POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: School of Earth and Environmental Sciences
Position Number: New
Type of Employment: Part time (0.8 FTE), Fixed Term for 3 years
Classification: Research Level A

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 Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (65). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

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 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 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 $11billion+ (see http://uniquest.com.au/our-track-record).

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 is a vibrant, multidisciplinary School with extensive teaching and research programs covering the fields of Geology, Geography, Environmental Management, Occupational Health and Safety Sciences and Planning. The School offers a wide range of undergraduate programs including Bachelor’s degrees in Arts (Geography) and Science (Geological and Geographical Science), a Bachelor of Environmental Management and Environmental Science, Occupational Health and Safety Science and a Bachelor of Regional and Town Planning. Honours in Geology, Geography, Geophysics, and Computational Earth Sciences. Coursework masters degrees are offered in Mineral Resources, Environmental Management, Geographic Information Science, Occupational Health and Safety Science and Urban and Regional Planning and the School also contributes to the multi-school Master of Development Practice. The School offers postgraduate training in research via the Master of Philosophy and Doctor of Philosophy and currently has over 150 students enrolled in these degrees. The School has a strong research profile and enjoys an excellent success rate in nationally competitive grants and has a strong record of high quality publications.

**Staff and Resources**

The School of Earth and Environmental Sciences is part of the Faculty of Science and is located on the St Lucia campus (Brisbane) of the University. The School has 104 academic staff, and 23 administrative and technical staff. There is a large contingent of research appointments and the School has been active in establishing a range of adjunct positions in order to promote engagement with leaders in government and the professions.

The School hosts world-class facilities which include a state-of-art planning studio, GIS computer laboratories and extensive analytical infrastructure. Our facilities include high-end sample preparation facilities and a laboratory complex that includes radiogenic and stable isotope geochemistry and geochronology, major and trace element geochemistry, noble gas geochemistry and geochronology, coal petrology and organic geochemistry, geomicrobiology and fluid inclusion facilities. Its Centre for Geoscience Computing conducts research on the mechanics and physics of solid earth processes, on all scales, using supercomputer simulation. Advanced computational technologies and simulation software development are applied to a wide range of industrial and environmental fields and provide a driver for innovation in the general area of simulation-assisted design, specifically in the sustainable energy, earth resources, mass mining and geotechnical sectors. Further information and details of the research interests of academic staff may be accessed on the School's web site at [http://www.sees.uq.edu.au/](http://www.sees.uq.edu.au/).

This position will be held with the School's Radiogenic Isotope Facility (RIF). The RIF Lab is a world-class laboratory currently serving UQ researchers and students, as well as external clients and collaborators from various national and international institutions. The ultra-clean lab with a centrally-controlled air-handling system and a number of Class-100 HEPA-filtered hoods/benches is one of a few facilities in Australia with its level of analytical sophistication, range and quality of mass spectrometers, and proven ultra-low analytical blanks. The facility
houses six ARC-LIEF and UQ-Griffith University MRFF-funded strategic instruments, including one Nu Plasma HR multi-collector inductively coupled plasma mass spectrometer (MC-ICP-MS), one Nu Plasma II MC-ICP-MS, one Thermo X-series quadrupole ICP-MS, one Thermo iCap-RQ Q-ICP-MS and two ASI RESOlation laser systems.

More information about RIF is available at https://sees.uq.edu.au/research/facilities/radiogenic-isotope-facility

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-ug

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

The primary role of the selected candidate will be to engage as a Postdoctoral Research Fellow within the Radiogenic Isotope Facility (RIF) at the School of Earth and Environmental Sciences to support Professor Jian-xin Zhao and Dr George Roff’s newly funded ARC discovery project titled: ‘U/Th dating of coral mortality and recovery rates in the Great Barrier Reef’.

Duties

Research

- Collect samples from the field sites, coral sample separation from sediment cores and rubble in the sample preparation labs, X-ray and CT imagery, and further preparation and vetting for high-precision U-Th dating in the RIF lab.
- Ion exchange column chemistry for separation and purification of U and Th from coral samples in a class-100 ultra-clean radiogenic isotope laboratory.
- U-Th isotope measurements and high-precision dating of dead coral rubble samples (typically in the age range of a few years to several hundred years) on a multi-collector inductively coupled plasma mass spectrometer.
- Work effectively with the chief investigators to interpret the isotope data and compile other related data if required for publication in high-impact international journals.
- Work effectively with other staff and students in the lab.
- Provide co-supervision of students in the field and laboratory work.

Service and Engagement

- Foster the School’s relations with industry, government departments, professional bodies and the wider community.
- Any other duties as reasonably directed by your 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 Professor Jian-xin Zhao

SELECTION CRITERIA

Essential

- Completion of a PhD degree in the area of geochemistry.
- Experience and competence in an ultra-clean radiogenic isotope laboratory.
- Strong research skills, including collation and review of literatures.
- Strong capabilities in collection, collation and analysis of data.
- Excellent written and verbal communication skills.
- Demonstrated ability to manage competing priorities and excellent organisational skills.
- Ability to work both independently and collaboratively with colleagues.
- Experience with OH&S policies and practice.

Desirable

- Experience in MC-ICPMS U-series dating methods and applications.
- Experience in coral reef studies, especially in coral reef response to disturbances.
- Proven research capacity as demonstrated by publication track record.

Qualification Verification

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

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 part-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.