

POSTDOCTORAL RESEARCH ASSISTANT - GEOCHRONOLOGY

UKRI – NERC – BGS

This role will be based at the BGS headquarters in Keyworth, Nottingham

Appointment will be at UKRI Pay Band D

Pay Band D starting salary is £31,931 to £34,709 (depending on qualifications and experience)

Full-time – 37 hours a week (some flexible working options may be available, although please note this role is not suitable for hybrid/remote working)

Fixed-term appointment (3 years)

About us

The British Geological Survey (BGS) is an applied geoscience research centre that belongs to UK Research and Innovation (UKRI) and is affiliated to the Natural Environment Research Council (NERC). It is a world leading geological survey whose core mission is to inform government of science related to the subsurface and to undertake applied research to solve earth and environmental issues, both in the UK and globally. It is funded directly by UKRI, as well as through research grants and private sector contracts.

BGS has an annual budget of approximately £60 million and employs 650 people. It has two main sites: a head office in Keyworth near Nottingham, and the Lyell Centre, which is a joint collaboration with Heriot Watt University in Edinburgh. BGS works with more than 150 private sector organisations, has close links with 40 universities, and sponsors approximately 100 PhD students each year.

We strive to [promote equality and diversity across our organisation](#) in order to continuously improve our scientific and organisational efficiency. As such, we aim to have a workforce with employees from all backgrounds with people who are passionate about earth science and who share our dedication to work for the good of the environment and the benefit of society.

We will actively seek to avoid discrimination on the grounds of age, disability, race, sex or sexual orientation, being trans or a member of the non-binary community, being married or in a civil partnership, being pregnant or on maternity leave or religion.

The British Geological Survey has achieved [Bronze status for Athena SWAN](#) – a scheme that recognises an organisation's dedication and progress in developing a diverse and broad workforce; we are also committed to the Disability Confident framework and, as part of UKRI, are members of Inclusive Employers.

About the role

An exciting opportunity has arisen for a highly motivated Postdoctoral Research Assistant (PDRA) to join the BGS Geochronology and Tracers Facility (GTF) which is part of the Decarbonisation and Resource Management challenge area to carry out research and development in the fields of geochronology and isotope tracing.

This is a new post and is linked to a new BGS instrument and the development of new capabilities and science opportunities related to this significant capital investment – the NERC funded collision and reaction cell (CRC-) multi-collector (MC-) inductively coupled plasma mass spectrometer (ICP-MS) with MS/MS capability.

Your main duties/activities will include the following:

- Carry out research and development related to application of CRC-MC-ICP-MS/MS (Thermo Fisher Neoma), principally in the fields of geochronology and isotope tracing.
- Develop capability, through the design and testing of analytical strategies, for in-situ (laser ablation) geochronology using the Rb-Sr system, whilst exploring the utility of these strategies for other decay schemes (e.g., Lu-Hf, Re-Os, K-Ca).
- Work with project partners to characterise 'reference materials' – including an assessment of best practice with regards to uncertainty quantification - and establish how they are best deployed within the user community.
- Work with project partners to demonstrate the new capabilities through application science.
- Communicate the outcomes of the tasks listed above, via participation in workshops and conferences within the user community, and through written dissemination e.g. open reports, journal publications etc.

You will also be expected to:

- Contribute to the operation and running of the GTF's range of ICP-MS techniques including: SC-SF-ICP-MS (Nu Attom) and MC-ICP-MS (Thermo Fisher Neptune and Nu Instruments Nu Plasma HR).
- Contribute as a team member to the successful operation of the GTF ICP-MS laboratories.
- Contribute to broader group activities including: outreach, post-graduate training, etc.
- Undertake required training and development for the role.
- Contribute to wider BGS efforts related to innovation and science strategy.

About you

You will have a good degree in geoscience, environmental science, analytical chemistry or a related discipline. You will also have a PhD in geoscience and this should be a subject related to this role.

We are looking for candidates with a keen interest and good all-round knowledge of isotope geoscience, mass spectrometry and the fundamentals of Geochronology.

It is also essential that you have proven outputs (thesis, papers and other outputs) and significant (at least 3-6 months accumulated time) experience in method development and analysis using either:

- laser ablation MC-ICPMS; or
- laser ablation ICP-MS/MS for geochronology applications.

