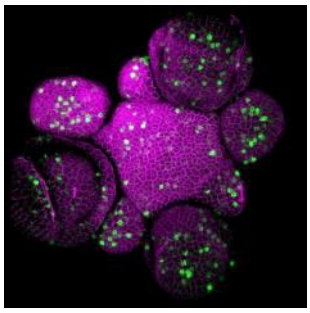
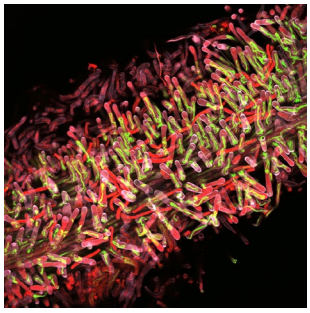
UNIVERSITY OF CAMBRIDGE

Research Associate in Physical Biology – Mitotic Mechanisms

Sainsbury Laboratory Cambridge University (SLCU)

Closing Date: 6 November 2026

Job Reference: PT51399

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The role

Salary:
£33,002-£35,608
Grade 5

(when PhD thesis submitted but not yet awarded)

£37,694-£46,049 - Grade 7

Contract:
Fixed-term contract

Location: Sainsbury Laboratory

Department:
Sainsbury Laboratory

Responsible to:
Group Leader

Working pattern:
Full-time
37 hours per week

Purpose of the role

Applications are invited for a Post-doctoral Research Associate position in the group of Dr. Francois Nedelec at the Sainsbury Laboratory Cambridge University (SLCU). This call is open to carry out fundamental research in the field of physical biology, specifically studying mitotic spindle assembly and chromosome segregation. This post is funded by a prestigious ERC Synergy project BioMecaNet in collaboration with the experimental groups of Andrea Musacchio (MPI of Molecular Physiology, Dortmund, DE) and Thomas Surrey (CRG, Barcelona, SP).

Applicants must have or be close to obtaining a PhD in computational biology, physics, applied mathematics, computer science or related field and have a proven track record of scientific publication. Prior experience in modelling of biological systems, or expertise in systems biology and/or theoretical biophysics, in general, would be advantageous. The successful applicant will have the opportunity to develop skills in mathematical modelling, advanced numerical simulations and machine learning.

Fully involved in the basic research in these areas whilst also writing up their research work for presentation and publication, the post holder will have the opportunity to assist in the supervision of student projects, and to engage in teaching if desired. Good and effective communication skills are essential (e.g. presentations, outreach activities).

The post will be available until 30 June 2028.

Job role

The project's primary focus is the comprehensive analysis of the fundamental mechanisms underlying chromosome segregation, employing advanced mathematical models and computer simulations. The research will concentrate on a thorough investigation into the mechanics of the cytoskeleton, particularly in relation to the formation of a functional bipolar mitotic spindle.

A central goal of the project is to integrate filament mechanics and cellular chemistry into the modeling process, with a specific aim to develop physically accurate simulations of chromosome bi-orientation and segregation.

Person specification

	Essential	Desirable
Education		
Have or be close to obtaining a PhD in computational biology, physics, applied mathematics, computer science or related field	√	
Specialist knowledge & skills		
Prior experience in modelling of biological systems, or expertise in systems biology and/or theoretical biophysics		√
Interpersonal & communication skills		
Good and effective communication skills are essential (e.g. presentations, outreach activities)	√	
Experience and achievements		
Have a proven track record of scientific publication	√	
Additional requirements		
Additional essential skills and knowledge as set out in the advert text	√	
Additional advantageous skills as set out in the advert text	√	

The Sainsbury Laboratory

SLCU is a research institute funded by the Gatsby Charitable Foundation within the School of Biological Sciences. The Laboratory is focused on increasing understanding of the regulatory systems underlying plant growth and development. It brings together specialists in biological, physical, and mathematical sciences integrating a range of wet-lab experimental research with computational modelling. This interdisciplinary approach is essential for understanding the complex dynamic and self-organising properties of plants.

