**Research Assistant OR Postdoctoral Researcher (dependant on experience) in the Earth Surface Research Laboratory**

**Job title:** Research Assistant OR Postdoctoral Researcher (dependant on experience) in the Earth Surface Research Laboratory

**Post status:** Specific purpose (approximately 5 years duration)

**Research group/department/school:** Earth Surface Research Laboratory, Discipline 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 Research Assistant salary scale in line with government pay policy i.e. Research Assistant €31,962-41,943 OR Postdoctoral Researcher (PD1) €44,847-51,313 gross per annum.

**Hours of work:** 37.5 per week

**Closing date:** 17:00 GMT, 11 December 2024

**Post summary**

The [Earth Surface Research Laboratory (ESRL)](https://www.tcd.ie/Geology/esrl/) invites applications for a Research Assistant OR Postdoctoral Researcher (dependant on experience) in geochemistry, funded by Geological Survey Ireland (GSI). The position will be tenable for the duration of the ESRL's funding (approximately five years, subject to satisfactory performance), starting on 16 January 2025 or as soon as possible thereafter.

Applicants will contribute to the day-to-day running of the ESRL, under the management of the laboratory Director, Dr Mike Stock, and in collaboration with other ESRL staff. Their primary responsibility will be the preparation of samples for geochemical analysis. This will include preparing geological and environmental samples for [Geological Survey Ireland's Tellus survey](https://www.gsi.ie/en-ie/programmes-and-projects/tellus/activities/ground-survey/Pages/default.aspx) and a diverse range of national/international research projects. While sample analysis will not be their primary responsibility, they will be trained to operate a range of geochemical instruments within the ESRL.

In addition to sample preparation, the successful applicant will take on other duties within the ESRL. This will include developing new procedures, consumable procurement, maintaining health and safety protocols, account management, communication with the ESRL's management committees and training laboratory users in sample preparation techniques. They will also work with ESRL team members to maintain and improve the laboratories Quality Management System, preserve its ISO accreditation, and liaise with/report to Geological Survey Ireland.

Applicants without a PhD (or equivalent experience), or with a PhD not in geochemical Earth, environmental or soil science, will be employed as a Research Assistant. They will receive a single point annual incremental pay rise (starting January 2026) and, on reaching the top of the Research Assistant pay scale, the position may be promoted to a Postdoctoral Researcher, subject to satisfactory performance. Applicants with a PhD in geochemical Earth, environmental or soil science may be directly appointed as a Postdoctoral Researcher with a single point annual incremental pay rise on this salary scale (starting January 2026).

In the case that a Postdoctoral Researcher is appointed, the applicant will be invited to conduct their own programme of innovative research under the guidance of the ESRL Director, Dr Michael Stock: this research is secondary to all other responsibilities in the ESRL and will only be permitted where these other duties have been completed satisfactorily. The time allocation and nature of this research will be subject to approval by the ESRL Director and will be reported to Geological Survey Ireland. It may be for either applied or oriented basic research in any area of Earth, environmental or soil science. However, outputs must be publishable following the FAIR principles of the [National Open Research Forum](https://norf.ie/), and should aim to make use of ESRL facilities and integrate data collected as part of GSI's Tellus survey.

The successful applicant will be supported in their ongoing professional development, both through internal training and regular attendance of external courses. A limited amount of funding may be provided to support the research programme (e.g. laboratory costs, travel, fieldwork, publications) and the researcher will have use of ESRL equipment free of charge, following approval of analysis requests by the ESRL Scientific Advisory Committee. 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](https://www.tcd.ie/Geology/research/geochem.php).

**Background to the post**

The ESRL was established as a national geochemical research facility in 2019, funded through a service level agreement with Geological Survey Ireland. The ESRL is the XRF data supplier for Geological Survey Ireland's [Tellus geochemical survey](https://www.gsi.ie/en-ie/programmes-and-projects/tellus/Pages/default.aspx) 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 is also open to all Earth and environmental scientists based on the island of Ireland for research projects through funded research projects and bi-annual open calls where researchers can apply for free facility access.

The laboratory currently hosts a state-of-the-art Zetium WD-XRF, Rigaku ED-XRF, elemental analyser (TIC/TOC/S) 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). In addition to the advertised position, the ESRL is staffed by full-time technical support staff, a Research Fellow and the Director. High level oversight is through dedicated Management and Scientific Advisory Committees.

More broadly, the TCD Department of Geology hosts full rock preparation facilities and a wide-range of [analytical laboratorie](http://www.tcd.ie/Geology/research/facilities/)s, 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:**

* Prepare geological and environmental samples for geochemical analysis, principally by XRF.
* Manage and maintain sample preparation equipment within the ESRL.
* Develop new and existing laboratory operating procedures.
* Contribute to maintaining a safe working environment within the ESRL.
* Maintain the consumable inventory within the ESRL, procuring materials as required.
* Undertake such administrative responsibilities as directed by the ESRL Director. These might include reporting, account management and occasional secretarial duties.
* Maintain the laboratories' Quality Management System and ISO accreditation, contributing to ESRL audits and reports.
* Continue their professional development by pursuing internal/external training opportunities.
* Disseminate research and other information about the ESRL amongst academics, the public and other relevant stakeholders (e.g. industry, government agencies) through relevant conferences, meetings and outreach events.
* In the case that a Postdoctoral Researcher is appointed, they will work on an innovative programme of research in Earth, environmental or soil sciences with clear and accessible outputs, developing both their own international profile and the profile of the ESRL.

**Qualifications**

* Research Assistant applicants must hold a BSc in Earth or environmental science, or a similar relevant area.
* Postdoctoral Researcher applicants must hold a PhD (or demonstrate equivalent experience) in geochemical Earth, environmental or soil science, or a similar relevant research area.

**Knowledge and experience**

**Essential**

* Experience working in a laboratory environment.
* Demonstrable knowledge of geochemistry and/or chemical analysis.
* Experienced operation of Microsoft Office software.
* Excellent communication skills.
* Excellent organisational skills.
* Postdoctoral Researcher applicants must show evidence of research potential and achievements, including publications, in geochemistry, environmental chemistry, soil science and/or relevant analytical methods.

**Desirable**

* Knowledge of XRF analysis.
* Knowledge of TC, TOC, TIC and Hg analysis.
* 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 in publishing research results or other project reporting.
* Experience in account management and reporting.
* Knowledge of ISO procedures, particularly ISO 17025:2017.

**Skills and competencies**

* Demonstrated potential to work effectively within a geochemical laboratory in a research setting.
* Excellent organisational skills and an ability to balance technical and administrative tasks.
* Excellent communication skills, including with academic and non-academic stakeholders.
* An ability to work in a multidisciplinary environment, including engaging with researchers in diverse disciplines.

**Application procedure**

Applications should be made to:

Dr Hilde Koch, Trinity College Dublin
kochhi@tcd.ie

Applicants are required to submit the following documents:

* A one-page cover letter detailing their suitability for the post
* A full CV (max. 2 pages)
* 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.