Job description and selection criteria

Job title	Departmental Lecturer in Machine Learning
Division	MPLS
Department	Computer Science
Location	Wolfson Building, Parks Road, Oxford.
Grade and salary	Grade 8: Salary £41,526 – £49,553 p.a. (with discretionary salary up to £54,131)
Hours	Full Time
Contract type	Fixed term until 30/9/2025
Reporting to	Head of Department
Vacancy reference	152091

The role

The opportunity has arisen to appoint a full-time Departmental Lecturer in Computer Science, to start as soon as possible. This will be a fixed-term appointment until 30 September 2025, and the salary will be on a scale up to £49,553 per annum. The position is to start as soon as possible.

The post holder will be a full member of the team responsible for teaching and supervision of undergraduate and graduate students within the Department of Computer Science.

Responsibilities

The main duties of the successful candidate are as follows:

- To participate in the teaching and administrative work of the Department, including lecturing, project supervision, laboratory work, examining, admissions, and syllabus development. In particular, (co-)lecturing a course on Reinforcement Learning.
- To deliver tutorials at Jesus College (a 3-hour stint a week term time).
- To supervise, or assist in the supervision of graduate students as required.
- Undertake advanced academic study to underpin lectures and class teaching
- Produce lecture notes, course materials, reading lists, and reference guides

- Engage in assessment and university examining
- First contact for student matters relating to attendance, conduct, coursework, performance, and welfare (referring matters to appropriate others)
- Plan and organise specific areas of the syllabus and contribute to syllabus
- development
- Participate in the undergraduate and graduate student admissions processes
- Gather and analyse feedback from students, colleagues, and examiners
- Modify course design, content, or delivery and propose changes to regulations as appropriate
- Allocate tasks and provide day-to-day supervision to demonstrators/teaching assistants, technical or academic support staff, junior research assistants, and masters and doctoral students working on the research project(s)
- Liaise with examiners and academic staff regarding student performance and the development of new courses
- Share in the work of departmental committees developing academic strategies and policies
- Manage independent research projects or specific areas of research within a broad programme, to include: developing research questions within a specific context; conducting original research; analysing qualitative and/or quantitative data from a variety of sources, and developing appropriate analytical protocols and techniques to support research
- Identify sources of research income, develop proposals, and make funding applications to secure it
- Write research articles for prestigious peer-reviewed journals, book chapters, and reviews, present papers at conferences, and lead seminars to disseminate research findings

Selection Criteria

Essential Criteria

- A doctoral degree in Computer Science
- Experience of delivering lectures on Reinforcement Learning and tutorials in imperative and concurrent programming, compilers, digital systems, linear algebra and formal proofs.
- An aptitude for teaching and awareness of pedagogic methods
- Sufficient depth and breadth of knowledge in the subject to develop course units in a sufficient variety of Computer Science areas

Pre-employment screening

All offers of employment are made subject to standard pre-employment screening, as applicable to the post.

If you are offered the post, you will be asked to provide proof of your right-to-work, your identity, and we will contact the referees you have nominated. You will also be asked to complete a health declaration (so that you can tell us about any health conditions or disabilities so that we can discuss appropriate adjustments with you), and a declaration of any unspent criminal convictions.

We advise all applicants to read the candidate notes on the University's pre-employment screening procedures, found at: www.ox.ac.uk/about/jobs/preemploymentscreening/.

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities. Income from external research contracts in 2016/17 exceeded £564m and we rank first in the UK for university spin-outs, with more than 130 companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information please visit www.ox.ac.uk/about/organisation

Department of Computer Science

The Department of Computer Science was established in 1957, making it one of the longest-established Computer Science departments in the country. It is one of the UK's leading Computer Science Departments (ranked first in a number of international rankings). The UK Research Excellence Framework (REF) in December 2014 resulted in 74 members of the Department having 53% of their research activity ranked in the top category of 4* (world-leading). Overall, we received an average of 3.34 across the Department (3* being internationally excellent). A significant majority of the Department are active in externally sponsored research, with both government and industrial funding. At present, there are 69 members of academic staff and almost 100 research staff.

The Department has close links with government, industry, and other departments within the University. Among the latter are Mathematics, Engineering, Physics, Statistics and a number of life sciences departments. The Department is housed across multiple sites within the University's South Parks Road Science Area, facilitating strong collaborative links with research groups and institutes in closely allied areas (including the Oxford Internet Institute and the Oxford e-Research Centre). This is an essentially inter-disciplinary activity which is at present attracting major funding from a number of sources. At present, the Department holds over £50m in external research contracts.

