

PhD Opportunity in Geological Modelling and Seismic Hazard Assessment



We are seeking a motivated and capable PhD student to join an exciting MBIE-funded *Smart Ideas* research project focused on improving earthquake ground motion prediction in Aotearoa New Zealand. The project will develop novel methods for generating high-resolution 3D geological models of sedimentary basins and linking these directly to advanced physics-based earthquake simulations.

This interdisciplinary project investigates how geological structures influence earthquake ground motions, with a focus on sedimentary basins. By integrating diverse datasets and modelling approaches, the research will contribute to improved understanding of subsurface conditions relevant to seismic hazard. The outcomes will support more informed decision-making for risk mitigation and urban resilience in Aotearoa New Zealand.

The ideal candidate will have a combination of the following:

1. Research experience in sedimentary basin analysis, stratigraphy, or geological modelling.
2. Familiarity with GIS and subsurface modelling tools (e.g. ArcGIS, Petrel, or similar).
3. A background in siliciclastic sedimentology, stratigraphy, and/or structural geology.
4. Strong written and verbal communication skills. (If English is not your first language, please include TOEFL or IELTS scores if available.)

The successful candidate will be supervised by Dr. Andrew La Croix, in collaboration with a broader team of geologists and earthquake engineers from University of Waikato, University of Canterbury, University of Auckland, and Changwon National University. We are offering a 3-year position based at the University of Waikato in Hamilton New Zealand (North Island). The position includes a PhD stipend of \$35,000/yr and full cover of tuition fees. The preferred start date is October 1, 2025.

Direct all initial enquiries to Dr. Andrew La Croix (University of Waikato, alacroix@waikato.ac.nz). A curriculum vitae, cover letter, and contact details of at least two referees should be emailed to alacroix@waikato.ac.nz by August 1st, 2025.



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