



MATHEMATICAL INSTITUTE
ANDREW WILES BUILDING

Job Description and Selection Criteria

Job title	Whitehead Lecturer (Departmental Lectureship)
Division	Mathematical, Physical and Life Sciences
Department	Mathematical Institute
College	Balliol College
Location	Andrew Wiles Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG.
Grade and salary	Grade 8: £45,585 - £54,395 p.a.
Hours	Full time
Contract type	Permanent
Reporting to	Head of Department, Mathematical Institute
Vacancy reference	169541
Additional information	<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>The post is part funded by the Clay Mathematics Institute (CMI) and Balliol College and the postholder will carry out teaching duties for the college.</p>

The role

Applications are invited for the post of Whitehead Lecturer in the Mathematical Institute (as the University's Department of Mathematics is known), with effect from 1 September 2024 or as soon as possible thereafter.

The development of exceptional talent in mathematics is critically important for the future of the subject at Oxford and beyond. The Mathematical Institute's programme of outreach and communication of mathematics already involves key individuals including Professor Jon Keating, the Institute's Director of External Relations, Professor Marcus du Sautoy, the Charles Simonyi



Chair in the Public Understanding of Science, and Professor Dominic Vella, Academic Lead (Undergraduate Admissions and Outreach), and is supported by the Schools Liaison and Admissions Coordinator and Outreach Administrator. The Whitehead Lecturer will expand the academic leadership of this team, with a particular focus on encouraging and developing exceptionally talented young mathematicians from the UK and overseas. The Whitehead Lecturer will serve as Executive Director of and a primary lecturer on the PROMYS Europe Summer School, a programme designed to bring competitively selected pre-university students from around Europe to come to Oxford for a six-week residential summer school.

The Whitehead Lecturer will be expected to communicate mathematics effectively to audiences at all levels, and to be able to provide stimulating projects involving mathematical research to outstanding young mathematicians including school and undergraduate students. The postholder will also be expected to have the ability to teach over a wide range of topics in the undergraduate mathematics syllabus at Oxford, in tutorials, classes and lectures. The postholder will be expected to maintain contact and familiarity with current mathematical research.

Responsibilities

The main duties of the post are as follows:

Public understanding and communication of mathematics

- To serve as the Executive Director of PROMYS Europe. This includes managing the competitive selection of pre-university students from around Europe; designing and teaching a demanding syllabus in Pure Mathematics for six weeks every summer in Oxford; selecting, managing and mentoring the Counsellors supporting the summer school students; providing pastoral care to the summer school students and undergraduate Counsellors; working closely with the CMI team to ensure smooth delivery of the PROMYS Europe summer school; and serving on the PROMYS Europe Management Board.
- To promote and extend society's appreciation of the power and beauty of mathematics, in general, and the research of the department in particular.
- To work with the department's External Relations Team and Schools Liaison and Admissions Coordinator and Outreach Administrator to support and expand initiatives in the department relating to the public understanding of mathematics.

Teaching

- To carry out teaching at undergraduate level (including lectures, classes, and project supervision) under the direction of the Head of Department. The requirement will normally be:
 - to give not fewer than sixteen lectures in each academic year
 - to contribute not less than one set of classes per annum to the Inter-Collegiate Class Scheme (this scheme delivers the teaching in the third and fourth years of the undergraduate courses), or to make an equivalent contribution elsewhere

Examining

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

Administration

- To participate in the administration of the department as and when requested by the Head of Department
- To raise the profile and participation of under-represented groups in mathematics, to assist the department in its strategic goal of improving the diversity of its undergraduate and postgraduate students and faculty, in particular the gender balance.

- To contribute to developing academic strategies for outreach activities, particularly those directed at highly talented mathematicians.

College

- To give six hours per week of tutorials and/or classes during full term, averaged over three eight-week blocks each academic year.
- To share responsibility for the teaching of Pure Mathematics within the College, and to undertake relevant administration.
- To monitor student progress through termly written reports, report meetings, College exams ('collections') and assessment of vacation work.
- To participate in the admissions processes for undergraduates and graduates.
- To have responsibility of pastoral care for undergraduate and graduate students.
- To take part in College open day and outreach activities as relevant.

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 Committee for this process is expected to comprise;

- Professor Martin Bridson FRS, President of Clay Mathematics Institute and Whitehead Professor of Pure Mathematics
- Professor Coralia Cartis, Professor of Numerical Optimisation and Tutorial Fellow in Mathematics, Balliol College
- Professor Jason Lotay, Professor of Pure Mathematics and Tutorial Fellow in Mathematics, Balliol College
- Professor Dominic Vella, Professor of Applied Mathematics and Academic Lead for Undergraduate Admissions and Outreach at the Mathematical Institute

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 experience may be reduced as a result.

