



## POSITION DESCRIPTION

Melbourne School of Psychological Sciences  
Faculty of Medicine, Dentistry and Health Sciences

### Research Fellow in Computational Cognitive Science

POSITION NO	0044562
CLASSIFICATION	Level B
WORK FOCUS CATEGORY	Research Focused
SALARY	\$98,775 - \$117,290 p.a.
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full time
BASIS OF EMPLOYMENT	Fixed-term position available for 3 years Fixed term contract type: Research
OTHER BENEFITS	<a href="http://about.unimelb.edu.au/careers/working/benefits">http://about.unimelb.edu.au/careers/working/benefits</a>
HOW TO APPLY	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Name: Amy Perfors Tel +61 3 9035 6032 Email <a href="mailto:amy.perfors@unimelb.edu.au">amy.perfors@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:  
[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)

## ***Position Summary***

The Complex Human Data Hub (CHDH) at the University of Melbourne is seeking a research associate for a three-year position involving the mathematical and computational study of human cognition.

This full-time research-only position is not centred around a particular project, so self-starting scientists with an independent set of research interests are preferred. Research in the CHDH focuses on the use of quantitative and/or "big data" tools in cognitive science. Representative topics include information transmission, cultural and linguistic evolution, induction, decision-making, development, memory, or categorisation. Representative frameworks include Bayesian models, neural networks, reaction time modelling, experience sampling, or the use of large-scale data (e.g. twitter, word associations, etc). We are looking for an excellent early career researcher with experience and interest in any subset of these topics and approaches.

The principal supervisor for this position will be A/Prof Amy Perfors, Deputy Director of the CHDH. Simon Dennis is Director of the CHDH.

## ***1. Key Responsibilities***

### **1.1 RESEARCH AND RESEARCH TRAINING**

- ▶ Participate in research independently and as a member of a research team
- ▶ Produce quality conference and seminar papers and publications
- ▶ Effective supervision of research support staff
- ▶ Provide effective supervision of major honours or postgraduate research projects and supervise or co-supervise Research Higher Degree and Honours students
- ▶ Produce publications arising from scholarship and research, such as books and peer reviewed journal articles
- ▶ Identify sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline

### **1.2 LEADERSHIP AND SERVICE**

- ▶ Actively participate at School and/or Faculty meetings and contribute to planning or committee work to build capacity in the School/discipline.
- ▶ Actively participate in key aspects of engagement within the University e.g. School's outreach, first year orientation, academic advice to external bodies
- ▶ Participate in community and professional activities related to the relevant disciplinary area including attendance and presentations at conferences and seminars
- ▶ Positive engagement in learning and career development of self and others
- ▶ Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

## ***2. Selection Criteria***

### **2.1 ESSENTIAL**

- ▶ PhD in cognitive science, psychology, computer science, statistics, or related discipline
- ▶ Demonstrated track record in independent and team based research in computational cognitive science or closely related discipline
- ▶ Developing research profile as evidenced by:
  - Identification of sources of funding to support individual or collaborative projects relating to teaching, research and leadership practice in the discipline
  - developing publication record in high-impact peer reviewed journals
- ▶ Strong interpersonal and communication skills, with an ability to build and maintain relationships with key stakeholders (internal and external) and work collaboratively
- ▶ Demonstrated ability to perform quantitative / statistical data analysis
- ▶ Ethical scholar who values diversity and works effectively with individual differences
- ▶ Experience in implementing and interpreting computational models within one or more of the approaches described (Bayesian models, neural networks, diffusion models, experience sampling, or large-scale data)
- ▶ Strong quantitative and computational background, including programming in at least one language (not just html/css)
- ▶ Background and interest in psychology or cognitive science

### **2.2 DESIRABLE**

- ▶ Demonstrated success in obtaining research funding
- ▶ Experience in designing new models
- ▶ Experience in psychological experiment design
- ▶ Experience in supervision of honours or postgraduate students

## ***3. Equal Opportunity, Diversity and Inclusion***

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy

sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Growing Esteem.

## **4. Occupational Health and Safety (OHS)**

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<http://safety.unimelb.edu.au/people/community/responsibilities-of-personnel>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

## **5. Other Information**

### **5.1 COMPLEX HUMAN DATA HUB**

<http://psychologicalsciences.unimelb.edu.au/research/chdh>

Amy Perfors: <http://psychologicalsciences.unimelb.edu.au/research/chdh/ccs>

Simon Dennis: <https://findanexpert.unimelb.edu.au/display/person811247>

School of Psychological Sciences: <http://psychologicalsciences.unimelb.edu.au/>

### **5.2 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES**

[www.mdhs.unimelb.edu.au](http://www.mdhs.unimelb.edu.au)

The Faculty of Medicine, Dentistry & Health Sciences has an enviable research record and is the University of Melbourne's largest faculty in terms of management of financial resources, employment of academic and professional staff, teaching of undergraduate and postgraduate (including research higher degree) students and the conduct of basic and applied research. The Faculty's annual revenue is \$628m with approximately 55% of this income related to research activities.

The Faculty has a student teaching load in excess of 8,500 equivalent full-time students including more than 1,300 research higher degree students. The Faculty has approximately 2,195 staff comprising 642 professional staff and 1,553 research and teaching staff.

The Faculty has appointed Australia's first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty's Reconciliation Action Plan (RAP), which will be aligned with the broader University – wide plan. To enable the Faculty to improve its Indigenous expertise knowledge base, the Faculty's RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

### 5.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>.

### 5.4 GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive contributions to society in research and research training, learning and teaching, and engagement. <http://about.unimelb.edu.au/strategy-and-leadership>

The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy Research at Melbourne: Ensuring Excellence and Impact to 2025 aspires to a significant advancement in the excellence and impact of its research outputs.

<http://research.unimelb.edu.au/our-research/research-at-melbourne>

The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:

- ▶ Understanding our place and purpose – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.
- ▶ Fostering health and wellbeing – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health;

on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.

- ▶ Supporting sustainability and resilience – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.

Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of Research at Melbourne: Ensuring Excellence and Impact to 2025.

## 5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/governance>