



**Faculty of Environment  
School of Earth and Environment**

**Electron Optics Research Technician**

**Fixed term for 3 years**

**Job sharing arrangements can be considered**

In this new role you will work closely with the unit Experimental Officer to provide support in all operational areas. You will take specific responsibility for the operation of the school's two Scanning Electron Microscopes and their integrated analytical systems (X-ray spectroscopy, Cathodoluminescence imaging, Electron Backscatter Diffraction, Secondary and Back-Scattered Electron imaging). This will include sample preparation, delivering training and advice to staff and students, and day-to-day running of the analytical service.

You will have demonstrable technical and analytical background (e.g. substantial laboratory instrumentation based project work or work experience). You do not need experience with electron microscopy or x-ray analysis as long as you are technically-minded with an aptitude for analytical procedure, training can be provided in house.

**University Grade 5 (£21,391 - £24,775 p.a.)**

**Informal enquiries may be made to Richard Walshaw, tel +44 (0)113 343 2393, email [R.D.Walshaw@leeds.ac.uk](mailto:R.D.Walshaw@leeds.ac.uk)**

**Ref: ENVEE1061**

**Click here for further information about working at the University of Leeds  
[www.leeds.ac.uk/info/20025/university\\_jobs](http://www.leeds.ac.uk/info/20025/university_jobs)**

## **Job Description**

**Responsible to: Head of School**

**Reports to: Technical Services, Resources and Facilities Manager**

This role will work closely with the Electron Optics unit's Experimental Officer, providing support in all operational areas as necessary but with specific responsibilities as follows:

### **Main duties and responsibilities**

- Operation of the school's two Scanning Electron Microscopes and their integrated analytical systems (X-ray spectroscopy, Cathodoluminescence imaging, Electron Backscatter Diffraction, Secondary and Back-Scattered Electron imaging)
- Provision of training and advice in these areas to staff and students which will include the preparation of training documents and materials
- Provision of occasional practical demonstrations to students and course delegates
- Sample Preparation – responsibility for mounting and coating of geological specimens for SEM and Probe analysis. Provision of training and advice in these areas to staff and students
- Handle enquiries, schedule and log bookings. Basic reporting on usage and financial income for contribution to SRF (small research facility) accounts
- Develop and implement new ways of providing and running the analytical service
- Basic trouble shooting and first order maintenance of instrumentation, e.g. servicing of vacuum equipment, also liaising with service engineers where necessary
- Ensuring Health & Safety compliance in all work
- Developing and maintaining beneficial relationships with academic, technical and industrial partners
- General housekeeping, administration, monitoring and ordering of consumable stock
- Any other duties as may reasonably be required, commensurate with the grade of the post

## **Career Expectations**

The University of Leeds is committed to developing its staff. All staff participate in the Staff Review and Development scheme and we continue to work with individuals, supporting them to maximise their potential.

Progression to a higher grade is dependent on an individual taking on an increased level of responsibility. Vacancies that arise within the area or across the wider University are advertised on the HR website - <http://jobs.leeds.ac.uk> - to allow staff to apply for wider career development opportunities.

## **University Values**

All staff are expected to operate in line with the University's values and standards, which work as an integral part of our strategy and set out the principles of how we work together. More information about the University's strategy and values is available at <http://www.leeds.ac.uk/comms/strategy/>.

The School of Earth and Environment is a green impact award holder, and expects all staff to go about their duties in a resource efficient way, minimising impacts to the environment wherever possible

## **Person Specification**

### **Essential**

- GCSE (or equivalent) qualifications with grade C's or above in Maths and Science subjects
- Demonstrable technical and analytical background (e.g. substantial laboratory instrumentation based project work or work experience)
- Excellent communication and interpersonal skills
- Ability to work independently but also as a successful team member
- A flexible approach to work with excellent organisational and time management skills
- Ability to demonstrate initiative in the work place
- Good IT skills

### **Desirable**

- A-level qualifications in Science subjects
- Degree in Geology/Chemistry/Physics or an Engineering discipline
- Experience of providing an analytical service
- Good ability with computers and computer driven instrumentation
- Experience with electron or x-ray optical equipment

The successful applicant does not need experience with electron microscopy or x-ray analysis as long as they are technically-minded with an aptitude for analytical procedure. All training can be provided in house for the right candidate.

