POSITION DESCRIPTION

Position Title	Technical Officer		
Organisational Unit	Faculty of Health Sciences		
Functional Unit	National School of Psychology		
Nominated Supervisor	Senior Research Fellow		
Higher Education Worker (HEW) Level	HEW 6	Campus/Location	Melbourne (St Patrick's)
CDF Achievement Level	1 All Staff	Work Area Position Code	
Employment Type	Part-time (0.5), Fixed term	Date reviewed	April 2018

ABOUT AUSTRALIAN CATHOLIC UNIVERSITY

Mission Statement: *Within the Catholic intellectual tradition and acting in Truth and Love, Australian Catholic University is committed to the pursuit of knowledge, the dignity of the human person and the common good.*

Australian Catholic University (ACU) is both a Catholic University and a public institution within the Australian higher education sector. ACU is an inclusive community which welcomes students and staff of all beliefs. The University is committed to a strong Catholic ethos and seeks to foster and promote teaching and learning, research and scholarship, and community engagement in the Christian tradition. As valued members of our community, all staff members are expected to have an understanding of ACU's Mission and values and to demonstrate an active contribution to them.

The University shares with universities worldwide a commitment to quality in teaching, research and service. It aspires to be a community characterised by free enquiry and academic integrity.

The University chooses to focus on areas of teaching and research that are closely connected with its particular character as a University that is Catholic, public and national. The focus areas are Theology and Philosophy, Health, Education, and the Common Good and Social Justice.

ACU has over 2,500 staff supporting more than 34,000 students across seven campuses – Adelaide, Ballarat, Brisbane, Canberra, Melbourne, North Sydney and Strathfield.

The structure to support this complex and national University consists of:

- Provost

- Chief Operating Officer & Deputy Vice-Chancellor

- Deputy Vice-Chancellor, Research

- Deputy Vice-Chancellor, Students, Learning and Teaching

- Vice President

- Pro Vice-Chancellor Assisting the Vice-Chancellor and President

Each portfolio consists of a number of Faculties, Research Institutes or Directorates. The Directorate of Identity and Mission drives both the Identity and the Mission of the University. In addition, five Associate Vice-Chancellors and Campus Deans focus on the University's local presence and development of the University at the local 'campus' level.

The University pursues performance excellence and offers an environment where staff are valued and rewarded. Staff are expected to demonstrate a commitment to continuous improvement and to participate fully in resolving issues to achieve and maintain quality standards relevant to role. Further information about a career with ACU is available at www.acu.edu.au.

ACU is committed to diversity and social inclusion in its employment practices. Applications from Aboriginal and Torres Strait Islander people, people with disabilities and people from culturally diverse groups are encouraged.

ABOUT THE SCHOOL OF PSYCHOLOGY

The School of Psychology, within the Faculty of Health Sciences aims for excellence in teaching and research. The School has over 30 academic staff on the Melbourne, Brisbane and Strathfield (Sydney) campus. There is one National Head School, currently located at the Melbourne campus, with an Assistant Head at the Melbourne campus and Deputy Heads at Strathfield and Brisbane.

The School offers a range of undergraduate and postgraduate training programs: three-year and fourth-year sequences in psychology, higher degree research programs in psychology, and professional training programs in the areas of Clinical Psychology and Educational and Developmental Psychology.

The research quality in Psychology at ACU is ranked well above world standard, the highest rating possible under the 2015 Excellence in Research Australia (ERA) assessment.

Research program in Microstructural imaging and rehabilitative plasticity. Currently, our research team includes (i) honours and master students working on small experiments in brain injury, (ii) a research assistant providing assistance with the practicalities of research, (iii) two PhD students working on a large-scale training study in TBI, (iv) Prof Jones (CUBRIC, Cardiff University) who is involved on our research projects as honoray professorial fellow, (v) Associate Professor Caeyenberghs as director of the research program; (v) a halftime technical officer providing support with automated processing pipelines; and (vi) visiting international PhD students.

