



RESEARCH FELLOW

DEPARTMENT/UNIT	Monash Biomedical Imaging
FACULTY/DIVISION	Office of the Deputy Vice-Chancellor (Research)
CLASSIFICATION	Level B
DESIGNATED CAMPUS OR LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

Monash Biomedical Imaging (MBI), where this position sits, is the University's research platform of excellence for biomedical imaging. MBI hosts state of the art MRI facilities for animal and human imaging, and radiochemistry, molecular and X-ray imaging facilities for investigating small animal models. These capabilities are supported by expert personnel and a suite of ancillary facilities, including patient support, radiobiology and (limited) short-term animal holding. MBI conducts basic and translational research of the highest quality, increases skills in biomedical imaging amongst research staff and higher degree by research students, and provides user access to internal and external researchers. These core drivers of the facility's activities aim to provide cutting edge and high-quality research imaging modalities to biomedical and non-biomedical researchers.

MBI is a node of the **National Imaging Facility (NIF)** (see anif.org.au) and provides access to biomedical imaging research infrastructure and facilities of the highest quality for internal and external researchers, and undertakes training and skills development of research staff and higher degree students in biomedical imaging techniques. These core drivers of the facility's activities have significant overlap with those of the Imaging and Medical Beam Line (IMBL) of the Australian Synchrotron, which similarly strives to provide cutting edge imaging modalities to biomedical and non-biomedical researchers for high quality research.

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

POSITION PURPOSE

A Level B research-only academic is expected to carry out independent and/or team research within the field in which they are appointed and to carry out activities to develop their research expertise relevant to the particular field of research.

The **Imaging Scientist Post-Doctoral Research Fellow** will be responsible for experimental design, data collection and analysis of neuroimaging data acquired using the Magnetic Resonance (MR) scanner and MR-PET scanner and associated technologies located at MBI.

The Research Fellow will be involved in overseeing the development of the projects; performing appropriate theoretical and computational modelling work; implementing and validating experimental scanning protocols; converting, managing and undertaking statistical analysis of the imaging and behavioural data; and providing reports of the brain measurements collected in healthy control participants. Related responsibilities will include undertaking routine reliability testing to ensure data quality, and ongoing optimisation of the data collection and analysis. The Research Fellow will be required to be available for some out-of-normal hours work, attend research program and research platform meetings, and to undertake other related responsibilities as directed.

Reporting Line: The position reports to the Primary Chief Investigator for National Mobile MRI Network Project

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level B research-only academic may include:

1. Responsible for subject recruitment, experiment design and data analysis and management for the National Mobile MRI project
2. Familiarity and competence with deep learning based methods in medical imaging and application of these techniques
3. Research and development of novel MRI methods
4. Project coordination
5. The conduct of research either as a member of a team or independently and the production of conference and seminar papers and publications from that research
6. Supervision of research-support staff involved in the staff member's research
7. Guidance in the research effort of junior members of research-only Academic staff in their research area
8. Contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies
9. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
10. Administrative functions primarily connected with their area of research
11. Occasional contributions to the teaching program within the field of the staff member's research
12. Co-supervision or, where appropriate, supervision of major honours or postgraduate research projects within the field of the staff member's area of research
13. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees
14. Participate in NIF activities at the local and national level, and attend networking and promotional opportunities for inter-nodal collaborations and communicate NIF's capability to the wider scientific community, both in academia and industry
15. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - A doctoral qualification in the relevant discipline area or equivalent qualifications or research experience.

Knowledge and Skills

2. Demonstrated statistical analysis and manuscript and research proposal preparation skills; including a solid track record of refereed research publications
3. Experience in successfully supervising, mentoring and coaching to support the development of research staff and/or a demonstrated trajectory of leadership capability
4. Experience in supervising and working with major honours or postgraduate students within the discipline
5. The ability to work both independently in a research environment and as part of an inter-disciplinary research team
6. High level organisational skills, with demonstrated capacity to establish and achieve goals
7. Excellent written and oral communication skills
8. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
9. Advanced computer skills with experience using Microsoft Word, Excel and PowerPoint; specific experience in working with a range of programming languages
10. Strong track record in publication
11. Substantial experience and practical use of deep learning models for medical imaging applications
12. Substantial experience in using MRI methods and programming using MATLAB and python
13. Expertise in MRI applications in neuroimaging

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.