lawrence Berkeley National Laboratory, USA  Dr Thorsten Weber Lawrence Berkeley National Laboratory, USA
Dr Scott Kim University of New South Wales	Acquiring the knowledge and technical expertise in generating knockout mouse using bacterial artificial chromosomes.	Professor Mason Freeman Harvard Medical School, USA
Dr Laszlo Kiss University of Sydney	Stellar oscillations as a tool to identify planet hosting stars.	Dr Gaspar Bakos Harvard Smithsonian Centre for Astrophysics, USA
Dr Darby Kozak University of Queensland	Optically encoded particles as a platform for the validation of proteomic biomarkers in the early detection of ovarian cancer.	Professor Nicole Urban Fred Hutchinson Cancer Research Center, USA
A/Professor Sunil Kumar University of South Australia	Mechanical properties of coated bioceramics.	Dr Eduardo Saiz Lawrence Berkeley National Laboratory, USA
Dr Todd Lane University of Melbourne	Improved analysis and forecasting of precipitation through assimilation of Doppler radar observations with an ensemble Kalman filter.	Professor Fuqing Zhang Pennsylvania State University, USA
Dr Ricky Lareu University of Western Australia	Combinatorial regulation of fibrosis by small non-coding RNA molecules.	Dr Isidore Rigoutsos Deep Computing Institute, USA
A/Professor Simon Lewis Curtin University of Technology	Chemical characterisation and classification of automotive paint clear coats.	A/Professor Tim Menzies West Virginia University, USA  Professor Jay Siegel Indiana University, USA
Dr Chaohong Li Australian National University	Many-body quantum dynamics of strongly correlated atomic systems.	Professor Eugene Demler Harvard University, USA

Researcher	Project	Host institution(s)
Dr Tong Lin Deakin University	Improvement of fuel cell performance via superhydrophobic treatment of cell electrodes.	Professor Liming Dai University of Dayton, USA
Dr Chunsheng Lu Curtin University of Technology	Fractals in bio-inspired nanomechanics of hierarchical materials.	Professor Huajian Gao Brown University, USA
Dr Ian Macreadie CSIRO Molecular and Health Technologies	Investigations of the roles of allyl hydroperoxidase, clioquinol and farnesol in yeast models for neurodegenerative diseases.	Dr Jaekwon Lee University of Nebraska, USA Dr Robert Spreitzer University of Nebraska, USA
Dr Karen Murphy University of South Australia	Cardiometabolic health effects associated with dairy consumption.	Professor Gary Fulcher University of Manitoba, Canada Dr Curtis Rempel University of Manitoba, Canada
Dr Michelle Power Macquarie University	Host parasite co-evolution: a tool for managing emerging diseases in Australia.	Professor John Barta University of Guelph, Canada
Dr Morgan Pratchett James Cook University	Predicting future effects of climate change on coral reefs.	Dr Bernhard Riegl Nova Southeastern University, USA
Dr Thomas Rayner University of New South Wales	Climate change and freshwater fishes of the tropical Pacific.	Professor Robert Kinzie University of Hawaii, USA Dr David Foote United States Geological Survey Pacific Island Ecosystems Research Centre, USA
Dr Yinlan Ruan University of Adelaide	Fabrication of chalcogenide glasses and antibody labelling using quantum dots for infrared applications.	Dr Jennifer Hollingsworth Los Alamos National Laboratory, USA Professor Kathleen Richardson Clemson University, USA
Dr Kallista Sears CSIRO Textile and Fibre Technology	Carbon nanotubes for flexible, high performance, organic solar cells.	Professor Ray Baughman University of Texas at Dallas, USA
Dr Melony Sellars CSIRO Marine and Atmospheric Research	All-female sterile prawn culture: determining how to improve the viability of prawns with an extra set of chromosomes.	Mr Steve Arce The Oceanic Institute, USA Dr Shaun Moss The Oceanic Institute, USA

<b>Researcher</b>	<b>Project</b>	<b>Host institution(s)</b>
Dr Marcus Sheaves James Cook University	Developing a global view of wetland-estuary linkages.	Dr Thomas Minello National Oceanic and Atmospheric Administration, USA
Dr Petra Souter Australian Institute of Marine Science	Use of next generation gene analysis to predict corals' capacity to cope with climate change.	Dr Iliana Baums Pennsylvania State University, USA  Professor Jim Marden Pennsylvania State University, USA
Dr Jeremy Sumner University of Tasmania	Markov and phylogenetic invariants: resolving the mathematical connections between related phylogenetic methods.	Professor Elizabeth Allamn University of Alaska at Fairbanks, USA  Professor John Rhodes University of Alaska at Fairbanks, USA
Dr Anita van den Biggelaar University of Western Australia	Innate immune pathways to microbial pathogens in newborns in settings with high versus low to moderate exposure.	A/Professor Ofer Levy Harvard Medical School, USA  A/Professor Richard Malley Harvard Medical School, USA
Dr David Williams Curtin University of Technology	Testing new technologies for the detection and discovery of emerging microbial pathogens relevant to the Australasian region.	Professor Ian Lipkin Columbia University, USA
A/Professor David Young Griffith University	Extending the life-time of inexpensive antimonial chemotherapy for leishmaniasis.	Professor Edward Tiekink University of Texas at San Antonio, USA