POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow/ Research Fellow
Organisation Unit: School of Earth and Environmental Sciences
Position Number: 3011908
Type of Employment: Full time, Fixed term
Classification: Research Academic Level A/B

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 (SEES) is part of the Faculty of Science and is located on the St Lucia campus (Brisbane) of the University. It 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.

SEES 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 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.

SEES hosts **world-class facilities** which include sample preparation facilities and a complex analytical infrastructure consisting of trace element, radiogenic and stable isotope geochemistry, radiogenic and noble gas geochronology, coal petrology and organic geochemistry, geomicrobiology and fluid inclusion facilities.

A recently built geomicrobiology laboratory provides culturing facilities for aerobic and anaerobic microorganisms, including a coy anaerobic chamber, a photosynthetic growth chamber, fluorescence microscopy, and sample preparation for SEM and TEM analyses of bacteria-mineral interactions. In addition, the School maintains close links with the Centre for Microscopy and Microanalysis, a Major National Research Facility that provides access to electron microscopes (SEMs and TEMs), electron microprobes, X-ray diffractometers, nano-SIMS, surface analysis capabilities, and a host of other modern analytical instrumentation.

SEES also has a state-of-art planning studio as well as GIS and **Remote Sensing** computer laboratories. SEES Faculty and students are also actively engaged in using UQ’s world-class marine research facilities at **Heron Island** and **Stradbroke Island**.

Further information and details on the research interests of academic staff in the **School of Earth and Environmental Sciences** can be found on the web.

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-uq](http://www.uq.edu.au/current-staff/working-at-uq)
DUTY STATEMENT

Primary Purpose of Position

To engage in full time research, as a Postdoctoral Research Fellow / Research Fellow, on the iMOVE CRC project “An Integrated Demographic and Transport Demand Modelling Framework (ID-TDM)” — (https://imovecrc.com/project/integrated-land-use-transport-modelling/) and developing and implementing an integrated demographic transport demand model to test different land use scenarios in response to key infrastructure projects in a South East Queensland Context.

There are two positions available; one will require qualifications in demography, economics or related disciplines; the other will require qualifications in transport modelling/planning.

The project will start at the end of June 2019 and will run for a period of 3 years. The initial contract will be for 1 year, with the possibility to be renewed for further 2 years based on project outcomes from the first year.

Applicants should also refer to the UQ Academic Criteria for Performance policy. This policy applies to staff at levels A to E, across all of the academic categories - Teaching and Research, Teaching Focused, Research Focused and Clinical Academic.

Duties

Duties and responsibilities include, but are not limited to:

Research

Level A and B

- Reviewing and drawing upon best practice methodologies in demographic projection methods, land use planning, transport demand modelling and econometrics to develop a modelling framework
- Prepare and assemble data input
- Implement the model to test a range of scenarios
- Review the literature to identify best practice methodologies
- Prepare and assemble demographic, transport and land use data
- Develop an integrated demographic transport model within the iMove project team
- Prepare and publish peer-reviewed scientific publications
- Manipulate and analyse data in R or similar suitable software packages
- Liaise with industry partners
- Liaise with team members across Faculties and also within Department of Transport and Main Roads

Level B

- Assist in the supervision of Honours and Higher Degree by Research students engaged on the project
- Take a lead role in applications for external research funds
Service and Engagement

- Attend relevant school based meeting and seminars
- Any other duties as reasonably directed by your supervisor

Level B

- Foster the School’s relations with industry, government departments, professional bodies and the wider community

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 Jonathan Corcoran.

SELECTION CRITERIA

- Position 1: PhD or near completion in the area of demography, economics or related disciplines / Position 2: PhD or near completion in transport modelling or related disciplines
- Demonstrated knowledge of the methods used in the collection and analysis of demographic / transport data
- Experience in demographic / transport modelling (land use or large-scale problems)
- Ability to publish peer-reviewed papers in high-quality recognised journals.
- Ability to conduct advanced statistical analysis and modelling in R or similar software package
- Ability to work independently and collaboratively in a multi-disciplinary team
- Ability to liaise with partners outside academic

Additional selection criteria for Level B

- Evidence of outstanding contributions to research, including peer-reviewed publications in leading journals
  An ability to establish effective relationships and to represent and promote academic discipline at a wider community level, including industry, government and professional bodies.
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 full-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to (science.recruitment@uq.edu.au).