MPhil Scholarships in Biomedical Imaging Technology (MRI and PET)

The Australian Research Council Training Centre for Innovation in Biomedical Imaging Technology, at the University of Queensland, is looking for high calibre enthusiastic Bachelor students who:

- have studied Engineering, Physics, Computer science degrees or equivalent;
- are interested in the Biomedical Imaging Technologies of MRI and PET;
- want to obtain relevant skills and exposure to industry;
- want to learn about commercialization; and,
- have a desire to be involved in academic, clinical and/or industry focused research.

We have exciting opportunities to work with world leading academic researchers and industrial partners focused on the development and translation of new MRI and PET methodologies to the clinic. Some of the projects include:

- Translating and evaluating Quantitative Susceptibility Mapping in clinical practice
- Investigating pTx and RF pulse design technologies to enhance Ultra-high Field MRI
- Utilisation of pharmokinetic modelling to advance PET imaging reconstruction
- The integration of multimodal imaging, clinical and genomic data

Applications are invited from outstanding and enthusiastic graduates who have an interest, and preferably a background, in Biomedical Imaging Technology. They should have basic understanding of object orientated coding principles and basis knowledge and experience in a programming language: C++, Matlab, Python or equivalent.

Successful students will have the opportunity to:

- Learn about the trends occurring in diagnostic imaging in the age of “Personalised Medicine”
- Learn about the use of Artificial Intelligence concepts such as machine learning and big data analytics in real world problems; and,
- Undertake internships with our industrial partners.
The Centre for Advanced Imaging (CAI), a strategic initiative of The University of Queensland, is a leading imaging research facility in Australia, and one of a handful in the world. It brings together the skills of a critical mass of researchers and state-of-the-art, world- or Australian-first imaging research instruments including NMR, EPR, MRI, PET, CT, optical imaging and an on-site cyclotron and radiochemistry facilities. CAI hosts the largest Node of the National Imaging Facility (NIF) (http://anif.org.au/). CAI conducts research across the spectrum from development of new imaging technologies, analysis of molecular structure, synthesis of MRI and PET biomarkers targeting fundamental biological processes to studies of major diseases affecting a range of organ systems, through to imaging economically significant agricultural animals and plant material, minerals and construction materials. A multidisciplinary, cohesive student community have come together from all over the globe to CAI to undertake research training. The Centre has an active student association (STAC) that provides many opportunities for networking and professional development, a supportive mentoring structure that will enhance personal and professional growth, an annual symposium and a well-attended weekly seminar program which attracts high profile National and International speakers. Further details on the Centre for Advanced Imaging and ongoing research can be found on CAI’s website http://www.cai.uq.edu.au/. CAI is committed to supporting the career growth of female researchers and have a number of initiatives to support females in developing and achieving a fulfilling research career at the institute. For more information, please visit our CAI Women in Imaging website at https://cai.centre.uq.edu.au/women-imaging

Enquiries: For enquiries specific to this project please email Markus Barth (m.barth@uq.edu.au).

How to apply

To submit an application for this role, please send your application to CAI hdr@cai.uq.edu.au. All applicants must supply the following documents

- Cover letter.
- Academic CV, including details of two referees. Please go to https://graduate-school.uq.edu.au/what-include-academic-curriculum-vitae-cv for details on what is required in an academic CV.
- International applicants: Evidence for meeting UQ's English language proficiency requirements https://graduate-school.uq.edu.au/english-language-proficiency-requirements
- Academic transcript for all post-secondary study undertaken, complete or incomplete, including the institution grading scale

Students may be domestic or international of high scholarly calibre and will have a First Class Honours degree or equivalent. More information about the admission into the UQ Graduate School Mphil program can be found here (https://graduate-school.uq.edu.au/uq-research-degrees and https://graduate-school.uq.edu.au/scholarships).

Remuneration

The base stipend for MPhil Scholars will be at the rate of AUD $31,828 per annum (2018 rate) tax-free for two years with the possibility of one six month extension in approved circumstances.

For the candidates who have been successful in obtaining any government-funded scholarship or UQ-funded scholarship or any other external scholarship, a top-up scholarship may be awarded.