

## ***Job Description and Selection Criteria***

<b>Post</b>	Associate Professorship (or Professorship) of Engineering Science (Electrical Engineering (Quantum Technologies))
<b>Department</b>	Engineering Science
<b>Division</b>	Mathematical, Physical and Life Sciences
<b>College</b>	Balliol College
<b>Contract type</b>	Permanent upon completion of a successful review. The review is conducted during the first 5 years.
<b>Salary</b>	Combined University and College salary from £48,114 p.a. to £64,605 p.a. plus substantial additional benefits including college housing allowance of £12,585 p.a. and access to a shared equity scheme (subject to availability) or college accommodation (of limited availability); college research allowance of £1,320 p.a.; private medical insurance. An allowance of £2,804 p.a. would be payable upon award of Full Professor title.
<b>Vacancy number</b>	148630

### **Overview of the post**

Applications are invited for the post of Associate Professor of Engineering Science (Electrical Engineering (Quantum Technologies)) to be held in the Department of Engineering Science, with effect from 1<sup>st</sup> October 2021 or as soon as possible thereafter. The successful candidate will also be appointed to a Tutorial Fellowship at Balliol College.

This appointment will add strength to the Department's research in Quantum Technologies, and to the substantial activities in Quantum Technologies across the University, with the intention of being able to offer specialist engineering courses in this area. The successful candidate will play a pivotal role in developing the Department's activities in Quantum Technologies, both in research and in teaching undergraduates who wish to specialise in this area of electrical engineering in their third and fourth years. At the same time, the new post-holder should be able to teach mathematics and electrical engineering. They will conduct original research in the field of Quantum Technologies and its applications and will hold a doctorate in electrical engineering or a cognate discipline.

Candidates are expected to have an internationally leading track-record in the (broadly defined) area of the engineering of quantum systems, including photonic systems as applied to quantum technologies,



quantum photonics, quantum computer architectures, or similar areas; with a strong focus on the engineering aspects of these topics.

In College the role will be as a Tutorial Fellow, providing pastoral support and teaching in the field of Electricity and Electromagnetism, as well as other general engineering aspects of the syllabus.

The post holder will be expected to apply for and obtain external funding to support the development of their programme of independent research as well as to develop links with colleagues in the Department of Engineering Science and in other departments across the University and elsewhere as appropriate.

To assist in setting up new research activities, the Department will provide an equipment dowry and an annual support fund, and access to Departmental and University research support funds (which must be bid for). Further funding for the set-up costs of experimental facilities can be made available, and laboratory and office space will be provided. The appointee will be given help to apply for grants from research councils, for example through the Engineering & Physical Sciences Research Council (EPSRC) and from industry.

The successful candidate will also assist in the teaching of their subject at both undergraduate and graduate level. Undergraduate teaching in the department may include lectures and practical classes, and the supervision of undergraduate design and project work (see <http://www.ox.ac.uk/admissions/undergraduate/courses-listing/engineering-science>). The subjects taught at undergraduate level would be expected to be in the general field of electrical engineering, mathematics, and other areas of engineering, depending on the interests of the appointee and requirements of the college. Graduate teaching will involve supervision of MSc and Doctoral students.

The University of Oxford is a member of the Athena SWAN Charter to promote women in Science, Engineering, Technology and Medicine. The University holds an Athena SWAN Bronze award at institutional level. The Department of Engineering Science holds a Departmental Bronze Athena award in recognition of its efforts to introduce organisational and cultural practices that promote gender equality in SET and create a better working environment for both men and women. Feel free to contact [equality@admin.ox.ac.uk](mailto:equality@admin.ox.ac.uk) for further information about Athena SWAN at the University of Oxford.

If you would like to discuss this post and find out more about joining the academic community at Oxford, please contact the Department on [academic.recruitment@eng.ox.ac.uk](mailto:academic.recruitment@eng.ox.ac.uk), or telephone: +44 (0) 1865 273003. All enquiries will be treated in strict confidence and will not form part of the selection decision.

