



RESEARCH FELLOW

DEPARTMENT/UNIT	School of Psychological Sciences
FACULTY/DIVISION	Faculty of Medicine Nursing and Health Sciences
CLASSIFICATION	Level A
DESIGNATED CAMPUS OR LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

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.

The **Faculty of Medicine, Nursing and Health Sciences**, is the largest faculty at Monash University, and offers the most comprehensive suite of professional health training in Victoria. We consistently rank in the top 40 universities worldwide for clinical, pre-clinical and health sciences. We want to improve the human condition. That is our vision - it has no expiration date. Through academic health centres, other translational models and by educating the healthcare workforce of the future, our staff, students and alumni directly improve quality of life. Setting the global health care agenda, the Faculty aspires to lead in all areas of research activity and influence local, national and international policy to improve health and social outcomes and health inequalities. We've made a major impact in the world of medical research and become globally recognised for our quality education of over 41,000 doctors, nurses, and allied health professionals. We are ambitious and aim to maintain our position as a leading international medical research university. We're recognised for the breadth and depth of our research, for our commitment to translational research, for the quality and scale of our research capability, and as a thriving biotechnology hub. To learn more about the Faculty, please visit www.monash.edu/medicine.

The **Monash School of Psychological Sciences** is ranked among the best in the world. Our School's mission is to develop students and research outcomes that make significant contributions to improving the lives of others globally. Our overarching vision is to make significant and long-lasting impact that changes the world around us, beginning in infancy and across the lifespan. Drawing on the expertise of our staff and the University's unique research platforms and technology, our mission is to sustain and build on Monash's position with world-class research and teaching in Psychology. For more information about us and the work we do, please visit www.monash.edu/medicine/psych.

Housed within the School of Psychological Sciences, the Turner Institute for Brain and Mental Health is a world-leading institute dedicated to making significant contributions to basic and translational research,

clinical care, and research training in brain and mental health. The Institute represents the largest grouping of cognitive and clinical neuroscientists in Australia and Asia Pacific. To learn more, please visit www.monash.edu/turner-institute/research.

POSITION PURPOSE

A Level A research-only academic is expected to contribute towards the research effort of the University and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

This Research Fellow appointment will generate research relevant to the development of brain connectivity methods with a focus on Dynamic Causal Modelling (DCM), which is a framework for modelling neural circuitry (i.e. effective connectivity).

The Research Fellow will be responsible for developing and validating multimodal and directed (effective) brain connectivity methods and be a part of an interdisciplinary team of researchers who develop and apply novel analysis methodology. This position is funded by the Australian Research Council (ARC) Discovery Project awarded to Monash University (Dr Adeel Razi, Lead Investigator), University of Melbourne (Associate Professor Andrew Zalesky) and University College London (Professor Karl Friston).

Reporting line: The position reports to the Chief Investigator of the grant at Monash University

Supervisory responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

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

1. The conduct of research under limited supervision either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and seminar papers and publications that employ brain connectivity and related methods
2. Involvement in professional activities including preparing and analysing data for publications for dissemination of research, attendance at conferences and seminars in the field of expertise
3. Limited administrative functions primarily connected with the area of research of the academic such as grant submissions using data generated from the research and ability to conduct quality literature search/reviews
4. Coordinate and manage the integration of large, potentially longitudinal, multi-modal MR imaging data, as well as apply novel analytic pipelines for high level imaging processing and analyses
5. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff. Preparing and analysing data for publications for dissemination of research and for presentation at international conferences as well as internal meetings at UCL, and meetings with external collaborators
6. 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
7. Where relevant, advice within the field of the staff member's research to postgraduate students as well as other researchers in the team

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - An honours degree in a numerate discipline (e.g. engineering, mathematics, physics, computer science, psychology) or higher qualifications in the relevant discipline and progress towards a doctorate in the relevant discipline; or
 - a doctoral qualifications in Neuroscience, Biomedical Engineering, or in a scientific discipline relevant to fMRI or a closely related field

Knowledge and Skills

2. Demonstrated strong report and publication preparation skills; including a track record of strong research resultant in publications, conference papers, reports or professional or technical contributions resultant in evidence of research quality and ability
3. Exceptional analytical and statistical analysis skills experience in handling large datasets
4. Demonstrated strong research resultant in publications, conference papers, reports or professional or technical contributions resultant in evidence of research quality and ability
5. Well-developed organisational and record keeping skills, with the ability to prioritise multiple tasks and set and meet deadlines
6. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
7. A demonstrated capacity to work in a collegiate manner with other staff in the workplace as well as the ability to work independently in a research environment (with limited supervision)
8. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications and specified university software programs, with the capability and willingness to learn new packages as appropriate
9. Strong programming ability in either MATLAB, Python or R and strong statistical/mathematical knowledge, ideally with some knowledge of Bayesian modelling techniques

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
- There may be a requirement to work evenings and weekends from time to time

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.