



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 [Centre for Future Timber Structures](#) and the [Fire Safety 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

Fire Performance of Floor Timber Systems

Conventional load-bearing floor systems consisting of cross laminated timber (CLT) panels that span between shear walls at the core of floor-plans, spandrel beams, and columns have restricted span capacities (fire or serviceability). The principles of **floor timber systems** replicate those of a traditional reinforced concrete flat plate systems where the ends of the floor panels are restrained from rotation by walls and column. Regarding structural fire performance, there are **key gaps on how timber floor panels behave during or after fire**. Fire-induced failure mechanisms of CLT systems are induced by reduction of the members' cross section (charring and/or delamination) or weakening of the connecting conditions.

This project aims at investigating the fire performance of floor timber systems and proposing a prototype CLT composite floor system with enhanced structural load-bearing capacity during and after fire. This project will study the **potential of novel timber floor systems with enhanced fire performance**. This will be done by introducing elements that allow for improved composite action of the structural system; e.g. additional anchoring to improve connection performance during fire, lamellas of material with higher residual capacity to compensate strength loss due to charring of timber.

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 timber structures, fire safety engineering, heat transfer, and/or engineered timber products 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**.