Our mission is to try to gain a deep understanding of the neural substrates underpinning responses to training in patients with brain injury. Specifically, we investigate whether training effects are supported by neuroplastic modulations in brain structure and connectivity. A critical challenge hereby is to find ways to identify the microscopic lesions and pathophysiology in the patients with brain injuries, including damage to white matter tracts. Our lab utilizes state of the art advanced MRI scans, like microstructural imaging techniques (diffusion MRI and myelin mapping) – techniques refined by Prof. Jones from CUBRIC – and metabolic imaging (MR spectroscopy), which are necessary to provide additional insight into the injury mechanisms that underlie behavioral impairments. The primary objective of our research program is to develop non-invasive imaging biomarkers for use in therapeutic trials aimed at reducing cognitive and motor deficits. We also coordinate a leading program of research in the field of connectomics in a wide range of clinical populations. Network organization fundamentally influences brain disorders, and a connectomic approach grounded in network science is integral to understanding neuropathology. Our connectomic approach in traumatic brain injury has gained international recognition as perhaps the first serious attempt to understand chronic cognitive impairments from a disconnection syndrome perspective. Our neuroimaging findings are not only used as diagnostic tools, but also as biomarkers for longitudinal interventions using our novel training programs (BrainGames and CogMo) for improving cognitive and motor symptoms in neurodisability.

The halftime Technical Officer will support the activities of our research team, particularly our ongoing innovation in neurorehabilitation science. Our work in this space is recognized internationally and has made outstanding contributions to Research, exceeding the benchmark expectations of our discipline at national and international levels. We have published numerous articles in the top 10-20 % ISI category of clinical neurology (Brain), imaging sciences (NeuroImage), developmental psychology (Developmental Science) and neurosciences (Journal of Neuroscience). Our work has resulted in very high citation counts over the ERA recording period; this count is accelerating over time.

The Technical Officer will be a vital cog in our group, supporting the research program by providing assistance with the set-up of automated pipelines for processing MRI data and providing help with the technical/methodological parts of manuscripts and grant applications. The Technical Officer will complement the work of the other halftime Technical Officer. He/She will join a strong vibrant research culture and productive research teams where quality research is conducted.

POSITION PURPOSE

The overarching role will be to provide high level technical support to researchers at the Research program in Microstructural imaging and rehabilitative plasticity of the Melbourne Campus , including Prof Derek Jones, and Associate Professor Karen Caeyenberghs.

Specifically, the successful applicant will perform the following: analyses of multi-modal MRI data including pre-processing and post-processing using a wide array of toolboxes (FSL, Freesurfer, Mrtrix, ExploreDTI), and provide support for manuscript preparations (methods sections), technical aspects of grant submissions, publications, and related duties, as required.

POSITION RESPONSIBILITIES

Introduction

A number of frameworks and standards express the University's expectations of the conduct, capability, participation and contribution of staff. These are listed below:

- ACU Strategic Plan 2015-2020
- Catholic Identity and Mission
- ACU Capability Development Framework
- Higher Education Standards Framework
- ACU Service delivery Model
- ACU Staff Enterprise Agreement including provisions in relation to Performance Excellence

The Capability Development Framework in particular is important in understanding the core competencies needed in all ACU staff to achieve the University's strategy and supports its mission.

Key responsibilities

Key responsibilities specific to this position	Relevant Core Competences (Capability Development Framework)	Scope of contribution to the University			
		Within the work unit or team	School or Campus	Faculty or Directorate	Across the University
Set-up automated pipelines/workflows of pre-/post- processing of MRI data in various systems (FSL, Matlab, Python, and/or Nipype), and conduct associated data analysis.	• Be Responsible and Accountable for Achieving Excellence • Make Informed Decisions	✔			
Computer programming (C++, matlab, python, E-Prime and related applications). This includes testing of new methods, troubleshooting and resolving technical solutions.	• Make Informed Decisions	✔			

Key responsibilities specific to this position	Relevant Core Competences ([Capability Development Framework](#))	Scope of contribution to the University			
		Within the work unit or team	School or Campus	Faculty or Directorate	Across the University
Provide technical advice, expertise and value-add to the development and maintenance of research procedures and the operation of additional equipment including a powerful server.	• Communicate with Impact • Know ACU Work Processes and Systems	✓			
Provide support for manuscript preparations and grant applications to support project goals and objectives.	• Collaborate Effectively • Make Informed Decisions	✓			
Provide training and support for the use of technical equipment and MRI scanning techniques.	• Communicate with Impact • Coach and Develop	✓			
Identify and recommend improvements and efficiencies by investigating current processes and/or systems and advising/implementing these.	• Be Responsible for Achieving Excellence • Make Informed Decisions	✓			
Ensure effective storage and management of research data collection equipment.	• Know ACU Work Processes and Systems	✓			

HOW THE ROLE OPERATES

Key Challenges and Problem Solving

- Make significant technical contributions to manuscripts that target high impact journals and to grant applications, within tight deadlines.

- Ability to work effectively on multiple projects, concurrently.

- Ability to troubleshoot hardware and software issues, and to effect appropriate solutions.

