

PhD Scholarships in Structural Health Monitoring of Composite Materials

School of Civil Environment & Mining Engineering, The University of Adelaide

The University of Adelaide has a long tradition of excellent research outcomes and collaboration between researchers in the fields of engineering. The research quality of School of Civil, Environmental & Mining Engineering is reflected in the School achieving an ERA ranking of 4, which is a performance above world standard. The School is one of the top three Schools in The Faculty of Engineering, Computer and Mathematical Sciences (ECMS). The School and Faculty well equipped structural health monitoring facilities, such as 3D scanning laser vibrometer, ultrasonic and vibration measurement equipment.

The project:

Monitoring the safety of structures in order to improve reliability and reduce life-cycle costs is an issue of worldwide importance across a wide range of industries, such as aerospace, as well as civil and mechanical engineering. The need has motivated much research into structural health monitoring in recent years. SHM system is defined as the monitoring of a structure over time using periodically spaced measurements from an integrated system. It should ideally be able to detect and locate damage in structures, then estimate its severity and monitor its evolution over time.

An excellent opportunity exists for civil, mechanical or applied mathematics graduates. The position is directly linked to a new ARC Project in the research area of structural health monitoring. The project explores a new methodology for structural safety diagnosis in fibre composite structures using guided wave.

Persons:

The projects are well suited for applicants with **civil** or **mechanical engineering** or **applied mathematics** background.

Requirements

- Have a minimum of a Second Class Honours (Division A) or equivalent; preferably First Class Honours or Master with a research component.
- Demonstrate ability to undertake a broad range of analytical tasks.
- Demonstrate computer programming skills.
- An ability to work independently and as part of a multi-disciplinary research team.
- Evidence of strong oral and written communication skills.
- Knowledge in area of solving inverse problems and/or damage mechanics are highly desirable.
- Experience and knowledge in composite materials are highly desirable.

Remuneration:

The scholarships will be \$24,653 per annum (2013 rate, nominally tax-free) for 3 years plus tuition fee waiver.

Applications:

Applicants are invited to contact Dr. (Alex) Ching-Tai Ng alex.ng@adelaide.edu.au, or +61 (08) 8313-1237 for further information. Applications must consist of a **cover letter** outlining your interest and suitability for the positions, a detailed **curriculum vitae** and the names and contact details of **two referees**.