For more information on work in quantum technology at Oxford, please contact Prof Dominic O'Brien [dominic.obrien@eng.ox.ac.uk](mailto:dominic.obrien@eng.ox.ac.uk).

## **The role of Associate Professor at Oxford**

Associate Professor is the main academic career grade at Oxford with a focus on research and teaching, spanning the full range of professor grades in the USA. Associate Professors are appointed jointly by a University department or faculty and an Oxford college, and you will have a contract with both.

Associate Professors are full members of University departments and college governing bodies, playing a role in the democratic governance of the University and their college. You will join a lively, intellectually stimulating and multi-disciplinary community, which performs to the highest international levels in research and teaching, with extraordinary levels of innovation, creativity and entrepreneurship.

There is considerable flexibility in the organisation of duties, with three 8-week undergraduate teaching terms and generous sabbatical leave to balance teaching and research (please see the Benefits, Terms

and Conditions section for further details of sabbatical leave). There is the potential for temporary changes to the balance of duties between College and University to enable a focus on different aspects of work at different stages in your career.

Oxford offers many opportunities for professional development in research and teaching. Associate Professors may apply for the title of full Professor in annual exercises. If the title is conferred, you will also have access to professorial merit pay opportunities. In exceptional cases, the title of full Professor may be awarded on appointment.

Appointments are confirmed as permanent on successful completion of a review during the first five years. The vast majority of Associate Professors successfully complete this initial review.

## **Duties of the post**

For the University the post-holder will be expected:

### **Research**

- to engage in original research in the field of quantum technologies; with an emphasis on any one or more of the following: quantum systems, including photonic systems as applied to quantum technologies, quantum photonics, quantum computer architectures or similar areas; with a strong focus on the Engineering aspects of these topics.
- to secure research funding and engage in the management of research projects;
- to disseminate their research through publication in scholarly journals, participation in international conferences and seminars, and through other media;
- 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;
- to supervise research students;

### **Examining**

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

### **Administration and outreach:**

- to participate in the administration and outreach activities of the department as and when requested by the Head of Department.

### **For the College, the post-holder will be expected:**

- to engage in advanced study and research;
- to share responsibility for the organisation, supervision and teaching of Engineering Science at Balliol College including arrangements for the admission of new students;
- to undertake for the College six hours of tutorial and class teaching a week averaged over the three terms (twenty-four weeks) of the academic year;
- to take a role in the pastoral care of undergraduates;
- once established in post, the successful applicant should also be prepared to take the lead tutor role in Engineering;
- to act as College Advisor to Balliol College graduate students in Engineering Science and cognate areas;
- to contribute to the administration of the College as a member of the Governing Body and a trustee of Balliol College, including attending Governing Body meetings, and acting as a member

of College committees when called upon to do so.

### **Hazard-specific / Safety-critical duties**

This job includes the following hazards or safety-critical activities which will require successful pre-employment health screening through our Occupational Health Service before you will be allowed to start work:

- Occasional travel outside of Europe or North America on University Business.

### **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 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 committee 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 selection committee will take this into account, recognising that the quantity of your research may be reduced as a result.

### **The successful candidate will demonstrate the following.**

#### **Essential**

- (a) A doctorate in the field of Electrical Engineering or a cognate discipline;
- (b) Proven research record of high quality at international level in quantum technologies, focusing on the engineering and systems aspects of the technology
- (c) Significant research potential in quantum technologies; evidenced by a written coherent research plan of high standard, appropriate to the Department's research standing;
- (d) Ability to attract research funding and develop an independent programme of research;
- (e) Experience of and ability to teach effectively. At undergraduate level this would involve a wide range of topics within the field of electrical engineering and related topics in the context of our general Engineering Science course. At graduate level it would involve principally more specialised material in the context of our CDT programmes;
- (f) Ability to supervise graduate students;
- (g) Excellent interpersonal skills necessary for undertaking teaching and the pastoral care of students;
- (h) Evidence of the ability, or the potential, to provide excellent tutorial teaching in a range of undergraduate papers in the Engineering Science course (including Electricity, Electronics, Electromagnetism and other general aspects of the syllabus);
- (i) Ability and willingness to undertake the full range of pastoral and administrative duties both within the Department and the College.

