POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: School of Mathematics and Physics
Position Number: 3037415
Type of Employment: Full-time, fixed-term for until July 2020
Classification: Academic 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 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 $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 discipline of Mathematics is located in the School of Mathematics and Physics in the Faculty of Science. It is the leading provider of applied mathematical and statistical education in Queensland, with extensive undergraduate and postgraduate degrees (MPhil and PhD) and coursework. The Discipline is internationally recognised for its research excellence and hosts a number of first-class research centres. Details of the research interests of academic staff may be accessed on the School’s web site at http://www.smp.uq.edu.au/

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

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

DUTY STATEMENT

Primary Purpose of Position

To carry out research in advanced Monte Carlo methods for spatial processes.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Contribute ideas, conduct research and publish scholarly papers on advanced Monte Carlo methods in high-quality academic journals.
- Work with colleagues and postgraduates in the development of joint research projects, including applying for internal and/or external funding when opportunities arise.
- Communicate research outcomes, in the form of oral and written presentations, at meetings, in reports, conferences and in peer-reviewed publications.
- Participate in the supervision of postgraduate students.

Service and Engagement

- Perform a range of administrative functions in the School
• Contribute to the processes that enable the academic team to manage the work of
the School, including participate in School decision-making and serve on School
committees
• 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 Dirk Kroese.
SELECTION CRITERIA

- PhD in the area of Mathematics/statistics with a specialization in Advanced Monte Carlo Methods.
- Demonstrated expert knowledge in the area of advanced Monte Carlo methods and spatial point processes.
- Advanced understanding of measure theory.
- Demonstrated expert knowledge in rare-event simulation (including splitting and importance sampling).
- Evidence of a contribution to high-quality research, including publication of research in high-ranking peer-reviewed international (English-language) journals.
- Effective oral and written communication skills, including the ability to research and write reports.
- Ability to work collaboratively with colleagues.
- High proficiency in scientific computing is highly desired.

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.

Accessibility requirements and/or adjustments can be directed to Carley Meehan at recruitment@uq.edu.au.