Seismic Hazard Ground Motion Seismologist

This is a key member of our ground motion team contributing to the National Seismic Hazard Model. The purpose of this role is to undertake ground motion research and application that will directly contribute to current and future revisions of the national model.

Position priorities and responsibilities

- Undertake research and development related to ground motion modelling for seismic hazard application.
- Work with the seismic hazard model team on revisions of the National Seismic Hazard Model including research to guide the model’s future directions; contribute to the core framework of the model and its application using expertise in software systems, ground motion modelling, and/or engineering seismology, depending on the skills of the applicant.
- Publish results in peer-reviewed journals, and present findings at research conferences and to end-users of the National Seismic Hazard Model.
- Contribute to discussions and planning of research directions with colleagues at GNS Science and, as appropriate, develop proposals for new research funding.
- Undertake other duties as agreed by the Team Leader.

Responsibilities of all staff

- Comply with all GNS Science policies and procedures
- Contribute to making GNS Science a healthy and safe place to work by complying with the responsibilities and accountabilities outlined in the Health and Safety Management System Framework

The responsibilities of this position will change over time to respond to changing needs. The incumbent will need the flexibility to adapt and develop as the company and its environment evolves.
Key working relationships

Internal:
- Members of the National Seismic Hazard Model Team; Seismology: Source to Surface Team, Earthquakes Physics and Statistics Team; software engineering team; as well as other staff as required for specific projects.

External:
- The international and national seismic hazard modelling, ground motion and engineering community.

Person specification

Skills, knowledge and attributes
- When appropriate, a willingness to work with iwi/Maori groups and organisations to build relationships with the aim of facilitating Maori development.

Experience

Essential:
- Demonstrated research experience in ground motion modelling for seismic hazard application, including some or all of the following subtopics: empirical ground motion model development, development of ground motion characterisation models for hazard assessment, modelling of aleatory and epistemic uncertainty, non-ergodic modelling approaches, site model development.
- Modern computer programming skills in common scientific languages (e.g. Python, R, Java)
- A demonstrated publication record based on innovative research achievements.
- Experience in contributing to successful proposals for research funding.

Desirable:
- Several years of post-PhD experience in a research environment, working as part of a team.
- Python and Java programming skills and experience working with modern software architectural methods. Experience with version control and unit testing for software development.
- Experience with high-performance and cloud computing.
- Experience in statistics.

Qualifications

Essential:
- A PhD in seismology, engineering or geophysics.
Competencies

The following competencies are expected of all staff:

► **Results Orientation:** *The ability and commitment to achieve effective results, and work towards or exceed agreed goals.*

► **Business Focus:** *The ability and desire to apply appropriate principles and practices to maximise revenue, minimise cost, while meeting our obligations.*

► **Relationship Management:** *The ability and commitment to develop and maintain effective relationships with groups and individuals.*

► **Communication:** *The ability to express thoughts and ideas clearly and consistently (orally and in writing).*

► **Innovation and Initiative:** *The ability and commitment to seek and use better ways of doing things (to improve personal and GNS Science performance).*

► **Teamwork:** *The ability to establish and maintain effective and cooperative relationships.*

► **Professional Integrity:** *Act in a manner that conveys high personal and professional standards.*

► **Technical Expertise:** *The ability to maintain and develop technical expertise.*

► **Leadership and Management Skills:** *The ability to inspire others to achieve desired results and to develop and enable others to realise their full potential.*