The successful candidate will demonstrate that they have the following:

Essential selection criteria

- (a) A doctorate in mathematics;
- (b) Excellent communication skills, to include proven ability and/or potential to communicate mathematics to audiences at all levels;
- (c) Experience of running mathematics summer schools for mathematically talented school children and undergraduates or similar initiatives;

- (d) Ability to teach effectively, in particular:
- in undergraduate lectures, not exclusively in their area of doctoral research;
 - in intercollegiate classes;
 - in tutorials on a wide range of topics in the pure mathematics syllabus in the first and second year undergraduate mathematics course.
- (e) Excellent interpersonal skills necessary for undertaking tutorial teaching and the pastoral care of students;
- (f) Excellent organisational skills;

Desirable selection criteria

- (g) Evidence of excellent team work and team leadership;
- (h) Ability to develop academic strategies for outreach and public engagement activities;
- (i) Success in obtaining external funding for outreach and public engagement activities.

Pre-employment screening

Standard checks

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>

Proof of qualifications

This post specifies that a PhD qualification is essential. If you are offered the post, you should therefore be in a position to provide proof of this qualification at least three months in advance of your proposed start date, and will be asked to provide the original PhD certificate or transcript as part of the pre-employment checks. If you do not yet have either of these documents, you should provide an academic reference confirming submission of the thesis or that the qualification has been awarded. Failure to present either of these documents in a timely fashion could result in a delayed start, particularly where there is a need to apply for a valid work visa ahead of the appointment.

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.

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 have twice been ranked first in the UK, in the 2021 and 2014 Research Excellence Framework exercises, 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) 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). The range of our research interests is well reflected by the profile of our faculty as listed at 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.

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.

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](#)¹ contributes to many aspects of our work.

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.

For more information on the Mathematical Institute, please visit: www.maths.ox.ac.uk

The Mathematical Institute holds a silver Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

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. Oxford is widely recognised as one of the world's leading science

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

universities and the MPLS Division is home to our non-medical sciences, with 10 academic departments that 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 tackles major societal and technological challenges – whether developing new energy solutions or improved cancer treatments, understanding climate change processes, or helping to preserve biodiversity, 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.

The disciplines within the MPLS Division regularly appear at the highest levels in rankings, including the Times Higher Education and QS world rankings. Nationally, the quality of the Division's research outputs and environment, and the resulting impact, was recognised through strong performances in the UK Research Excellence Framework in both 2014 and 2021.

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 and we have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships and faculty positions. MPLS continues in its work to support diversity in its staffing, seeing that it will bring benefits to all, and we are pleased to note that all academic departments in the Division hold Athena Swan Awards.

We have around 7,300 full and part-time students (including approximately 3,400 graduate 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 diverse 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 (www.oxfordsparks.ox.ac.uk) 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 bring the potential of our scientific efforts forward for practical and beneficial application to the real world and our desire, aided by the work of Oxford University Innovation and Oxford Sciences Innovation, is to link our best scientific minds with industry and public policy makers.

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

Balliol College

Oxford has 39 self-governing and independent Colleges, enabling academic staff and students to enjoy the benefits of belonging to a small, interdisciplinary community as well as a large, internationally renowned University. The collegiate system encourages a strong sense of community, bringing together leading academics and students across subjects, and from different cultures and countries.

Balliol is one of the best known of all the Oxford colleges. It combines an outstanding academic reputation and strong sense of collective identity with a welcoming and cosmopolitan environment. It has approaching 130 academics, 400 undergraduates and an equal number of

graduates; numbers of applications per place at both undergraduate and graduate level are high and there is an active outreach programme to attract the best students regardless of background.

More information about the College may be found at: <https://www.balliol.ox.ac.uk>.

Balliol is a leading contributor to the undergraduate single and joint degree [maths courses](#), and provides a highly attractive environment for graduate mathematicians. It is also committed to enabling mathematical research. The College establishment comprises three Tutorial Fellows in Mathematics (Applied: [Professor Coralia Cartis](#) and [Professor Derek Moulton](#), Pure: [Professor Jason Lotay](#)) and is associated with the University Chair in Numerical Analysis, as well as tutors in Computer Science and Philosophy who are formally linked with mathematics via the joint degree programmes.

