

POSITION DESCRIPTION

Position Title:	Research Engineer
Organisation Unit:	School of Mining & Mechanical Engineering / Mining3
Position Number:	3039671
Type of Employment:	Full Time Fixed Term (12 months with possibility of extension)
Classification:	HEW Level 6

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 CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (40), the US News Best Global Universities Rankings (42), QS World University Rankings (47), Academic Ranking of World Universities (54), and the Times Higher Education World University Rankings (66). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

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 53,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 17,000 international students from 135 countries, adding to its proud 260,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a \$2.15 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+.

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

With an excellent reputation for quality graduate training and research performance, the School of Mechanical and Mining Engineering delivers a comprehensive range of programs in aerospace, materials, mechanical, mechatronic and mining engineering.

Boasting strong student enrolments in professionally accredited programs, combined with world-class researchers and facilities, we are focused on strengthening our position in the engineering community. We will develop global solutions to contemporary issues and mentor the leaders of tomorrow by attracting the brightest minds and fostering a truly innovative and collaborative work environment.

The School recognizes and values equity and diversity, and encourages applications from any individual who meets the requirements of this position, regardless 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.

For more information about the School, please visit: <http://www.mechmining.uq.edu.au/>

Mining3

Mining3 is a world leading research organisation directed by the global mining industry to develop and deliver transformational technology to improve the productivity, sustainability, and safety of the mining industry.

Our world-class researchers and engineers develop tangible solutions to industry-identified challenges, using both fundamental and applied research while leveraging our extensive history and acquired knowledge.

By bringing industry and research expertise together, we collaboratively accelerate the delivery of real-world solutions from our research, ensuring they are available to the market as rapidly and effectively as possible.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is [available online](#).

DUTY STATEMENT

Primary Purpose of Position

The primary purpose of the position is to provide specialist mechanical / mechatronic or similar technical engineering support to research and industry projects involving the development of new technologies relevant to the strategic objectives of Mining3.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Conduct quality research projects under supervision.
- Engage in independent and/or team research.
- Provide technical advice to researchers in small sized projects.
- Write research reports and participate in writing quality technical publications, as required by projects.
- Where appropriate, publish results in high quality outlets in collaboration with colleagues.
- Manage projects under the direction of the Program Directors or project leaders.

Technical

- Set up and test experimental apparatus, and assist with experimental procedures as required.
- Provide specialist engineering support for projects involving development of new technologies relevant to the strategic objectives of Mining3. This includes but is not limited to:
 - Innovative control algorithms and source code to meet the requirements of research projects.
 - Software for systems such as:
 - embedded application for interfacing to high speed ADC and DAC modules
 - communication protocols
- Manage the design and construction of equipment according to project schedules, ensuring that apparatus being developed comply with industry requirements and safety standards.
- Test equipment in laboratory and field environment and attend field trials.

Service and Engagement

- Play a key role in driving improvements in research quality and delivery of projects.
- Provide technical and scientific input for research projects.
- Develop innovative and creative concept solutions.
- Make a strong contribution to ensure the science conducted in projects is of a high standard and is relevant to client and stakeholder needs.
- Maintain strong and continuous communication links with your supervisor ensuring that reporting is of the highest quality and that there is a clear understanding of project

outcomes and deliverables.

- 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 Mining3
 - 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 Work Area Leader, however may work on research projects outside of this work area.

SELECTION CRITERIA

Essential

- Bachelor level degree in a relevant engineering discipline with subsequent relevant experience; or extensive experience and specialist expertise or broad knowledge in technical fields; or an equivalent combination of relevant experience and/or education training.
- Demonstrated experience in research or relevant industry experience in an area aligned with current research activities of Mining3.
- Demonstrated ability to undertake research in an area aligned with current research activities in Mining3.
- Ability to develop effective professional relationships.
- Demonstrated high level of drive and enthusiasm.
- Demonstrated ability to work collaboratively with colleagues from different disciplines as well as with administrative and technical staff.
- Demonstrated high-level interpersonal, written and verbal communication skills.
- An enjoyment of, and interest in, contributing to high quality research.

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](#) for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to recruitment@uq.edu.au.