Research in the Department is currently managed in ten themes:

- *Algorithms & Complexity Theory* focusses on determining the inherent difficulty of computational problems, classifying problems according to this inherent difficulty, and

designing and analysing algorithms that use computational resources as efficiently as possible;

- *Artificial Intelligence & Machine Learning* focuses on theoretical foundations, multiagent systems, deep learning and computational linguistics;
- *Automated Verification* investigates theory and practice of formal verification and correct-by-construction synthesis for software and hardware systems;
- *Computational Biology & Health Informatics* is concerned with computational approaches for biomedical research and healthcare innovation;
- *Cyber-Physical Systems* is focusing on intelligent and autonomous sensor systems with applications in positioning, healthcare, environmental monitoring and smart cities;
- *Foundations, Structures and Quantum* embraces interdisciplinary research, and has a particular interest in structural foundations of quantum computation;
- *Human-Centred Computing* covers human-computer interaction, social computing and world-wide web;
- *Data and Knowledge* covers databases, knowledge representation and reasoning;
- *Programming Languages* covers functional programming, program analysis, and programming language foundations;
- *Security* specialises in cybersecurity, protocol analysis, systems security, trusted computing, human-centred security, and networking.

For more information, please visit: http://www.cs.ox.ac.uk/.

The Mathematical, Physical, and Life Sciences Division (MPLS)

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University. Oxford is widely recognised as one of the world's leading science universities. The disciplines within the MPLS Division regularly appear at the highest levels in world rankings. In the results of the six-yearly UK-wide assessment of university research, REF2014, the MPLS division received the highest overall grade point average (GPA) and the highest GPA for outputs. We received the highest proportion of 4* outputs, and the highest proportion of 4* activity overall. More than 50 per cent of MPLS activity was assessed as world leading.

The MPLS Division's 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. Our senior researchers have been awarded some of the most significant scientific honours (including Nobel prizes and prestigious titles such as FRS and FR.Eng) and we have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships. The Division is also the proud holder of eight Athena Swan Awards (4 Silver and 4 Bronze) illustrating our commitment to ensure good practice and to encourage women in science at all levels in the division.

We have around 6,000 students and play a major role in training the next generation of leading scientists. Oxford's international reputation for excellence in teaching is reflected in its position at the top of the major league tables and subject assessments. MPLS academics educate students of high academic merit and potential from all over the world. Through a mixture of lectures, practical work and the distinctive college tutorial system, students develop their ability to solve major mathematical, scientific and engineering problems.

MPLS is dedicated to bringing the wonder and potential of science to the attention of audiences far beyond the world of academia. We have a strong commitment to supporting public engagement in science through initiatives including the Oxford Sparks portal (http://www.oxfordsparks.net/) and a large variety of outreach activities; these are crucial activities given so many societal and technological issues demand an understanding of the science that underpins them. We also endeavour to bring the potential of our scientific efforts forward for practical and beneficial application to the real world and our desire is to link our best scientific minds with industry and public policy makers.

For more information about the MPLS division, please visit: http://www.mpls.ox.ac.uk/

Jesus College

There are 39 self-governing and independent colleges at Oxford, giving both academic staff and students the benefits of belonging to a small, interdisciplinary community as well as to a large, internationally-renowned institution. The collegiate system fosters a strong sense of community, bringing together leading academics and students across subjects, and from different cultures and countries.

Jesus College has a strong commitment to promoting and enabling education, learning, scholarship and research at the highest levels amongst its students and academic staff, whilst preserving an informal and friendly atmosphere. Founded in 1571 by Elizabeth I, the College is a self-governing educational charity. With Professor Sir Nigel Shadbolt, FRS, FREng, as its Principal, the College comprises some 90 Fellows, 30 lecturers, 260 graduates, 350 undergraduates, and 100 support staff. The College is located on an attractive historic site in the centre of Oxford, with excellent access to the Bodleian Library and other University libraries, the Science Area, and the University's department and faculty buildings. The Ship Street Centre adjacent to the College provides teaching facilities and en-suite student accommodation. The College has two annexe sites elsewhere in the city to provide additional student accommodation. To mark its 450th anniversary, the College will open the Dr Yu-Tung Cheng Building in autumn 2021. The landmark building will provide accommodation for postgraduates, a cafe, teaching and learning space, Graduate Study Room multifaith room, and gym. At its heart will be the Dr Henry Cheng Ka-shun Digital Hub which will offer an open, collaborative space to promote the very best interdisciplinary learning and research. The Hub will provide the College with a much-needed space to facilitate the new landscape of research and outreach championed by the collegiate University. The research exhibited in the Hub will not only be of benefit to the academic community, but will create greater opportunities for more public engagement in areas that will promote real and sustainable changes in the economy, our society, culture, public policy, healthcare, and the environment. Equipped with agile, state-of-the-art technology, the Digital Hub will enable our teams to exploit the latest advances of a fast-evolving, high-technology

world. The result will be a more open and integrated College, forging new links with other colleges and University faculties, as well as with the wider Oxford community.

