



**MATHEMATICAL INSTITUTE**  
ANDREW WILES BUILDING

## Job Description and Selection Criteria

<b>Job title</b>	Departmental Lecturer in Mathematical and Computational Finance
<b>Division</b>	Mathematical, Physical and Life Sciences
<b>Department</b>	Mathematical Institute
<b>Location</b>	Andrew Wiles Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG.
<b>Grade and salary</b>	Grade 9: £48,835 - £56,587 per annum
<b>Hours</b>	Full time
<b>Contract type</b>	Permanent
<b>Reporting to</b>	Head of Department
<b>Vacancy reference</b>	157280
<b>Additional information</b>	<p>This is a permanent position comparable in status with an Associate Professorship in US universities.</p> <p>This is a full-time position that cannot be held concurrently with any other substantive post without the explicit permission of the Head of Department.</p> <p>This post is subject to a 2-year probationary period.</p> <p><b>PLEASE NOTE: Applicants are responsible for contacting their referees and making sure that their letters are received by the closing date</b></p>

### The role

As Departmental Lecturer you will contribute to the teaching and administration of the Mathematical and Computational Finance Group. You will engage in advanced study and academic research in the area of Mathematical and Computational Finance and will have achieved, or demonstrate the potential to achieve, an outstanding research record. You will lecture and teach (principally but not exclusively) graduate students, and will lead independent research projects or specific areas of research within a broad programme.



You will also contribute to the teaching, research, and administration of the department. The department is proud to have held an Athena SWAN Silver Award since 2016, and aims for a strategic goal of improving the diversity of its undergraduate and postgraduate students and faculty, in particular the gender balance. The successful candidate is therefore expected to demonstrate experience of engaging with outreach and/or mentoring activities aimed at increasing diversity in mathematics.

Further details about the Mathematical and Computational Finance Group can be found [here](#).

## **Responsibilities**

The main duties of the post are as follows:

### *Research*

- to engage in original research in the field of Mathematical and Computational Finance;
- to secure research funding and engage in the management of research projects;
- to disseminate research through publication in scholarly journals, participation in international conferences and seminars, and through other media;
- to build collaborations across the global research community;
- to engage in knowledge transfer activities.

### *Teaching*

- to carry out teaching at undergraduate and graduate level including lectures, classes, demonstrations, and project supervision, under the direction of the Head of Department. The requirement will normally be;
  - to give not fewer than thirty-two lectures in each academic year;
  - to contribute not fewer than twelve sets of four classes (1.5 hours per class) per annum;
  - or
  - a broadly equivalent mix of lectures and classes as agreed, consistent with current departmental policies.
- to supervise research and MSc students.

### *Examining*

- to take part in University examining as and when requested to do so.

### *Administration*

- to participate in admissions and other administrative duties for the MSc in Mathematical & Computational Finance;
- to engage with outreach activities to support the department in achieving its strategic aim to improve the diversity of its undergraduate and postgraduate student body;
- to participate in the administration of the department as and when requested by the Head of Department.

## Selection criteria

Your application will be judged only against the criteria which are set out below. You should ensure that your application shows clearly how your skills and experience meet these criteria.

The Selection Panel for this process will comprise;

Professor Mike Giles, Head of Mathematical Institute (Chair)

Professor Rama Cont, Head of Mathematical & Computational Finance

Professor Ben Hambly

Professor Jan Obloj

Dr Katia Babbar

The University is committed to fairness, consistency and transparency in selection decisions. Members of the selection committee are aware of the principles of equality of opportunity, fair selection and the risks of bias.

If, for any reason, you have taken a career break, parental leave or have had an atypical career and wish to disclose this in your application, the selection committee will take this into account, recognising that the quantity of your research and teaching experience may be reduced as a result.

