

Summary of Linkage Projects Applications for Funding to Commence in 2006

Queensland

Queensland University of Technology

LP0668224 Dr MO Adebajo; A/Prof RL Frost; Dr WO Doherty

Approved Project Title **Development of bagasse fly ash adsorbent for the removal of impurities in sugar process streams**

2006 : \$29,650

2007 : \$29,650

2008 : \$29,650

Primary RFCD 2901 INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES

APA(l) Award(s): 1

Partner Organisation(s)

Sugar Research Institute

Administering Institution Queensland University of Technology

Project Summary

High quality raw sugar attracts a premium and is important in maintaining market access in these times of increasing competition and excess production from overseas producers. Options that are in current use in Australia for the removal of colour and impurities are not very cost effective. This research will develop a sugarcane waste (fly ash) into an adsorbent for the removal of these impurities. This will enable the sugar industry and rural communities to become more sustainable through enhanced competitiveness and diversification through co-generation and value-added products. This project will also reduce the disposal costs (\$2 M/y) for the sugar industry and minimize environmental pollution due to the use of a waste product.

LP0668125 A/Prof SJ Grieshaber; Prof CP Taylor; A/Prof K Thorpe; Ms LR ENGLERT

Approved Project Title **Predicting progress: A longitudinal study of the social behaviour, numeracy and literacy of children in the Queensland preparatory trial.**

2006 : \$166,000

2007 : \$155,000

2008 : \$173,000

2009 : \$47,206

Primary RFCD 3301 EDUCATION STUDIES

APA(l) Award(s): 3

Partner Organisation(s)

Department of Education and the Arts

Administering Institution Queensland University of Technology

Project Summary

High quality early education has been shown to improve later school performance. By identifying factors that affect literacy, numeracy and social behaviour in the early years, this project contributes to improvements in literacy and numeracy outcomes for children and increased levels of pedagogical expertise for teachers. Children will have better chances of achieving essential standards in literacy and numeracy, especially in rural, remote, Indigenous, and culturally and linguistically diverse communities. National benefits include contributing to life long learning and improving the life chances of young children.

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LP0667790 Dr A Hickling-Hudson; A/Prof DE Stewart; Dr JM McLaughlin; Dr MF Tapo

Approved Project Title **The Health Promoting Teachers College: Education to Counter HIV/AIDS**

2006 : \$85,000

2007 : \$75,000

2008 : \$80,000

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

APA(l) Award(s): 2

Partner Organisation(s)

Ministry of Education

Administering Institution Queensland University of Technology

Project Summary

The largest component of Australia's aid budget is directed to PNG, a country shown to be highly vulnerable to the HIV/AIDS pandemic. This research will help Australia tackle the emerging AIDS crisis in PNG by contributing to strong preventative efforts and health promotion initiatives through the education sector.

This project benefits Australia by developing HIV/AIDS education within the Health Promoting Teachers College, a model directly relevant to the education of teachers in multicultural and Indigenous settings.

In terms of Australia's aid assistance, the project develops strategies for improved community health education and promotion services in PNG and other partner countries.

LP0668273 A/Prof E Kozan; Mr I Dall; Mr PW Milevskiy; Mr MJ Clarke; Mr MS McGown

Approved Project Title **Hybrid Job Shop Techniques for Dynamic Train Scheduling**

2006 : \$55,000

2007 : \$55,000

Primary RFCD 2301 MATHEMATICS

Partner Organisation(s)

Queensland Rail

Administering Institution Queensland University of Technology

Project Summary

The job shop approach to dynamic train scheduling promises considerable benefits over existing approaches, and allows problems of large size and complexity to be solved with great accuracy. The application of research results in Australia has the potential to:

- reduce train delays and costs by better planning of train schedules of railway systems;
- reduce transport costs to rail customers and increase rail's market share of freight movements;
- enhance the ability of operators to control operations in an efficient manner and minimise conflicts;
- to increase efficiency of Australian Railway System, leading to lower operating and capital costs;
- optimise the energy consumed.

