

Fully funded postdoctoral position and PhD at the University of Otago
Topics: Earthquake detection/Slow slip detection/Statistical modelling of seismic swarms

We seek motivated individuals with a background in statistical or computational modelling of earthquake or slow slip events and a strong academic record to participate in a collaborative and international research programme. Research projects will utilize computational or statistical techniques to acquire a complete catalogue of slow slip events (SSEs) and seismic swarms on and around New Zealand's Hikurangi subduction margin and investigate the occurrence patterns of these events.

Research topics for the postdoctoral and PhD positions will include:

- Detection of slow slip events and their occurrence patterns
- Earthquake detection and identification of seismic swarms
- Stochastic modelling of seismic swarms

We offer two positions beginning as early as January 2023:

- one two-year postdoctoral fellow position
- one three-year PhD position

This research programme aims to use statistical modelling techniques and machine learning methods to catalogue SSEs and seismic swarms from geodetic and seismic data in the Hikurangi Subduction Zone, and model the relationships between seismic swarms and SSEs, with the aim to find out relationships between SSEs and great earthquakes, and thus develop tools to forecast SSEs and great earthquakes. The successful applicants will be working with Associate Professor Ting Wang (University of Otago), Professor Mark Stirling (University of Otago), Dr Laura Wallace (GNS Science), Dr Calum Chamberlain (Victoria University of Wellington), Professor Mark Bebbington (Massey University), and Dr Matt Gerstenberger (GNS Science).

Both positions will be based at the University of Otago (Dunedin, New Zealand), with collaborative visits to Victoria University of Wellington, University of Tokyo and the Institute of Statistical Mathematics in Japan.

Eligibility:

The PhD applicant should hold a BSc (hons) or MSc, and the postdoctoral fellow should hold a PhD. Preference will be given to applicants with experience in these areas: Statistics, Computer Science, Mathematics, Seismology, and Geodesy.

Prospective applicants are encouraged to contact Associate Professor Ting Wang (ting.wang@otago.ac.nz) and provide a cover letter explaining their interest in the project, a CV, a copy of full University academic transcript, and details of two academic referees.

Applications will be considered as submitted, with a **deadline on 15 January 2023**.