POSITION DESCRIPTION

Position Title: Research Officer/Postdoctoral Research Fellow
Organisation Unit: School of Information Technology & Electrical Engineering
Position Number: TBA
Type of Employment: Full-time - Fixed term for three years
Classification: Research Academic 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 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.

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.

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

The primary purpose of this position is to engage in the renewable energy laboratory operation to closely work with ITEE/UQ Solar academics, research staff and HDR students to build a strong link with the Gatton Solar Plant education infrastructure. This person will also work with the UQ P&F Engineering and technical staff working for the Gatton Solar plant. This person will assist in further development of the School’s Power & Energy Systems Solar research program, in particular with the UQ’s large scale solar investment facilities.
Duties

Duties and responsibilities include, but are not limited to:

Teaching and Learning
- Familiarize with the usage and functionality of all the equipment in the lab.
- Train (and also assist) post-graduate students regarding equipment usage for their research.
- Assist in the laboratory based experiments for undergraduate and postgraduate courses
- Help with thesis projects in honours and postgraduate level
- Provide support for the operation and management of the renewable laboratory initiatives for Continuing Professional Development courses for industry professionals.

Research
- Maintain the renewable energy laboratory facility and facilitate innovative experimental trials with the Gatton Solar facility
- Assist in developing new experimental tools to conduct research
- Assist in developing new control tools and hardware on loop experiments for battery management systems with large scale solar plants
- Develop Open Platform Communications tools using the solar plant SCADA/PLC systems
- Work with colleagues and postgraduates in the development of joint research projects.
- Participate in regular meetings to discuss specific project objectives, methodology and outcomes.

Service and Engagement
- Perform a range of administrative functions within the research facilities of the group
- Contribute to the processes that enable the UQ Solar team to manage the work of the laboratory and solar plants
- 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 the Prof Tapan K Saha.

SELECTION CRITERIA

Essential
- PhD (or have submitted PhD thesis prior to taking up the position) in Electrical Engineering; or a Bachelor/Master's degree with at least five years' relevant work experience in the area of renewable energy
- Demonstrated expert knowledge in Real Time Digital Simulation
- Demonstrated programming skill in Python/Matlab
- Experience with PLC programming
- Demonstrated expertise in hardware-in-the-loop and software-in-the-loop simulations.
- Evidence of a contribution to research projects in software/hardware platforms, including new innovative applications.
- Ability to work collaboratively with colleagues.

Desirable
- Industry experience and professional management skill.
- Demonstrated experience with battery simulators, lithium ion batteries and power amplifiers.
- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives.

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.