#### **Desirable**

- (j) Excellent track record of obtaining research grants;
- (k) Experience of research collaborations at national and international level;
- (l) Experience of supervising research students;
- (m) Experience of or an interest in developing links with Industry.

(n) Evidence of excellence in teaching.

## How to apply

Before applying, you may find it helpful to read the information on the application process [here](#).

To apply, visit the [academic vacancies page](#), click on the relevant post title, 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 now.

You should contact all three of your referees before applying, to ensure they are aware of your application and of the requirements for the post, and to ensure that they would be content to write a reference for you for this post, if they were asked to do so. The University will assume that it is free to approach your referees at any stage unless your application specifies otherwise. Therefore, if you would prefer a referee or referees to be approached only with your specific permission or if you would prefer them to be approached only if you are being called for interview on the final short list, then you must indicate this in your application.

The University and colleges welcome applications from candidates who have a disability or long-term health condition and is committed to providing long term support. The University's disability advisor can provide support to applicants with a disability, please see <http://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 <http://www.accessguide.ox.ac.uk/>.

Teaching commitments are mainly concentrated into Oxford's three 8-week undergraduate teaching terms, making it easier to balance teaching and research. There is considerable flexibility in the organisation of duties, and generous sabbatical leave.

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 asked to upload a full CV with publications list, a supporting statement and a research proposal. Please note:

- Given the overall limit of 10 pages (see below), you may not be able to include your complete list of publications, in which case you should select the ones which are most relevant to your application. Whether or not you submit a complete list, you should highlight the five most important publications with an asterisk and explain in each case (in not more than three sentences per publication) why that paper is particularly significant.
- 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 employment, education, or during career breaks (such as time out to care for dependants).
- The research proposal should set out your plans and priorities for research over the next five years, should you be appointed to this post.

You should therefore upload, **within a single PDF document**, the following:

1. Your full CV including your teaching and research experience, career details to date, and awards received;
2. Your supporting statement as described above;
3. Your research proposal.

A teaching proposal is not required.

The name of the PDF attachment should be of the form DF21BAL\_Surname\_Initials.pdf. **The total size of the attachment must not exceed 10 pages in a normal font and spacing.** Please do not attach additional material to your application, as it will not be considered.

Should you experience any difficulties using the online application system, please email [recruitment.support@admin.ox.ac.uk](mailto:recruitment.support@admin.ox.ac.uk). 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

The deadline for applications is **Monday 1 February 2021 at noon.**

Should you have any queries about matters that are not addressed in this document, please contact the Department at [academic.recruitment@eng.ox.ac.uk](mailto:academic.recruitment@eng.ox.ac.uk), or telephone: +44 (0) 1865 273003. Please quote DF21BAL/148630 in all correspondence.

All applications will be acknowledged after receipt and will be considered by the selection committee as soon as possible after the closing date. Please note that 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 shortlisted candidates will be interviewed and it is anticipated that this will take place online.* They will be asked to give a presentation to the Committee as part of an interview process that will span parts of 2 days. Interviews will take place during the afternoons of Thursday 29 April and Friday 30 April. The interview process is expected to proceed as follows:

#### **29 April (afternoon):**

Each candidate will present a 30-minute seminar on a suitable topic from their current research (25 minutes presentation plus 5 minutes of questions). The seminar will be presented online and attended by members of the Selection Committee, and other interested members of the Department (only some of whom will be experts in the specialist field of the appointment).

#### **30 April (afternoon):**

The formal interview by the Selection Committee will be held online on the afternoon of 30 April. This will last about 45 minutes, and will include discussion of research interests and directions, teaching interests and expertise and experience, including undergraduate projects and other aspects of the post. Candidates will be asked to undertake a short teaching exercise in the course of their interview.