Mathematics has been studied at Balliol since at least 1276. Balliol currently admits 5-8 undergraduate students annually in Mathematics or Maths & Statistics; and additionally allocates 3-4 places to Maths & Philosophy and Maths & Computer Science. This forms the third biggest undergraduate subject group in the College after PPE and History. The College also averages 25 graduate students in various branches of Mathematics, and has a strong entry, with a number of scholarships.

Teaching

During term the Whitehead Lecturer will be required to undertake six hours of undergraduate teaching per week, averaged over three eight-week terms. Once the College's needs have been met, these hours may be used in teaching for other colleges. Undergraduate maths teaching for Balliol combines tutorials and classes for the first and second year students; third and fourth year undergraduates are taught in intercollegiate classes organised through the Mathematical Institute. Tutorials consist of an hour of academic discussion between a tutor and two or three undergraduates; classes within Balliol last longer and involve more undergraduates and often a graduate student who marks the work and helps run the class. Undergraduate teaching may also include the setting and marking of submitted work and termly assessments ('collections'), termly reporting on student performance, and regular meetings of Tutorial Board.

Other Duties

The Lecturer will be required to undertake pastoral duties in relation to undergraduate and graduate students (including acting as Personal Tutor for some undergraduates and College Adviser to some graduates), and to participate in the administration of Mathematics within the College and in the admission process for undergraduates and graduates.

Terms of Employment

The Lecturer will be appointed for two years in the first instance, and re-appointed thereafter subject to successful review during the two-year probationary period.

Benefits

The following benefits are available:

- Eligibility to places for pre-school children at [Balliol Day Nursery](#).
- Provision for maternity and paternity or parental leave on the same basis as the University.
- An annual Academic Support Allowance of up to £440 to cover purchase of academic books, scholarship- and teaching-related expenses.
- Common Table: entitlement to five SCR lunches a week in and out of term (when kitchens are open) and three SCR dinners a week in term (weeks 0-9, excepting Wednesdays, Fridays and Saturdays), noting that drinks and formal dessert, if taken, are charged for

and that, while most dietary requirements are catered for, the College is not able to guarantee this in every case.

- Membership of the Senior Common Room (for which a small termly charge is made).
- Use of a shared teaching room.
- An annual Entertainment Allowance for events involving students of the College for whom a pastoral or advising role is carried out.
- Discount on purchases at Blackwells Bookshop.
- Access to postal, fax, and photocopying facilities, in addition to social facilities such as rooms for meetings and overnight accommodation for academic visitors.
- Access to 24/7 borrowing Library and to Special Collections Centre for early printed books and manuscripts.

Equal Opportunities

Balliol College is an Equal Opportunities employer. Further information can be found on the College's website: <https://www.balliol.ox.ac.uk/current-members/policies-and-statutes/equality-policy>. Applicants are asked to complete an Equal Opportunities Monitoring Form.

How to Apply

Applications are made through our online recruitment portal. Information about how to apply is available 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 be required to upload a curriculum vitae and a supporting statement, to include a description of teaching and other relevant experience. 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 **169541**.

You will also be asked to give the contact details of three referees as part of your online application. Applicants are responsible for contacting their referees and making sure that reference letters are received by the closing date.

Applicants should ask their referees to send their letters of reference DIRECTLY to:

references@maths.ox.ac.uk

The Recruitment Coordinator, Mathematical Institute, Andrew Wiles Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG.
Tel: 01865 273525

by the closing date (a letter by email is sufficient) **quoting the vacancy reference 169541**.

Referees should preferably not, all be from the same institution and whenever possible one should be the applicant's current, or most recent, supervisor. **NOTE: reference letters must be received from your referees by the closing date for your application to be complete.**

All applications must be received by **12.00 noon** UK time on **Monday 05 February 2024**.

Interviews are anticipated to take place in the week commencing **week commencing 04 March 2024**.

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).

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

Application FAQs, including technical troubleshooting advice is available at: <https://staff.web.ox.ac.uk/recruitment-support-faqs>

Non-technical questions about this job should be addressed to the recruiting department directly at vacancies@maths.ox.ac.uk.

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 online recruitment portal 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 very senior research

posts at **grade RSIV/D35 and clinical equivalents E62 and E82**, which with effect from 1 October 2023 will be 30 September before the 70th birthday. The justification for this is explained at: <https://hr.admin.ox.ac.uk/the-ejra>.

For **existing** employees on these grades, 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 other grades 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 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 the Work+Family Space, 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.