LP0668012 Dr HC Lingard; Dr NG Blismas; Prof RR Wakefield

Approved Project Title **An investigation of supervisory practices for improving occupational health and safety behaviour in construction teams: a cross-level experimental analysis**

2006 : \$86,000

2007 : \$109,000

2008 : \$100,000

Primary RFCD 3212 PUBLIC HEALTH AND HEALTH SERVICES

Partner Organisation(s)

Multiplex Construction Pty Ltd

Boulderstone Hornibrook

Roads & Traffic Authority (NSW)

Administering Institution Queensland University of Technology

Project Summary

Construction workers, comprising 8% of the Australian workforce, are a high risk group for occupational fatality, injury and disease. Almost 10% of all injury and death claims in Australia are attributed to construction, creating a significant social and economic burden. The research addresses the previously neglected issue of how first-line supervisors shape subordinates' safety behaviour. The research makes a significant contribution by identifying and encouraging supervisory behaviours that:

- (i) create strong, positive safety climates in sub-contracted work crews;
- (ii) support the translation of organizational OHS policies/procedures into safe practices; and
- (iii) improve the OHS performance of the construction industry.

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LP0668405 Dr BM McKimmie; Dr NL Jimmieson

Approved Project Title **Responding to fire-related stressors in the workplace: An examination of the role of social support from a group processes perspective**

2006 : \$44,500

2007 : \$40,500

Primary RFCD 3801 PSYCHOLOGY

Partner Organisation(s)

Queensland Government, Department of Emergency Services

Administering Institution Queensland University of Technology

Project Summary

This research has significant national benefit and will result in basic and applied outcomes. At the basic level, the research will result in a better understanding of the way in which social support reduces the impact of stressors and stimulate new avenues of research in the fields of workplace stress and social identity. At a more applied level, the research program will provide the grounding for a future intervention designed to reduce the social costs of workplace fires. It is expected that such an intervention would be associated with several economic and social benefits such as a reduction in sick leave, employee turnover, and losses in productivity, and improved outcomes for employees in terms of psychological well-being.

LP0668185 Prof KL Mengersen; A/Prof SR Phinn; Mr C Witte; Mr RJ Denham

Approved Project Title **Measuring and presenting uncertainty in complex natural resource monitoring programs**

2006 : \$130,000

2007 : \$126,000

2008 : \$125,000

Primary RFCD 2302 STATISTICS

APA(I) Award(s): 1

Partner Organisation(s)

Department of Natural Resources and Mines

Administering Institution Queensland University of Technology

Project Summary

This project addresses Australia's key research goal of An Environmentally Sustainable Australia, priority goals of Water, Soil and Climate, and the theme of Complex Systems. Through improved capability in making data-based decisions and true sharing of university and government agency expertise, the project will enhance Australia's ability to better manage its natural resources, meet national and international environmental commitments, and address national demands for quality science underpinning decisions about natural resource management

LP0668357 Dr JA Tacchi; Dr A Bruns; Dr D Rooney; Dr E Ferrier; Ms A Humphreys; Prof PW Graham

Approved Project Title **Mapping the missing grassroots: ethnographic action study of local grassroots broadband content (co) creation and consumption**

2006 : \$74,340

2007 : \$101,078

2008 : \$103,042

Primary RFCD 4103 CINEMA, ELECTRONIC ARTS AND MULTIMEDIA

APDI Ms A Humphreys

Partner Organisation(s)

Ipswich City Council

Administering Institution Queensland University of Technology

Project Summary

This project contributes to the National Research Priority, Frontier Technologies for Building and Transforming Australian Industries. Innovative digital technologies which contribute to the development of broadband content and uptake of broadband constitute a key technological frontier for Australia. Broadband and digital media, and the overall new media literacies required for their effective use, are a major contributor to national productivity, competitiveness, and growth. This project develops frontier technologies for collaborative production, exhibition, and evaluation of broadband content by grassroots creative producers, promoting an innovation culture as well as exploring innovative uses of broadband and digital media forms.