Shortlisted candidates will have an opportunity to meet virtually with academics from the Electrical Engineering Group as well as with one or more senior members of the College. Neither of these meetings constitutes any part of the selection process.

If covid restrictions have lifted significantly and we are able to hold these interviews in person, arrangements will be discussed with the shortlisted candidates with sufficient notice.

## **The Department of Engineering Science**

Engineering teaching and research takes place at Oxford in a unified Department of Engineering Science whose academic staff are committed to a common engineering foundation as well as to advanced work in their own specialities, which include most branches of the subject. We have especially strong links with computer science, materials science, medicine and also the Saïd Business School. The Department

employs 120 academic staff (this number includes 13 statutory professors appointed in the main branches of the discipline, and 25 full professors); in addition, there are nine visiting professors. There is an experienced team of teaching support staff, professional services and administrative staff and technicians. The Department has well-equipped laboratories and workshops, which together with offices, lecture theatres, library and other facilities have a net floor area of about 25,000 square metres.

The Department is ranked second in the world in the latest *Times Higher Education World University Rankings* for Engineering & Technology. Further information about the Department is available at [www.eng.ox.ac.uk](http://www.eng.ox.ac.uk).

### **Teaching**

We aim to admit 170-180 undergraduates per year to take a 4-year course leading to the MEng degree in Engineering Science. The course is accredited at MEng level by the major engineering institutions. The syllabus has a common core extending through the first two years. Specialist options are introduced in the third year, and the fourth year includes further specialist material and a major project.

### **Research**

Research in the Department is particularly strong. We have approximately 600 research students and about 250 postdoctoral researchers. Direct funding of research grants and contracts, from a variety of sources, amounts to an annual turnover of approximately £70m.

According to the results of the six-yearly UK-wide assessment of university research, REF2014, published on 18th December 2014, the Department of Engineering Science is the best engineering department in the country. Based on the Grade Point Average (GPA) score adopted to produce the rankings, the Department was ranked first out of the 62 General Engineering Departments, ahead of Cambridge, Imperial College and UCL. The impact of the Department's research was also rated as number one in engineering in the UK.

The research activities of the department fall into eight broad headings, though there is much overlapping in practice: Information Engineering (Robotics, Computer Vision and Machine Learning); Control Engineering; Thermofluids; Materials and Mechanics; Civil and Offshore; Electrical and Optoelectronic; Chemical and Process; Biomedical Engineering.

### **Electrical and Opto-electronic Engineering**

The successful candidate will join the thriving Electrical and Opto-electronic Engineering cluster, one of seven research clusters in the Department. The cluster's core research themes are photonics, communications and electromagnetics, microelectronic circuits, and quantum technologies (all on the main Departmental site in Central Oxford), as well as energy storage and energy systems at Begbroke Science Park (just outside Oxford). Oxford University leads the UK Quantum Technology Hub in Computing and Simulation and there are more than 200 hundred researchers in the University involved in aspects of quantum science and technology (see <http://oxfordquantum.org/>).

There are 18 academic and senior research staff in this research cluster, who occupy 1700m<sup>2</sup> of laboratory space. (Professors Martin Booth, Steve Collins, Justin Coon, Steve Elston, Charles Monroe, Stephen Morris, Dominic O'Brien, Katya Shamonina, Steve Sheard, Paul Stavrinou, Chris Stevens, Noa Zilberman, Dan Rogers, Malcolm McCulloch, Dave Howey, Tony Wilson, and Dr's Patrick Salter and Julian Fells). Two chairs (in Electrical Engineering and Photonics) are currently vacant.

Research has core themes in photonics, communications and electromagnetics, circuits and systems, nanotechnology, (all on the main site), as well as energy storage and energy systems at Begbroke Science Park. Endeavours range from fundamental science (e.g. graph theory for communications networks), to

highly applied research (e.g. electric motors for the spin-out company YASA Motors). Across this broad grouping there is a strong track record of publication, national and international leadership and exploitation.

