



Job Description and Selection Criteria

Post	Professor of Pure Mathematics
Department/Faculty	Mathematical Institute
Division	Mathematical, Physical and Life Sciences
College	Worcester College

Overview of the post

The Mathematical Institute and Worcester College intend to appoint to the Professorship of Pure Mathematics with effect from 1 October 2021, or earlier if possible. A non-stipendiary Professorial Fellowship at Worcester College is attached to this Professorship.

The Professorship of Pure Mathematics is one of the most senior positions in the Institute. It is a cornerstone of Oxford's commitment to research in fundamental mathematics. The holder of the Chair will be a research mathematician of the highest international calibre.

You will join Oxford's world leading Department of Mathematics, which was ranked first in the UK in the 2014 REF (Research Excellence Framework) exercise, and which is housed in the stunning Andrew Wiles Building in the heart of the University's new Radcliffe Observatory Quarter.

You will, in addition to the departmental appointment, be elected to a Professorial Fellowship at Worcester College, a thriving intellectual community.

This post is a statutory professorship, which is the most senior academic grade at Oxford. Statutory professors have a world-leading research reputation and exercise broad academic leadership across their department or faculty and college, and more widely in their subject at national and international level. Please see <https://hr.admin.ox.ac.uk/academic-posts-at-oxford> for a description of the different types of academic posts at Oxford.

If you would like to discuss this post, please contact Professor Mike Giles, Head of the Mathematical Institute, at head-of-department@maths.ox.ac.uk, or Professor Ben Green at ben.green@maths.ox.ac.uk. All enquiries will be treated in strict confidence and will not form part of the selection decision.



Duties of the post

You will be a member of both the University and the College community. You will be part of a lively and intellectually stimulating research community which performs to the highest international levels in research and publications and will have access to the excellent research facilities which Oxford offers. You will have a role to play in the running of the College as a member of the Governing Body and a trustee of the College.

The main duties of the post are as follows:

Research

- Engage in original research of the highest calibre in a major field of pure mathematics;
- Disseminate research through publication in scholarly journals, participation in international conferences and seminars, and in other ways as appropriate;

Academic Leadership and Funding

- Provide research leadership in the field of pure mathematics;
- Secure research funding and engage in the management of research projects;

Teaching

- Carry out teaching at undergraduate and graduate level (including lectures, classes, and project supervision) - the requirement will normally be to give not fewer than thirty six lectures in each academic year;
- Supervise Doctoral and Masters students, and postdoctoral research assistants;

Examining

- Take part in University examining both for undergraduate and graduate students as and when requested to do so.

Administration

- Participate in the administration of the department as and when requested by the Head of the Mathematical Institute;
- Act as Head of the Mathematical Institute if requested to do so by the divisional board;
- Participate in the life of the College and take part in its governance as a Trustee and member of Governing Body, which will involve some service on College committees and occasionally on appointment panels; serve as 'College Advisor' for some of the College's graduate students in Mathematics.

Headship of Department

Every professor who is employed by the University, unless individually exempted, has an obligation to accept headship of the department or faculty in which their post is held, if invited to do so by the divisional board.

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 University is committed to fairness, consistency and transparency in selection decisions. Members of electoral boards (selection committees) will be aware of the principles of equality of opportunity, fair selection and the risks of bias. There will be both female and male board members wherever possible.

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

You will demonstrate the capacity to do following:

- carry out original research of the highest quality in pure mathematics, as evidenced by, for example, publications in internationally refereed journals;
- provide research leadership and direction in a major field of pure mathematics;
- attract research funding;
- contribute to research strategy, leadership and direction outside the area of your speciality;
- communicate and disseminate research, as evidenced by, for example, invitations to and participation in conferences, seminars and research workshops;
- supervise graduate students and direct postdoctoral researchers;
- teach effectively, in particular in undergraduate and graduate lectures, not exclusively in the area of your research expertise;
- undertake willingly the full range of administrative duties within the Department and the College.

How to apply

To apply, visit https://my.corehr.com/pls/uoxrecruit/erq_jobspec_details_form.jobspec?p_id=148286, then 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 refer to the "Terms of Use" in the left hand menu bar for information about privacy and data protection. Please provide details of three referees and indicate whether the University may contact them without seeking your permission. Referees should not write directly to the University, but may be contacted at any stage in the recruitment process if the electoral board requests your references.

