

POSITION DESCRIPTION

Position Title:	Research Officer - Novel Flotation Technologies
Organisation Unit:	Julius Kruttschnitt Mineral Research Centre (JKMRC)
Position Number:	3066936
Type of Employment:	Full time, Fixed term
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 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 \$11billion+.

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

Organisational Environment

The University of Queensland's Sustainable Minerals Institute (SMI) is a world-leading research institute integrating the expertise of technical, environmental and social specialists to deliver responsible resource development across the life of mine. We are dedicated to finding knowledge-based solutions to the sustainability challenges of the global minerals industry, and training the next generation of industry leaders.

SMI is home to six research centres and a Centre of Excellence based in Chile. We have a strong track record in developing world leading solutions in exploration, mining, mineral processing, workplace health and safety, mine rehabilitation, social responsibility, water and energy.

At SMI, we are truly independent, objective and rigorous and our researchers have experience working across the research, government and industry sectors. We offer professional development training to many of our partners and can tailor courses to suit industry trends or company needs. We offer supervision to PhD students and are proud that our alumni are now in senior roles in resource companies and government organisations around the world.

SMI comprises seven major research Centers:

- WH Bryan Mining and Geology Research Centre
- Julius Kruttschnitt Mineral Research Centre
- Centre for Social Responsibility in Mining
- Minerals Industry Safety and Health Centre
- Centre for Mined Land Rehabilitation
- Centre for Water in the Minerals Industry
- International Centre of Excellence in Chile

Information about the Institute may be accessed on the Institute's web site at <http://www.uq.edu.au/smi>.

The **Julius Kruttschnitt Minerals Research Centre (JKMRC)** is a world class provider of postgraduate education and innovative applied research in mineral processing and geometallurgy. The Centre has an outstanding international reputation as an innovator in mining and mineral processing research. It is the largest Australian research centre in this field and collaborates with major mining and mineral processing research groups worldwide. Further information on the JKMRC may be accessed via <http://www.jkmrc.uq.edu.au>.

Information for Prospective Staff

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

The University of Queensland [Enterprise Agreement](#) outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

To undertake high quality research in the topic area of mineral flotation and mineral processing technologies. In particular a large portion of the work will be dedicated to the field of coarse particle processing, with a specific focus on the practical application of the HydroFloat® technology and associated equipment, both upstream and downstream.

The Research Officer will design, build and commission novel flotation equipment as well as undertake, analyse and write reports associated with onsite pilot and full scale flotation experimental test work.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Design, procurement and commissioning of novel flotation equipment
- Statistical design of experimental programs and formulation of research project proposals to be performed within large industry-funded projects
- Conduct laboratory and pilot scale flotation related experiments and subsequent analysis of the data collected, including mass balancing, data processing of mineral surface and mineral liberation analysis.
- Assist in conducting industrial surveys and subsequent data analysis
- Complete safety audits and Job Safety Analysis paperwork associated with laboratory and on-site experimental testing
- Prepare project reports and presentation of research outcomes to industrial sponsors
- Publish the results of research in reputed and high impact international journals and other appropriate publications
- Contribute to the development of new research ideas and research funding proposals and/or fellowships
- Participate in postgraduate training and supervision

Service and Engagement

- Assist with project management
- Plan and conduct work at external sites including remote mine locations
- Foster the Centre's relations with industry, government departments, professional bodies and the wider community.
- Support additional projects on aspects of relevant disciplinary knowledge and skills when required

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 Group Leader of the Separation Program.

SELECTION CRITERIA

- PhD (or progress towards PhD) in relevant discipline such as minerals processing
- Demonstrated ability to conduct research in the discipline area with experience in the following
 - Mineral processing and mineral flotation, with particular emphasis on coarse particle flotation technology
 - Design, building and commission of pilot scale test rigs
 - Onsite surveys and sample collection in industrial mineral processing plants
 - Analysis of complex experimental data by using mass balancing and statistical packages
- Ability to comply with and perform the job safety analysis associated with experimental tasks
- Demonstrated time management skills and the ability to work across multiple projects with multidisciplinary teams
- Track record of producing innovative research outcomes and publishing in high impact and mainstream journals
- Experience in use of the JKMRC HydroFloat rig and skills in developing and testing models of flotation behaviour is desirable

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](#) 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 recruitment@uq.edu.au.