POSITION DESCRIPTION

Position Title: Senior Lecturer/Associate Professor in Neuroengineering
Organisation Units: School of Information Technology & Electrical Engineering; Queensland Brain Institute
Position Number: NEW
Type of Employment: Full-time, Continuing
Classification: Academic Level C or D

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 (60). 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.
School of Information Technology & Electrical Engineering

It is an exciting time to get involved with the School of Information Technology and Electrical Engineering, located on UQ’s St. Lucia campus. The School is ramping up its investment in teaching, research and engagement to create an inspiring, diverse and flexible workplace. The direction is backed by a bold, new strategic vision to ensure the School is at the forefront of meaningful research outcomes and pedagogy across its core impact areas of health, data, automation and energy. Boasting strong student enrolments in professionally accredited programs, combined with world-class researchers and facilities, the School is focused on strengthening its position in the global computer science and engineering communities. By attracting the brightest minds and fostering a truly innovative and collaborative work environment, the School will develop global solutions to contemporary issues and mentor the leaders of tomorrow.

Our people are our greatest asset. We offer collaborative, inclusive work and study places, which are enriched by the significant diversity of our staff, students and community. We genuinely believe that creativity and innovation flourishes in an environment where people feel supported, valued and empowered. Mutual respect, inclusivity and accountability are at the cornerstone of UQ’s culture.

The School is committed to supporting the career growth of women researchers and have a number of initiatives to support women in developing and achieving a fulfilling research career at the School.

Details of the School may be accessed on its website at http://www.itee.uq.edu.au/.

Queensland Brain Institute

The Queensland Brain Institute works to understand the development, organisation and function of the brain. We aim to understand the neural circuits in the brain, how information is processed in these circuits, how their function results in behavioural outcomes, and how dysfunction of these circuits leads to disorders such as dementia. We aim to (1) Understand how neural circuits process and evaluate information from the sensory world and (2) Use our understanding of brain function to improve learning in classrooms and in the workplace. (3) Develop novel therapeutic approaches to treat disorders of neural function.

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 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 the 2010, 2012, and 2015 Excellence in Research for Australia (ERA) reviews, one of only two universities in Australia to achieve this.

Details of the Institute may be accessed on its website at http://www.qbi.uq.edu.au.

Information for Prospective Staff

The School recognises and values equity and diversity, and encourages applications from any individual who meets the requirements of this position irrespective of gender, sexuality, race, ethnicity, religion, disability, age or other protected attributes. The School strives to provide an inclusive working environment, and along with the University is committed to supporting staff with family and caring responsibilities by providing policies, programs and initiatives to help balance work and family responsibilities.

Further 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 develop an impactful joint research program between the School of ITEE and QBI, bridging the domains of neuroscience and electrical engineering and driving interaction between the two organizational units; develop research activities in neuroengineering; play a pivotal role in developing a high-quality programme in neuroengineering and contribute to teaching in the broader area of Electrical Engineering and Neuroengineering, including course coordination and student supervision.

The position is part of a new initiative between the School of ITEE and QBI. Initially, this will involve playing a leading role in the development of joint research across the neuroscience, and engineering and computer science divide. In addition to this, the appointment will help develop a high-quality Masters-level programme in neuroengineering, including the establishment of a new coursework teaching laboratory in order to teach the new specialization and to carry out neurophysiological and other physiological measurements in a safe and controlled environment. For the initial five years, the position will have half the standard ITEE teaching duties allowing a greater focus on research and support for PhD student scholarships and travel for research collaboration. During that five year period, the role will include 0.5FTE placement as a Group Leader within QBI.

We seek to appoint an enthusiastic team player who can operate at the leading edge of research, with an interest in developing new neuroengineering technologies and facilitating joint work between the School of ITEE and the QBI.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Develop an independent and/or team research program including external funding, and achieve international recognition in the research area
- Conduct research and publish scholarly papers in high quality outputs such as refereed international journals, books and conference proceedings
- Develop an ongoing program of applied and contract research in the field and contribute as a chief investigator to collaborations which yield new insights and opportunities
- Prepare research publications and progress reports and participate in regular meetings to discuss project objectives, methodology and outcomes
- Actively seek research funding from internal and external sources including the Commonwealth research granting agencies, the state government and industry
- Develop and maintain a relevant industry network
- Foster collaborative research between ITEE and QBI.

Teaching and Learning

- Teach into undergraduate and postgraduate courses in neural engineering and other related areas, and assist in the initiation and development of course material
- Lead development and delivery of the Masters programme in neuroengineering
- Make original contributions to teaching which expand knowledge or practice in the relevant discipline
- Actively teach and supervise at honours and postgraduate level
- Provide effective academic advice to students
- Provide support for other academic staff during absences.

Service and Engagement

- Perform a range of administrative functions and leadership within ITEE and QBI and mentor less experienced staff
• Contribute to the processes that enable the academic team to manage the work of ITEE and QBI, including participation in School and Institute decision-making and serving on appropriate committees
• Foster ITEE and QBI relations with industry, government departments, professional bodies and the wider community
• Perform a range of higher-level internal duties and provide strong contribution to activities relevant to the faculty, ITEE, QBI, and the external community, including industry
• Any other duties as reasonably directed by your supervisor(s).

For Appointment at level D

The duties as listed above, as well as the following:
• Develop an ongoing program of discovery, applied and contract research in the field
• Obtain and successfully manage external competitive research grants, and consistently lead successful applications for external competitive research funding
• Lead a research team and foster the research activities of others
• Develop and maintain significant networks across the University, communities and industries and foster an environment where networks and relationships are built and maintained.

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

This position will report to Professor Ian Hayes in ITEE and Professor Pankaj Sah in QBI or a designated Supervisor.
**SELECTION CRITERIA**

- PhD in Electrical Engineering, or related field
- Experience which includes some of, but is not limited to, the following areas:
  - developing *in vivo* bionics systems;
  - design and development of sensors for neuroscience (either contact or optical) for
  - *in vivo* neural stimulation and signal measurement;
  - systems neuroscience using electrophysiological recording and manipulation
  - development of systems that augment or mimic nervous system functionality
  - brain-machine or brain-computer interfaces
- International recognition in the area of expertise and a strong record of
  publications in reputed refereed journals and conferences
- Evidence of a significant contribution to research, including successful external grant
  applications and ability to lead a research team
- An ability to establish effective relationships and to represent and promote the research
  area at a university and wider community level, including industry, government and
  professional bodies
- Demonstrated capacity for undergraduate and postgraduate teaching in a relevant
  discipline and an active and effective record of principal supervision of research
  higher degree students
- Developed industry liaisons and professional contacts and experience in liaising and
  collaborating with external agencies and industry to develop collaborative research
  initiatives
- Ability to successfully lead a research team to deliver tangible outputs to industry

**For Appointment at level D**
The criteria as listed above, as well as the following:
- Demonstrated evidence of course-coordination and effective undergraduate and
  postgraduate teaching and an active and effective record of principal supervision of
  research higher degree students to completion
- National and international recognition in the area of expertise and a strong record of
  publications in reputed refereed journals and conferences
- Strong national and international industry liaisons and professional contacts
- Evidence of outstanding contribution to research and high-level success in gaining
  significant external grant funds
- Ability to successfully lead a research team, deliver tangible outputs to industry, and
  mentor less experienced staff

**Seminar**
Applicants invited for interview may be expected to present a seminar in conjunction with the
selection interview process.

**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 the contact person
listed in the job advertisement.