About the Institute

SLCU opened in 2011 in a purpose-built facility located within the Cambridge University Botanic Garden, within walking distance of central Cambridge and the train station. It is structured and operates as a research institute within the University of Cambridge.

SLCU has close connections with many other University of Cambridge departments, including Plant Sciences, Crop Science Centre, Genetics, Biochemistry, Chemistry, Engineering, Mathematics, Physics and nearby centres closely associated with the University, such as the European Bioinformatics Institute, the Wellcome Trust Sanger Institute, NIAB, the MRC Laboratory for Molecular Biology and Microsoft Research, as well as stakeholder networks.

More information at **slcu.cam.ac.uk**

The facilities

The Institute is well equipped for pioneering plant science research with its modern 11,000m^2 building that incorporates laboratories, support areas, and meeting spaces, together with the University's Herbarium, a public café and a 121-seat auditorium where academic symposia and public talks are held.

SLCU runs a range of centrally managed facilities and services. It has 42 controlled environment growth rooms, 300m^2 of growing space under glass, tissue culture rooms and Level 2 Containment facilities. There is an in-house state-of-the-art advanced imaging facility, including live imaging of developing plant tissues, and high-resolution scanning electron microscopy.

The Laboratory is also set-up to support advanced bioinformatics, image processing and modelling software development. The Institute has a substantial core equipment budget, both for initial provision and recurrent needs. Future priorities will depend on the needs of appointee.

Flexible and inclusive working environment

SLCU has a wide range of family-friendly benefits, including maternity leave that exceeds the legal minimum, additional paternity leave, parental leave, adoption leave, childcare provision and flexible working options.

We are a diverse community with people from more than 25 countries. At SLCU we foster an inclusive culture in which people can speak openly, try new things and be bold. We welcome people from all backgrounds and respect, celebrate and value everyone regardless of race, colour, gender identity, age, religion, sexual orientation, physical or mental ability, nationality or neurodiversity. SLCU actively supports equality, diversity and inclusion and encourages applications from all sections of society. SLCU currently holds a silver Athena Swan award.

Our people

SLCU is a community of about 120 scientists in research groups of up to 12 people, headed by Research Group Leaders who represent a balance between senior established academic staff and more junior and mid-career researchers. At steady state the Institute hosts 15 research groups, including 11 Group Leaders and 4 Career Development Fellows. The current Director is Professor Henrik Jönsson, who also leads his own research group. The community includes about 20 PhD students, 55 postdocs, a regular cohort of visiting students and around 30 professional staff.

The School of Biological Sciences

The School of Biological Sciences is one of six Schools of the University of Cambridge. In line with the University's mission, the academic vision of the School is the pursuit of education, learning and research at the highest international levels of excellence. Our goal is to continue to deliver research and teaching at the highest levels, working in innovative ways to achieve ongoing excellence.

About the School

The research and teaching carried out in the School of the Biological Sciences is diverse and covers animal, human, plant and microbial science from the atomic, molecular and cellular levels through to tissues, organs, whole organisms, populations, ecosystems, biodiversity, and human behaviour. The research has impacts on health and disease across species, agriculture, conservation and the environment as well as on the pharmaceutical and biotechnology industries, with direct translational relevance to the clinic, public services and social policy, and the bio-economy.

The School is organised into nine Departments (Biochemistry; Genetics; Pathology; Pharmacology; Physiology, Development and Neuroscience; Plant Sciences; Psychology; Veterinary Medicine; Zoology) and four major interdisciplinary research institutes (Gurdon Institute, Cambridge Stem Cell Institute, Sainsbury Laboratory and the MRC Toxicology Unit) all of which are involved in fundamental biological research with varying contributions to undergraduate and postgraduate teaching.

The School has oversight of the Botanic Garden, the Herbarium and the Museum of Zoology through the Departments of Plant Sciences and Zoology respectively. The School also contributes to the Cambridge Conservation Initiative, an unprecedented and highly successful amalgamation of cross-Schools groups and Non-Governmental Organisations.

