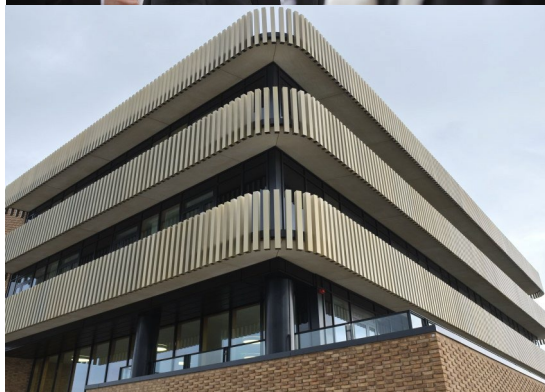
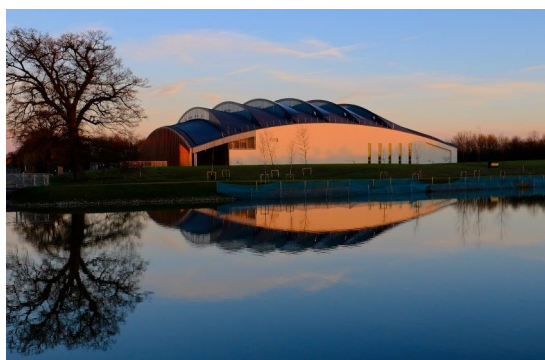


Senior Royce Application Scientist

Department of Materials Science and Metallurgy

Closing date: Sunday 27th April 2025

Job Reference: LJ45685



The role

Salary:

£41,671 - £55,755

Contract:

Fixed term (2 years)

Location:

West Cambridge

Department:

Department of Materials
Science and Metallurgy

Responsible to:

Profs. Ruth Cameron, Serena Best,
Roisin Owens

Working pattern:

Full-time

Purpose of the role

The Royce Senior Application Scientist will be a biologist with expertise in a variety of biological processes and techniques and also familiar with relevant materials science techniques. They need to be research-active to ensure that they are familiar with the current state of the art both in terms of practise and equipment. The Role Holder will manage the accelerated translation of materials science-related technology be responsible for the following Royce facilities: general cell culture equipment (including a microbiological safety cabinet, incubator, plate reader and microscope), a freeze drier, a two photon confocal microscope with electrophysiology attachment, a suite for acquisition of electrical measurements (including a potentiostat and multimeter), a Luminex 200, a vibratome, and related computers. The Senior Applications Scientist will be an advocate for the Facility to attract users from around the UK and will interact closely with the Henry Royce Institute.

As part of Royce's strategy to support accelerated translation of materials science-related technology, we aim to provide companies of all sizes with timely access to project and facility capability to support new product conception and innovation. In many cases these are short duration projects designed to answer a specific question. These short, sprint projects are difficult to support in a traditional academic environment, hence Royce is supporting the addition of a Royce Application Scientists across its Partner Institutions with experience aligned to our key research areas, but not constrained by these boundaries.

The role encompasses training users in biological safety and advanced biological techniques, managing and maintaining the day to day running of the equipment, administering booking systems, recording costings and income, and general management of the accounts.



We seek to employ a Senior Application Scientist with expertise in biomedical scaffold production, biological evaluation of materials and evaluation of bioelectronic behaviour of materials.

