



UNIVERSITY OF  
CAMBRIDGE

# Research Assistant or Research Associate in computational modelling of emotional memory

Department of Psychology

Closing date: 26 February 2025

Job Reference: PJ45024



## Research Assistant/Associate in computational modelling of emotional memory

**Salary:**

Grade 5 £30,505 - £34,866

Grade 7 £36,924 – £45,163

**Contract:**

Fixed-Term - until 1 October 2026

**Location:**

Cambridge

**Faculty / Department:**

Department of Psychology

**Responsible to:**

Dr Deborah Talmi

**Working Pattern:**

Full-time. Please note there is a requirement for this position to work from the office in central Cambridge

**Purpose of the role**

- We are seeking a post-doctoral research associate to work at the Department of Psychology, University of Cambridge, UK. The post-holder will work within an ESRC-funded cohort study focusing computational models of trauma memory. The primary aim of this post is to develop temporal context models that can account for a wider range of empirical data in research on emotional and trauma memory. Taking the eCMR model (Talmi, Lohnas, and Daw, 2019, Psychological Review) as the basis for this work, the post holder will conduct innovative and creative research tests and develop this model so that it may simulate additional phenomena from the domain of trauma memory.
- The project team consists of Dr Deborah Talmi, Prof. Holmes (<https://www.katalog.uu.se/profile/?id=N18-2401>) and Prof. Henson (<https://www.mrc-cbu.cam.ac.uk/people/rik.henson/>). It provides opportunities to advance cognitive and computational understanding of memory. The post-holder will be based in Dr Talmi's research group at the Department of Psychology of the University of Cambridge (in person).
- The post-holder will be responsible for developing variants of Temporal Context Models, model optimisation, running numerical simulations, and comparing simulated and empirical memory data statistically.
- The post-holder's responsibilities will include data management, statistical analysis, and dissemination of the results to academic and non-academic audiences. They will also be expected to contribute more broadly to ongoing research at the lab.



**Key responsibilities**

- To join a team working on trauma memory, leading the development of computational models of data already being collected
- To run numerical simulations of behavioural and neural datasets
- To conduct sophisticated statistical and model-based analysis of behavioural and neural data
- To use optimisation packages
- To work in person in the lab at least three days each week.
- To attend weekly in-person lab meetings in Cambridge, and occasionally present study ideas and data.
- To record, analyse and write up the data, maintaining a permanent record of the methodologies used and engaging in Open Science practices such as code sharing.
- To prepare and present findings at informal and formal scientific meetings.
- To contribute to the writing, submission and revision of papers to be submitted to peer-reviewed journals, under the guidance of the team.
- To contribute to the overall activities of the research team and the department.
- To undertake any other duties that may be required within the general scope of the post.
- To support team members and contribute to teaching and to supervise a small number of undergraduates in the department.
- To follow University of Cambridge policies including Equal Opportunities, Ethics, Race Equality, Fire and Health and Safety.

# Person Specification

| Criteria  | Essential      | Desirable                        |
|---|----------------|----------------------------------|
| <b>Education</b>  |                |                                  |
| <ul style="list-style-type: none"> <li>PhD in computational neuroscience, computational cognitive science, physics, mathematics, computer science, machine learning, statistics, engineering or a related field, which should be completed or near completion on 1st March 2025. Note, if near completion, the submission and viva dates should be clearly stated on the cover letter, and appointment will be made as a Research Assistant, until evidence of submission.</li> </ul>   | X              |                                  |
| <b>Specialist Knowledge &amp; Skills</b>  |                |                                  |
| <ul style="list-style-type: none"> <li>Strong quantitative skills, including knowledge of a relevant data analytic techniques and statistical methods and demonstrable experience applying them to model-based analyses of behavioural and / or neural data</li> <li>Demonstrable interest and original contribution to in computational neuroscience and/or mathematical psychology</li> <li>Proven ability to analyse data, write up research results and bring projects to completion, with publications in peer-reviewed, scientific journals.</li> <li>Demonstrable interest in computational neuroscience of memory</li> <li>Demonstrable experience of sharing and version controlling code, eg on GitHub, as part of open research practices</li> <li>Competence in freeware, specifically R or Python</li> </ul> | X<br><br><br>X | X<br><br><br>X<br><br>X<br><br>X |
| <b>Interpersonal &amp; communication skills</b>   |                |                                  |
| <ul style="list-style-type: none"> <li>Ability to present complex information effectively to a range of audiences both in writing and verbally.</li> <li>Excellent interpersonal and collaborative skills, with</li> </ul>  | X<br><br>X     |                                  |

