








AUSTRALIA JAPAN EMERGING RESEARCH LEADERS EXCHANGE PROGRAM
Visit to Japan, 4-14 November 2014

Area	Photo	Researcher Details	Overview
Healthy ageing and wellbeing		Dr Gaetan Burgio Senior Research Fellow Australian School of Advanced Medicine Macquarie University	Malaria research and genetics, targeting Healthy Ageing and Wellbeing. The development of new antimalarial drugs to combat this lethal disease.
		Dr Susanna Guatelli Senior Lecturer University of Wollongong	Research in medical physics, to improve radiotherapy, including existing and novel radiotherapy treatments; the development of novel instrumentation for radiotherapy Quality Assurance, and the development of simulation codes used to solve problems concerning radiotherapy.
New materials, biotechnology, nanotechnology		Associate Professor Idriss Blakey ARC Future Fellow Australian Institute for Bioengineering and Nanotechnology The University of Queensland	The development of functional polymeric nanomaterials that are specifically designed for applications in biomedical imaging, computer chip manufacture and sensors.
		Dr Xiangping Li Senior Research Fellow Centre for Micro-Photonics Swinburne University of Technology	Innovative nanophotonic approaches to address bottlenecks experienced by current big data centres. In tackling the capacity bottleneck, Dr. Li has proposed an entirely new concept of photonic data centres based on petabyte-capacity optical storage arrays enabled by his paradigm-shifting inventions.
		Professor Paul Low Winthrop Professor School of Chemistry and Biochemistry University of Western Australia	Understanding how changes in redox state can influence molecular electronic structure and opto-electronic properties of molecular materials, with an emphasis on molecular electronic applications. Design of molecules that offer potential to be used in the construction of next generation molecular electronic devices.
ICT		Professor Jonathan Manton Future Generation Professor The University of Melbourne	The intersection of mathematics (especially differential geometry), electrical engineering (signal processing and stochastic processes) and systems biology and computational neuroscience. The underlying theme is the application of topology and geometry to the better understanding of real-world systems and the development of better algorithms for solving real-world problems.
		Associate Professor Tapabrata Ray ARC Future Fellow School of Engineering and Information Technology University of New South Wales	Computational intelligence with a focus on the development of efficient and effective optimization algorithms for the solution of complex, computationally expensive optimisation problems. Efficient optimisation strategies lead to novel designs, cost effective and environmentally friendly solutions, and allow us to gain physical insights into complex problems and systems.