

# Postdoctoral Fellow in Mathematical Biology

## Science and Engineering Faculty



a university for the **real** world<sup>®</sup>

CRICOS No. 00213J



## About QUT

QUT is a major Australian university with a global outlook and a 'real world' focus. We are one of the nation's fastest growing research universities and our courses are in high demand. Our graduates include eight Rhodes Scholars, five of these awarded in the past six years.

We are an ambitious and collaborative institution that seeks to equip our students and graduates with the skills they will need in an increasingly disrupted and challenged world. We are transforming the student experience we offer our 50,000 students and we place a premium on the international and national accreditation of our various professional degrees.

Our internationally award-winning Science and Engineering Centre is home to The Cube, acknowledged as one of the world's largest digital interactive learning and display spaces. QUT established the world's first Creative Industries Faculty, and we invest heavily in collaborative learning and interdisciplinary research environments.

Further information about QUT can be obtained from the website at [www.qut.edu.au](http://www.qut.edu.au).

### Our Vision

The [QUT Blueprint 5](#) is our institutional strategic plan. It sets out priorities, strategies and key performance indicators to drive greater coherence and coordination of our efforts. Our overall vision for the future is:

- to provide outstanding real world education through physical and virtual learning environments and innovative courses that lead to excellent outcomes for graduates living in a diverse and complex environment characterised by rapid, transformative change;
- to focus on being a globally leading university that delivers solutions to the challenges of today and of the future through high-impact research that spans discipline boundaries and works in partnership with end users, leveraging our deep technological strengths and alignment to the human capital and innovation needs of the global economy;
- to strengthen and extend partnerships with professional and broader communities to build our reputation as a source of knowledge that is applied to real world challenges.

## About the Science and Engineering Faculty

QUT's Science and Engineering Faculty is helping to drive the innovations shaping the way we live for a safer, more sustainable and secure world tomorrow. We pride ourselves on being world leaders in our research and learning outcomes.

The Faculty is home to outstanding researchers of international renown, including five ARC Australian Laureate Fellows. Two ARC Centre's of Excellence; the Australian Centre for Robotic Vision (ACRV) and Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS) are hosted by the Faculty. In the most recent 2015 Excellence in Research for Australia rankings, 100 percent of the Faculty's research was rated as world standard or above.

There is a dedicated commitment to addressing the problems of our time through active participation in 10 Cooperative Research Centres (CRCs), including 2 announced in 2017; iMove CRC and Food Agility CRC. Faculty members are also regularly supported in their fundamental and applied research through the Australian Research Council and industry bodies such as Rural Development Corporations. The Faculty actively encourages and supports transdisciplinary research through its support of the Institute for Health and Biomedical Innovation (IHBI) and Institute for Future Environments (IFE), which is housed in the \$230-million Science and Engineering Centre at our Gardens Point campus.

Also housed in the Science and Engineering Centre is the world-class Central Analytical Research Facility (CARF), supporting a global research community through state of the art instrumentation for scientific analysis.

Strong industry connections enable us to address genuine challenges through research, as well as offer more than 11,000 students relevant and practical experience. Through long standing collaborations with partners such as BMW, Boeing, Stryker, Shell and the Commonwealth Bank of Australia, we remain at the forefront of teaching by facilitating real world learning that is delivered on campus, online and in the real world. QUT is accredited by the UK Higher Education Academy, and to date more than 300 staff have achieved fellowships. QUT is also a participant in the

inaugural Science in Australian Gender Equity (SAGE) pilot, a national program promoting gender equity and gender diversity in STEMM.

Across four Portfolios, Six Schools and 21 Disciplines, the Science and Engineering Faculty is the partner of choice for excellence in research, education, and equity.

<https://www.qut.edu.au/science-engineering>

The Faculty's partners with QUT's two transdisciplinary research institutes. Faculty researchers use the world-class research facilities provided by the Institutes and engage in large scale programmatic activities, allowing coordinated research to be undertaken at scale to address global challenges. The Institutes undertake high-impact research that spans discipline boundaries and works in partnership with end users.

The Institute for Future Environments (IFE) is focussed on the future nexus of natural, built and virtual environments and generates knowledge, technology and practices that make our world more sustainable, secure and resilient. SEF is the majority Faculty partner in IFE.

