



OPPORTUNITIES FOR BUSHFIRE RESEARCH IN NEW ZEALAND

→ The Australian Bushfire Cooperative Research Centre is a seven-year initiative providing research to enhance the management of bushfire risk to the community in an economically and ecologically sustainable way. Formed in 2003, the Bushfire CRC is conducting research projects in partnership with fire agencies, universities and governments across a range of disciplines.

The Bushfire CRC is offering two postgraduate scholarships at the University of Canterbury, Christchurch, New Zealand, in collaboration with the Ensis Bushfire Research Group. The scholarship programmes cover research projects in the management of rural and forest fires in the landscape, and also examine the economic and social aspects of these fires.

→ **THE OFFER**

The Bushfire CRC is offering outstanding students access to:

- Full Scholarships of \$25,000 per annum,
- Top up Scholarships of \$9,000 per annum, and
- Project Support

Applications are invited from students interested in undertaking Masters studies with backgrounds in environmental and natural resource science, geography, social science, economics or engineering.

The projects will need to commence in 2007 and be completed within the two-year period of the scholarship.

→ **SUGGESTED RESEARCH TOPICS**

1. Fuel dynamics and hazard assessment: One of the most important factors determining the behaviour of fires is the amount of fuel available that actually burns under prevailing fire weather conditions. This depends on fuel/vegetation characteristics (i.e. structure, composition, continuity and load). This study will develop fuel models and fuel hazard assessment guides for fire behaviour models and risk assessment tools for major vegetation types in New Zealand.

2. Productivity and effectiveness of rural fire fighting: Quantifying the productivity and effectiveness of fire suppression resources specific to fuel type, climate, terrain and firefighter crew experience will be investigated. To date there have been no New Zealand trials of fire suppression productivity and effectiveness. Outcomes are to provide recommendations and guidelines for New Zealand rural fire agencies on fire suppression resource productivity and effectiveness.

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3. Values-At-Risk from rural fires in New Zealand: This project will provide an understanding of the cost of rural fire management activities to New Zealand fire agencies, as well as the indirect losses and damage. Trends in rural costs over the last two decades will also be analysed, to provide recommendations and guidelines for assessing and determining values-at-risk from wildfire.

4. Meteorological features relevant to rural fires in New Zealand: One of the major uncertainties in fire danger rating and fire behaviour predictions is the spatial and temporal variation of the weather parameters for models, especially wind fields used in these models. In most cases weather data is limited to only a few specific locations, none of which may be actually near the fire location. Mountains, valleys, ridges and atmospheric stability can influence both the speed and direction of wind flow. Research to compare wind simulations against measured wind data will aim to improve the weather inputs for fire prediction models.



→ **HOW TO APPLY**

Students with a first class honours degree and a keen interest in pursuing a research career in bushfire science are encouraged to apply.

For further information please contact:

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THE BUSHFIRE CRC

More information on the Bushfire CRC can be found at:

www.bushfirecrc.com

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