### Essential selection criteria

The successful candidate will be expected to meet the following criteria:

- (a) A doctorate in mathematics or closely related subject;
- (b) The proven ability and/or potential to carry out high quality independent research at an international level in Mathematical and/or Computational Finance, as evidenced by, for example, publications in leading international journals;
- (c) Ability to attract research funding, with evidence (commensurate with career stage) of an excellent track record in obtaining research grants;
- (d) The ability to communicate and disseminate research, as evidenced by, for example, invitation to and participation in conferences, seminars and research workshops;
- (e) Experience of and ability to teach effectively, in particular:
  - in undergraduate and graduate lectures, not exclusively in the area of his or her research expertise;
  - in Intercollegiate Classes on a broad range of topics in the undergraduate mathematics syllabus;
  - in lectures and classes for the postgraduate Mathematical and Computational Finance MSc course.
- (f) Ability to supervise graduate students;
- (g) Excellent interpersonal skills necessary for undertaking small-group teaching and the supervision and pastoral care of students;
- (h) Ability and willingness to undertake the full range of administrative duties within the department;

- (i) Experience of research collaborations at national and international level;
- (j) Experience (commensurate with career stage) of supervising research students.

### **Desirable selection criteria**

(a) Experience of supporting the personal and/or career development of under-represented groups within mathematics (for example through outreach activity, mentoring or acting as a role model).

### **Pre-employment screening**

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide: proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) 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 for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at: <https://www.jobs.ox.ac.uk/pre-employment-checks>

### **The Mathematical Institute**

The Mathematical Institute, as Oxford's Department of Mathematics is known, is one of the leading mathematics departments in the world. Our mathematical research, impact and environment were all ranked first in the UK in the 2014 Research Excellence Framework exercise, a government review of research in all UK universities. The Mathematical Institute is the focus of research into both fundamental mathematics and its applications, and our inclusive nature and overall size are key factors in the provision of an outstanding research environment for our members. The large number of faculty, postdocs and students in the Mathematical Institute, all supported by excellent facilities, allows us to maintain a critical mass in research groups encompassing a wide spectrum of mathematics, while our integrated nature fosters collaboration between fields. We also host a large number of academic visitors. Our web pages ([www.maths.ox.ac.uk](http://www.maths.ox.ac.uk)) provide comprehensive information about all of our activities.

The research activities of the Institute as a whole can be gauged from the web pages of the research groups and centres within the Institute ([www.maths.ox.ac.uk/research](http://www.maths.ox.ac.uk/research)). The range of our research interests is well reflected by the profile of our faculty as listed at [www.maths.ox.ac.uk/people](http://www.maths.ox.ac.uk/people). Many members of the Institute have received prestigious prizes and other special recognition for their work; some recent examples can be found at [www.maths.ox.ac.uk/news/awards-and-prizes](http://www.maths.ox.ac.uk/news/awards-and-prizes).

The Mathematical Institute moved into the purpose-built Andrew Wiles Building in the University's Radcliffe Observatory Quarter in September 2013. As well as providing offices for all staff and graduate students, it houses a range of other facilities available to members of the department, including the Whitehead Library, a large range of meeting rooms, teaching spaces, lecture rooms, and social spaces, and a small laboratory for carrying out table-top experiments. For more information, see [www.maths.ox.ac.uk/about-us](http://www.maths.ox.ac.uk/about-us).

Teaching is central to the life of the Mathematical Institute and we have around 900 undergraduates on course, some on joint courses with other departments. We teach around 250 students each year across five taught master's degree courses, and have over 250 doctoral students in residence at any one time. Our doctoral programme always attracts the best research students from across the world, and we have a broad mentoring and training programme.

The Mathematical Institute strives to ensure that all staff and students are given the opportunities and support they need to achieve their potential. We are committed to equality of opportunities and to advancing women's careers. We support staff returning from long-term absence with teaching relief, offer flexible working arrangements, and the department sponsors University nursery places to support the priority allocation of childcare to our staff. Further information about family support can be found below under University Benefits, Terms and Conditions. Our Equality, Diversity & Inclusion Committee<sup>1</sup> contributes to many aspects of our work, see [www.maths.ox.ac.uk/members/good-practice](http://www.maths.ox.ac.uk/members/good-practice).

As part of the department's commitment to openness, inclusivity and transparency, we strongly encourage applications from all who consider they meet the requirements of the post, and particularly from women and ethnic minorities.

