



Trinity College Dublin  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin



Geological Survey  
Suirbhéireacht Gheolalochta  
Ireland | Éireann

## Post specification

**Job title:** Research Fellow in the Earth Surface Research Laboratory

**Post status:** Specific purpose

**Research group/department/school:** Earth Surface Research Laboratory, Department of Geology / School of Natural Sciences. Trinity College Dublin, the University of Dublin.

**Location:** Earth Surface Research Laboratory, Unit 6b, Trinity Technology & Enterprise Centre (TTEC), Pearse Street, Dublin 2, Ireland / Department of Geology, Museum Building, Trinity College Dublin, Dublin 2, Ireland.

**Reports to:** Dr Michael Stock, Assistant Professor in Geochemistry and Director of the ESRL.

**Salary:** Appointment will be made on the appropriate point of the IUA Post-Doctorate Researcher Level 2 salary scale in line with government pay policy i.e. €50,540 – €54,965 gross per annum.

**Hours of work:** 39 per week

**Closing date:** 18:00 Dublin time, 18 February 2024

## Post summary

The [Earth Surface Research Laboratory](#) (ESRL) invites applications for a Postdoctoral Fellowship in geochemistry, environmental chemistry, or a similar related discipline, funded by [Geological Survey Ireland](#). The Fellowship will initially be tenable for four years with the possibility of a further two-year extension, starting on 18 March 2023 (or as soon as possible thereafter).

Applicants are invited to propose their own programme of innovative research, which they will manage independently under the guidance of the ESRL Director, Dr Mike Stock. Proposals may be for either applied or oriented basic research in any area of Earth or environmental science. However, they must contain clearly defined project outputs, which are publishable following the FAIR principles of the [National Open Research Forum](#). Project proposals should aim to make use of ESRL facilities and, where possible, integrate data collected as part of Geological Survey Ireland's Tellus survey.

In addition to conducting their own research, the successful applicant will take on day-to-day management duties within the ESRL. This will include communicating with technicians, managing instrument bookings and sample throughput, and developing new laboratory procedures. They will also work with ESRL team members to maintain and improve the laboratories Quality Management System and preserve its ISO accreditation. They will liaise with and report to Geological Survey Ireland.

In addition to becoming a member of the ESRL, the successful applicant will be hosted within the Department of Geology in the School of Natural Sciences and will join the active Trinity College Dublin [Geochemistry Research Group](#).

A limited amount of funding will also be provided to support the research programme (e.g. laboratory costs, travel, fieldwork, publications) and the researcher will have ESRL equipment free of charge, following approval of analysis requests by the ESRL Scientific Advisory Committee.

## Background to the post

The Earth Surface Research Laboratory was established as a national geochemical research facility in 2019, funded through a service level agreement with Geological Survey Ireland. The laboratory is open to all Earth and environmental scientists based on the island of Ireland for research projects and runs two open calls per year where researchers can apply for free facility access. Additionally, the ESRL is the XRF data supplier for Geological Survey Ireland's [Tellus geochemical survey](#) and is equipped to analyse up to ~2,500 Tellus soil and sediment samples per year. In December 2021, the laboratory was awarded an ISO17025:217 (General requirements for the competence of testing and calibration laboratories) accreditation by the Irish National Accreditation Board (INAB).

The laboratory currently hosts a state-of-the-art Zetium WD-XRF, Rigaku ED-XRF, elemental analyser (TIC/TOC/S), FTIR and an Hg analyser, in addition to a full suite of sample preparation equipment (including both XRF pellet pressing and fusion). All instruments and equipment are housed within individual clean rooms and samples/data are controlled through a cloud-based laboratory information management system (LIMS). The ESRL is staffed by two full-time technical staff and overseen by the Director. High level oversight is through dedicated Management and Scientific Advisory Committees.

More broadly within the TCD Department of Geology, the successful applicant will have access full rock preparation facilities and a wide-range of [analytical laboratories](#), including: three state-of-the-art laser-ablation ICP-MS laboratories, a clean wet laboratory and dedicated ICP-OES and MS instruments, a quality XRD instrument, two geoscience dedicated field-emission-gun SEMs (equipped with Raman, full colour CL and EBSD), and an IRMS for the analysis of H-C-N-O isotopes in organic matter and carbonates.

## Standard duties and responsibilities of the post

The successful applicant will:

- Develop and manage an innovative programme of research in Earth or environmental sciences with clear and accessible outputs, developing both their own international profile and the profile of the ESRL.
- Manage the day-to-day operation of the ESRL, maintaining the laboratories Quality Management System and ISO accreditation, and contributing to ESRL audits and reports.
- Engage and disseminate research amongst academics, the public and other relevant stakeholders (e.g. industry, government agencies) through relevant conferences, meetings and outreach events.
- Work with ESRL technicians to develop new procedures and train users to safely and efficiently carry out research within the laboratory.
- Undertake such administrative responsibilities as directed by the ESRL Director.
- Occasionally participate in limited teaching within the Department of Geology, for example demonstrating on undergraduate fieldtrips and supervising postgraduate research projects.

## Qualifications

- Applicants must hold a PhD in Earth or environmental science, or a similar relevant research area.



## Knowledge and experience

### *Essential*

- Evidence of research potential and achievements, including a strong existing publication record in geochemistry or environmental chemistry.
- At least one previous postdoctoral position.
- Evidence of an existing international reputation for research excellence.
- Expert knowledge of major and trace element geochemistry, including processing standard data and calculating analytical uncertainties.
- Experience working in a laboratory environment and managing instrument maintenance issues.
- Demonstrated skills in XRF analysis and data processing.

### *Desirable*

- Experience in laboratory management or procurement of equipment/consumables.
- Experience in developing laboratory procedures.
- Experience in training users in laboratory procedures and safe working practices.
- Experience teaching and/or supervising students.
- Evidence of collaboration with government and/or industry partners.
- Knowledge of ISO procedures, particularly ISO 17025:2017.
- Knowledge of TC, TOC, TIC and Hg analysis.

## Skills and competencies

- An ability to independently manage a programme of innovative research.
- Excellent organisational skills and an ability to balance research and administrative tasks.
- Demonstrated potential to manage a geochemical laboratory in a University setting.
- Excellent communication skills, including with technical staff, academics and non-academic stakeholders.
- An ability to work in a multidisciplinary environment, including engaging with researchers in new and unrelated disciplines.

## Application procedure

Applications should be made to:

**Dr Michael Stock, Trinity College Dublin**  
**STOCKM@tcd.ie**

Applicants are required to submit the following documents:

- A cover letter detailing their suitability for the post, including the relevance of their existing publication record
- A full CV
- A proposal outlining their proposed programme of research, including the timing of key milestones and deliverables (max. 5000 words)
- Indicative plans to target/leverage external research funding (max. 500 words)
- The contact details of two referees (including email addresses)

All applicants will be notified of the outcome of their submission. Successful applicants will be invited to interview via Zoom.