Please also refer to the specific essential and desirable skills criteria for this post.

What we offer

A [great benefits package is also offered](#), including a very generous pension scheme, 30 days annual leave plus bank holidays, and access to flexi-time.

We also offer the 'Bike to Work' scheme, free car parking, health and wellbeing support and sports/social clubs.

All staff have access to a platform of learning and development opportunities and where appropriate to the role, technical/specialist training.

BGS provides a range of flexible working options including flexible working patterns, compressed hours and home working so if you have a need for flexibility, please raise

this in the recruitment process when your needs, balanced with the requirements of the role, will be fully considered.

Please note that any internal BGS staff applying for this post would, if successful, be appointed to new UKRI Terms and Conditions and pay (if not already on them).

How to apply

Applicants are required to include a cover letter outlining their suitability for this role. We would stress the importance of this paperwork in our selection process.

A well thought through application addressing the advertised essential and desirable criteria for the post will be considered far more favourably than a generic covering letter and CV.

If you experience any issues applying for this role, please contact Recruitment@ukri.org.

The closing date for receipt of applications is **Sunday 18 September 2022**. Interviews are expected to be held in early October 2022.

Postdoctoral Research Assistant - Geochronology: Skills Specification		
Criteria to be assessed at Shortlist 'S' and Interview 'I' Stage		
	Essential	Desirable
QUALIFICATIONS	Degree in geoscience, environmental science, analytical chemistry or a related discipline (S) PhD in geoscience (S)	
EXPERIENCE	Proven outputs (thesis, papers and other outputs) and significant (at least 3-6 months accumulated time) experience in method development and analysis using: 1) laser ablation MC-ICPMS (S)	Experience in Rb-Sr, Lu-Hf, U-Pb, Sm-Nd or other appropriate geochronology (S) Experience in method development of laser

	<p>OR</p> <p>2) laser ablation ICP-MS/MS for geochronology applications (S)</p>	<p>ablation ICPMS/MS for the reduction/elimination of interference issues (S)</p> <p>Experience in wet chemical separation and sample preparation techniques in a clean-lab environment (S)</p> <p>Experience acquiring and/or using SEM-based imagery for laser ablation targeting (S&I)</p>
KNOWLEDGE	<p>Sound knowledge of isotope geoscience, mass spectrometry and the fundamentals of Geochronology (S&I)</p>	<p>Competent in 'R' and/or Python coding (S)</p> <p>Competent with Lolite 4 data processing software (S)</p> <p>Competent with using IsoplotR (S)</p> <p>Familiar with uncertainty propagation principles and mechanisms and their application to isotope ratio mass spectrometry (S&I)</p>
SKILLS & ABILITIES	<p>Ability to present their science clearly to scientists and non-scientists (S&I)</p> <p>Excellent written and verbal communication skills and excellent presentation skills (S&I)</p> <p>Ability to work unsupervised and to prioritise work and meet tight deadlines (S&I)</p> <p>Very good attention to detail (S&I)</p>	

	<p>Ability to work within a variety of teams, demonstrating an ability to lead teams and to participate as a team member (S&I)</p> <p>Flexible approach with the ability to adapt to changing priorities (I)</p> <p>Ability to train students as well as experienced researchers (S&I)</p> <p>Ability to empathise with the needs of the business and colleagues and relate this to your support role in the organisation (S&I)</p>	
PERSONAL QUALITIES	<p>Affable, grounded and approachable (I)</p> <p>Optimistic, resilient and respectful to others (I)</p> <p>Able to travel off-site and abroad occasionally (S)</p> <p>Alignment to BGS Core Values (S&I)</p>	
MOTIVATION	<p>Demonstrates an interest in geochronology and its relevance for modern-day societal issues (S&I)</p> <p>Demonstrates an interest in the work of BGS, NERC and UKRI (S&I)</p> <p>Displays an enthusiasm for their science and a desire to develop this further (I)</p> <p>Demonstrates an interest in their own Continuing Professional Development (S&I)</p> <p>Demonstrates curiosity and a drive to resolve scientific problems (S&I)</p>	



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