We have a number of family-friendly policies, such as the right to apply for flexible working, hybrid working, and support for staff returning from periods of extended absence. We are committed to ensuring an inclusive interview process and will reimburse up to £250 towards any additional care costs (for a dependent child or adult) incurred as a result of attending an interview for this position, which may not be applicable if the interviews are held remotely.

## **The Mathematical & Computational Finance Group**

The Oxford [Mathematical and Computational Finance Group](#) is one of the world's leading research groups in the area of mathematical modelling in finance and offers a thriving research environment, with experts covering multiple areas of quantitative finance. Our group maintains close links with the [Data Science](#), [Stochastic Analysis](#) and [Numerical Analysis](#) groups as well as the [Institute for New Economic Thinking](#) (INET), the [Oxford-Man Institute of Quantitative Finance](#) and the [Oxford Probability Group](#), enabling cross-fertilisation of ideas and techniques.

The group runs the MSc in Mathematical and Computational Finance and is a partner in the EPSRC Centre for Doctoral Training in Mathematics of Random Systems.

## **The Mathematical, Physical, and Life Sciences Division**

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University. 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. MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. We have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships.

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.

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<sup>1</sup> The Mathematical Institute was a founding supporter of the London Mathematical Society's Good Practice Scheme ([www.lms.ac.uk/women/good-practice-scheme](http://www.lms.ac.uk/women/good-practice-scheme)). We have held an Athena SWAN Silver since 2016

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. 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/>

## 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 and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. 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](http://www.ox.ac.uk/about/organisation).

## How to Apply

Applications are made through our e-recruitment system and you will find all the information you need about how to apply on our Jobs website <https://www.jobs.ox.ac.uk/how-to-apply>.

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

You will also be required to upload;

1. Your full CV
2. List of Publications
3. Details of Teaching Experience
4. Statement of Research Interests
5. 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).

Please upload all documents **as PDF files** with your name and the document type in the filename, quoting vacancy reference **157280**.

Please also give details of the names and contact details (postal and e-mail addresses and telephone number) of **three** referees (not more than two of whom should be from the same university/institution).

**Reference letters form an important part of your application and it is your responsibility to ask all three of your referees to send their reference to [vacancies@maths.ox.ac.uk](mailto:vacancies@maths.ox.ac.uk) by the closing date (a letter by email is sufficient). The University will also assume that it is free to approach your referees at any stage unless your application specifies otherwise, but the onus is on you to have the letters sent.**

All applications must be received by **12.00 noon UK time on Monday 9<sup>th</sup> May 2022.**

Interviews will be taking place on **Friday 27<sup>th</sup> May 2022.**

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## 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).

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**DATA PROTECTION:** All data supplied by applicants will be used only for the purposes of determining their suitability for the post, and will be held in accordance with the principles of the Data Protection Act 1998 and the department's data protection policy.

<https://www.maths.ox.ac.uk/members/policies/data-protection/statement>

Due to the large volume of recruitment that the department administers we are unable to provide feedback to non-shortlisted applicants.

## If you need help

Help and support is available from: <https://hrsystems.admin.ox.ac.uk/recruitment-support>

If you require any further assistance please email [recruitment.support@admin.ox.ac.uk](mailto:recruitment.support@admin.ox.ac.uk).

To return to the online application at any stage, please go to: [www.recruit.ox.ac.uk](http://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: <https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy>. The University's Policy on Data Protection is available at: <https://compliance.admin.ox.ac.uk/data-protection-policy>.

### 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 69<sup>th</sup> birthday for all academic and academic-related staff in posts at **grade 8 and above**. The justification for this is explained at: <https://hr.admin.ox.ac.uk/the-ejra>

For **existing** employees, any employment beyond the retirement age is subject to approval through the procedures: <https://hr.admin.ox.ac.uk/the-ejra>

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 <https://hr.admin.ox.ac.uk/staff-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](http://www.club.ox.ac.uk) and <https://www.sport.ox.ac.uk/>.

### 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 <https://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 <https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme>

### 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 <https://hr.admin.ox.ac.uk/my-family-care>

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 <https://childcare.admin.ox.ac.uk/>

### 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 <https://edu.admin.ox.ac.uk/disability-support>

### 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 <https://edu.admin.ox.ac.uk/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](http://www.newcomers.ox.ac.uk).