

PhD Opportunity: Climate Stress Testing, Risk Modelling & Data Science – Join the STRAND Project

We are seeking a talented and driven PhD student to join the STRAND Project ([Project Website](#)) – an internationally distinctive initiative focused on the development of cutting-edge climate stress testing frameworks for financial systems. This interdisciplinary research sits at the intersection of data science, operations research, climate science, and financial risk modelling. The project is a collaboration between the University of Otago, Earth Sciences New Zealand, Griffith University (Australia), and Bodeker Scientific.

About the Role

This PhD will contribute to the development of innovative, data-driven models to assess the impact of physical climate risks, such as floods, on real estate markets, financial institutions, and economies. Working alongside an experienced and collaborative research team, you will help build the tools needed for forward-looking stress testing of climate-related risks at both macro and micro levels.

Essential Skills and Background

We are looking for a candidate with strong quantitative and computational skills, and a deep interest in applying these to complex, real-world challenges. You should have:

- ❖ A strong foundation in mathematics, statistics, data science, GIS or operations research
- ❖ Proficient Python programming skills
- ❖ Ability to manage large datasets
- ❖ Solid econometric skills

And willingness to develop expertise in:

- ❖ Climate finance and financial system risk
- ❖ GIS modelling for spatial climate risk exposure
- ❖ Macroeconomic modelling, including CGE or IAMs
- ❖ Climate science, especially related to physical hazards and impact pathways

Who Should Apply?

We particularly encourage applicants with backgrounds in operations research, data science, computational modelling, GIS, macroeconomic modelling (e.g. CGE), applied statistics. A Master's degree (or equivalent research experience e.g. NZ or Australian honours) in a relevant field is preferred. This position is ideal for someone who wants to work at the frontier of climate risk modelling with tangible policy and industry relevance.

Location

The project is based at the University of Otago, Dunedin, New Zealand, with opportunities for collaboration with leading international researchers and policy stakeholders. There will be an opportunity to spend some time in Australia at Griffith University.

PhD Student Stipend

A stipend of \$33,000 per year and tuition fee will be covered for three years. The project will commence October 2025.

Application Process

Please send CV, transcripts and one page document outlining how you could contribute to the project by Monday 1st September 2025. Early applications are welcome. Please send your documents using the subject line “STRAND Project PhD” to **Dr Quyen Nguyen** (q.nguyen@gns.cri.nz), and cc **Prof. Ivan Diaz-Rainey** (i.diaz-rainey@griffith.edu.au) and **Prof. Tony Moore** (tony.moore@otago.ac.nz).