POSITION DESCRIPTION

Position Title: Senior Microscopy Services Officer
Organisation Unit: Queensland Brain Institute
Position Number: 3039144
Type of Employment: Full Time, Fixed Term appointment up to 3 years
Classification: Hew Level 7

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 (45), the US News Best Global Universities Rankings (52), QS World University Rankings (51), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index; and secured a greater share of Australian Research Council grants in 2016 ($24.5 million) than any other university nationally.

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 230,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.7 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+ (see http://un quest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and will have further success in this area as an important strategic aim going forward.

Organisational Environment

The Queensland Brain Institute (QBI) works to understand the development, organisation and function of the brain. We aim to understand the neural circuits in the brain, how their function results in behavioural outcomes, and how dysfunction of these circuits leads to disorders such as dementia, Parkinson’s disease and schizophrenia. We aim to (1) Develop novel therapeutic approaches to treat disorders of neural function and (2) Use our understanding of brain function to improve learning in classrooms and in the workplace.

Established in 2003, QBI is housed on the St Lucia campus of UQ. It is home to more than 450 staff and students, including 41 group leaders.

Over the past decade QBI has become known as one of the world’s leading neuroscience research institutes. It played a key role in contributing to UQ attaining the highest possible score of 5 for neuroscience, in both the 2010, 2012, and 2015 Excellence in Research for Australia (ERA) reviews, one of only two universities in Australia to achieve this.

Information about the Institute may be accessed on the Institute’s web site at www.qbi.uq.edu.au

QBI Microscopy Facility

The QBI Microscopy Facility consists of over 20 advanced instruments including automated imaging systems for bright-field and wide-field fluorescence, slide scanners, confocal microscopy, two-photon microscopy, spinning disk confocal microscopy, TIRF, FLIM, FRET and super-resolution imaging, including SIM and PALM/STORM systems. We have dedicated high-end workstations for image analysis including Imaris, Zen, NIS and Neurolucida, along with a dedicated remote server for Huygens deconvolution. Data storage is managed by a custom engineered elastic-compute cloud-based instance of OMERO (Open Microscopy Environment) with petabytes of next generation storage and gigabytes of IO per second, which is being actively improved to assist our users with remote visualization and custom analysis tools.

For more information see the QBI Microscopy website: http://web.qbi.uq.edu.au/microscopy/

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

DUTY STATEMENT

Primary Purpose of Position
This position is primarily responsible for assisting with the general maintenance of the instruments within the QBI Microscopy Facility and will include working with research scientists for training on imaging and analysis techniques. We are seeking someone who has experience in biomedical imaging and image analysis and has demonstrable competence in a variety of microscopy techniques.

Duties

Duties and responsibilities include, but are not limited to:

- Provide researchers with training in advanced microscopy techniques including confocal and two-photon microscopy, light-sheet microscopy / SPIM, structured illumination microscopy (SIM) and single molecule imaging techniques (PALM/STORM), and general microscopy techniques such as bright-field and wide-field fluorescence.

- Provide researchers with training and advice in advanced imaging analysis techniques including CellProfiler, ImageJ/FIJI analysis, Imaris 3D analysis, neuron tracing and image deconvolution.

- Assist with managing the daily operation of general and advanced microscopy equipment, including routine maintenance.

- Undertake administrative tasks including (but not limited to) preparation of reports and plans, and give information and advice for the production of operational, budgeting and planning reports as required.

- Contribute to the activities of other groups such as research projects within QBI as directed, under the supervision of the facility manager.

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 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 the Microscopy Services Manager.
SELECTION CRITERIA

**Essential**

- Postgraduate qualifications in a relevant field in science; or an equivalent combination of relevant experience and/or education/training.
- Experience in live cell imaging, confocal and two-photon microscopy, light-sheet microscopy / SPIM, and advanced applications such as FRAP, FRET and FLIM.
- Experience in super-resolution imaging techniques such as SIM, STORM and PALM.
- Experience in image analysis applications such as CellProfiler, Imaris, Neurolucida, Amira and ImageJ/FIJI.
- Demonstrated ability and willingness to solve problems and find solutions to technical problems.
- Must be professional in approach to work and enjoy working in a team environment.
- Must be self-motivated and able to work to objectives with limited guidance — either alone or as a member of a small team.
- Willing to undergo further training as required.

**Desirable**

- Experience in hardware integration with LabVIEW/MATLAB.
- Demonstrated interest in neuroscience research.

The University of Queensland values diversity and inclusion.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au

Applications are also encouraged from women.

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