Electrical engineering research in the Department is highly collaborative. These include collaborations with Physics and Materials Science, in the area of Quantum Technologies. The UK Quantum Technology Hub in Quantum Computing and Simulation is led from Engineering Science, and there are wide range of other collaborations across Oxford including antennas for the square-kilometre array (collaboration with Physics), cameras for crop sensing (collaboration with Plant Sciences), and microscopy for a wide range of biological applications

Research in photonics encompasses applied optics and dynamic optics, with research in microscopy and laser machining, which has led to spinouts (Aurox, Opsydia) and a wide range of collaborations. In soft matter photonics, research is carried out on new optoelectronic devices based upon materials such as liquid crystals and polymers as well as hybrid materials incorporating inorganic semiconducting and metallic structures.

Research activity in communications and electromagnetics includes networks (theory, connectivity, relay system performance, and networked quantum sensing), optical wireless systems (from indoor sensor systems to outdoor communications, using visible and infra-red) and fibre communications (novel high-capacity fibre designs). Work on metamaterials has led to patent applications for wireless power, with a company based on this technology recently spun out (Metaboards). The group working on microelectronic circuits and systems has developed MEMS circuitry and advanced camera technology (with applications such as novel detectors for communications and the sensing of crops). Work on single photon detectors (SPADs) has led to their application in visible light communications.

Energy storage and energy systems feature research spanning electric motors and power electronics, as well as battery technology and energy management. New advanced battery degradation diagnostic techniques have been developed for *in situ* applications. Research on mobility systems includes high power density long-life electrical machines which are essential for modern vehicle power trains, complimented by new advanced battery degradation diagnostic techniques for applications in-use, electrochemical model-based battery and supercapacitor management approaches. Work on grids has seen the development of advanced demand-side management techniques and in the developing world solar nano grids. Much of this work is in collaboration with companies such as Siemens, Bosch, McLaren, Samsung and Jaguar Land Rover.

Computing research spans from programmable devices to cloud computing, including topics such as accelerator architectures, computing infrastructure, in-network computing, high performance networked-systems and data centre networks. The research is mostly implementation and measurement-led, and the group is very active in the open-source research community, while also collaborating with both silicon vendors and large-scale providers.

## **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, 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 world rankings, with Oxford's Mathematical, physical and life sciences research judged 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. 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 7,000 full and part-time students (including approximately 3,500 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](http://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](http://www.mpls.ox.ac.uk)

## **Balliol College**

More information about the College may be found at: [www.balliol.ox.ac.uk](http://www.balliol.ox.ac.uk)

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.

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 400 undergraduates and a roughly equal number of graduates and receives a large number of applications per place at both undergraduate and graduate level.

Balliol has a strong engineering tradition, and has been teaching engineers for more than 50 years. With three Tutorial Fellows and a Senior Research Fellow (Professor Dominic O'Brien), the subject is well represented in all the major branches of the subject. Professor Jin-Chong Tan teaches materials and structures, Prof James Kwan teaches thermodynamics, fluid mechanics and mathematics, and we are assisted by one or more College Lecturers. The successful applicant will join this team.

There is a thriving subject group, including the Balliol Engineering Society (BEERS). We admit 5/6 graduate students, and 8/9 undergraduate students a year, and this together with our three Tutorial Fellows makes us one of the larger engineering colleges in Oxford.

The successful candidate will be a Trustee of the College and as such a full member of the College's Governing Body, which meets three times a term; and will also become a full member of the Senior Common Room.

Candidates who wish to speak to someone about the College post may contact the Senior Tutor, Dr Nicola Trott at [nicola.trott@balliol.ox.ac.uk](mailto:nicola.trott@balliol.ox.ac.uk) or telephone +44 (0) 1865 277738, or the Senior Engineering Tutor, Professor Jin-Chong Tan at [jin-chong.tan@eng.ox.ac.uk](mailto:jin-chong.tan@eng.ox.ac.uk).

## **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.

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](http://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 personal 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](http://www.ox.ac.uk/about/organisation).