|  |            |   |
|--|------------|---|
| <p>a reflective, and resilient attitude to challenge.</p> <ul style="list-style-type: none"> <li>• Able to manage the requirements of your project in a timely and organised manner, balancing working independently using your own initiative while also working effectively as part of a team.</li> </ul>  | X          |   |
| <b>Relevant experience</b>   |            |   |
| <ul style="list-style-type: none"> <li>• previous experience in computational neuroscience of memory, especially with model-based analyses of behavioural data</li> <li>• hands-on experience with how experimental data is collected in humans</li> <li>• sufficient programming skills to run numerical simulations and use large-scale optimization packages</li> </ul> | X<br><br>X | X |

## Declaration on Research Assessment

The University of Cambridge is a signatory to the San-Francisco Declaration on Research Assessment (DORA), and in recruitment or promotion evaluations will assess research on the basis of its merits rather than the journal or venue in which it is published. Applicants should not include Journal Impact Factors or uncontextualized metrics in their applications. Full details are at: <https://www.research-strategy.admin.cam.ac.uk/research-policy/DORA>

# The Department of Psychology



The Department of Experimental Psychology (one of the oldest psychology departments in the country) merged with the Department of Social and Developmental Psychology in 2012 to create a new larger Department of Psychology, and now has interests covering the full breadth of Psychology. It is not a large Department as measured by the number of University Teaching Officers (28), but it does accommodate many Post-Doctoral Research Scientists and Postgraduate Research Students within a number of world-class research groups. Members of the Department teach on a number of undergraduate courses and admits around 50 research postgraduates each year.

The Department is celebrated for its teaching; students are taught by researchers of international excellence and many of its past students have gone on to prominent positions in psychology and related fields throughout the world.

The Department is frequently rated in the top three world-wide. Research staff include University Teaching Officers, Postdoctoral Research Associates, Research Assistants, Laboratory Staff and Graduate Students conducting psychological and neuroscientific research into topics including sensory perception, attention, memory, language, cognitive development, psychopathology, computational models of psychological processes, associative learning, animal cognition and behaviour, drug addiction, family and gender, forensic psychology, new human genetics and assisted reproductive technologies, new information technologies, social cognition, social perception and personality, children's developing social understanding and relationships, social representations, judgment and decision-making, biological influences on development and behaviour, expression of personality in ideology and music, social and political attitudes and applied developmental psychology.

Facilities for research in human perception and cognition are excellent and includes access to cognitive neuroscience facilities, including 3T and 7T magnets and human electrophysiological and psychophysiological measurement, including magnetoencephalography. Excellent infant and child testing lab facilities are also available.

For more details relating to the Department of Psychology [www.psychol.cam.ac.uk](http://www.psychol.cam.ac.uk)

# The School of Biological Sciences



The School of the Biological Sciences is one of the six Schools that are responsible for delivering teaching and research and the administration of those activities within the University.

## About the School

The School of the Biological Sciences encompasses the Faculty Board of Biology and the Faculty Board of Veterinary Medicine and is represented on the Faculty Board of Clinical Medicine. It has responsibilities across three Triposes (the Natural Sciences Tripos, Medical and Veterinary Sciences Tripos and Psychological and Behavioural Sciences Tripos) and is responsible for graduate education within the Departments and University Partner Institutes that sit within the Faculty of Biology.

