POSITION DESCRIPTION

Position Title: Research Assistant
Organisation Unit: School of Earth and Environmental Sciences
Position Number: New
Type of Employment: Full-time, Fixed-term
Classification: Hew Level 6

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world's top universities, as measured by several key independent ranking, including the CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (42), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland's highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 52,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 15,400 international students from 135 countries, adding to its proud 250,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $1.75 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.
UQ has an outstanding track-record in commercialisation of our innovation with major
technologies employed across the globe and integral to gross product sales of $11 billion+

UQ has a rapidly growing record of attracting philanthropic support for its activities and this
will be a strategic focus going forward.

Organisational environment

The School of Earth and Environmental Sciences (SEES) is part of the UQ Faculty of
Science and currently has 104 academic staff, and 31 professional and technical staff and
over 1,120 equivalent full-time students.

The School’s extensive teaching and research activities span the fields of geology, human
and physical geography, environmental science and management, biodiversity conservation,
geospatial science and remote sensing, mineral resources, palaeontology, geophysics,
occupational health and safety sciences, and urban and regional planning. SEES teaches
into a diverse range of programs for undergraduate, honours and postgraduate coursework
students, and higher degree by research programs.

The School has a vibrant, multidisciplinary research profile and enjoys consistent success in
securing nationally competitive grants, industry funding, publishing numerous papers in high-
quality international journals as well as having an important influence in areas related to
government policy and industry practice.

School academics and technical staff are supported by world-class facilities and laboratories
that house specialist instruments, microscopes and other equipment. Facilities include an
extensive lapidary laboratory together with a suite of mass spectrometry infrastructure
enabling major and trace element analyses, radiogenic and stable isotope investigations,
noble gas geochronology, coal petrology, organic geochemistry, micropaleontology,
geomicrobiology and fluid inclusion studies. The School also maintains close links with the
UQ Centre for Microscopy and Microanalysis, which houses transmission electron
microscopes, scanning electron microscopes, sample preparation facilities and a
sophisticated optical microscopy suite.

Other School facilities include an innovative planning studio and computer laboratories for
GIS and remote sensing. Staff and students also engage in teaching and research at UQ’s
world-class island research stations on North Stradbroke Island and Heron Island.

For more information, visit the School of Earth and Environmental Sciences website:
sees.uq.edu.au.

Diversity and Inclusion

The School recognizes and values equity and diversity, and encourages applications from
any individual who meets the requirements of this position irrespective of gender, sexuality,
race, ethnicity, religion, disability, age or other protected attributes. The School strives to
provide an inclusive working environment, and along with the University is committed to
supporting staff with family and caring responsibilities by providing policies, programs and
initiatives to help balance work and family responsibilities.
DUTY STATEMENT

Primary Purpose of Position

The purpose of this role is to optimise in situ Sr-isotope analysis of magmatic plagioclase via laser ablation multi-collector ICP-MS, to investigate magma chamber processes leading to explosive volcanism. The successful applicant will join a vibrant magmatic petrology research team, supporting the Foundation Research Excellence Award (UQ-FREA) research project ‘Understanding volcanic eruption triggers: a new geochemical approach’ awarded to Dr Teresa Ubide, within the School of Earth and Environmental Sciences, and the Centre for Geoanalytical Mass Spectrometry Radiogenic Isotope Facility.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Preparation of samples and standards, engaging with collaborators that supply materials and expertise in method development
- Development of laser ablation multi-collector inductively coupled plasma mass spectrometry (LA-MC-ICP-MS) Sr isotope mapping of magmatic plagioclase. Optimisation of lab protocols and data reduction, and application of the method to volcanic plagioclase to investigate magma transport, storage and differentiation in the Earth’s crust
- Characterisation of magmatic plagioclase crystals via optical microscopy, electron microprobe and laser ablation quadrupole ICP-MS
- Interpretation of geochemical data to investigate magmatic histories and the triggers of volcanism
- Preparation of scientific manuscripts to be submitted to peer-reviewed international journals
- Training of and collaboration with other team members on laser ablation mass spectrometry, data reduction and manuscript preparation
- Presentation and discussion of research findings at conferences
- General engagement and support of research activities in the team
- Any other duties as reasonably directed by the supervisor

Other

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the University’s Code of Conduct
- requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School
• the adoption of sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures
• requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University

Organisational Relationships

The position reports to Dr Teresa Ubide, School of Earth and Environmental Sciences.

SELECTION CRITERIA

• Qualifications and training equivalent to an Honours degree in Science
• Sound knowledge and understanding of igneous petrology/geochemistry
• Ability to prepare and analyse geological samples, and process geochemical data
• Ability to interpret magmatic processes
• Demonstrated experience in in situ geochemical analysis and data reduction
• Excellent oral and written communication skills, including demonstrated experience in preparation of scientific papers
• Ability to work collaboratively with colleagues as part of a research team
• Ability to prioritise own workload, work independently and meet deadlines
• Commitment to upholding the University’s values, and with the outstanding personal qualities of openness, respectfulness and integrity
• Experience in laser ablation mass spectrometry would be desirable
• Experience in the use of computer applications in geochemistry, and particularly laser ablation mass spectrometry data reduction (e.g., Iolite) would be desirable

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University’s Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

This role is a full-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed recruitment@uq.edu.au