## **University Benefits, Terms and Conditions**

**Benefits available to all University staff are available on page 15.**

### ***Salary***

The successful candidate will be appointed on the Oxford scale for associate professors, as shown in the table in the annexe.

Those appointed below the top of this salary range will receive annual increments to the University component of the salary until they reach the top point. There is also an annual 'cost-of-living' review. In exceptional cases, the Departmental/Faculty board may propose the awarding of additional increments within the substantive scale to an Associate Professor at any time during their appointment.

Additional remuneration may be paid for graduate supervision, examining and some tutorial teaching. Those holding administrative appointments within the department/faculty may be eligible for additional payments.

### ***Pension***

The University offers generous pension provision. Associate Professors are usually offered membership of the Universities Superannuation Scheme.

Details are available at <http://finance.web.ox.ac.uk/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 <http://hr.admin.ox.ac.uk/holding-outside-appointments>.

Guidance is also available on:

ownership of intellectual property <https://governance.admin.ox.ac.uk/legislation/council-regulations-7-of-2002> and managing conflicts of interest <http://researchsupport.admin.ox.ac.uk/governance/integrity>

### ***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](http://www.ox.ac.uk/about/organisation/governance)

and <http://governance.admin.ox.ac.uk/legislation/statute-iv-congregation> for further details.

### ***Family support***

The University offers generous family leave arrangements, such as maternity, adoption, paternity and shared parental leave. Details are available at <http://hr.admin.ox.ac.uk/family-leave-for-academic-staff>. You will have considerable flexibility in the day-to-day organisation of duties in the Associate Professor role. 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 <http://childcare.admin.ox.ac.uk/home>.

The University subscribes to My Family Care, a benefit which allows staff to register for emergency back-up childcare and adult care 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 <https://hr.admin.ox.ac.uk/my-family-care>

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/](http://www.newcomers.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 [welcome.ox.ac.uk](http://welcome.ox.ac.uk).

If you require a visa, we have a dedicated Staff Immigration Team to support successful applicants through the immigration process (for Global Talent and Skilled Worker visas) from job offer through to arrival in the UK. This is subject to the eligibility criteria being met for the respective visa routes.

### ***Relocation***

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

### ***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 <https://edu.admin.ox.ac.uk/home> 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:

<https://hr.admin.ox.ac.uk/staff-benefits>

<https://hr.admin.ox.ac.uk/discounts>

### ***Pre-employment screening***

Your appointment will 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 <https://www.jobs.ox.ac.uk/pre-employment-checks>

### ***Length of appointment***

Appointments to Associate Professorships at Oxford are confirmed as permanent on successful completion of a review during the first five years.

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 <https://hr.admin.ox.ac.uk/the-ejra>

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

## 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>.

## College Benefits, Terms and Conditions

### College benefits

Superannuation arrangements usually take the form of the Universities Superannuation Scheme, which Fellows are automatically entered into unless they opt out.

As a Tutorial Fellow of Balliol College, the post-holder would have the following benefits:

- A taxable and pensionable allowance for housing costs (£12,585 p.a.), or single accommodation in College provided free of charge, where available.
- Eligibility to bid for College housing, where applicable and available.
- Access to a shared equity scheme (subject to availability) for help in the purchase of a property.
- Entitlement to become or remain a member of the Universities Superannuation Scheme (USS).
- Option to join the College BUPA Corporate Care Group as a taxable benefit.
- Eligibility to apply for Teaching Remission in the first two years of appointment.
- Entitlement to sabbatical leave (one term for every six terms in service).
- A College office/teaching room.
- Common Table: free meals in College when the kitchens are open.
- 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, currently £1,320, to cover purchase of academic books, conference travel, research assistance, computer equipment, and other research-related expenses.
- An annual Entertainment Allowance for events involving students of the College.
- Discount on purchases at Blackwells Bookshop.
- Interest free loan for purchase of computer equipment.
- 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.