The School collaborates closely with the School of Clinical Medicine. At the graduate level the Graduate School of Life Sciences looks strategically at graduate provision and education across the two Schools and at the undergraduate level the Graduate Committee and Medical Education Committee with the Clinical School work closely together.

The School is a key player in the Cambridge Conservation Initiative as well as the majority of Cambridge Strategic Initiatives. The School is associated with the Museum of Zoology and the Botanic Garden. Key officers of the School plus details of relevant Research Ethics Committee (Human Biology, Psychology) can be found on the School's website: [www.bio.cam.ac.uk/](http://www.bio.cam.ac.uk/). Various subcommittees report to the Council, as required. Formal representation on the Council of the School (its most senior decision-making body) is outlined in Chapter 8 of the University's Statutes and Ordinances. Heads of School Institutes, as well as Heads of Departments, are currently co-opted on to the Council, together with representatives of the three Faculty Boards. In addition, the Head of the Botanic Gardens and a representative from the School of Technology attend as observers.

## Athena SWAN

The Athena SWAN Charter was launched in June 2005 to recognise and reward commitment to advancing the careers of women working in higher education in science, technology, engineering, mathematics and medicine (STEMM). Although developed to address the lack of female representation in these subjects, the activities that support the Charter will contribute towards a more positive working environment for all.

For more information on the history and principles of the Athena SWAN Charter please visit the Athena SWAN website.

The University of Cambridge was a founder member of Athena SWAN Charter and the University won its first award in the inaugural round of March 2006. Since then, the University has successfully renewed its Bronze Athena SWAN award in 2009 and 2012 and in 2014 achieved a Silver Athena SWAN award. Many of the Departments in the School of Biological Sciences hold awards at Bronze or Silver level and the School continues to support the Athena SWAN process across all subjects.

# Terms of Appointment

## Tenure and probation

Appointments will be made on a fixed-term basis until 1 October 2026. This post is grant funded (ESRC), and in the event that this funding should cease, the post may be at risk of redundancy. The Head of Department, or their nominee, will keep the role holder informed of the funding situation. Appointments will be subject to satisfactory completion of a six-month probationary period.

## Hours of Work and Working Pattern

The hours of work for the position are 37 hours per week, working Monday – Friday.

## Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a hybrid pension scheme. For further information please visit: [www.pensions.admin.cam.ac.uk/](http://www.pensions.admin.cam.ac.uk/).

## Annual leave

Full time employees are entitled to annual paid leave of 36 days inclusive of public holidays. For part-time employees, annual leave will be pro rata'd based on days worked.

## General information

### Pre-employment checks

### Right to work in the UK

We have a legal responsibility to ensure that you have the right to work in the UK before you can

start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it.

### Health declaration

Once an offer of employment has been made the successful candidate will be required to complete a work health declaration form.

### Qualifications

The person specification for this position lists qualifications that are essential and/or desirable. Please note that if you are offered the post you will be asked to provide your relevant original certificates of these qualifications.

**References** - offers of appointment will be subject to the receipt of satisfactory references.

### Equality and Diversity

We welcome applications from everyone, regardless of age, gender, ethnicity, disability, sexual orientation, gender identity, class, socio-economic background, religion and/or belief. We particularly encourage women and /or candidates from a Black, Asian and Minority Ethnic background to apply for this vacancy as they are currently under-represented at this level within our University.

### Information if you have a disability

The University welcomes

applications from individuals with disabilities. We are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so and, if successful, to assist them during their employment. Information for disabled applicants is available at <http://www.admin.cam.ac.uk/offices/hr/staff/disabled/>

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

If you prefer to discuss any special arrangements connected with a disability, please contact, [hr@psychol.cam.ac.uk](mailto:hr@psychol.cam.ac.uk), who is responsible for recruitment to this position.



