

Seismologist



The Seismologist undertakes research into broadband ground motion simulation, seismic wave propagation in 3D earth models, or earthquake source physics through research and consultancy contracts.

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|------------------------|---|
| Reports to: | Earthquake Physics and Statistics Team Leader |
| Department: | Earth Structure and Processes |
| Group: | Science |
| Tenure: | Permanent |
| Location: | Avalon |
| Direct reports: | Nil |
| Budget: | Nil |
| Career Path: | Research |
| Job Family: | Research |
| Career Step: | To Be Confirmed |
| Date: | August 2022 |

Position priorities and responsibilities

Scientific Research

- Undertake research into broadband ground motion simulation, seismic wave propagation in 3D earth models, and/or earthquake source physics.
- Work collaboratively with fellow seismologists, geodynamic modellers, engineering seismologists and geotechnical specialists.
- Developing research plans in consultation with senior staff
- Assisting with planning, execution and reporting of established projects
- May be involved in supervising technicians or other staff

Commercial

- Contribute to consultancy projects both within NZ and overseas for clients as required and complete reports to agreed scope, timeframe, and budget.

Communication

- Communicating scientific research through authorship or co-authorship of scientific publications papers or reports
- Making presentations at conferences and seminars
- May represent GNS Science at conferences

Projects

- Undertake projects for your manager as and when required

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 Seismology: Source to Surface Team, Earthquakes Physics and Statistics Team; Earthquake Geo Team; software engineering team; as well as other staff as required for specific projects.

Person specification

Skills, knowledge and attributes

- Demonstrated research experience in seismology, clearly complementing our team strengths in areas of seismology such as in ground motion modelling, 3-D seismic wave propagation, earthquake rupture modelling, inversion for source parameters and 3D crustal-scale earth models, and synthetic seismicity modelling by multiple fault interaction.
- A demonstrated publication record and research achievements, with potential for innovation.

Experience

Essential:

- Research experience in ground motion modelling, or
- Research experience in source physics modelling

Desirable:

- Experience in parallel programming with MPI or Open MP.
- Experience in contributing to successful proposals for research and consultancy funding.

Qualifications

Essential:

- PhD in geophysics/seismology

Performance Dimensions

At a high level, GNS Science recognises six **Performance Dimensions**: three relate to technical capability, one relates to leadership (if applicable) and two relate to the *way we work*. Below are the general expectations that are the minimum standards expected of all staff. There are also expectations that specifically relate to the career step associated with the role; you can find these on GNS Online.

Technical capabilities

Scope, complexity and innovation

- Enduring commitment to maintaining and developing skills and knowledge in area of expertise.
- Both the ability and desire to apply appropriate rigour, principles and practices to deliver quality work in a cost-effective manner.
- Acts in a manner that conveys high personal and professional standards.
- Open to coaching and feedback – incorporates suggestions to find better ways of doing things (to improve own and GNS Science performance).

Contribution to GNS Science / profession

- Establishes and maintains effective and collaborative working relationships – with colleagues and external individuals and groups.
- Both the ability and commitment to work in a culturally responsive and inclusive manner; respecting and valuing the diverse perspectives of individuals and groups.
- Takes an interest in early career colleagues, graduates and students – provides coaching and/or mentoring as appropriate. Supports initiatives to promote science careers.
- Prevents harm to self and others by carrying out duties safely and responsibly.

Delivery of work

- The ability and commitment to deliver pieces of work and projects on time to required quality, cost and benefit parameters.
- The application of appropriate project management rigour, principles and practices to delivering quality projects in a cost-effective manner

Behavioural expectations

Manaakitanga – we do the right thing

Champions a positive working culture. Works and interacts with colleagues, external partners, stakeholders and customers in a way that is consistent with our values:

- We are **CONNECTED** in our purpose; with each other, with partners and stakeholders and with our communities.
- We are **INSPIRED** by our work to explore, challenge, innovate and aim higher.
- We are **EMPOWERED** to be our best – valued for our differences, encouraged to contribute and enabled to grow and develop.

Bicultural commitment

- As a Crown Research Institute, GNS Science is committed to partnering with iwi/hapū and Māori communities and agencies to achieve their science aspirations.
- We do this in a way that is culturally appropriate (**tikanga**) and honours Māori and non-Māori worldviews (**te ao**).

These expectations are intended to support and guide the development of individual staff.