

The Tata Steel Professorship of Metallurgy

Department of Materials Science and Metallurgy

Closing date: 20 April 2023

Job Reference: LJ35052



The Tata Steel Professorship of Metallurgy

Background to the role

The Tata Steel Professorship of Metallurgy was established in 2008 through a donation from Tata Steel UK Ltd. Thanks to the generosity of Tata Steel, the Professorship benefits from a permanent endowment which provides research funding and the opportunity to run a world leading Metallurgy group in the Department of Materials Science & Metallurgy (DMSM) in Cambridge.

The Professorship is focused on metallurgical research including, but not limited to, ferrous metals. The Professor will be provided with research space in the DMSM where there are extensive shared facilities for materials fabrication and characterisation.

Personal profile

The successful candidate will be a recognised world leader in the field of metallurgy. Their research will have strongly influenced the development of metallurgy at a global scale. They will have the vision to develop their research and to build on the available strengths in the Departments and engage widely across the University and beyond.

It is important they show evidence of enthusiasm and ability to teach a range of materials science courses successfully at undergraduate and master's level. This will include the delivery of existing courses, and the development of new teaching materials, lecture courses, examinations and laboratory classes.

They will also demonstrate significant contributions to the general progress of the field, for example by setting national agendas for funding schemes, participating in major subject area reviews, and driving increased participation in Materials Science at all levels.

They will make contributions to the management of the Department at the request of the Office of the Head of Department.



1) Teaching and research

The Professor will be required to deliver lectures and give instruction in Materials Science topic and in particular to perform the following duties:

- i) To fully participate in the teaching programme of the Department through the delivery undergraduate and Master's lecture courses, participating in practical and examples classes, and other forms of teaching at the undergraduate and Master's level at the request of the Office of the Head of Department.
- ii) To undertake original research in the area of Metallurgy and the general supervision of research and advanced work in the Department, and to assist students in their studies by supervision or informal instruction.

2) Examining

The Professor will be required to undertake such university examining as may be required by the relevant Faculty Board or comparable body.

3) Supervision

The Professor will be required to act as the supervisor of graduate students as and when requested, adhering to the requirements provided by the University, Department, and the relevant funding bodies for the proper supervision of graduate students.

4) Management & Administration

Management and administrative duties are shared equitably among the teaching members of the Department, supported by the Department's Professional Services Staff.

All academic members of staff are expected to play significant roles from time to time on the Faculty Board and Faculty Committees dealing with such matters as academic and other appointments, admission of graduate students, research and teaching assessments, the libraries and computing arrangements. They are also encouraged to accept appointment to University Committees.



Person Specification

Candidates will be considered for the Professorship on the basis of the following selection criteria, which you should address in your application.

Criteria	Essential	Desirable
Education		
An outstanding research record of international stature in Metallurgy.	✓	
The vision, leadership experience and enthusiasm to build on current strengths in maintaining and developing a leading research presence, and an established record in attracting research grant support to further this development.	✓	
The ability to further the academic planning and strategic development of Metallurgy in the University and, where appropriate, to facilitate its development within the UK.	✓	
The ability to manage and interact effectively with staff and students at all levels.	✓	
An enthusiastic commitment to the recruitment, training and mentoring of the next generation of researchers, including undergraduates, research students, and postdoctoral research fellows	✓	
Demonstrable commitment to ED&I matters	✓	
Candidates will hold a PhD or equivalent postgraduate qualification.	✓	

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, 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

All appointments to University Offices are subject to the Statutes and Ordinances of the University.

Salary

Salary on appointment will be determined by the Vice-Chancellor at an appropriate point on the University's salary spine for grade 12, taking into account the criteria for the respective contribution band.

Professorial salaries are reviewed periodically, on the basis of research, teaching and general contribution, by the Vice-Chancellor with the assistance of a small Advisory Committee.

Headship of the Department

Should a Professor be appointed to the Headship of a Department, a pensionable payment is made in addition to salary.

Recruitment Incentive

The University has a scheme whereby a single recruitment incentive payment may be made on appointment at the Vice-Chancellor's discretion.

Tenure

Appointments are to the retiring age for established academic positions.

Working Pattern

The appointment is full-time.

Annual leave

Subject to compliance with the Statutes and Ordinances relating to leave, full time officers are entitled in any holiday year to take a minimum of 28 days annual paid holiday. These periods are inclusive of public holidays that fall outside Full Term.

Sabbatical leave

Cambridge has a generous statutory provision for leave of absence of one term for every six terms of service. Academic staff use this opportunity for study and research.

Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme), a defined benefits pension scheme. If you are already a member of the NHS Pension scheme, you may be eligible to continue in the scheme and should contact the Pensions section of the University:

www.pensions.admin.cam.ac.uk/

College membership

Membership of a College adds an important social and intellectual dimension which many of the University's academic community find attractive. Further details about a Professorial Fellowship are set out below and more details about college membership are provided in a separate section of this document.

The Scheme for newly-appointed University Officers seeking a College Fellowship is set out at: <https://www.ois.cam.ac.uk/uto-scheme>

Residence

It is a requirement of the role that you are resident in the University during term-time. Further information can be found here, p. 679: <https://www.admin.cam.ac.uk/univ/so/pdfs/2020/ordinance11.pdf>



Removal Expenses

If the person appointed is not resident in Cambridge, a contribution from University funds will be made towards expenditure incurred in removal to Cambridge to take up a University office.