# The University

The University of Cambridge is consistently ranked one of the best universities in the world, achieving academic excellence through its Faculties, Departments and other Institutions, together with the 31 Colleges.

The University is renowned for its record of discovery and innovation. It is one of the great institutions, with a regional, national and global reach, attracting the very best and brightest minds. Our staff and students shape the world around us for the better: we attract and partner with like-minded people.

Whether contributing to the development of new anti-cancer drugs, adding to the understanding of how black holes are formed, revolutionising the study of ancient settlements, convening academic expertise to offer solutions to the climate crisis, or analysing public attitudes towards democracy around the world, the University's research is remarkable in its breadth, quality and impact. The University also sits at the heart of Europe's largest technology cluster and has catalysed more than 1,500 high-tech companies. And yet what inspires our 24,000 students and 13,000 staff is not what has already been achieved, but what is possible in the future.

The education and experience of our students, based on a partnership between the University's academic Departments and Faculties and the 31 Colleges, is second to none. Every student is a member of one of the Colleges, each a community of students, academics and staff drawn from across the University's comprehensive range of subject areas.



The University is a self-governing community, with a system for decision-making that provides a high degree of accountability and transparency to its members. Each Department and Faculty is part of one of six academic Schools, but each of them, and each individual academic, has a great deal of autonomy. The Colleges are independent and self-governing, working in a symbiotic relationship with the University.

The University has a number of Institutions that are independent of any Faculty or Department and are not part of the academic Schools. These include the Institute of Continuing Education (which provides high-quality education to adults throughout their lives), the Fitzwilliam Museum, Kettle's Yard (an historic house and gallery that holds important collections of modern art) and the University Library. In addition to their diverse contributions to University and public life, these non-School Institutions are also important centres of teaching and research.

Cambridge University Press & Assessment provides academic publishing, examinations and learning materials worldwide, supporting the dissemination of research, academic development at school and in higher education, and international student mobility. Legally, the Press & Assessment is a department of the University. It provides very important funds to invest in the academic purposes of the University.

The University has made truly remarkable contributions to the sum of human understanding, with breakthrough ideas and discoveries that have changed the way we understand ourselves, our planet, and the universe around us. Yet the global and national contexts in which it operates are fast-changing and increasingly filled with uncertainty. In a world that is becoming - politically, economically, socially, and technologically – ever more interconnected but even less equal, the University's mission – “to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence” – has never been more relevant.



# About Us

**The University is one of the world's leading academic centres. It comprises 150 faculties and departments, together with a central administration and other institutions. Our institutions, museums and collections are a world-class resource for researchers, students and members of the public representing one of the country's highest concentrations of internationally important collections.**

The University has an annual income of £2 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £500 million per annum and continues to grow.