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

The University and colleges welcome applications from candidates who have a disability or long-term health condition and are committed to providing long term support. The University's disability advisor can provide support to applicants with a disability, please see <https://edu.admin.ox.ac.uk/disability-support> for details. Please let us know if you need any adjustments to the recruitment process, including the provision of these documents in large print, audio or other formats. If we invite you for interviews, we will ask whether you require any particular arrangements at the interview. The University Access Guide gives details of physical access to University buildings <https://www.accessguide.ox.ac.uk/>.

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

All applications must be received by **12.00 noon on Monday 18 January 2021**.

Please email recruitment.support@admin.ox.ac.uk should you experience difficulties using the online application system. Further help and support is available from <https://hrsystems.admin.ox.ac.uk/recruitment-support>. To return to the online application at any stage, please log back in and click the “My applications” button on the left hand side of the page.

You will be notified of the progress of your application by automatic emails from our e-recruitment system. **Please check your spam/junk mail** regularly to ensure that you receive all emails.

All applications will be considered by the electoral board as soon as possible after the closing date. The electoral board is free to search for other candidates at this or any subsequent stage in its proceedings. You will be kept informed of the progress of your application at each stage, but in some cases there may be a delay while deliberations are ongoing. All shortlisted candidates will be interviewed and will be asked to give a short presentation to the electoral board as part of the interview. The composition of the electoral board will be published in the University Gazette (<https://gazette.web.ox.ac.uk/>) when it is finalised.

The Department of Mathematics

The Professorship of Pure Mathematics is a cornerstone of Oxford's commitment to fundamental research in mathematics. The holder of the Chair must be a research mathematician of the highest international calibre. This Professorship is one of a number of Statutory Chairs in the Mathematical Institute. The holders of these Chairs are expected to provide research leadership for the 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/) 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 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/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 <http://www.maths.ox.ac.uk/about-us>.

Teaching is central to the life of the Mathematical Institute and we have an annual intake of approximately 300 undergraduates, some on courses taught jointly with other departments. We admit 100 students each year across five taught masters' degree courses and have over 230 doctoral students in residence at any one

time. Our doctoral programme attracts the best research students from across the world, and we have broad mentoring and training programmes.

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 and provide flexible arrangements for staff with parental responsibilities. Further information about family support can be found in the Standard Terms and Conditions. Our Good Practice Committee contributes to many aspects of our work, see www.maths.ox.ac.uk/members/good-practice.

The Mathematical Institute is committed to creating a working environment in which students and staff can achieve their full potential, and to embedding the principles of equality, diversity and inclusion across student and staff groups. The department holds an Athena SWAN Silver award in recognition of our work and progress towards advancing gender equality. Our Equality, Diversity and Inclusion Committee meets twice termly to focus on current and future priorities for the department, and we have recently welcomed an MPLS Divisional Equality, Diversity and Inclusion Fellow. Popular, established student and staff societies support under-represented groups with networking and learning events; our 'Fridays@4' series offers a skills development programmes for graduate students and Early Career Researchers; and the department engages in exceptional outreach and skills and development programmes, such as It All Adds Up which promotes further take up of maths to girls aged 14-17. The department is committed to overcoming barriers which can inhibit career development, for example providing financial support for caring needs to support attendance at development opportunities. The University provides excellent support for career development at all levels, including academic leadership development, research leadership and mentoring schemes, as well as generous family leave provision and support.

As part of the department's commitment to openness, inclusivity and transparency, we strongly encourage applications from all who consider that they meet the requirements of the position.

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 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, undertaking 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, as well as 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 world rankings, with Oxford's mathematical, physical and life sciences research judged the best in the country according to the 2014 REF assessment exercise carried out by the Higher Education Funding Council for England (HEFCE).

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. All departments in the Division also hold Athena Swan Awards, illustrating our commitment to ensure good practice and to encourage women in science at all levels.

We have around 6,000 full and part-time students (including approximately 2000 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 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

Worcester 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.

Worcester College occupies the site of Gloucester College, founded in 1283 for monks from the Abbey of St Peter, Gloucester. It was re-founded as Worcester College in 1714, following a benefaction by Sir Thomas Cookes, Bt., from Worcestershire. The original Benedictine site was large, and eighteenth- and nineteenth-century additions to it have resulted in the College occupying some twenty-six acres. The gardens were laid out to include a lake in the early nineteenth century, and the adjoining sports field was reclaimed from drained water meadows in the late nineteenth century. The mixture of architectural styles, set amongst landscaped, wooded gardens and grounds, make Worcester one of the most attractive colleges in Oxford.

