



## POSITION DESCRIPTION

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

### Postdoctoral Research Fellow in Cognitive Science

<b>POSITION NO</b>	0045941
<b>CLASSIFICATION</b>	Research Fellow Level A
<b>SALARY</b>	\$69,148 - \$93,830 p.a.
<b>SUPERANNUATION</b>	Employer contribution of 17%
<b>EMPLOYMENT TYPE</b>	Full-time (fixed term) position available for 3 years Fixed term contract type: Research
<b>OTHER BENEFITS</b>	<a href="http://about.unimelb.edu.au/careers/working/benefits">http://about.unimelb.edu.au/careers/working/benefits</a>
<b>CURRENT OCCUPANT</b>	New
<b>HOW TO APPLY</b>	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.
<b>CONTACT FOR ENQUIRIES ONLY</b>	Professor Simon Dennis Ph: +61 03 9035 4889 Email: <a href="mailto:simon.dennis@unimelb.edu.au">simon.dennis@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 websites:

[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)  
[joining.unimelb.edu.au](http://joining.unimelb.edu.au)

## ***Position Summary***

The Complex Human Data Hub (CHDH) in the Melbourne School of Psychological Sciences at the University of Melbourne is seeking a postdoctoral research fellow to collaborate with senior academics on the mathematical and computational study of human cognition. As the CHDH is in early formation mode, this position will play a key role in developing the research agenda. A background in cognitive science is essential and researchers with an interest in computational approaches to language are especially encouraged.

Representative topics include cross-linguistic semantics, cultural and linguistic evolution, categorization, learning, decision-making and inductive reasoning. Representative approaches include probabilistic modeling, information-theoretic analyses, and the analysis of large naturally occurring data sets (e.g. linguistic corpora, dictionaries, twitter posts, and image collections). 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 newly appointed Associate Professor Charles Kemp. The incumbent will also work closely with and take direction from other senior members of the Complex Human Data Hub.

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

The position description should be read alongside [Academic Career Benchmarks and Indicators](#)

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

- ▶ Under limited supervision, participate in research independently and as a member of a research team
- ▶ Take a leading role in the coordination and execution of research projects.
- ▶ Contribute to building an active research record, including academic publications and reports, and presentations at conferences.
- ▶ Effective supervision of research support staff
- ▶ Engage in research activities, including ethics submissions that support the completion of the research project.
- ▶ Co-supervision of major honours or postgraduate research projects within the research area may be required.

#### **1.2 LEADERSHIP AND SERVICE**

- ▶ Build competence and confidence in presenting projects to academic and industry audiences
- ▶ Participate in activities which strengthen the links between the University and the community and which help in the dissemination and use of psychological knowledge.
- ▶ Identification of sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline
- ▶ Undertake administrative functions and obligations primarily connected with the Fellow's area of research
- ▶ Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity

- ▶ Active participation in School committees

### 1.3 ENGAGEMENT

- ▶ Develop and maintain working relationships with members of the Hub, School and Faculty.
- ▶ Contribute to the School/Faculty's research activity and national profile.
- ▶ Presentation of research findings at seminars, workshops and conferences as required.
- ▶ Active participation in team and project meetings.
- ▶ Perform 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

- ▶ A PhD or near completion of a PhD in the field of cognitive science, psychology, machine learning, or a cognate discipline.
- ▶ Experience working with linguistic corpora, experimental data, or other data sets relevant to human cognition
- ▶ Demonstrated track record in independent and team-based research in computational cognitive science or a closely related discipline.
- ▶ Strong quantitative and computational background, including ability to program in at least one language (possible examples include Python, R, MATLAB, Java, and Scala)
- ▶ Excellent presentation and interpersonal skills to effectively liaise with other researchers and coordinate research within a larger team.
- ▶ Outstanding organisational skills and demonstrated ability to prioritise workload to achieve designated timelines and manage workload during peak periods.
- ▶ Strong written and verbal communication skills, including the ability to communicate with a range of stakeholders from policy and research environments.
- ▶ Demonstrated ability to work independently and collaboratively in a team to achieve project goals and meet agreed deadlines.

### 2.2 DESIRABLE

- ▶ Experience in designing and implementing new models
- ▶ Experience in working with large data sets
- ▶ 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 THE MELBOURNE SCHOOL OF PSYCHOLOGICAL SCIENCES**

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

The Melbourne School of Psychological Sciences is one of six schools within the Faculty of Medicine, Dentistry and Health Sciences. It is consistently ranked one of the top Schools of Psychology in Australia and is ranked 15<sup>th</sup> in the world in the 2018 QS global rankings. The School is undergoing vigorous growth and attracts some of the best students nationally and internationally to its broad range of APS accredited undergraduate, graduate, professional, and research programs.

The School's teaching is underpinned by excellence in research across a range of fields, including cognitive and behavioural neuroscience, cognitive and mathematical psychology, social and personality psychology, and clinical science. Research links extend across 25 departments, centres and institutes within the Faculty of Medicine, Dentistry and Health Sciences, including The Melbourne Brain Centre, The Murdoch Children's Research Institute, ORYGEN Youth Research Centre, Austin Health, the Royal Melbourne Hospital, the Royal Children's Hospital, the Royal Women's Hospital, and St. Vincent's Hospital. Research links are also embedded in a broad range of other

disciplines across the University including within the Faculties of the Victorian College of the Arts and Melbourne Conservatorium of Music, Science, Business and Economics, Education, Engineering, Law, and the Melbourne Business School.

The School is home to a vibrant community of over 84 academic, teaching, research and professional staff, 140 honorary staff, and 146 PhD students. In 2017, there were over 4,500 students enrolled in undergraduate subjects offered by Psychological Sciences, primarily through the Bachelor of Arts and Bachelor of Science, but also in breadth subjects in the Bachelor of Commerce, Bachelor of Biomedicine, Bachelor of Environments, and Bachelor of Music. There were about 200 students enrolled in the Graduate Diploma of Psychology, about 90 students enrolled in fourth year programs (B. A. (Hons), B.Sc. (Hons), and the Graduate Diploma of Psychology (Advanced). There were around 130 students enrolled in professional postgraduate programs (Clinical and Clinical Neuropsychology and combined Masters/PhD programs).

## 5.2 FACULTY OF MEDICINE, DENTISTRY & 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 \$630m 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

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. With outstanding performance in international rankings, Melbourne is at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked among the world's top universities. Further information about our reputation and global ranking is available at <http://futurestudents.unimelb.edu.au/explore/why-choose-melbourne/reputation-rankings>.

Established in 1853, shortly after the founding of Melbourne, the University is located just a few minutes from the centre of this global city. The main Parkville campus 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.

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/index.html#home>

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/unisec/governance.html>.