



PHD SCHOLARSHIP

The School of Civil Engineering at The University of Queensland (Brisbane, Australia) is offering a PhD scholarship for a motivated student to contribute to research being undertaken within the [Fire Safety Engineering Research Group](#) and the [Structural Engineering Research Group](#). Candidates with a background in Structural Engineering, Civil Engineering, Mechanical Engineering, Fire Safety Engineering or Physics are strongly encouraged to apply. The scholarship will be for three and a half (3.5) years and valued at AU\$ 26,682 per year. Top-up scholarships and international student fee-waivers are also available to exceptional candidates.

PROJECT INFORMATION

Propensity and consequences of fire-induced concrete spalling

Spalling during or after fire, occurs when the exposed surface of **heated concrete flakes away** in a sudden and violent manner. The propensity for fire-induced concrete spalling presents a **serious concern in the context of the historical approach to fire safe design of concrete structures**, where engineers typically rely on concrete's inherent fire safety characteristics (e.g. non-combustibility, non-flammability, high thermal inertia).

This project aims at investigating the occurrence of fire-induced concrete spalling and its effects in the structural fire performance of concrete structures (building or tunnel applications). This project will experimentally investigate the occurrence of fire-induced concrete spalling and propose simple, rather than complex, design methods to incorporate the **risk of spalling** in the design of fire safe concrete structures. The project will also propose design methods (analytical or numerical) for incorporating the effects of spalling on the **load-bearing capacity of concrete structures** during and after fire.

Experimental work within the scope of this project will be carried in the Fire and Structures Laboratories (<http://www.civil.uq.edu.au/fire>) at The University of Queensland.

QUALIFICATIONS

Candidates must hold a relevant undergraduate or Master's degree in Structural Engineering, Civil Engineering, Mechanical Engineering, Fire Safety Engineering, Physics or other related field. Candidates with skills or interested in concrete structures, fire safety engineering, heat transfer, and/or concrete technology are strongly encouraged to apply.

HOW TO APPLY

Interested candidates should submit their scholarship application on the Application for school-based PhD or MPhil scholarship [form](#), together with your supporting documents on the [RHD online application system](#). Details on the application for admission and scholarship process can be found at <http://www.civil.uq.edu.au/RHD-application-apply>.

For further details, please contact **Dr Cristian Maluk** at c.maluk@uq.edu.au.

Submission due by **14/07/2017**.