## **Additional Information**

The University offers generous terms and conditions of employment, a wide range of benefits, services, facilities and family friendly policies. Full details are available on the Human Resources web pages accessible at [www.leeds.ac.uk/hr](http://www.leeds.ac.uk/hr)

## **The Partnership**

The Partnership has been developed by students and staff and describes the mutual expectations of us all as members of the University of Leeds community. More information about the Partnership is available at <http://partnership.leeds.ac.uk>

## **Disclosure and Barring Service checks**

A Disclosure and Barring Service (DBS) Check is not required for this position. However, applicants who have unspent convictions, cautions, reprimands and warnings, including any pending criminal proceedings must indicate this in the 'other personal details' section of the application form and send details to the Recruitment Officer at [disclosure@leeds.ac.uk](mailto:disclosure@leeds.ac.uk).

## **Disabled Applicants**

The post is located in the School of Earth and Environment. Disabled applicants wishing to review access to the building are invited to contact the department direct. Additional information may be sought from the Recruitment Officer, email [disclosure@leeds.ac.uk](mailto:disclosure@leeds.ac.uk) or tel + 44 (0)113 343 1723.

Disabled applicants are not obliged to inform employers of their disability but will still be covered by the Equality Act once their disability becomes known.

**Further information for applicants with disabilities, impairments or health conditions is available in the applicant guidance.**

## **Further information**

The University of Leeds is one of the largest universities in Britain, with over thirty thousand students and more than six thousand staff, including over two thousand academic and academic-related staff. The University has departments in all major disciplines and is committed to developing a number of research areas as world class centres of excellence. This has involved identifying a number of `gold peaks' of high quality research and developing strategic investment initiatives for these areas to enable them to develop further. The University has recently invested over £23 million in a new/refurbished building for the School of Earth and Environment.

## **School of Earth and Environment**

The School of Earth and Environment is established as one of the leading centres of international excellence across the Earth and Environmental Sciences. In the UK RAE 2008, we ranked second nationally in terms of research power (the amount of internationally excellent and world-leading research outputs) for Earth and Environmental Sciences. The School comprises +90 academic staff and +80 postdoctoral researchers. In 2011/12 we attracted £11.2million in research funding and this figure is expected to exceed £13 million in 2014/15.

The School mission is “*to lead internationally in research, to deliver a high quality of learning and teaching in Earth and Environmental Sciences and hence to beneficially impact society*”. This is supported by a School Strategy that aims to achieve international recognition for frontier research of global impact and influence and by building strong dynamic academic communities across the School. Strong research – teaching linkages are central to this aim with the School being home to over 1,000 students spread across a portfolio of undergraduate, masters and PhD programmes.

## **The Sustainability Research Institute**

As a key part of the School of Earth and Environment, the Sustainability Research Institute (SRI) is home to a team of over 30 academic staff, 30 postdoctoral researcher staff and 50 research students conducting inter-disciplinary research on the different dimensions of sustainability. Research within SRI is based largely on the environmental social sciences and draws upon aspects of geography, sociology, politics, planning, economics, management, development studies and science and technology studies. Our broader activities combine social and natural sciences in leading-edge, interdisciplinary research. SRI has received significant research funding from various sources, including the £10 million ESRC Centre for Climate Change Economics and Policy, £6 million EPSRC In Demand Centre and £5 million ESRC Consumer Data Research Centre. As well as being a centre of excellence for inter-disciplinary research, SRI runs a range of postgraduate and undergraduate programmes on the different dimensions of sustainability.

