

Summary of Linkage Projects Proposals for Funding to Commence in 2008

Victoria

The University of Melbourne

LP0882034 Prof AF Christie; Dr CM Dent

Approved Project Title **'The fingers of the powers above do tune the harmony of this peace': Australia and the Harmonisation of Patents**

2008 : \$ 70,000

2009 : \$ 70,000

2010 : \$ 60,000

Primary RFCD 3901 LAW

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

IP Australia

Institute of Patent and Trade Mark Attorneys of Australia

Administering Organisation The University of Melbourne

Project Summary

Patent law is central to the key economic aim of encouraging an innovative culture. The harmonisation of patent systems around the world means Australian law will change. There is a significant risk that, without effective lobbying, the reforms will only reflect the needs and interests of the dominant economies, like the US. This project, with its comparative analysis of the patent examination process, will explore the ways in which this integral part of the patent system may be improved. This research will lead to proposals for reform that are in line with the interests of Australia's unique economy.

LP0882276 A/Prof S Dey; Dr B La Scala; Prof IM Mareels; Dr LS Irlight; Mr L de Bever; Mr S Bone; Mr A Randall

Approved Project Title **Robust Optimal Asset Liability Management via Stochastic Control Theory**

2008 : \$ 51,254

2009 : \$ 51,254

2010 : \$ 51,254

Primary RFCD 2301 MATHEMATICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Victorian Funds Management Corporation

Administering Organisation The University of Melbourne

Project Summary

The Australian federal and state governments are strongly exposed to the Australian and international investment markets, either directly or through entities such as the Future Fund, state-owned insurers and superannuation schemes. Additionally, the investment pool represented by individual Australian's superannuation savings managed by non-government organisations is significant. Robust and effective management of these assets in order to meet future liabilities of these funds are essential to a stable Australian economy. This research has the potential to be a key component of reliable investment management, helping make Australia an important investment hub.

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LP0882700 Dr LB Joubert; Dr KA Brock; A/Prof D Ames; Mr SJ Vale; Dr KD Hill

Approved Project Title **From rehabilitation to recovery after stroke : a model to optimise consumer and carer involvement.**

2008 : \$ 25,627

2009 : \$ 25,627

2010 : \$ 25,627

Primary RFCD 3207 NEUROSCIENCES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

St Vincent's Health

Administering Organisation The University of Melbourne

Project Summary

The National Research Priorities include 'ageing well, ageing productively'. Within this priority, it is necessary to be inclusive of those who have ongoing disabilities and/or chronic disease. This project aims to facilitate healthy lifestyles and community involvement in a group who have significant barriers to achieving their potential. The high incidence of depression and poor quality of life in stroke survivors and their carers emphasises the need to enhance wellness in these people. The study will develop a model for promoting recovery and community reintegration in stroke survivors, with the goal of enabling stroke survivors and their carers to actively participate in the community and pursue personal goals.

LP0882363 A/Prof Y Kashima; Dr S Durkin; Dr M Wakefield

Approved Project Title **Influence of Narrative Content and Context of Anti-smoking Public Health Messages**

2008 : \$ 43,517

2009 : \$ 44,417

2010 : \$ 44,417

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

The Cancer Council Victoria

Administering Organisation The University of Melbourne

Project Summary

By improving the effectiveness of public health campaigns such as those aimed at smokers, we can inform people about healthier ways of living, and encourage them to adopt healthier life style choices. This should reduce the risk of life style diseases such as cancer, stroke, and heart attack. This project will contribute to the promotion and maintenance of good health in the Australian community by facilitating preventive health care and help to reduce the medical cost not only to those who may fall victim to the diseases, but also to their families, communities, states, and Australia as a whole.