## **Probationary period**

The appointment is subject to an initial probationary period of up to five years. Satisfactory completion of this period, through demonstration of competence in teaching and research, and reasonable participation in College administration, will result in appointment to retiring age under the College statutes, subject to legislation in place at the time. If the Fellow should vacate the Associate Professorship, or other University office on which the holding of this Fellowship is dependent, the Fellowship must thereupon be vacated.

## **Offer of employment**

Applications for this post will be considered by a selection committee containing representatives from both the Engineering Science and Balliol College. The selection committee is responsible for conducting all aspects of the recruitment and selection process; it does not, however, have the authority to make the final decision as to who should be appointed. The final decision will be made by the Mathematical, Physical and Life Sciences Divisional Board and the Governing Body of Balliol College on the basis of a recommendation made by the selection committee. No offer of appointment will be valid, therefore, until and unless the recommendation has been approved by both the divisional board and the governing body, and a formal contractual offer has been made.

Balliol College and the University of Oxford are Equal Opportunities Employers.

Applications are particularly welcome from women and black and minority ethnic candidates, who are under-represented in academic posts in Oxford.

## Benefits of working at the University

### Employee benefits

University employees enjoy generous holiday and 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 <http://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 <http://www.sport.ox.ac.uk/home>

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

### 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 <http://childcare.admin.ox.ac.uk/home>

### 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 <http://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 <http://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).

## **Appendix: The Tutorial Fellowship**

### **General Template of Duties for Tutorial Fellows in Oxford Colleges**

#### **1: Introduction**

A Tutorial Fellowship represents the College side of a joint appointment, i.e. an appointment which involves a College component and a University component. The University side is represented by an Associate Professorship. The appointee is selected and funded jointly by the College(s) concerned and by the relevant division of the University. The joint appointment system is an unusual arrangement in research-intensive universities. Its central feature is that academics of major research reputation are attached to particular Colleges as Tutorial Fellows, where they are members of an interdisciplinary community of moderate size. In those Colleges they teach, and arrange teaching for, a small cohort of very able undergraduates in tutorials (teaching sessions with one, two, or three students) and small classes, monitoring their progress individually over the whole of their course. They also have responsibility for advising a certain number of graduate students in their subject area within their College. Tutorial Fellowships thus hold a key place in the intellectual culture of the collegiate University of Oxford. This document, adopted by the Conference of Colleges, aims to set out the main features of Tutorial Fellowships, and the expectations that Colleges will generally have of Tutorial Fellows.

The duties of a Tutorial Fellow are not confined to the College. All have an obligation as members of a department or faculty to contribute to research and teaching, and this will usually include lecturing, class teaching, supervision of graduate students and University examining alongside contributing to an internationally excellent research environment. As Associate Professors, the holders of joint appointments will also be expected to contribute to discussion and governance in their faculty or department, serving on committees, revising teaching syllabus materials and reading lists, and taking on administrative roles as needed. All Tutorial Fellows are also members of Congregation, the sovereign legislative body within the University, and have a right to vote on matters before Congregation.

#### **2: Research**

The Colleges have the same interest as departments and faculties in seeking to appoint to Tutorial Fellowships academic staff whose research is or has the potential to be of international standing, and a Tutorial Fellow will be required by the College to engage in research and publication at the highest level. The Colleges and the University work together to appoint outstanding researchers who are willing and able to engage in undergraduate and graduate teaching, student support and pastoral work, and administrative duties. Colleges offer extensive support for research, funding regular sabbatical leave and providing a system of allowances, together with rooms and library facilities, all within a welcoming, interdisciplinary community.

