

## Victoria

### Swinburne University of Technology

**LP0882156** Prof M Gu; Dr D Morrish; Mr K Poetter

**Approved Project Title** **Spectroscopy of complex and biological micro-objects for biosensing applications**

**2008 :** \$ 78,648

**Primary RFCD** 2708 BIOTECHNOLOGY

APDI Dr D Morrish

#### **Collaborating/Partner Organisation(s)**

Genera Biosystems Pty Ltd

**Administering Organisation** Swinburne University of Technology

#### **Project Summary**

The optically based test for specific DNA binding resulting from the conclusion of this project is of great potential benefit to all Australians as DNA is the building block of all living organisms. The technique developed and resulting biosensor will provide an invaluable tool for the determination and analysis of specific DNA reactions. The general technique developed for the genetic targeting of specific DNA reactions makes the detection of diseases and toxins like Chlamydia and anthrax, for example cheap, quick and accurate, keeping Australian's healthy, and strengthening national security.

**LP0882252** Prof JD Langan-Fox

**Approved Project Title** **Air Traffic Controller Competencies and Selection**

**2008 :** \$ 100,000

**Primary RFCD** 3502 BUSINESS AND MANAGEMENT

#### **Collaborating/Partner Organisation(s)**

Airservices Australia

**Administering Organisation** Swinburne University of Technology

#### **Project Summary**

This project targets a National Priority area Safeguarding Australia, Priority Goal: Critical Infrastructure. The partner organization Airservices Australia is a key player in the effective operation of the Australian aviation industry which is a critical and strategic component of the national transport infrastructure. Air Traffic Controllers (ATCs) provide the nation with aviation services that require them to perform all tasks without error. The project will help develop the standards of excellence of Australian ATCs, contribute to internationalizing Australian human factors literature, develop the knowledge and skills of the Airservices staff and research team, and assist RAF and civil ATC collaboration.

## Summary of Linkage Projects Proposals for Funding to Commence in 2008

**LP0882960** Prof CK Stough

**Approved Project Title** **Does Emotional Intelligence predict final year academic results and student retention in secondary schools?**

**2008 :** \$ 58,000

**2009 :** \$ 43,000

**2010 :** \$ 42,000

**Primary RFCD** 3801 PSYCHOLOGY

### **Collaborating/Partner Organisation(s)**

Balwyn High School

Anglican Church Grammar School

Girton Grammar School

Eltham College of Education

Presentation College Windsor

**Administering Organisation** Swinburne University of Technology

### **Project Summary**

Over the past 30 years the completion of the final year of secondary school education has become increasingly important, with a shift towards the requirement of higher levels of education throughout the Australian labour market. As a consequence, early school leavers are three times more likely to be unemployed than those students that complete Year 12 or post-secondary education. The proposed study will examine the role of emotional intelligence (EI) in academic performance at Year 12 and school retention in secondary schools. The results of the study will help schools develop evidence-based strategies to best retain students and help students maximise their academic potential.

**LP0882422** Prof IR Young; Dr AV Babanin

**Approved Project Title** **A Global Satellite Altimeter Database for Ocean Engineering Applications**

**2008 :** \$ 100,000

**2009 :** \$ 70,000

**2010 :** \$ 70,000

**Primary RFCD** 2912 MARITIME ENGINEERING

APA(I) Award(s): 2

### **Collaborating/Partner Organisation(s)**

MetOcean Engineers Pty Ltd

**Administering Organisation** Swinburne University of Technology

### **Project Summary**

Australia is a maritime nation with major shipping activities, offshore facilities and a very significant percentage of its population living near the coast. As such, it is critical that engineers can accurately predict ocean wave conditions. This project will bring together more than 20 years of satellite observations of the ocean into a single database. This database will represent a major resource for the nation, significantly enhancing our understanding of ocean wave conditions. The research projects associated with the database will provide an understanding of the ocean wave climate, oceanic extremes, tropical cyclone conditions and nearshore ocean design parameters.