More information about the College may be found at: www.worc.ox.ac.uk.

The Governing Body, which is responsible for overseeing the running of the College and the management of its endowments, comprises the head of College (the 'Provost') and fifty three Fellows. A further sixteen Research Fellows are not members of the Governing Body. There are approximately one hundred members of non-academic staff.

Worcester College currently has fifty five undergraduates studying Mathematics or one of the 'joint schools' (Mathematics and Computer Science, Mathematics and Philosophy, Mathematics and Statistics) and thirteen graduate students pursuing advanced degrees in Mathematics.

The College's Fellows in Mathematics are:

- Dr Richard Earl, who teaches a range of pure and applied subjects, from algebra, analysis, and geometry to dynamics, quantum theory, and relativity, and is also Director of Undergraduate Studies at the Mathematical Institute;
- Professor Endre Süli, whose research interests are mathematical and numerical analysis of nonlinear partial differential equations and finite element methods;
- Dr David Steinsaltz who teaches statistics and whose research interests are stochastic processes, biodemography, mathematical biology, random dynamical systems, meta-analysis, human sex ratio, and hidden Markov models

Professor Gabriel Stylianides, Professor of Education (Mathematics) in the Department of Education, is also a Fellow of the College.

The Governing Body of Worcester College is formally committed to building a more socially and culturally diverse academic community. As part of our diversity strategy, we are actively seeking excellent candidates from groups which are under-represented on our academic staff: black and minority ethnic candidates, and women of all ethnicities.

About the University of Oxford

Oxford's departments and colleges 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.

Oxford's self-governing community of international scholars includes Professors, Associate Professors, other college tutors, senior and junior research fellows and over 2,500 other University research staff. Research at Oxford combines disciplinary depth with an increasing focus on inter-disciplinary and multi-disciplinary activities addressing a rich and diverse range of issues. The current strategic plan can be found at www.ox.ac.uk/about/organisation/strategic-plan.

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

While Oxford has long traditions of scholarship, it is also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities. It consistently has the highest external research income of any university in the UK (the most recent figures are available at www.ox.ac.uk/about/organisation/finance-and-funding), and is ranked first in the UK for university spin-outs, with more than 130 spin-off companies created to date. Oxford is also recognised as a leading supporter of social enterprise.

Oxford admits undergraduate students with the intellectual potential to benefit fully from the small group learning to which Oxford is deeply committed. Meeting in small groups with their tutor, undergraduates are exposed to rigorous scholarly challenge and learn to develop their critical thinking, their ability to articulate their views with clarity, and their personal and intellectual confidence. They receive a high level of individual attention from leading academics.

Oxford has a strong postgraduate student body which now numbers over 10,000. Postgraduates are attracted to Oxford by the international standing of the faculty, by the rigorous intellectual training on offer, by the excellent research and laboratory facilities available, and by the resources of the museums and libraries, including one of the world's greatest libraries, the Bodleian.

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

University Benefits, Terms and Conditions

Standard duties

- to carry out teaching at undergraduate and graduate level (including lectures, classes, and project supervision) - the requirement will normally be to give not fewer than thirty six lectures in each academic year;
- to supervise Doctoral and Masters students, and postdoctoral research assistants;
- to undertake research and original work and the general supervision of research and advanced work in your subject and department/faculty, and to assist students in their studies by advice or informal instruction.

It is expected that professors will generally participate in the business and affairs of the relevant faculty or department.

Salary

Your salary will be determined after appropriate consultation. There is an annual 'cost-of-living' review. In addition you will be eligible for consideration, in regular reviews, for Professorial Merit Pay.

An additional pensionable allowance will be payable in respect of any period during which you are Head of Department/Faculty Board Chair. (Any allowance payable for a period of less than three years will not, however, be pensionable.)

Pension

The University offers substantial pension provision under the auspices of USS (the Universities Superannuation Scheme). You will be offered membership of USS.

Details are available at www.admin.ox.ac.uk/finance/epp/pensions/schemes/uss/.

Sabbatical leave

You will be eligible for sabbatical leave to allow you to focus on your research. In general, one term of leave is available for each six terms worked. This leave may either be taken as one term of leave after 6 terms of service, or accumulated and taken as one year of leave after 6 years of service.