Key responsibilities

- Ensure the smooth running of the 3D Bioelectronics Suite. Provide advice on computer hardware and software, advise and define computer interfaces for experiments, purchase components to a set budget, manage any outsourcing of the construction. Users probably rising to approximately 50 in the booking system
- Manage the 3D Bioelectronics Suite Facility. Provide resources and advice on research and design layouts equipment and experiments, operate key equipment, undertake online procurement for all researchers.
- Develop new techniques and methods to support the effective use of the facility by research groups. Review journals, other publications and attend relevant scientific meetings with peers to identify new techniques and methods for introduction to the facility. Calculate, interpret and validate all analytical data produced, co-author peer reviewed publications and presentations.
- Proactively engage with companies and research technology organisations to identify potential projects. Act as the key point of contact for companies running or looking to run short term projects. Collaborate with other Application Scientists in the delivery of more complex multidisciplinary projects. Provide research consultancy to external collaborators, arrange and conduct short research projects for external collaborators, work with group heads to develop and carry out long-term research projects to provide additional funding for research group, assist with the development of new research proposals, review journals, magazines and specialist web pages, participate in forums and conferences, take part in continuing professional development. Work with the wider technical teams and Technology Platform Leads as the technical lead to deliver short projects with positive outcomes.
- Responsibility for safety within the facility, ensure that the permits-to-operate for the apparatus are kept up-to-date, liaise with the departmental health and safety officers to implement the COSHH and risk assessments of those using the laboratories and the disposal of hazardous samples from the laboratories, manage and update the management and safety guide, induct staff and students.
- Creation and Delivery of Short/Sprint Projects: Issue proposals for work, including deliverables, timelines, and costs. Undertake data analysis to support the project work from partners and clients, produce customer facing technical reports and answer any follow-up questions
- Close projects and complete internal reporting to allow invoicing and tracking of key outputs. Demonstrate and instruct students and visitors in the use of laboratory instruments/equipment, liaise with departmental workshops and instrument/equipment manufacturers to ensure that the instruments/equipment are maintained and repaired, troubleshoot and repair equipment, operate a preventative maintenance plan.
- Participate in scientific meetings with peers and in exploratory meetings with prospective clients and contribute to the co-creation of projects and technical plans, develop costings and pricing suitable for quotes and proposals to win and deliver successful engagements, working with facilities and business engagement teams and industry technical leads. Provide administration of research grants held by including, liaising with the department's Accounts Section and occasionally funding bodies, prepare the full economic costing for research grant proposals in collaboration with academic staff within the department, assist academic staff with grant applications. Maintain a project management strategy to ensure all projects are fully documented. Networking with the wider Royce Support ongoing collaborations between Royce, companies and the wider HEI community. Work with Business Engagement and Communications teams to capture and report impact from projects (for example by preparing case studies for website publication). Work with the other Application Scientists to share information, best practice and potential projects
- Responsibility for the specification and supply of chemicals/ consumables and equipment. Place orders for the research groups and instrument components

(spares and consumables) using the University finance system (CUFS), provide input into the purchase of high value equipment for the facility. Maintain web pages for the instruments and booking system

Person specification

Essential or Desirable

Experience

- Previous experience in establishing and maintaining a biological research laboratory E
- Experience of management and operation of a Containment Level 2 laboratory E
- Experience of advanced biochemical characterisation tools E
- Experience of managing biological health and safety at Department level E
- Experience of teaching and supervising undergraduates, PhD students and PDRAs

Skills

- Knowledge of the operation of the research instruments/equipment used within the group(s). E
- Excellent instrument/equipment assembly skills E
- Excellent communication and organisational skills E
- Ability to write reports for research and consultancy projects
- Software skills in specialist area E
- Demonstrate highly specialist knowledge of research technical work, involving a critical understanding of relevant theory and/or principles outside of the immediate specialism E
- Ability to analyse budgets and prepare costings for equipment usage E
- Ability to prepare grant applications E
- Ability to Manage online booking systems D

Qualifications

- A PhD in biological sciences. E



The Department of Materials Science and Metallurgy

The Department has over 30 academic staff, (including staff extended beyond retirement age, established academic staff and early-career research fellows), approximately 50 administrative, technical and other support staff, and around 80 postdoctoral researchers, 150 postgraduate students and 20 visiting scientists at any time. Our research falls into six themes: structural materials, device materials, materials chemistry, clean energy and sustainability, medical and pharmaceutical materials and materials characterisation (particularly electron microscopy).

In 2013 the Department moved to a new purpose-built building on the West Cambridge Site. This is the first time all academic groups have been housed together in a single building. In the last UK Research Excellence Framework (REF 2021), for the first time, our Department was included within the Engineering Unit of Assessment (UoA), together with the Department of Chemical Engineering and Biotechnology, and the Department of Engineering. 99% of the submission as a whole was rated 'world leading' or 'internationally excellent'.

Research funding totals around £12M per annum, and come from a variety of sources: about 40% from the UK research councils and government, 40% from the EU (including a large number of European Research Council grants), 20% for industry, overseas governments and charities.

The Department offers a 3 or 4 year BA/MSci degree within the Natural Sciences Tripos (NST), with the majority of students completing the 4-year course. In year 1 the students read four subjects, in year 2 three subjects, before specialising in one subject only. Over 280 take Materials Science in year 1, over 85 in year 2, and over 35 in years 3 and 4. Year 4 includes students who have transferred from other universities to read for the Master of Advanced Studies (MASt) degree. In addition, 10 to 20 students are admitted each year to the one-year MPhil in Micro- and Nanotechnology Enterprise administered by the Department. Further details of the teaching programme can be found on the teaching pages of the departmental website: <http://www.msm.cam.ac.uk/teaching>

We have a thriving Graduate School.

Almost all postgraduate research students are working for the PhD, which they complete on average in 3.5 years. We play a prominent role in a number of centres for doctoral training centre, including the NanoDTC and the CDT in Computational Methods for Materials Science (in collaboration with the Department of Physics at Cambridge), and the DTC in Structural Metallics linking Materials at Cambridge with sister departments at Birmingham and Swansea.