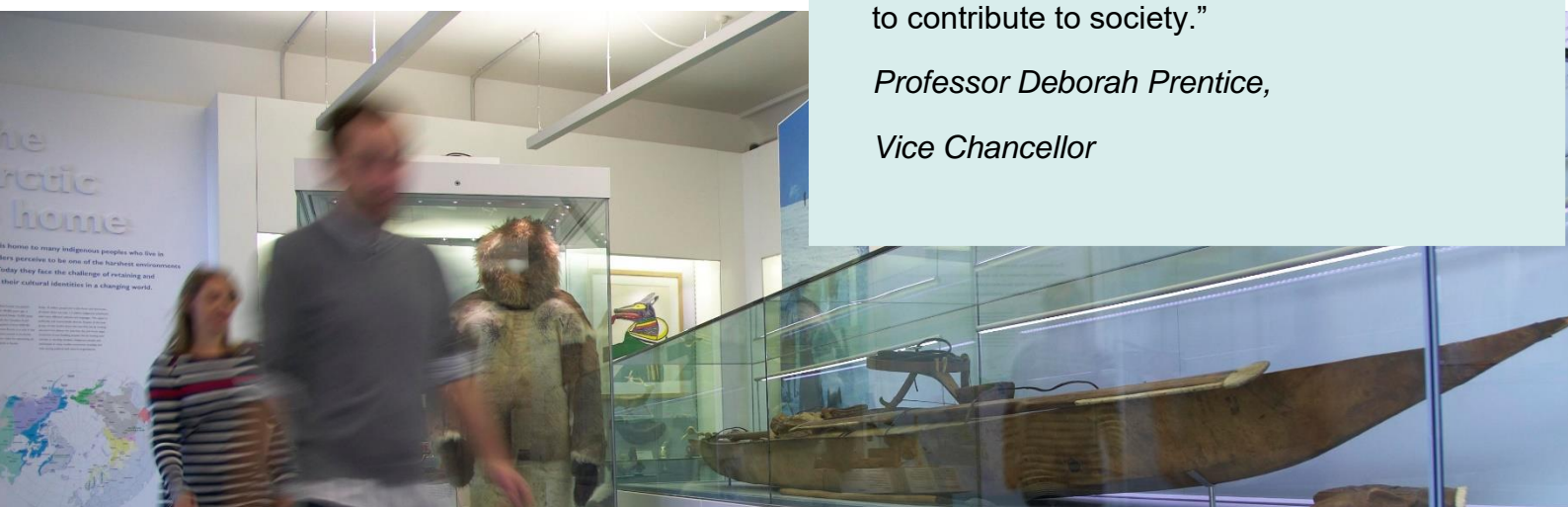
The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic staff are invited to join a College as a Teaching Fellow, which provides a further social and intellectual dimension. The Colleges admit undergraduate students, provide student accommodation and pastoral support and deliver small group teaching for undergraduates.

The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching.

Our instinct for seeking out excellence and setting up enduring and mutually beneficial collaborations has led us to establish strategic partnerships across the globe. Whether it is the successful Cambridge-Africa Programme involving universities in Ghana, Uganda and elsewhere on the African continent; or the close association with the government of India to pursue new research in crop science; or the creation, with Germany's Max Planck Institutes, of a Cambridge-based centre for the study of ethics, human economy and social change – international partnerships are now an inextricable part of the University's make-up.

“Through its outstanding education, research and innovation, the University of Cambridge has made – and continues to make – a lasting contribution to human knowledge and is flourishing. By working at the University of Cambridge, you will be joining a vibrant community of students, scholars and professional services staff committed to supporting and enhancing the University's mission to contribute to society.”

*Professor Deborah Prentice,  
Vice Chancellor*



# Working at the University

**Working at Cambridge you will join a diverse, talented and innovative community, with more than 24,000 students and over 13,000 staff from all walks of life and corners of the world.**

The University continually explores strategies to attract and retain the best people. It is committed to supporting its staff to achieve their best. We are a fair, diverse and inclusive society and we believe our staff are our greatest asset. There is strong commitment to developing institutional leadership and supporting and encouraging staff development at all levels.

The University offers a variety of roles including academic, research, professional, managerial and support roles. We also offer extensive benefits and excellent learning opportunities within a stimulating working environment.

The University's estate is undergoing the most significant transformation in its history. Cambridge has been able to create a science and technology campus to the west of the city centre, and is expanding further to the north west of Cambridge including investing in affordable homes for University key workers and community facilities. Even with their continued development, the University remains within walking or cycling distance across the campus. The University is a major partner on the Cambridge Biomedical Campus and continues to redevelop its historic city centre sites demonstrating a clear determination to ensure that we can offer the best facilities and opportunities for our staff and students.



