POSITION DESCRIPTION

Position Title: Research Fellow in Cyber Security (Critical Infrastructure)
Organisation Unit: School of Information Technology and Electrical Engineering
Position Number: NEW
Type of Employment: Fixed Term
Classification: Research Academic Level B

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+

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/

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

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 perform research as a research fellow, engage in postgraduate and honours theses supervision, and support contract work and grant application development, industry research collaborations and other activities associated with the School and its Cyber Security Research Group. The research fellow will gain access to state-of-the-art industrial control systems equipment through the UQ Energy Testlab, and specific domain expertise through collaboration with healthcare and energy research groups at ITEE.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Conduct research and publish scholarly papers in high quality refereed international journals, books and conference proceedings.
- Investigation towards evaluation of existing solutions in the area of industrial control systems and healthcare systems security.
- Collection of datasets for critical infrastructure research
- Develop a program of applied and contract research in the area of critical infrastructure cyber security within the energy, industrial control systems, and healthcare sectors.
- Work with colleagues and postgraduates in the development of joint research projects.
- Prepare research publications, vulnerability responsible disclosures, and progress reports
- 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.

Teaching and Learning

- Assist in the guest lecturing or lab work of cyber security undergraduate and graduate subjects in the Master of Cyber Security program and other programs as required
- Assist in the development of course material
- Teach and supervise at honours and postgraduate level
- Guide students in bug bounty and vulnerability assessment activities
- Provide leadership in developing programs in critical infrastructure security
- Where appropriate teach subjects in flexible delivery mode
- Consult with students
- Provide support for other positions during absences.
Service and Engagement

- Perform a range of research project management functions in UQ Cyber Security
- 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 the Chair and Director of UQ Cyber Security.

SELECTION CRITERIA

- PhD in the area of cyber security, computer science, software engineering, electrical and electronics engineering, mechatronics, information technology, mathematics or applied cryptography.
- Demonstrated expert knowledge in the area of cyber security
- Demonstrated technical knowledge of critical infrastructures, industrial control systems, healthcare systems, or applications of machine learning into cyber security applications would be desirable.
- Strong track record of publications into top journals and conferences.
- An ability to establish effect relationships and to represent and promote academic discipline at a university and wider community level, including industry, government and professional bodies.
- Evidence of a contribution to research, including successful external grant applications.
- Ability to work collaboratively with colleagues.

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.