

Summary of Linkage Projects Proposals for Funding to Commence in 2009

New South Wales

University of Technology, Sydney

LP0989721 Dr L Cao; Prof C Zhang; Dr W Wang

Approved Project Title **Pattern Analysis and Risk Control of E-Commerce Transactions to Secure Online Payments**

2009 : \$ 115,000

2010 : \$ 110,000

2011 : \$ 105,000

Primary RFCD 2801 INFORMATION SYSTEMS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

A2 Consulting Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

The instant filtering of risky online payments is critical for merchants and online payment service providers to control fraud and thus reduce immense losses every year. This project will deliver new and workable techniques for on-the-fly discovering e-payment fraudsters in e-commerce. It can safeguard Australian online businesses and build and transform Australian merchants and online payment associations by delivering frontier techniques and smart e-payment fraud prevention and risk control to boost Australian online businesses and competitive capabilities globally. The resulting systems, researchers trained and publications will further enhance Australia's global leading role in tackling critical data mining challenges and applications.

LP0989708 Dr SK Lal; Mr P Fischer

Approved Project Title **Evaluation of train driver work culture and environment for improving railway safety**

2009 : \$ 77,000

2010 : \$ 65,000

2011 : \$ 75,000

Primary RFCD 3504 TRANSPORTATION

Collaborating/Partner Organisation(s)

Signal Network Technology Pty Ltd (Signet)

Administering Organisation University of Technology, Sydney

Project Summary

This innovative research intersects the fields of neurosciences, computer science and engineering, leading to application of new knowledge for developing intelligent train driver systems for improving transport safety. Such research will place Australia at the forefront of this area. Reducing train related accidents will positively impact on the socio economic fabric of society by reducing the emotional and financial burden to the community. The research has the potential to lead to substantial revenue generation in Australia in the future. The data obtained will provide new knowledge and information to transport and Government authorities.

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LP0990087 A/Prof MR Phillips; Dr KS Butcher

Approved Project Title **Development of Low Cost, High Quality Nitrides for Solid-State Lighting and Other Power Saving Applications**

2009 : \$ 111,000

2010 : \$ 88,000

2011 : \$ 91,000

Primary RFCD 2914 MATERIALS ENGINEERING

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BluGlass

Administering Organisation University of Technology, Sydney

Project Summary

The advent of high brightness, low cost, compact, low power white light-emitting diodes (LEDs) will revolutionise lighting as we currently know it. Incandescent light bulbs and fluorescent tubes are inefficient light sources and their replacement with high efficiency solid state LED lighting over the next 10 years will provide a 10% reduction in global greenhouse gas emissions. The development and enhancement of a recent Australian innovation for the fabrication of low cost high brightness LEDs will enable Australia to be at the frontier of this technology and to be a world leader in the next stage of its development.

LP0989839 Dr TS Pitsis; A/Prof SK Sankaran; Prof Dr SP Gudergan; Prof SR Clegg

Approved Project Title **Governance Matters: identifying and making sense of the antecedents to project-blowouts**

2009 : \$ 150,000

2010 : \$ 135,000

2011 : \$ 135,000

Primary RFCD 3502 BUSINESS AND MANAGEMENT

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Helmsman

Administering Organisation University of Technology, Sydney

Project Summary

This project will have both national and international benefits as the problem of project blow-out is a global reality. The capability to predict, account for and resolve problems and issues that impact on project outcomes will contribute to the management of projects conducted by the public or private sectors and through public/private sector collaboration. The national benefit of this project cannot be overstated and will include but will not be limited to the better management of project outcomes that will be derived from cross-industry learning and the development of a framework for managing project blow-outs.

LP0990084 Dr SM Valenzuela; A/Prof DK Martin; Dr BA Cornell

Approved Project Title **Devices that use Ion Channels**

2009 : \$ 85,000

2010 : \$ 85,000

2011 : \$ 85,000

Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING

Collaborating/Partner Organisation(s)

Surgical Diagnostics Pty Ltd

Seagull Technology Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

The proposed device would supply the community of researchers in Australia and internationally with new techniques to enable them to quickly and conveniently investigate properties of ion channels and to speed the screening of potential ion channel targets for pharmaceutical hits and leads. In addition, the tethered membrane technology will be developed to fill an unmet need for a quick and biologically relevant test of EMC hazards. This will enhance the science and technology infrastructure within Australia, taking it into original and exciting directions, contribute to training young Australian scientists and students, as well as enhance Australia's competitive position in the field of nanobiotechnology.

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LP0989685 Prof S Vigneswaran; Dr JK Kandasamy; Dr HK Shon; Dr R Sleight; Prof RM Ben Aim; Mr A Chanan

Approved Project Title **Supported biomass membrane bioreactor: optimisation of aeration for better fouling control**

2009 : \$ 70,000

2010 : \$ 70,000

2011 : \$ 70,000

Primary RFCD 2906 CHEMICAL ENGINEERING

Collaborating/Partner Organisation(s)

Steri-flow Filtration Systems

Kogarah Council

Administering Organisation University of Technology, Sydney

Project Summary

This project will lead to a sustainable, affordable, energy-efficient treatment system for water reuse. The technology developed will particularly benefit small sewage treatment plants in coastal and isolated communities in Australia, by maximising the utilisation of water resources where water is limited, and by reducing the environmental impact of waste discharges. This project will also strengthen research links between Australian and European institutions through the development of this innovative technology. Local water industries will directly benefit from this frontier research.