

POSITION DESCRIPTION

Position Title:	Postdoctoral Research Fellow (CFD)
Organisation Unit:	Australian Centre for Water and Environmental Biotechnology
Position Number:	
Type of Employment:	Part time (50%), 1-year appointment.
Classification:	Research Academic Level A

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) is one of Australia's leading research and teaching institutions. For more than a century, we have been bringing together outstanding educators, researchers and innovators – across a range of disciplines – to inspire the next generation and to advance ideas that can benefit the world.

Today, UQ is [ranked among the world's leading universities](#) and we are consistently recognised as one of the top 5 universities in Australia.

Each year, we teach around 55,000 students across 6 faculties, located at our 3 beautiful campuses at St Lucia, Herston and Gatton – as well as online. We aspire to broaden the knowledge and skills of these students, so that they're equipped to achieve their professional goals and make a positive contribution to our society, and the world.

The University is also home to 8 research institutes and more than 100 separate research centres with an interdisciplinary community of more than 1500 researchers, who have come to UQ from all over the globe. This outstanding community of researchers is continuing to build upon UQ's long and proud tradition of discovery science, invention, innovation, translation and commercialisation.

At UQ, we recognise that our people are our greatest asset. As such, we seek to recruit innovative people who are passionate about helping us to advance our mission and broaden our impact.

Our culture is built on the things that we value most highly – the pursuit of excellence; creative and independent thinking; honesty and accountability; mutual respect and diversity; and providing support for our people. Through the promotion of these values, we're creating a culture that encourages our people to bring their very best, authentic self when they come to work at UQ.

Organisational Environment

The Australian Centre for Water and Environmental Biotechnology (ACWEB) is an internationally recognised centre of excellence in innovative water technology and management. The Centre has an outstanding worldwide reputation in urban water management and related fields, and an award-winning multidisciplinary team delivers practical technological solutions underpinned by fundamental scientific discoveries.

The Centre has six interlinked programs namely, next generation urban water technologies, integrated urban water management, sewer corrosion and odour management, nexus of urban water, health and environment, resource efficient agri-industry and environmental biotechnology.

Collaborative linkages with industry are strong and solutions developed by the Centre have yielded quantifiable benefits in the order of hundreds of millions of dollars to the Australian water industry and other sectors. At the same time, the ACWEB has an outstanding academic publication record, publishing on average more than 100 papers a year in high quality journals including the most prestigious multidisciplinary journals including Nature and Science, and top discipline journals such as Water Research and Environmental Science and Technologies.

The Centre has well-established process, microbiology and analytical labs. The direct collaboration with industry partners has also led to the creation of several field facilities including the Innovation Centre at Urban Utilities' Luggage Point Sewage Treatment Plant, supporting technology demonstration at larger scales and under practical conditions.

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 Centre 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 Centre.

For more Information about the Centre, please visit: www.awmc.uq.edu.au

Information for Prospective Staff

The Centre 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 Centre 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 available at - <http://www.uq.edu.au/current-staff/working-at-uq>

DUTY STATEMENT

Primary Purpose of Position

The Australian Centre for Water and Environmental Biotechnology is seeking a postdoctoral researcher to conduct computational fluid dynamics research at UQ with funding from the InjectMe project funded by the Danish Energy Agency and in collaboration with Aarhus University (Denmark) and Landia ASS. This involves simulation of hydrogen injection into anaerobic digesters using Open FOAM simulation software.

Duties

Duties and responsibilities include, but are not limited to:

Teaching and Learning

- Contribute to teaching and supervision of research students at honours, master and PhD levels, including as principal supervisor (in collaboration with senior academics).
- Industry engagement to support knowledge build and transfer directed at industrial outcomes.

Research

- Conduct simulations using non-Newtonian rheology model in multiphase systems, including gas-liquid-solids environments.
- Develop software including in support for PhD students and postdoctoral researchers.
- Collaborate with process modellers and process engineers, including industry and international partners.
- Present findings at internal ACWEB and industry seminars, conferences and industry workshops as required.
- Develop technology translation plans in collaboration with academic and industrial partners.
- Publish research in the form of scientific and technical reports to participating organisations and produce in high quality refereed journal publications.

Service and Engagement

- Actively engage and collaborate internally within the AWCEB, ITTC, and partners to foster their relationships with industry, government departments, professional bodies, universities and the wider community. This will include meetings with industry partners and showcase and conference events.
- Engage with external stakeholders who include other supporting industry and academic partners as well as the principal funding body. 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 directly to UQ ITTC lead CI Professor Damien Batstone, as well as the ITTC executive committee.

SELECTION CRITERIA

For Appointment at Level A

- A PhD in chemical/environmental or mechanical engineering (or related).
- Demonstrated experience in computational fluid dynamics, including code development for open source software platforms.
- Demonstrated experience in research translation to industry in the field of computational fluid dynamics.
- Published track record in the area of computational fluid dynamics.
- Ability to work collaboratively with colleagues.
- Ability to work in a multidisciplinary field, and synthesize data from multiple sources

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.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.

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This role is a full-time position; however flexible working arrangements may be negotiated.

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