<http://www.see.leeds.ac.uk/research/sri>

## **Earth Surface Science Institute**

This is an institute of earth science researchers with a broad range of expertise falling into four natural groupings: Process Sedimentology; Palaeontology; Environmental Geochemistry; and Engineering Geology and Hydrogeology. Research endeavours encompass the study of past and present environmental and climatic conditions and the processes that control them and produce change. Thus, we model river and turbidity current flow dynamics, study deep-sea vent communities, quantify groundwater systems, constrain nutrient fluxes in oceans, assess the causes of ancient mass extinctions and much more! Work ranges across all scales from the microscopic study of mineral growth and weathering to the global-scale study of iron cycling and the sulphur isotopic system of the oceans. The Institute also includes a strong group working on Engineering Geology and Hydrogeology whose interests overlap the Geochemists in the field of contaminated land and groundwater. From January 2014, the Earth Surface Science Institute will become focussed primarily on Palaeontology and Environmental Geochemistry, with other areas of applied geoscience moving to the new Institute of Applied Geosciences (see below).

<http://www.see.leeds.ac.uk/research/essi/>

## **Institute of Applied Geosciences**

The new Institute of Applied Geosciences was established at the beginning of 2014 to promote and support world-class applied research and its underpinning fundamental research, focused on energy, environmental and industrial applications leading to: high quality publications; strong impact case studies; enhanced income; attracting and training of top quality students; enhancement of research-led teaching for employment orientated UG and PG courses.

<http://www.see.leeds.ac.uk/research/iag/>

## **Institute for Climate and Atmospheric Science**

ICAS, in the School of Earth and Environment at the University of Leeds, is an established and expanding group, representing one of the largest and most active Atmosphere and Climate research teams in Europe. We have around 100 research-active members, whose programme covers Atmospheric Dynamics, Aerosols, Cloud Microphysics, Atmospheric Composition and Climate Change. In each of these areas, the Institute makes use of theoretical and numerical modelling on the full spectrum of scales, from cloud microphysics to global dynamics and chemistry. We maintain a long-term commitment to field measurement of atmospheric phenomena, including aerosols and chemistry as well as the physics and dynamics of weather systems. We also have well-established research collaborations with several UK and international agencies, including the Met Office, and we host the Directorate of the UK National Centre for Atmospheric Research (NCAS).

<http://www.see.leeds.ac.uk/research/icas>

## **Institute of Geophysics and Tectonics**

The Institute of Geophysics and Tectonics is dedicated to understanding the structure and evolution of the Earth and neighbouring planets. Detection and measurement of resources in the crustal layer and understanding of geological hazard also are principal aims. Measurement of gravity, magnetism, seismic waves and electrical properties, theoretical and computer modelling, surface structural mapping and petrological studies all contribute to these goals. Recently, in collaboration with the Faculty of Engineering, we have expanded applied research in petroleum engineering, seismology and structural geology.

<http://www.see.leeds.ac.uk/research/igt>

## **Research Laboratory Facilities**

The School of Earth and Environment has recently invested in newly commissioned geochemical and atmospheric science laboratories as part of the new build. These world class research facilities embrace all aspects of earth and environmental science including atmospheric instrument and chemistry labs, laser facilities, geomicrobiology-, geochemistry instrument-, isotope geochemistry-, hydrochemistry-, clean- and radiochemistry- labs. Further, the co-location of these facilities in the new School facilitates access to a wide range of analytical services including ICPMS, XRD, IC and isotope analysis.

<http://www.see.leeds.ac.uk/research/facilities/>

## **Learning and Teaching**

The School of Earth and Environment has a student population approaching 1000. We offer a wide range of undergraduate and MSc programmes within the broad areas of Earth Sciences, Environmental Science and Sustainability. We also offer an MRes course and have a vibrant PhD community.

Our student education strategy is to:

- 1. Recruit and train excellent students who go on to beneficially impact society**
- 2. Deliver distinctive, high quality, research based programmes, embedded in excellent practice**
- 3. Provide an exceptional student experience and a thriving academic community**

This strategy is delivered through high quality teaching supported by state-of-the-art equipment, facilities and resources. Strong links are made between research and teaching throughout the programmes, but in particular during projects and fieldwork.

<http://www.see.leeds.ac.uk/study/undergrad/>

<http://www.see.leeds.ac.uk/study/masters/>