<http://www.qut.edu.au/institute-for-future-environments>

The Institute of Health and Biomedical Innovation (IHBI) is focused on developing partnerships between health and biomedical scientists to bring new treatments to patients and to provide better health for our community. After the Faculty of Health, SEF is the most significant partner in IHBI.

<https://www.qut.edu.au/institute-of-health-and-biomedical-innovation>

## About the School of Mathematical Sciences

The School of Mathematical Science (SMS) is a vibrant, multidisciplinary school with extensive teaching and research programs covering the fields of statistical science, applied and computational mathematics, and operations research. In the recent 2014 QS University World Rankings, SMS was ranked 7th nationally in the subject area of Mathematics and 9th nationally in Statistics and Operations Research. The School offers programs of study at Bachelors, Honours, Postgraduate and Masters (research) and PhD

levels. There are currently 30 full-time academic staff members employed in the School.

The focus of research in SMS concerns multidisciplinary applied mathematics and statistics with an outstanding ARC grant success and industry involvement record. SMS hosts a node of the prestigious Australian Research Council Centre of Excellence for Mathematical and Statistical Frontiers: Big Data, Big Models, New Insights (ACEMS). The Centre includes over 50 researchers and research students at QUT and almost 100 participants across Australia. The research undertaken in SMS is well aligned with the research goals of the Institute of Future Environments (IFE) and strengthens QUT's real world positioning through better partnerships across internal and external boundaries.

## About the Position

This position reports to Professor Matthew Simpson, and is associated with research funding from the Australian Research Council. See [www.mj-simpson.com](http://www.mj-simpson.com) for more details about Professor Simpson's research group.

### Key responsibilities include:

- Undertake original research in mathematical biology of the highest standard, this will focus on developing, implementing and analysing stochastic models of collective cell behaviour
- Interpret the cell biology literature to guide the development of appropriate mathematical models
- Disseminate results through high quality journal publications in the mathematical biology literature
- Assist in the supervision of other research students in Professor Simpson's research group at QUT
- Undertake collaborative research projects with international research partners Professor Ruth Baker (Oxford, UK) and Professor Michael Plank (Canterbury, New Zealand)
- Implementing and administering University policy within the Faculty with respect to equitable access to education and workplace health and safety.

To be appointed as a Postdoctoral Fellow the successful applicant must meet the position classification standards outlined in the [QUT Enterprise Agreement \(Academic Staff\)](#).

### Real World Capabilities

To deliver on QUT's global, collaborative and connected vision requires a workforce that embodies the following capabilities:

- Agility and openness to change
- Connectivity and collaboration (intra and inter-disciplinary)
- Cultural inclusion
- Digital literacy
- Future-focused thinking (strategic, innovative & design and entrepreneurial)
- Global in intent and reach
- Leadership of strategy, action and others performance and resource management

### Type of appointment

This appointment will be offered on a fixed-term, full-time basis for up to two years.

### Location

Gardens Point campus, Brisbane.

## Selection Criteria

1. Completion of a doctoral qualification in applied mathematics or similar discipline.
2. Demonstrated experience in stochastic modelling techniques.
3. Independence and the ability to undertake research of the highest academic standard.
4. Outstanding record of papers published in major international journals relative to career stage.
5. Ability to communicate about applied mathematics and mathematical modelling effectively in English, both written and verbal.

### Salary and Benefits

The classification for this position is Academic Level A (LEVA) which has an annual salary range of \$65,330 to \$88,647pa, plus 17% superannuation and 17.5% recreation leave loading.

### Information for applicants

The position is open to Australian and International applicants. Aboriginal Australians and Torres Strait Islander people are encouraged to apply.

For further information about the position, please contact Professor Matthew Simpson at [matthew.simpson@qut.edu.au](mailto:matthew.simpson@qut.edu.au) ; or for further information about working at QUT contact Phoebe Broadley, HR Advisor on 07 3138 4134.

### How to Apply

When applying for this position your application must include the following:

- Cover letter
- Current resume
- A statement (maximum 1 page) outlining your scholarly research achievements, focusing on how your outputs, citations, grant funding and partnerships to date facilitate these objectives.

Please send these documents to [matthew.simpson@qut.edu.au](mailto:matthew.simpson@qut.edu.au)

**Applications close** 16 February 2018