LP0882114 A/Prof M Kraimer; A/Prof S Seibert; Dr LD Sargent

Approved Project Title **An evidence based approach to developing human and social capital in organisations**

2008 : \$ 68,000

2009 : \$ 68,000

2010 : \$ 68,000

Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Deloitte

Administering Organisation The University of Melbourne

Project Summary

A social and economic issue facing Australian organisations is the skills shortage and the retention of qualified professionals and managers. Our research informs this issue by examining the mechanisms for developing and engaging managerial employees in Australian organizations. These types of strategies can help reduce the 'brain drain' out of Australia. Moreover, it should increase the capability of businesses to attract Australians back --'brain gain.' Organizational strategies based on human and social capital development will also strengthen the social fabric of Australian society by building knowledge capabilities and enhancing well-being.

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LP0882300 Prof TL McCormack; Mr GJ Boas

Approved Project Title **Australia's Post World War II War Crimes Trials: A systemic and comprehensive Law Reports Series**

2008 : \$ 73,531

2009 : \$ 73,531

2010 : \$ 73,531

Primary RFCD 3901 LAW

Collaborating/Partner Organisation(s)

Australian War Memorial

Australian Defence Force

Administering Organisation The University of Melbourne

Project Summary

The publication of the project's Law Reports Series will, in effect, constitute the official history of this extensive Australian war crimes trial experience - in itself, an important national benefit. However, ready access to the previously buried historical primary source material also has profound potential for contemporary application. The proliferation of new international criminal tribunals with a concomitant explosion of case law has created a hunger for access to past judicial precedent. Reliance on the results of this project in war crimes trials around the world is guaranteed.

LP0882627 Prof JH Rubinstein; Dr MN Brazil; Prof DA Thomas

Approved Project Title **Rapid optimisation in underground mining network design**

2008 : \$ 53,554

2009 : \$ 61,716

2010 : \$ 64,516

Primary RFCD 2301 MATHEMATICS

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

AMIRA International

Administering Organisation The University of Melbourne

Project Summary

This project represents a major advance in the problem of optimising the infrastructure of underground mines and providing powerful planning tools for management. The software tools we are developing will prove important to the mining industry because of their accuracy, flexibility and generality. Not only can they be used for benchmarking in the design of specific mines, but they also provide a reliable method for testing the cost-benefit of emerging technologies. This is an important project for ensuring that Australia's mining industry remains efficient and internationally competitive. Given our economic dependence on mineral resources, it will also benefit Australia as a whole.

LP0882174 Dr LD Sargent; A/Prof WG Harley

Approved Project Title **Aged care in crisis? The effects of work organisation on nurse, resident and organisational outcomes**

2008 : \$ 45,000

2009 : \$ 45,000

Primary RFCD 3502 BUSINESS AND MANAGEMENT

Collaborating/Partner Organisation(s)

Australian Nursing Federation (Victoria Branch)

Administering Organisation The University of Melbourne

Project Summary

Given the rapidly ageing Australian population and critical nurse retention issues in aged care, this program of research will have significant national benefit. First, assessing the interactive effects of work stressors and high performance work practices on employee strain and turnover will be particularly important in terms of developing strategies for employee retention. Second, by examining across time the links between work stressors and high performance work practices on one hand and resident outcomes on the other, the research will have important implications for ensuring older people receive quality care and live with dignity in Aged care.

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LP0882176 Prof KC Stacey; Dr HL Chick; Dr VA Steinle

Approved Project Title **Supporting personalised learning in secondary schools through the use of specific mathematics assessments that reveal thinking.**

2008 : \$ 75,000

2009 : \$ 75,000

2010 : \$ 70,000

Primary RFCD 3302 CURRICULUM STUDIES

Collaborating/Partner Organisation(s)

Department of Education

Administering Organisation The University of Melbourne

Project Summary

This project will improve numeracy standards in secondary schools, by assisting teachers to personalise the teaching of each student. Through detailed research, the project will develop sophisticated assessments that clearly reveal students' mathematical thinking. On-line diagnosis will suggest teaching activities that can bring about desired conceptual changes. The effectiveness of the resources will be thoroughly tested, for impact on student achievement and the mathematics teaching skills of teachers, especially those working out-of-field. Rural schools will have equal access to these resources. Good numeracy provides the foundation for life-long learning, employment satisfaction and the economic competitiveness of Australia.