- Ability to communicate complex technical and conceptual details to a varied audience.

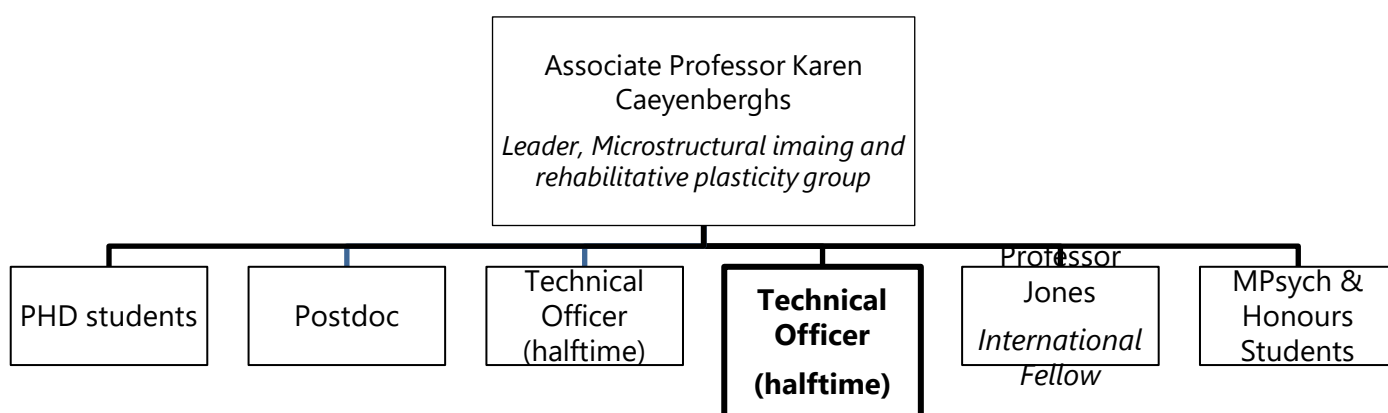- Ability to work autonomously and as part of a larger group.

Decision Making / Authority to Act

- The position holder has autonomy in the day-to-day management of their work.
- The position holder is able to solve technical problems relating to their work, and advice on best practice. The position also provides advice and recommendations to the supervisor for consideration and implementation.

Communication / Working Relationships

- The position holder will liaise with Research Centre Directors, Research Fellows and other Research Centre members. The position holder will also liaise with other staff members and students within the School of Psychology. It is expected that the position holder will liaise with external and internal stakeholders, such as Monash University and Swinburne University, along with other national and international research collaborators. {Expand with examples]

- The position holder communicates with researchers within the two research centres. This will include academic and administrative staff in the centres, research students (honours, masters and PhD students), and external research collaborators linked to centres.

Reporting Relationships

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                    Associate Professor Karen
                           Caeyenberghs
                  Leader, Microstructural imaging and
                    rehabilitative plasticity group

  PHD students | Postdoc | Technical Officer (halftime) | Technical Officer (halftime) | Professor Jones International Fellow | MPsych & Honours Students
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For further information about structure of the University refer to the organisation chart.

SELECTION CRITERIA

Qualifications, skills, knowledge and experience

1.	Completion of an undergraduate qualification with relevant research experience in a relevant field such as psychology, neuroscience, computer science, IT or engineering; or an equivalent combination of experience and/or education/training.
2.	Demonstrated computer programming experience with MATLAB, Python, C C++ or similar.
3.	Experience with experimental design and programming software (E-Prime, Presentation) would be an advantage.
4.	Demonstrated experience working with MRI technology and software for analysis or MRI data (such as Freesurfer, MRTrix, SPM /FSL).
5.	Familiarity with data analysis and statistical methods in psychology/cognitive neuroscience or related fields.
6.	Familiarity with technical contributions to articles for publication in scientific journals.

Core Competencies (as per the Capability Development Framework)

7.	Demonstrate confidence and courage in achieving ACU's Mission, Vision and Values by connecting the purpose of one's work to ACU's Mission, Vision and Values.
8.	Demonstrated ability to effectively plan work activity, prioritise time and resources using established processes and technologies to achieve optimum efficiency and effectiveness.
9.	Demonstrated ability to make informed evidence-based decisions by effectively sourcing and interpreting information to achieve high quality outcomes for the organisation.

Other attributes

10.	Demonstrated commitment to cultural diversity and ethical practice principles and demonstrated knowledge of equal employment opportunity and workplace health and safety, appropriate to the level of the appointment.