For more information:

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

The School of the Physical Sciences

The School of the Physical Sciences is one of the six Schools making up the academic work of the University. It comprises the following Departments: Applied Mathematics and Theoretical Physics (DAMTP), Chemistry, Earth Sciences, Geography (including the Scott Polar Research Institute), Institute of Astronomy, Isaac Newton Institute of Mathematical Sciences, Materials Sciences and Metallurgy, Physics (Cavendish Laboratory), Pure Mathematics and Mathematical Statistics (DPMMS).

The School's aim is to contribute to our understanding of the physical world through excellence in observational, theoretical and experimental science and to extend quantitative, qualitative and combined methodologies to address problems in the fields of biology, technology, medicine, social science and the humanities. In pursuit of these goals, the School coordinates objectives in research, teaching and infrastructure.

The School is responsible for allocating core funds to departments and provides broad strategic focus across its constituent departments in a number of areas including: research activity, undergraduate and graduate education, estate needs, fundraising and human resources. As part of the University's planning process, the School prepares a financial and academic plan which sets out strategic objectives, and determines budgets as well as the flow of resources to departments. The School manages a wide range of administrative activities and

projects across its departments and works alongside other Schools to further interdisciplinary research.

The School has over 1500 members of staff, over 3000 students and an annual budget of over £100 million.

The Office of the School of Physical Sciences is a small team led by the Head of Schools, currently Professor Nigel Peake, the School Secretary, the Director of Education and the Finance Manager. As well as the Deputy Secretary, there are currently six other staff, as well as those in the Degree Committee office. The wider School team supporting our Departments also include representatives from HR, Fundraising, and Research Operations who are assigned to the School.

The Office of the School currently occupies a suite of offices in 17 Mill Lane.

More information about the School Office and links to the websites of the School's constituent Department can be found at the SPS website:
<https://www.physsci.cam.ac.uk>



Terms of appointment

Tenure and probation

Appointments will be made on a fixed -term basis for a period of two years due to limited funding. Appointments will be subject to satisfactory completion of a nine-month probationary period.

Hours of Work and Working Pattern

The hours of work for the position 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/

Annual leave

Full time employees are entitled to annual paid leave of 41 days inclusive of public holidays. For new part-time employees, annual leave will be pro rata'd based on days worked.

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.

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 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/>

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 first-class 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 the West Cambridge site, the North West Cambridge development and the growth of the Biomedical Campus in the south of the city. The North West Cambridge development includes the opening of a primary school – the first in the UK to be managed by a University. So we are 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 £1.66 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £400 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 students, provide

Our ideas and innovations have shaped the world. Our campaign, 'Dear World... Yours, Cambridge', will raise £2 billion to help us shape all our futures.

student accommodation and deliver small group teaching. The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching and conducting research.

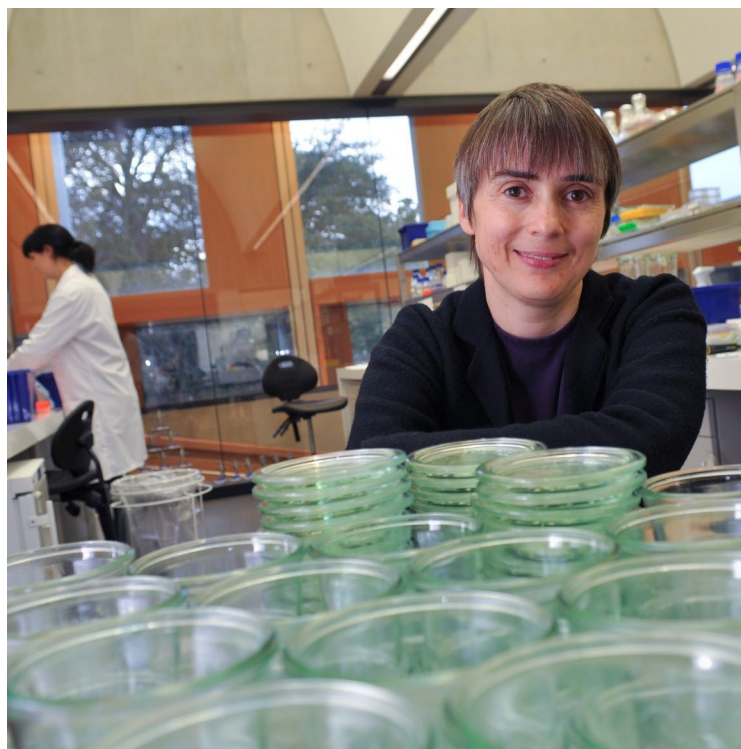
The University's estate is undergoing the most significant transformation in its history. Cambridge has been able to create a new science and technology campus to the west of the city centre, and is now expanding further to the north west of Cambridge including investing in affordable homes for University 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.