LP0882140 Prof LS Sterling; Dr K Taveter; Dr KG Joshi

Approved Project Title **Agent-Based Simulation - New Approaches for Design and Prototyping**

2008 : \$ 36,127

2009 : \$ 36,127

2010 : \$ 36,127

Primary RFCD 2801 INFORMATION SYSTEMS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Jeppesen

Administering Organisation The University of Melbourne

Project Summary

The project will improve the capacity of Australian companies to bring products to market more quickly where there are complex trade-offs between interacting actors. The simulation guidelines will help understand interaction in complex systems and the identification of important factors in the air traffic domain. The research will also preserve the leading position of Australian technology for high quality simulations of air traffic control. The new methods will help Australian SMEs using agent technology, of which there are several.

LP0882686 A/Prof FJ Vazquez-Abad; Prof D Dufresne; Dr M Menabde; Prof A van den Nouweland

Approved Project Title **Understanding cycles in mineral commodity price, a market model with uncertainty**

2008 : \$ 77,000

2009 : \$ 75,000

2010 : \$ 88,000

Primary RFCD 3402 APPLIED ECONOMICS

Collaborating/Partner Organisation(s)

BHP Billiton

Administering Organisation The University of Melbourne

Project Summary

Mining accounts for more than 8% of Australia's GDP, and almost 50% of Australia's total merchandise exports. Understanding phenomenological mechanisms for price fluctuations and using our dynamic price model can help determine better timing of investments in mining infrastructure. This knowledge will help Australia benefit from the upside of commodity 'cycles', super or not. The market model that will be developed in this project can be used to assist in better planning for commodity cycle upside, improving the overall efficiency of capital utilisation in the long term.

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LP0882159 Dr AM Wierenga; Prof JG Wyn; Dr JR Guevara; Prof AE Gough; Ms SJ Dyer

Approved Project Title Youth-led learning: local connections and global citizenship

2008 : \$ 97,000

2009 : \$ 97,000

2010 : \$ 89,000

Primary RFCD 3701 SOCIOLOGY

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Plan International (Australia)

Administering Organisation The University of Melbourne

Project Summary

Focussing on social connections across racial and religious boundaries, the project directly addresses two areas of immediate national concern: young peoples' wellbeing, and Australia's relationship with its neighbours. The project will generate a new model of sustainable partnership across NGOs and learning institutions to provide youth-led, global education programs for school-aged youth, promoting learning from a local basis about global issues. In creating this shared evidence base the project will benefit two industry sectors (NGOs and Education) and facilitate the development of effective processes toward young people's greater participation in social life.

LP0882157 Prof CJ Wilson; A/Prof D Phillips; Dr J Miller; Dr MA Kendrick

Approved Project Title Controls on Gold Mineralisation in Central Victoria: Towards New Exploration Models.

2008 : \$ 130,000

2009 : \$ 140,000

2010 : \$ 140,000

Primary RFCD 2603 GEOCHEMISTRY

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

GeoScience Victoria, Department of Primary Industries

Perseverance Corporation Limited

Ballarat Goldfields (Lihir Gold Limited)

Bendigo Mining NL

Administering Organisation The University of Melbourne

Project Summary

The proposed project will develop and evaluate new exploration models with implications for gold exploration and mining/investment in Victoria. The frontier research techniques to be employed will ensure that Australian geoscience remains at the forefront of international research. This project will also provide unprecedented research training opportunities for the next generation of Australian Earth Scientists. As prospective gold terranes are located in regional Australia, enhanced exploration and mining activity in future years may have significant economic and infrastructure benefits for rural and regional communities.