#### **3: Teaching and support**

Those appointed to Tutorial Fellowships are required to perform for the College or for the benefit of the College the stint of undergraduate tutorial teaching specified in their contract or job description, under the general oversight of each College's Senior Tutor. The timing of tutorials and the exact numbers of students in each tutorial group are usually matters for the individual tutor, though each College will have established conventions, and the Senior Tutor and subject colleagues will provide advice and examples of past good practice including arrangements such as intercollegiate teaching exchanges which are commonly used to provide expert coverage of different aspects of (or subjects within) a discipline. Tutorial teaching is not the same as lecturing: the intention is to engage the students in small groups in intellectual interaction and creative dialogue so as to help them develop an independent, critical, and well-informed approach to their discipline. This approach is underpinned by regularly setting written



work, typically weekly essays or problem sheets supported as necessary with recommended reading. Assessment and feedback on that written work is given by the tutors orally during the tutorials as well as by more conventional written comments or marking. Appointees should have the qualities required to relate effectively to students and their academic and personal needs.

Tutorial Fellows are generally assigned sole or joint tutorial responsibility for a defined group of students in their subject area within their College. This work typically involves the following tasks to support the students' education:

- (a) arranging tutorial and/or class teaching for each student in each term, whether the teaching is done by the tutor or another, and ensuring that teaching is of an appropriate standard;
- (b) monitoring students' progress through termly written reports, and by means of collections (regular tests of performance) and/or assessment of vacation work;
- (c) pastoral support of undergraduates reading the subject in question;
- (d) interviewing candidates who apply to read the subject at the College, including arranging for help from other suitable interviewers and making the final selection of who should be admitted;
- (e) writing references for students, and directing them to appropriate careers advice;
- (f) recommending and selecting books and online materials for their subject area in the College Library;
- (g) delegating responsibilities (a)-(f) above when on sabbatical leave, in consultation with the Senior Tutor and subject colleagues.

Tutorial Fellows are supported in these tasks by the administrative staff of the College and by the College Officers.

Tutorial Fellows normally do their tutorial teaching in rooms provided for them in Colleges or in their Departments or Faculties and should be easily contactable through their Colleges during Term (although it is recognised that conferences and other commitments may mean that Tutorial Fellows are sometimes away from Oxford for short periods in Term).

Oxford Colleges offer strong pastoral support to all their students. Here Tutorial Fellows play a key role, not only for their own undergraduates as indicated above, but also by acting as 'College Adviser' in College for a number of graduate students in their disciplinary area (this being additional to the formal academic supervision of research students arranged by the University with a suitable expert very possibly from another College). While Tutorial Fellows are often the first point of contact for students who are having difficulties, there are, of course, experts available when professional help is needed. Tutorial Fellows work closely with College Officers and with staff with appropriate medical and welfare training to ensure that students are supported appropriately and referred to professional services if that is necessary.

#### **4: College Governance**

Oxford Colleges are self-governing communities with wide responsibilities. Tutorial Fellows are normally members of College Governing Bodies, the sovereign bodies of Colleges. They are usually Charity Trustees as well as employees. In many Colleges, major College Officerships (Senior Tutor, Tutor for Admissions, Tutor for Graduates, Dean) are held by Fellows specially appointed to undertake those roles on a full-time basis. However, in some Colleges, such officerships are taken on by Tutorial Fellows on a full-time or part-time basis for agreed limited periods in return for additional stipend and/or a specified remission of tutorial teaching duties. In these various ways, Tutorial Fellows are expected to contribute to the governance and running of their Colleges, though Tutorial Fellows will not normally be asked to take on significant administrative duties in their probationary period (or in the first five years, if their probationary period is shorter than that).

## ANNEXE

### PAY SCALE FOR ASSOCIATE PROFESSORS WITH TUTORIAL FELLOWSHIPS (APTF-U)

(with effect from 1 August 2020)

Grade (30S)				
Scale point	National Pay spine	University Salary	College Salary	Total Salary
11	52	£54,184	£10,421	£64,605
10	51	£52,609	£10,118	£62,727
9	50	£51,081	£9,824	£60,905
8	49	£49,597	£9,538	£59,135
7	48	£48,156	£9,262	£57,418
6	47	£46,758	£8,992	£55,750
5	46	£45,400	£8,731	£54,131
4	45	£44,082	£8,478	£52,560
3	44	£42,802	£8,232	£51,034
2	43	£41,560	£7,993	£49,553
1	42	£40,353	£7,761	£48,114