## Equality, Diversity and Inclusion

The University has built its excellence on the diversity of its staff and student community. We aim to be a leader in fostering equality and inclusion, and in promoting respect and a sense of belonging for all. We encourage applications from all sections of society. All appointments are made on the basis of merit. We have an Equal Opportunities Policy, along with a range of diversity groups, including the Women's Staff Network, Race Equality Network and LGBT+ Staff Network. More details are available here:

<http://www.equality.admin.cam.ac.uk/>

The University has a bronze Race Equality Charter award, with a framework for improving the representation, progression and success of minority ethnic staff and students within higher education. Furthermore, the University's silver Athena swan award recognises and celebrates good practice in recruiting, retaining and promoting gender equality.

# Living in Cambridge

Cambridge is rich in cultural diversity. From beautiful University and College buildings, museums and art galleries, quaint gardens and punts on the River Cam, to a vibrant restaurant and café scene, our employees are surrounded by the wonderful features of this unique city.

You can find a wide-range of high street shops and 3 shopping centres, with independent alternatives at the historic market and nestled within the passageways in the city centre. You will find a cinema, bowling alley, a nightclub and various live performances at the Cambridge Leisure Park, with further entertainment options at the Corn Exchange, Arts Theatre and the ADC Theatre. Further information can be found on the Visit Cambridge website.

If you prefer the faster pace of life, London is a 45-minute train journey away. For those travelling from overseas, Stansted Airport is just 45 minutes away and Heathrow Airport under 2 hours away. The University is a short distance from a host of other attractions such as Ely Cathedral, Newmarket Races and various wildlife parks and stately homes. Cambridge is also within easy reach of the beautiful Broads and coastlines of Norfolk and Suffolk.

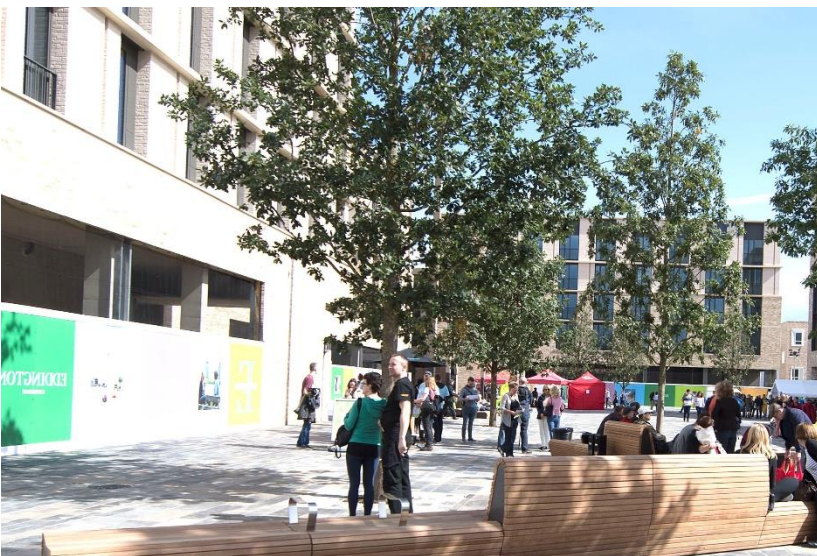
## Relocation Support

The University recognises the importance of helping individuals to move and settle into a new area. We provide support and guidance to those relocating internationally or domestically to take up a post at the University of Cambridge, liaising with other University offices and selected partners to ensure comprehensive relocation support is available. This includes: accommodation, childcare, schools, banking, immigration and transport. If you would like further information, please visit <https://www.accommodation.cam.ac.uk/RelocationService/>. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of

## Accommodation Service

The University Accommodation Service helps staff, students and visiting scholars who are affiliated to the University in their search for suitable accommodation in Cambridge. The dedicated accommodation team can provide access to a wide range of University-owned furnished and unfurnished properties, and has a database of private sector accommodation available for short and long-term lets. For further information and to register with this free service please visit:

<https://www.accommodation.cam.ac.uk/>



# What Cambridge can offer

**We offer a comprehensive reward package to attract, motivate and retain high performing staff at all levels and in all areas of work.**

The University offers a wide range of competitive benefits, from family leave entitlement, to shopping and travel discount schemes. Our generous annual leave package contributes to the positive wellbeing of our University employees. Sabbatical leave enables academics to focus on research and scholarship, whilst still maintaining their full salary. The University also has a [career break scheme](#) for academic and academic-related staff, with additional flexible working policies for all other staff.

