POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow
Organisation Unit: School of Mechanical and Mining Engineering
Position Number: TBA
Type of Employment: Full Time, Fixed Term, until 30/06/2019 with possible extension to 30/6/2020
Classification: 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://unquest.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.

Organisational Environment

The School of Mechanical and Mining Engineering is one of the largest Schools of this type in Australia with 75 full-time academic staff members who are widely published internationally and have extensive research backgrounds.

The UQ Composites Group at The University of Queensland, conducts research in the manufacturing of composite materials, structural health management and biocomposites, as part of the Centre for Advanced Materials Processing and Manufacturing (AMPAM). The group is led by Martin Veidt who initiated UQ’s involvement in composite materials by conducting fundamental research on damage detection and characterisation of composite materials as a major part of the UQ Ultrasonics research program. UQ Composites has received continuous funding from the Australian Research Council (ARC) and has established long term collaborations with the Defence Science and Technology Group (DST Group), and the Defence Materials Technology Centre (DMTC). The UQ Composites Group is also continuing to attract industry funding and to successfully position itself as one of the leading research centres for composite materials in Australia.

Information about the Faculty and the School may be accessed on the Faculty’s web site at http://www.uq.edu.au/faculty-school.

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 role of the UQ Composites Research Fellow is to work with Academics, Research Staff and Industry Partners to support research and development projects in the UQ Composites group, including a DMTC project to explore the potential of hybrid composite materials for Defence applications.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Support research and development projects in the UQ Composites group by assisting in various tasks in the areas of design, manufacturing, testing, numerical simulation, data management and quality control.
- Liaise with industry partners directly regarding the direction of research projects.
- Investigate the potential of hybrid composite materials such as metal-composite laminates, hybrid matrix composites and metal matrix composites for Defence applications.
- Identify key performance measures for assessment of composite material systems, and suitable tests for these measures.
- Assess opportunities for cost-effective integration of hybrid composite materials into Defence platform applications using existing manufacturing pathways.
- Professionally document all research and development tasks.
- Support the publication of scholarly papers in high-quality outlets.
- Develop relationships with industry to form research partnerships.

Teaching and Learning

- As a 'Research focussed' position there is no formal requirement for teaching. However it is encouraged that you actively seek teaching opportunities.
- Contribute to the effective supervision of bachelor and postgraduate students.

Service and Engagement

- Assist to foster the School’s relations with industry, government departments, professional bodies and the wider community.
- Participate in regular meetings to help manage the project and optimise project outcomes.
- Present outcomes of the work to visitors, at meetings and conferences.
- Participate in applications for external funding.
- Effectively train staff and students in the safe and effective operations of equipment and research laboratories in accordance with University requirements.
- Any other duties as reasonably directed by the supervisor.
Other
Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

- 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 Scott Ding.

SELECTION CRITERIA

Essential

- PhD in the field of Mechanical or Mechanical and Materials or equivalent.
- Demonstrated expert knowledge in composite materials, design, finite element simulation, data management, experimental techniques and manufacturing.
- Demonstrated high level of drive and enthusiasm.
- An ability to establish effective relationships and to represent and promote academic discipline at university and wider community level, including industry, government and professional bodies,
- Ability to work independently with minimal supervision and as part of a team.
- Demonstrated excellent written and verbal communication skills.
- Ability to organise multi-faceted projects.
- Record of publication of scholarly papers in high-quality outlets.
- Evidence of successful contribution to research, including participation in applications for external funding.

Desirable

- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives.
- Demonstrated competence to supervise undergraduate students and research assistants.

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.