Terms of Appointment

Tenure and probation

The appointment will be made on a fixed-term basis until 30 June 2028. The appointment will be subject to satisfactory completion of a six month probationary period.

Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme). For further information please visit: https://www.pensions.admin.cam.ac.uk/

Annual leave

Research staff are entitled to annual paid leave of 41 days inclusive of public holidays. The annual leave year runs from 1 October until 30 September.

General information:

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 with 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.

References

Offers of appointment will be subject to the receipt of satisfactory references.

Application process

To submit an application for this vacancy, please click on the link in the 'Apply online' section of the advert published on the University's Job Opportunities pages. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Please ensure that you upload a copy of your full Curriculum Vitae (CV) including a list of publications, a covering letter highlighting your suitability for the position and contact information of three referees in the Upload section of the online application. If you upload any additional documents which have not been requested, we will not be able to consider these as part of your application.

The closing date for applications is stated in the advert. If you have any questions about this vacancy or the application process, please email HR@slcu.cam.ac.uk.

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 https://www.hr.admin.cam.ac.uk/policies-procedures/disabled-applicants-and-members-staff

We encourage you to declare any disability that you may have, and any 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.

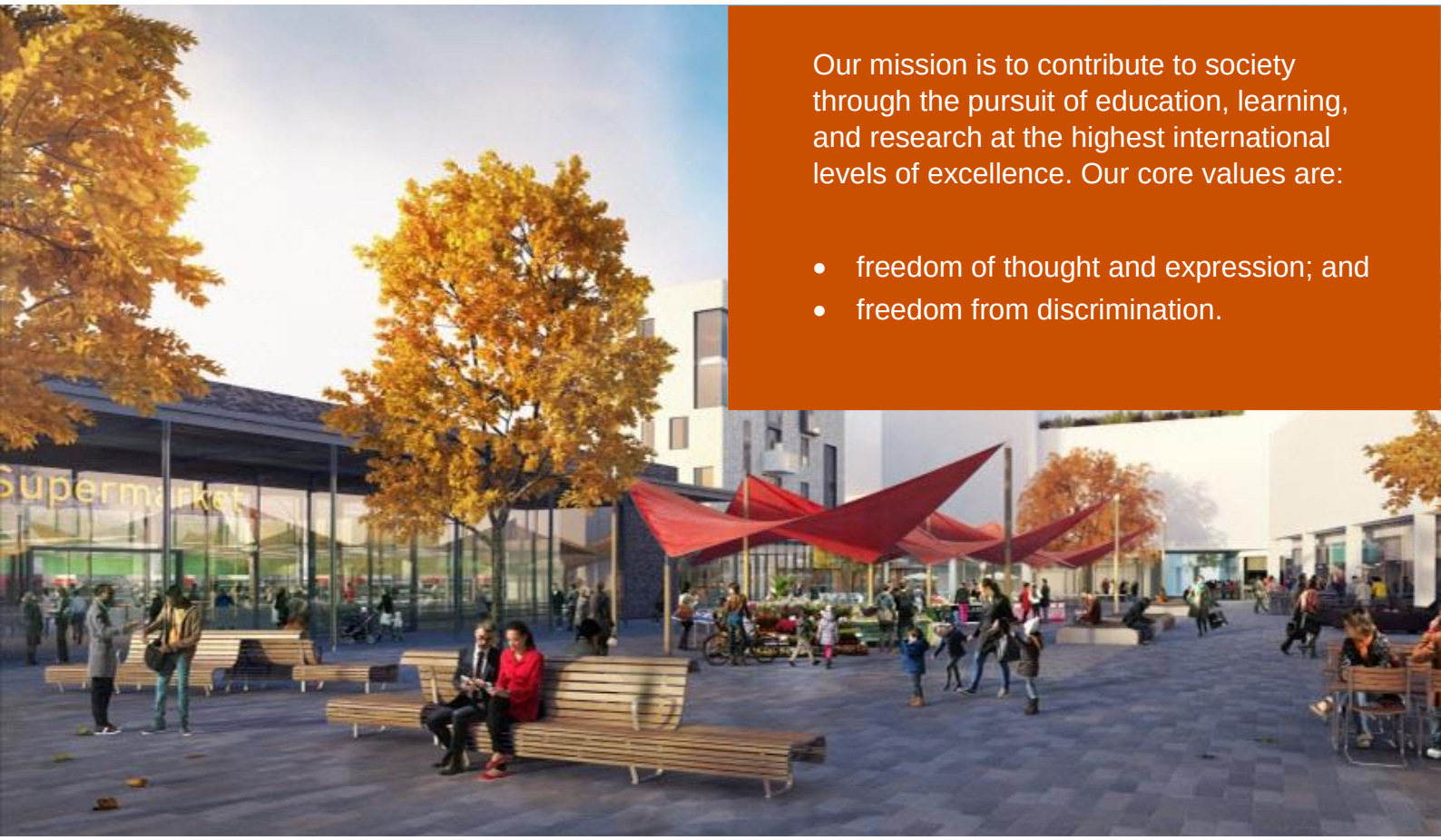
If you prefer to discuss any special arrangements connected with a disability please contact the HR Team on hr@slcu.cam.ac.uk

