

POSITION DESCRIPTION – ACADEMIC

POSITION INFORMATION

Position Title	Research Fellow (Microstructural imaging and rehabilitative plasticity)		
Faculty	Faculty of Health Sciences		
Institute	School of Psychology		
Nominated Supervisor	A/Prof Karen Caeyenberghs	Campus/Location	St Patrick's
Academic Level	Level B	Academic Career Pathway	Research-focused
CDF Achievement Level	1	Work Area Position Code	
Employment Type	Full-time, Fixed Term	Date reviewed	August 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 FACULTY OF HEALTH SCIENCES

The Faculty of Health Sciences comprises six Schools: Allied Health, Exercise Science, Nursing, Midwifery and Paramedicine, Physiotherapy, Science and Psychology.

In 2014 there are approximately 8,500 students (EFTSL) and 521.51 (FTE) staff in the faculty under the disciplines: public health, occupational therapy, speech pathology, social work, exercise science, nursing, midwifery, paramedicine, physiotherapy, science, psychology and counselling. The Faculty is represented across all of ACU's six campuses. An expanding portfolio of postgraduate courses is also available in coursework and research.

The Faculty's current research priorities focus on Cardiovascular Disease and Metabolism, Health Services Research, Movement and Rehabilitation, Psychology and Mental Health.

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) 4 honours and master students working on small experiments in brain injury, (ii) a fulltime 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 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 clinical populations. Specifically, we investigate whether training effects are supported by neuroplastic modulations in brain structure and connectivity. 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. Our work 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.

POSITION PURPOSE

The Research fellow will be a vital cog in our group, supporting the research program by providing assistance with the supervision of other PhD/honours/master students, supervising data collection, analysing brain MRI imaging data, helping with the organization of MRI workshops, publishing in high quality scientific journals, and providing help with grant applications. The Research fellow will join a strong vibrant research culture and productive research teams where quality research is conducted.

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
- Learning For Life Framework 2014-2017
- ACU Teaching Criteria and Standards Framework
- Research Quality Standards
- Academic Performance Matrices and Evidence Framework
- ACU Capability Development Framework
- Minimum Standards for Academic Levels (MSALs)
- Higher Education Standards Framework
- ACU Service Principles
- ACU Staff Enterprise Agreement including provisions in relation to Performance Excellence and Academic Career Pathways.

The following two frameworks in particular are important in understanding the expectations of an academic position and the required qualifications and capability of a position holder:

- The [Academic Performance Matrices and Evidence Framework](#) which describes the performance standards in areas of academic activity.
- The [Capability Development Framework](#) which describes the core competencies needed in all ACU staff to achieve the University's strategy and supports its mission.

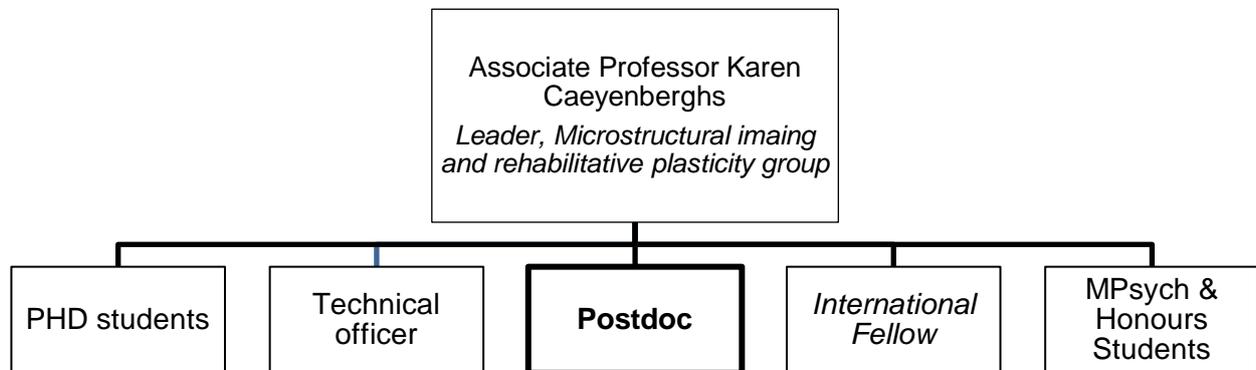
All academic staff are allocated workload comprising a range of academic duties/activities that fall within the following three broad areas of academic activity in line with the relevant Academic Career Pathway and Academic Level.

- Teaching, Curriculum Development and Scholarship of Teaching
- Research
- Academic leadership/service.

Key responsibilities

Broad area of academic activity	Key responsibilities specific to this position	Relevant Core Competencies (Capability Development Framework)
<p>Research</p>	<ul style="list-style-type: none"> • Analyse existing MRI datasets on structural neuroplasticity in clinical populations. • Assist in conducting research projects on rehabilitative plasticity and developmental plasticity. • Perform analyses of multi-modal MRI data including pre-processing and post-processing using a wide array of toolboxes (FSL, Freesurfer, Mrtrix, ExploreDTI) • Write high quality research papers and publish in high quality peer- reviewed journals • Present research findings at seminars and national/international conferences. • Contribute to the development and writing of grant applications to external/internal funding bodies • Provide regular written and verbal reports about the research activities undertaken as part of the appointment • Maintain research confidentiality and conform to all requirements of research ethics, and the protection of intellectual property • Comply with health and safety policies and procedures and the conduct of safe work practices 	<ul style="list-style-type: none"> • Collaborate effectively • Live ACU's Mission, Vision and Values • Communicate with impact
<p>Academic Leadership and Service</p>	<ul style="list-style-type: none"> • Manage and mentor staff and research students in the Microstructural Imaging and Rehabilitative Plasticity research team. • Will be self-managed and make an independent contribution to the research team and consistent with the University's Strategic Plan with regards to research intensification. • Build collaborations with researchers and practitioners in the research fields of neuroimaging and connectomics, to support the development of a field of expertise. 	<ul style="list-style-type: none"> • Coach and Develop • Make informed decisions • Be responsible and accountable for achieving excellence

REPORTING RELATIONSHIPS



Australian Catholic University

For further information about structure of the University refer to the [organisation chart](#).

SELECTION CRITERIA

This section sets out the qualifications, skills, knowledge, experience and competencies expected of the position holder, collectively referred to as 'qualifications and capability'. These are informed by the evidence and performance standards for the relevant Academic Level and Academic Career Pathway and Academic Level drawn from the [Academic Performance Matrices and Evidence Framework](#) and the Core Competencies set out in the [Capability Development Framework](#).

Opportunities to develop capability are provided through the development programs coordinated by internal providers of professional development. See the [Training and Development website](#) for more information.

Qualifications and Capability	
Qualifications and other credentials	
1.	Completion of a PhD in (neuro) psychology and/or neuroscience or related disciplines.
Research	
2.	Demonstrated ability to collaborate with other team members to achieve individual goals and aims of the team.
3.	Demonstrated responsibility for one's own personal growth in a research career pathway and actively seeking out opportunities for learning and self-improvement in the field of neurorehabilitation.
4.	Showed evidence of nationally and internationally leading and shaping the field of neuroimaging.
5.	Strong verbal and written communication skills. Ability to communicate clearly based on facts and logic; listen and respond appropriately to others.
6.	Ability to review and develop appropriate administrative procedures and systems to accommodate complex administrative tasks.
Core Competencies	
7.	Demonstrated 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 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.
Other attributes	
9.	Showed strong computing skills, including MRI toolboxes (e.g., FSL, FreeSurfer, mritx) and statistics software (e.g., SPSS, STATA).