Tasmania

University of Tasmania

LP0991026 Prof DM Bowman; Prof BM Potts; Dr MJ Hovenden; Dr AP O'Grady; Dr RC Barbour

Approved Project Title **Devising ecologically sustainable restoration programs for degraded rural landscapes by integrating landscape ecology, genetics and ecophysiology**

2009 : $ 90,000
2010 : $ 172,500
2011 : $ 175,000
2012 : $ 92,500

Primary RFCD 2707 ECOLOGY AND EVOLUTION

Collaborating/Partner Organisation(s)

Greening Australia

Administering Organisation University of Tasmania

Project Summary

Concern about tree decline in rural landscape is widespread, and disturbingly climate change is predicted to exacerbate this problem. Past ill-considered tree plantings have proven to be economically wasteful, achieved limited ecological resilience and negligible improvement of biodiversity values. Using Tasmania as a 'model system', we will advance this problem by undertaking research to determine how seedling establishment, tree growth, carbon storage and water use are influenced by landscape setting, management history, climate change, species type and local varieties. This research will provide a much needed evidence to devise ecologically sustainable tree-plantings in southern Australia.

LP0990266 Dr AM Reading; Dr N Rawlinson

Approved Project Title **3D seismic velocity structure for geothermal exploration: a novel approach combining ambient and passive seismic methods**

2009 : $ 33,000
2010 : $ 50,000
2011 : $ 17,000

Primary RFCD 2602 GEOPHYSICS

Collaborating/Partner Organisation(s)

KUTh Energy Ltd

Administering Organisation University of Tasmania

Project Summary

Australia hosts many geological locations that have the potential for geothermal energy production. This is a sustainable power resource and employs diverse technological approaches depending on local conditions. We aim to pilot a new seismic imaging method, which could become a standard in geothermal exploration around the world, to investigate natural heat sources buried in the crust. Tasmania is an ideal pilot location with active geothermal exploration tenements held by a locally-based company.

LP0990307 Prof MR Renilson; Dr GA Thomas; Dr JR Binns; Mr GJ Macfarlane; Mr GM Webber; Mr SA Schmied; Mr RH Huijsmans

Approved Project Title **The novel production and analysis of breaking waves utilising circular-track moving disturbances**

2009 : $ 40,000
2010 : $ 80,000
2011 : $ 65,000
2012 : $ 25,000

Primary RFCD 2918 INTERDISCIPLINARY ENGINEERING

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Liquid Time Pty Ltd

Administering Organisation University of Tasmania

Project Summary

Surfing is a major industry in Australia, contributing $11billion to the economy. It has high active participation levels; but locations with good surfing conditions are limited and becoming crowded. New technologies, such as the circular-track wave pool, are required to provide safe environments for surfing with controllable high quality waves. The research in this proposal will considerably advance knowledge of wave mechanics; provide the ability to design a commercially-viable wave pool and ensure the Australian surfing industry and sport continue to expand. The project will thus result in major scientific, economic and social benefits for Australia.

LP0991044 Prof JJ Summers; Dr SJ Elder; Dr MJ Summers; Prof J Vickers

Approved Project Title **Evaluation of a multidimensional cognitive enhancement training program for healthy older adults**

2009 : $ 23,917
2010 : $ 45,675
2011 : $ 45,653
2012 : $ 23,896

Primary RFCD 3801 PSYCHOLOGY

Collaborating/Partner Organisation(s)

Alzheimer's Australia TAS

Administering Organisation University of Tasmania

Project Summary

The percentage of the Australian population aged 65 years and over is projected to increase considerably over the next 50 years. The increased number of older Australians will have a major economic cost in terms of income support and the provision of health services. It is of high socioeconomic importance, therefore, to promote functional independence in this group. The implementation of cognitive enhancement programs that may slow age-related cognitive decline and, thereby, maximise quality of life and independence for a long as possible will have significant national benefit.