Consultancy Work

The University's policy on consultancy work is that consultancy arrangements must be entered into privately between the employee and the organisation concerned. The consultancy work must not interfere with the duties required of the officer under the officer's contract of employment with the University. Consultancy work is not covered by the University's insurances, even when the University has knowledge that such work is being done. The University must not be regarded as being directly or indirectly involved in any consultancy arrangement through the use of University letterheads, advice given or work done in the individual's capacity as an employee of the University. Individuals undertaking private or consultancy work are advised to take out personal insurance.

Alternatively, professional indemnity cover may be obtained by channelling private work through the University company Cambridge Enterprise Ltd. Anyone wishing to do so should, in the first instance, contact them at www.enterprise.cam.ac.uk.

Professorial Fellowships

The great majority of Professors at Cambridge hold a professorial fellowship of a college. Although election to a fellowship is a matter for an individual college, the University takes active steps to draw the attention of Heads of House to the names of those Professors eligible for election. The Scheme for newly-appointed University

Officers seeking a College Fellowship is set out at: <https://www.ois.cam.ac.uk/uto-scheme>

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. Accordingly, shortlisted candidates, whatever their nationality, will be asked to provide such evidence at an appropriate stage in the recruitment procedure. If you do not have the right to work in the UK already, any offer of employment we make will be conditional upon you gaining it.

Health Declaration - Offers of appointment made to prospective University officers whose work will fall within certain categories are conditional on the completion of a medical questionnaire and, if necessary, on a satisfactory health check by the Occupational Health Service. Only the person elected will be asked to complete the questionnaire, at the time of election.

References – References will be requested prior to the final meeting of the Board of Electors.

Please note: references are not required from your current employer.



Equal Opportunities

The University of Cambridge appoints solely on merit. No applicant for an appointment in the University, or member of staff once appointed, will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

Equality, Diversity and Inclusion

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:

<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 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.

Applicants wishing to discuss with or inform the University of any special arrangements connected with their disability can, at any point in the recruitment process, contact Dr



Gosia Wloszycka, who is responsible for the administration of the recruitment process for this position, by email on:

mw425@admin.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 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 £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 students, provide 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.

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 18,000 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 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.



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 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/>

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

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/relocation>. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of staff with the costs of relocating to Cambridge.

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

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 and a CAMbens Cycle to Work salary sacrifice scheme is also available, which enables 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.



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 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. 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.

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 institutions. The CareerStart@Cam programme also supports employees in assistant staff roles who do not hold higher education qualifications to develop their skills, experience and qualifications.



College Membership

The University, the Faculties and Departments, and the Colleges are linked in a complicated historical relationship that is mutually beneficial but not simple. Students (both graduate and undergraduate) are admitted by one of the 31 Colleges, although in the case of graduate students the Faculties and Departments determine admissions before the Colleges are involved. Almost all undergraduates, and many graduate students, live in a College.

The teaching of undergraduate students is shared between the Colleges and the Faculties and Departments, with the Colleges arranging small group teaching ("supervision") and the Departments providing lecturing, laboratory classes, and advanced supervisions. Most academic staff will also be invited to join a College as a teaching or professorial fellow.

Membership of a College adds an important social and intellectual dimension which many of the University's academic community find attractive. Most colleges expect their fellows to take part in undergraduate supervision and College administration. Appointment to a College fellowship is a separate matter from a University appointment, for which the College provides modest remuneration additional to University salary. It is not compulsory for academic staff to be a member of a College.

Further advice can be obtained from The Chair of the Faculty/Head of Department or senior colleagues.

The Scheme for newly-appointed University Officers seeking a College Fellowship is set out at: [UTO Scheme | Office of Intercollegiate Services \(cam.ac.uk\)](#)



How to Apply

Applications, consisting of a letter of application together with a statement of current and future research plans, a curriculum vitae and a publications list, should be made online no later than: 20 April 2023.

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.

Conversations about flexible working are encouraged at the University of Cambridge. Please feel free to discuss flexibility prior to applying (using the contact information below) or at interview if your application is successful.

If you have any queries regarding the application process please contact: Dr Gosia Wloszycka at:
professorships@admin.cam.ac.uk and/or
mw425@admin.cam.ac.uk

Appointment Procedure

The appointment will be made by a Board of Electors, chaired by the Vice-Chancellor or Deputy, with a membership which includes members of the Department, members of cognate Departments and external experts.

All applications will be acknowledged. The Board of Electors will decide how they wish to proceed towards making an election, which may include interviews and/or presentations. Short-listed candidates may be invited to visit the Department to give a seminar on their work and meet prospective colleagues in the course of the process.

Candidates will be informed of the progress of their applications as agreed by the Electors.

It is anticipated that the successful candidate will take up the appointment on 1 October 2023 or as soon as possible thereafter.

Informal Enquiries

Informal enquiries about this Professorship are welcomed and should be directed to:

CONTACT NAME

Professors Jason Robinson, Ruth Cameron, and James Elliott (Joint Heads of the Department)
Department of Materials Science and Metallurgy
Telephone: 01223 334344
Email: hod@msm.cam.ac.uk





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CAMBRIDGE