



# 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](#). Candidates with a background in Civil Engineering, Mechanical Engineering, Chemical 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

### *The role of moisture and the water cycle on the flammability of vegetation and risk of bushfires*

Bushland fires are devastating events that can result in significant loss of life and economic consequences. At present, there is limited knowledge regarding key factors affecting the flammability of vegetation. The water cycle in bushlands, due to climatological and seasonal conditions as well as human interaction, plays an important role in defining the vegetation of bushlands and, eventually, the intrinsic fire risk. Relevant research in the field of fire safety has demonstrated that moisture content is a factor that strongly affects the flammability of solid fuels. Nonetheless, in practice fire risk assessments of bushlands are rarely defined on the basis of flammability principles, but on empirical relationships based on weather data, field measurement of vegetation density and eventually coarse satellite remote sensing data.

The main goal of this project is to study the effect of different moisture content and type of vegetation on the flammability of bushlands. This project will aid the development of fundamentals to improve bushfire risk models. The proposed methodology is aimed at connecting flammability characterisation of vegetation at small-scale with large-scale field measurements data on fire and moisture.

Experimental work within the scope of this Project will be carried in the Fire 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 Civil Engineering, Mechanical Engineering, Chemical Engineering, Physics or other related field. Candidates with skills or interested in fire safety engineering, fluid mechanics, heat transfer, and/or forestry 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 Juan P. Hidalgo** at [j.hidalgo@uq.edu.au](mailto:j.hidalgo@uq.edu.au).

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