Tsunami Modelling Scientist

Reports to:	Tsunami Team Leader	**Position Status:**	Permanent
Business Unit:	GNS	**Location:**	Avalon
Department:	Earth Structure & Processes	**Date:**	June 2025
Direct Reports:	Nil	**Budget & Delegated Authority:**	Nil
Group:	Science & Commercial Operations	**Career Step:**	Scientist 1 / Band 6
Job Family:	Science & Research	**Career Path:**	Research

Purpose

The purpose of this role is to develop and run hydrodynamic numerical models of tsunami. The models will then be used to improve both our understanding of the tsunami hazard and risk faced by New Zealand and the region and our ability to respond to tsunami when they occur.

Position Priorities and Responsibilities

- Conduct fundamental and applied research into tsunami hydrodynamic modelling. Develop tsunami hydrodynamic models and use them to conduct underpinning and applied research into tsunami hazard and risk assessments and tsunami forecasting.
- Provide scientific advice before and during a tsunami event that may threaten New Zealand if needed.
- Develop research plans and proposals in consultation with senior staff.
- Assist with planning, execution and reporting of established projects.
- Publish papers, contribute to or lead commercial and science reports, present at scientific conferences and contribute to outreach activities as needed.

Responsibilities of all Employees

- Comply with all relevant Business Unit policies, procedures and frameworks, and act in line with the relevant Business Unit values.
- Contribute to our healthy and safe workplace by following Health, Safety and Wellbeing (HSW) expectations outlined in and integrated into our operational practices and HSW Frameworks, including undertaking HSW training and participating in health monitoring programmes relevant to your work.
- Work effectively as a team member by fostering good relationships and supporting others by providing coverage of other functions as required and ensuring workloads are evenly spread.
- Have the flexibility to adapt and develop as the company and its environment evolves.

Key Working Relationships

Internal	External
• Tsunami Team (GNS Business Unit) • Natural Hazards and Risk Theme Leader • Programme and Project Leaders	• Government (local and central agencies) • Regional Councils • Other Crown Research Institutes • National and international research organisations • Commercial organisations • The general public

Person Specification

Qualifications and Experience

Essential

- A relevant post graduate qualification or equivalent work experience.
- Demonstrated track record of publishing research papers in leading scientific journals or completing applied research reports.
- Demonstrated experience of contributing to research or commercial project planning.
- Experience with programming in Fortran, C or other commonly used programming or scripting languages.

Desirable

- A relevant post graduate qualification or equivalent work experience.
- Demonstrated track record of publishing research papers in leading scientific journals or completing applied research reports.
- Demonstrated experience of contributing to research or commercial project planning.
- Experience with programming in Fortran, C or other commonly used programming or scripting languages.

Skills, Knowledge and Attributes

- Knowledge of tsunami physics, tsunami hydrodynamic numerical modelling methods, tsunami warning system operations and/or natural hazard or risk assessment methods is highly desirable.
- Demonstrated ability to model tsunami propagation and inundation models and the ability to write and execute scripts in common programming and scripting languages.
- Ability to use GIS, Matlab or other similar tools.
- Knowledge of good software engineering design principles for scientific software design, development, testing, maintenance and documentation is highly desirable.
- Excellent written, oral and interpersonal communication skills.