The College encourages the academic achievements of its students (being regularly towards the top of the table for the best performance in final examinations) with excellent teaching, and generous and varied financial support. Similarly it celebrates and supports the academic endeavours of its Fellows and lecturers, both in research and teaching. As a result of its emphasis on research, the has College increased the number of Research Fellows at early, mid and senior career stages, as well as offering post-doctoral researchers membership of the Middle Common Room.

The Fellows and lecturers of the College form a lively multi-disciplinary and international community. Weekday lunches in particular are a popular and lively time for Fellows and lecturers to talk to their immediate colleagues and those in other disciplines. Guest Nights on Wednesdays and Fridays during term offer very pleasant occasions for Fellows and lecturers to entertain professional and personal guests, and a chance to meet a wide range of interesting people. The College hosts a number of well-attended formal dinners throughout the year, at which the postholder and a guest would be most welcome.

Fellows and lecturers can make use of the College's well-equipped seminar and other rooms for meetings, entertainment, conferences etc., and can book accommodation for guests in dedicated Fellows' guest rooms. A dedicated Resources Room provides computers, printers, and a photocopier.

The post-holder will be responsible (in respect of the College obligations) to the Principal and Governing Body via the Academic Director.

The College has two Tutorial Fellows in Computer Science: Professor Standa Zivny and Associate Professor Seth Flaxman. The College normally admits 6 undergraduate students per year to read for degrees in Computer Science, Mathematics & Computer Science, and Philosophy & Computer Science making a student body in the subject of 24. There are usually around 18 postgraduate students in Computer Science in taught and doctoral programmes (full-time and part-time).

The Lecturer will have access to a teaching room and office space. The Lecturer will be offered Senior Common Room membership at Jesus (charge of £60 pa) and will be entitled to lunch and dinner free of charge in the Senior Common Room (SCR) in weeks 0 – 9 of term. The Lecturer will receive a research allowance of £500 p.a. and a teaching book allowance of up to £250 p.a. reviewed annually, paying up to half the cost of books purchased, but subject to a purchase limit of £500 p.a.

How to apply

Before submitting an application, you may find it helpful to read the 'Tips on applying for a job at the University of Oxford' document, at www.ox.ac.uk/about/jobs/supportandtechnical/.

If you would like to apply, click on the **Apply Now** button on the 'Job Details' page and follow the on-screen instructions to register as a new user or log-in if you have applied previously. Please provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants).

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

Please upload all documents **as PDF files** with your name and the document type in the filename.

All applications must be received by **midday** on the closing date stated in the online advertisement.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

Should you experience any difficulties using the online application system, please email recruitment.support@admin.ox.ac.uk. Further help and support is available from www.ox.ac.uk/about_the_university/jobs/support/. To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our e-recruitment system to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.

Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/privacynotices/job/. The University's Policy on Data Protection is available at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/universitypolicyondataprotection/.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. The University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at **grade 8 and above**. The justification for this is explained at: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/.

For **existing** employees, any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/.

There is no normal or fixed age at which staff in posts at **grades 1–7** have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of Opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See www.admin.ox.ac.uk/personnel/staffinfo/benefits.

University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and www.sport.ox.ac.uk/oxford-university-sports-facilities.

Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See www.welcome.ox.ac.uk.

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependents. See www.admin.ox.ac.uk/personnel/permits/reimburse&loanscheme/.

Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to My Family Care, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/.

Childcare

The University has excellent childcare services, including five University nurseries as well as University-supported places at many other private nurseries.

For full details, including how to apply and the costs, see www.admin.ox.ac.uk/childcare/.

Disabled staff

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University's Staff Disability Advisor, see www.admin.ox.ac.uk/eop/disab/staff.

Staff networks

The University has a number of staff networks including the Oxford Research Staff Society, BME staff network, LGBT+ staff network and a disabled staff network. You can find more information at www.admin.ox.ac.uk/eop/inpractice/networks/.

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is an organisation run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.