## Pay and benefits

The University salary structure includes automatic service-related pay progression in many of its grades and an annual cost of living increase. In addition to this, employees are rewarded for outstanding contribution through a number of regular pay progression schemes. The University offers attractive pensions schemes for employees, with an additional benefit of a salary exchange arrangement providing tax and national insurance savings.



## CAMbens employee benefits

The University offers employees a wide range of competitive benefits, known as CAMbens. CAMbens offers something for everyone across a range of categories, including:

- Financial Benefits, including shopping discounts (both local and national) and a Payroll Giving scheme;
- Relocation and Accommodation Benefits, including relocation assistance and interest-free Rental Deposit Loans;
- Travel Benefits, including Cycle to Work, discounts on train season tickets and interest-free Travel to Work loans;
- Family Friendly and Lifestyle Benefits, including support with childcare and family friendly policies;
- Health and Wellbeing Benefits, including a University Staff Counselling Service, discounts at the University Sports Centre, and other local gyms, and healthcare schemes.



# What Cambridge can offer

## Family-friendly policies

The University recognises the importance of supporting its staff. We have a range of family-friendly policies to aid employees' work-life balance including a generous maternity, adoption and shared parental leave entitlement of 26 weeks' full pay, and paid emergency leave for parents and carers.

Other family-friendly support includes:

Our highly regarded workplace nurseries, a childcare salary exchange scheme and a high-quality holiday Playscheme are available to help support University employees with caring responsibilities (subject to demand and qualifying criteria). Further childcare information can be found here:

<https://www.childcare.admin.cam.ac.uk/>

The Newcomers and Visiting Scholars Group (<https://www.nvs.admin.cam.ac.uk/>) is an organisation within the University that welcomes the partners and families of visiting scholars and new members of the University. Run by volunteers, the group offers opportunities to visit interesting Cambridge venues, learn about the community, take part in social events and gain local knowledge while developing a strong support network of both residents and other newcomers.

## Your wellbeing

The University's Sport Centre, Counselling Services and Occupational Health are just some of the support services available to University employees to promote their physical and mental wellbeing. The University delivers The Festival of Wellbeing annually, which is a programme of stimulating talks and activities, which aim to promote wellbeing and good mental and physical health. The University also hosts the [Cambridge Festival](#), which is a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.

## Development opportunities

We support new employees to settle in through various activities as well as supporting their professional and career development on an ongoing basis. Our Personal and Professional Development (PPD) team provide development opportunities for all University employees, including face-to-face sessions, online learning modules and webinars. All employees also have unlimited access to LinkedIn Learning to support their development. Both new and existing employees can undertake funded Apprenticeships, which lead to a range of vocational and professional qualifications. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and institutions. A range of University training providers also offer specialist learning and development in their own areas e.g. teaching and learning, digital literacy, finance, health and wellbeing, safety.



# How to apply

Applications should be submitted online via the University of Cambridge jobs page [www.jobs.cam.ac.uk](http://www.jobs.cam.ac.uk) by clicking “Apply online” in the job advert. You will need an email address to register for our online system.

Informal enquiries are welcomed and should be directed to:

Professor Deborah Talmi ([dt492@cam.ac.uk](mailto:dt492@cam.ac.uk))

If you have any queries regarding the application process, please contact:

Fiona Lyall Grant (email: [hr@psychol.cam.ac.uk](mailto:hr@psychol.cam.ac.uk))

The closing date for applications is: Wednesday 26 February at midnight

The interview date for the role: is Friday 7<sup>th</sup> March 2025