Outside commitments

You may apply to spend up to 30 working days in each year on projects outside your employment duties, such as consultancy, spin-out activity and membership of research councils and other bodies. There is no limit to earnings from these activities without deduction from salary. Details of the approval process may be found at www.admin.ox.ac.uk/personnel/staffinfo/academic/approvaltoholdoutsideappointments/.

Guidance is also available on:

ownership of intellectual property www.admin.ox.ac.uk/statutes/regulations/182-052.shtml and managing conflicts of interest www.admin.ox.ac.uk/researchsupport/integrity/conflict/policy/.

Membership of Congregation

Oxford's community of scholars governs itself through Congregation which is its "parliament". You will be a voting member of Congregation.

See www.ox.ac.uk/about/organisation/governance and www.admin.ox.ac.uk/statutes/781-121.shtml for further details.

Residence

You will be required to reside within the University (i.e. within twenty-five miles of Carfax, the central point of Oxford) during at least six months in each academic year, between 1 October and 1 August, and in particular during not less than six weeks of each term.

Housing

You may be eligible for assistance with housing: some rental accommodation is available for statutory professors moving to Oxford for their first year, and there is a Joint Equity Scheme which new statutory professors may be entitled to join, to help with the purchase of a home in Oxford.

General information about home rental and purchase is available at internationalstaffwelcome.admin.ox.ac.uk/housing.

Relocation

Subject to UK tax regulations and the availability of funding, a relocation allowance may be available.

Family support

The University offers generous family leave arrangements, such as maternity, adoption, paternity and shared parental leave. Details are available at www.admin.ox.ac.uk/personnel/during/family/. You will have considerable flexibility in the day-to-day organisation of your duties. Requests for flexible working patterns will be accommodated as far as possible.

You will be eligible to apply to use the University nurseries (subject to availability of places). For details of the nurseries and how to apply for places, please see www.admin.ox.ac.uk/childcare/.

The University subscribes to My Family Care, a benefit which allows staff to register for emergency back-up childcare and adultcare services, a 'speak to an expert' phone line and a wide range of guides and webinars through a website called the Work + Family Space.

For more details, please see www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/.

The Oxford University Newcomers' Club is run by volunteers, whose aim is to help the newly-arrived partners of visiting scholars, of graduate students and of newly appointed academic and administrative members of the University to settle in and to give them opportunities to meet people in Oxford. Further information is available at www.newcomers.ox.ac.uk/.

The Careers Service has a dedicated adviser for the partners of University employees, offering assistance in finding employment, training or volunteering opportunities.

For details, please see www.careers.ox.ac.uk/.

Welcome for International Staff

One of Oxford's great strengths is its truly international body of research and teaching staff from over 140 countries, and we welcome applications from academics across the world. We can help international staff and

partners/families make the transition to Oxford. Information about relocation, living and working in the UK and Oxford is available at www.internationalstaffwelcome.admin.ox.ac.uk/.

If you require a visa, we have a dedicated team to support successful applicants through the Tier 1 visa process. Further information is available at www.gov.uk/tier-1-exceptional-talent.

Promoting diversity

The University is committed to recruiting and retaining the best people, whoever they are, to ensure equality of opportunity. The Vice Chancellor's Diversity Fund provides resources for innovative projects to promote diversity.

The Equality and Diversity Unit promotes good practice across the University by developing policies and offering training, and runs a range of support networks for staff. It works closely with Colleges, the Oxford University Student Union and external campaign groups.

Please see www.admin.ox.ac.uk/eop/ for details.

Other benefits and discounts for University employees

The University has a range of facilities and benefits for its staff, including discounted health insurance, sustainable travel schemes, and discounts in local shops and restaurants. Details are available at:

www.admin.ox.ac.uk/personnel/staffinfo/discountsforstaff/services/
www.admin.ox.ac.uk/personnel/staffinfo/benefits/

Pre-employment screening

Your appointment would be subject to the University's standard pre-employment screening. This will include right-to-work, proof of identity, references, a pre-employment health declaration, and any other checks as applicable to the post. We advise you to read the notes for applicants at www.ox.ac.uk/about/jobs/preemploymentscreening/.

Length of appointment

The University operates an employer justified retirement age for all academic posts, for which the retirement date is 30 September immediately preceding the 69th birthday.

The justification for this may be found 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 EJRA procedures. Further details can be found at www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

College Benefits

Full college dining rights: lunches in the Senior Common Room (of which you will be a full member as a Professorial Fellow) and dinners at the common table in term and vacation (except when the kitchens are closed).