The University

The University of Cambridge is one of the world's oldest and most successful universities. We are a renowned centre for research, education, and scholarship that makes a significant contribution to society. The University is consistently ranked amongst the top universities in the world. Our affiliates have won more Nobel Prizes than any other University.

Our sustained pursuit of academic excellence is built on a long history of world-leading teaching and research within a distinctive collegiate system. For eight centuries our ideas and innovations have shaped the world. Our principal goal is to remain one of the world's leading universities in an increasingly competitive global higher education sector. Today the University of Cambridge is at the centre of a cluster of over 4,300 businesses employing 58,000 people.

Our capital investment projects include academic and commercial growth at both the West Cambridge Innovation District, and the Biomedical Campus in the south of the city. Eddington, in North West Cambridge, is a mixed-use development including key worker housing for staff, a community centre and a new primary school, managed by the University. Through these projects, the University is deeply embedded in, and committed to serving, our local community. These are all conspicuous signs of a University that is not only adapting to new needs, but also anticipating the future.



Our mission is to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence. Our core values are:

- freedom of thought and expression; and
- freedom from discrimination.

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.

"Cambridge graduates and researchers have made – and continue to make – a colossal contribution to human knowledge and the understanding of the world around us. Their work touches on the lives and livelihoods of everyone from patients diagnosed with life-threatening diseases, to residents of areas critically affected by climate change, to children growing up in conflict zones. It has a lasting impact on our society, our economy and our culture: the world is truly a better place thanks to their efforts."

Stephen Toope, Vice Chancellor 2019

Working at the University

Working at Cambridge you will join a diverse, talented and innovative community, with more than 23,000 students and over 16,000 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.

We offer 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 our 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 we continue to redevelop our historic city centre sites demonstrating our determination to ensure that we can offer the best facilities and opportunities for our staff and students.

Equality & Diversity

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 at 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.

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 for others.

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.

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 18 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 may be 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 is an organisation within the University run by volunteers whose aim is to help newly arrived wives, husbands, partners and families of Visiting Scholars and members of the University to settle in Cambridge and give them an opportunity to meet local people. The Postdoc Academy supports the postdoctoral community within Cambridge. Further details are available here:
https://www.postdocacademy.cam.ac.uk/

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 by clicking "Apply online" in the job advert. You will need an email address to register for our online system.

Scientific enquiries apart from the formal application process should be directed to Dr Francois Nedelec at Francois.Nedelec@slcu.cam.ac.uk

If you have any queries regarding the application process please contact the HR Team on hr@slcu.cam.ac.uk.

The closing date for applications is 6 November 2026.

UNIVERSITY OF CAMBRIDGE