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

Working at the University

Working at Cambridge you will join a diverse, talented and innovative community, with more than 18,000 students and over 11,000 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. Furthermore, the University's Athena SWAN award recognises and celebrates good practice in recruiting, retaining and promoting women. 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 has signed up to the Race Equality Charter, a notional framework for improving the representation, progression and success of minority ethnic staff and students within higher education.



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.

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.

Further information about attractions in and around Cambridge can be found at [Visit Cambridge](http://www.visitcambridge.org), the official tourism website for the city.



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.

CAMbens employee benefits

We offer a CAMbens scheme for University employees, providing access to online and in-store shopping discounts and cashback. With more than 2,000 participating retailers, employees can save money on a wide range of household expenses, from groceries and clothes, to holidays and insurance and much more. A range of local discounts are also available, helping employees to save money whilst also supporting local Cambridge businesses. CAMbens Cars and CAMbens Cycle to Work salary sacrifice schemes are also available, which enable employees to save money on transport costs. A 10% discount rate on the purchase of train season tickets, bulk buy tickets and an interest free travel to work loan are also available for staff of the University of Cambridge.

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 emergency family care support via My Family Care.

In addition, our Ofsted rated 'outstanding' workplace nurseries, childcare vouchers, a childcare salary sacrifice scheme and a high quality holiday play scheme are available to help support University employees with caring responsibilities. 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.

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. There are many societies in Cambridge catering for almost every taste and interest. Whether you want to take part in a sport, participate in music or drama, pursue a hobby, or join a political group, you will almost certainly find that a society exists for this purpose. The University also hosts the [Cambridge Science Festival](#) and [Cambridge Festival of Ideas](#), as well as [Open Cambridge](#) weekend, which together attract over 50,000 visitors per year. The festivals are a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.



What Cambridge can offer

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. Payroll giving is also a simple, tax-efficient way for employees to make monthly donations to charity.

Relocating to Cambridge

The University Accommodation Service exists to help employees in their search for a rental home in Cambridge. A new University development at North West Cambridge called Eddington offers subsidised rented accommodation to University staff. The development consists of high quality furnished one and two bedroom apartments. For more information about the development and how to apply please visit the website www.nwcambridge.co.uk



The importance of helping individuals settle into a new area is also recognised by the University. The Shared Equity Scheme <https://www.hr.admin.cam.ac.uk/pay-benefits/cambens-employee-benefits/financial/shared-equity-scheme> provides financial assistance to qualifying new members of staff with the purchase of living accommodation, where they have to relocate to take up their appointment. Removal expenses are also available for qualifying new members of staff.



Equality & diversity

The University has a vibrant and varied community. We support and encourage under-represented groups and we value diversity. We welcome applications from individuals with disabilities. Our recruitment and selection procedures follow best practice. We have an Equal Opportunities Policy, along with a range of diversity networks for women, black and minority ethnic and lesbian, gay, bisexual and transgender staff. More details are available here: <http://www.equality.admin.cam.ac.uk/>

Development opportunities

We support new employees to settle in through various activities. The encouragement of career development for all staff is one of the University's values and we put this into practice through various services and initiatives. Our Personal and Professional Development Department provides development opportunities and courses for all University employees. These include face-to-face sessions, online learning modules and webinars. Employees may also apply for financial support to undertake training that will lead to a qualification. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and development for all staff is one of the University's values and we put this into practice through various services and initiatives. Our Personal and Professional Development Department provides development opportunities and courses for all University employees. These include face-to-face sessions, online learning modules and webinars. Employees may also apply for financial support to undertake training that will lead to a qualification. 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.

How to apply

Submitting an application

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.

The University of Cambridge is a signatory of the San Francisco Declaration on Research Assessment (DORA). DORA recognises the need to improve the ways in which the outputs of scholarly research are evaluated. The University expects candidates to apply the principles of DORA when preparing their applications. We do not use journal-level metrics when assessing the quality of research outputs. Applicants should not include journal-level metrics, such as the Journal Impact Factor, anywhere in their application materials. More information about DORA, its principles and aims can be found at: <https://sfdora.org/> and <https://www.research-strategy.admin.cam.ac.uk/research-policy/DORA>.

Informal enquiries are welcomed and should be directed to:

Prof. Serena Best (smb51@cam.ac.uk) and **Prof. Ruth Cameron** (rec11@cam.ac.uk)

The closing date for applications is **Sunday 27th April 2025**



UNIVERSITY OF
CAMBRIDGE