Geodetic and Tsunami Data Processing Coordinator

This position supports GeoNet’s GNSS (Global Navigation Satellite Systems) and sea level monitoring programme. It will involve ensuring the day-to-day processing, reception and reporting on GNSS and sea level monitoring data. The role includes trouble-shooting problems with sites and updating data processing. This role will also assist in managing the relationship with our stakeholder Land Information New Zealand (LINZ).

Position priorities and responsibilities

- Managing subscriptions, monitoring and communication with LINZ for the PositioNZ-RT streaming network.
- Managing monitoring and communication with LINZ for the coastal sea level gauge network
- Trouble-shoot, track faults and help resolve issues in the GNSS and coastal sea level gauge remote field network and the GNSS and coastal sea level gauge data reception and processing systems in collaboration with the Remote Infrastructure Management, Data Science Platform Team, and LINZ.
- Provide operational support for Deep Ocean Assessment and Reporting of Tsunamis (DART) data and meta-data curation.
- Writing regular operational reports for stakeholders.
- Check daily processing of GNSS time series and assist with the troubleshooting and resolution of processing issues.
- Check daily data processing of coastal sea level time series and assist with the troubleshooting and resolution of processing issues.
- Assist with managing the relationship with LINZ to ensure contractual requirements are met.
- Manage metadata of GNSS and coastal sea level gauge sites.
- Apply firmware upgrades and configurations to GNSS instruments.
- Use scripts for the operational GNSS and coastal sea level gauge system, which may include scripts to manage firmware, configuration, equipment testing, trouble shooting, data recovery and reporting.
- Write documentation for diagnostic approaches, known issues and their fixes, processes, systems, and best practices for GNSS and coastal sea level gauge instruments and data processing systems.
- Perform data quality checks to ensure the delivery of high quality data.
- Engage with end-users, in particular LINZ, to answer questions and provide support.
- Attend and present at conferences relating to GNSS and coastal sea level gauge network operations and data.
- Assist with the development of best practices for GNSS, coastal sea level gauge and DART network operation and data curation.
- Assist with the GNS Science response to geological hazard events.
- Undertake projects as directed by your manager as and when required.
- Provide support to the National Geohazards Monitoring Centre as 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:
- Science Operations and Data Team
- Data Science Platform Team
- Data Science Systems Development Team
- Remote Infrastructure Management Team
- National Geohazards Monitoring Centre
- Other GNS Science staff

External:
- LINZ
- External surveyors and researchers
- Equipment suppliers

Person specification

Skills, knowledge and attributes

- Familiarity with Unix/Linux operating systems, command lines, and computing and networking platforms based on Unix/Linux.
- Good written and spoken English.
- Understanding of collecting and processing of GNSS observations.
- Understanding of collecting and processing of coastal sea level measurements.
- Aptitude for understanding scientific equipment and its operations, such that it can be studied and tested through the data it produces.
- Ability to work across teams and learn across disciplines.
Desirable:
- Familiarity with processing GNSS data using Gamit/GlobK.
- Familiarity with pressure sensor measurements and tidal gauge data collection.
- Familiarity with FDSN webservices.
- Expertise developing scripts to perform operational tasks, manage data, and study problems using large and complex datasets.
- Understanding of GNSS data and data quality.
- Understanding of DART buoy functionality as required for data curation.
- Familiarity with version control and code management.
- Understanding of applications of GNSS and sea level measurements data in research and surveying.
- Ability to study complex problems using data-driven analysis techniques.

Experience

Essential:
- Background in geodesy and geophysical methods.

Desirable:
- Previous experience working in cross-functional teams of technical experts.
- Development and use of scripts for operational tasks, data management, data science.
- Working with data on local storage and in the cloud.
- Participating client meetings to discuss service provided and upcoming work.

Qualifications

Essential:
- A degree in Geophysics or related discipline.

Desirable:
- Courses or qualifications in surveying or data science.

Other requirements

Essential:
- Advanced computer aptitude.
- Excellent communication and interpersonal skills.
- Report and technical writing skills.
- Attention to detail.
- Innovative and problem-solving skills.
- Flexible team player.
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.