

Job Description and Selection Criteria

Post	Associate Professorship or Professorship of Engineering Science (Materials Engineering)
Department	Engineering Science
Division	Mathematical, Physical and Life Sciences
College	Christ Church
Contract type	Permanent upon completion of a successful review. The review is conducted during the first 5 years.
Salary	Combined University and College salary from £47,263 p.a. plus substantial additional benefits including; a housing allowance of £14,466 p.a.; other allowances including £2,200 p.a. for research support; membership of a medical insurance scheme; free meals entitlement when the kitchens are open; a relocation allowance may be available. A further salary allowance of £2,700 p.a. would be payable by the University upon award of Full Professor title.
Vacancy ID	

Overview of the post

The Department of Engineering Science wishes to appoint an Associate Professor (or Professor) of Engineering Science (Materials Engineering) in association with Christ Church with effect from 1 January 2019 or as soon as possible thereafter. The successful candidate will be appointed to an Official Studentship at Christ Church (equivalent to a Tutorial Fellowship at other Oxford colleges).

This appointment will add further strength to the Department's internationally-renowned research in solid mechanics and materials engineering. The Associate Professor will build a research group developing and/or evaluating the performance of novel structural and functional materials for advanced technological applications relevant to energy or aerospace. Preference may be given to candidates with an interest in being involved in the Rolls-Royce funded University Technology Centre (UTC) in Solid Mechanics, whose main focus is research in structural integrity of components relevant to Rolls-Royce's technology base. The UTC was successful last year in its application for an Engineering & Physical Sciences Research Council (EPSRC) Prosperity Partnership award, which allows it to combine its research strengths with those of two other Rolls-Royce UTCs, those at Imperial College (in vibrations), and at the University of Nottingham (in transmissions).

Applications from candidates with a strong research background in materials engineering, solid



mechanics or a cognate subject are welcome. The successful candidate will be expected to apply for and obtain external funding to enable development of independent research as well as to develop links with other departments across the University, primarily in the Mathematical, Physical and Life Sciences (MPLS) Division. Further information about the academic Divisions at Oxford is given below.

The successful candidate will also assist in the teaching of their subject at both undergraduate and graduate level. Undergraduate teaching may include lectures and practical classes, and the supervision of undergraduate design and project work (see www.eng.ox.ac.uk/study-here/undergraduate/engineering-science/engps.pdf). The subjects taught at undergraduate level would be expected to be in the general field of materials engineering, as well as other areas of engineering, depending on the interests of the appointee. Graduate teaching will involve supervision of MSc and DPhil students. (The University of Oxford awards a DPhil rather than a PhD.)

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 in the Department. The appointee will be given help to apply for grants from research councils and from industry.

Queries about the post should be addressed to Professor Lionel Tarassenko CBE FEng FMedSci, Head of Department at head@eng.ox.ac.uk, or telephone: +44 (0) 1865 273003. All enquiries will be treated in strict confidence; they will not form part of the selection decision.

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.

The University of Oxford is a member of the Athena SWAN Charter to promote women in Science, Engineering, Technology and Mathematics (STEM). 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. Contact equality@admin.ox.ac.uk for further information about Athena SWAN at the University of Oxford. Information about Athena SWAN in MPLS can be found at www.mpls.ox.ac.uk/equality-and-diversity/athena-swan.

Duties of the post

For the **University** the post-holder will be expected:

Research

- to engage in original research in the field of solid mechanics and materials engineering. Candidates with research interests in materials for energy or aerospace applications are particularly welcome.
- 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

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

The main duties of the post-holder for the **College** are as follows:

The person appointed will share organisational responsibility for Engineering Science with Professor Malcolm McCulloch, the other college tutor in Engineering. This includes the teaching of undergraduates (further details of which are set out below), the organisation of teaching not undertaken by the appointee, participation in the annual round of undergraduate admissions and in access initiatives and open days, setting and marking internal examinations (known as College Collections), and the general administration (including pastoral care) associated with work in the tutorial system. The appointee will, more generally, be expected to play an active part in the life and administration of the College by participation in Governing Body (the post is offered with a Governing Body Fellowship) and other Committees. The specific teaching duties associated with the post are as follows:

- To provide an average of 6 weighted hours of tutorial teaching per week of term averaged across the academic year, typically to pairs of students (in which case, this would be 4.8 contact hours), plus associated organisational and administrative duties such as completing tutorial reports on the OxCORT system, and setting and marking of College examinations (Collections). Note that some of this tutorial teaching requirement can be offset against certain project and class teaching organised by the Engineering Science Department.
- To provide tutorial teaching to Christ Church undergraduates in Engineering Science as follows:
 - (i) First Year undergraduate topics for Paper P3 (Structures and Mechanics) which involves coverage of: statics, bending and torsion, materials and solid mechanics, dynamics
 - (iii) Second Year undergraduate topics for Paper A3 (Structures, Materials and Dynamics), which involves coverage of: structural failure, mechanics of materials, dynamics of machines, mechanical vibrations

Additionally, the ability to teach elements of the First Year and Second Year Engineering Science undergraduate mathematics courses (Papers P1 and A1) would be an advantage but not a requirement.

- To take responsibility for the selection, teaching (including organising teaching) and pastoral care of Christ Church undergraduates in all degrees involving Engineering Science;
- To act as College adviser to the College's graduate students in Engineering and related subjects (a pastoral role distinct from the supervision of postgraduates which is organised separately by the department);
- To be involved in the selection of undergraduate, graduate and visiting students, which includes interviewing undergraduate candidates for degrees involving Engineering Science during the interview period in December and involvement with outreach activities such as Open Days.
- To participate in the governance of the College as a member of the Governing Body and as Trustee, which includes attendance at Governing Body meetings (usually three per term) and service on other College committees at a level appropriate to career stage.
- To contribute to the intellectual life and academic activities of the College.

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: one term of leave can be accrued after six completed terms (i.e. two years), OR, more usually, one year can be accrued after six completed years.

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.

Person specification

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 materials engineering, solid mechanics, or a related subject;
- (b) Proven research record of high quality at international level in solid mechanics and/or materials engineering, demonstrated by previous achievements, e.g. publications in recognised journals;
- (c) Significant research potential in solid mechanics and/or materials engineering, evidenced by a written 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 both the undergraduate and graduate levels, a wide range of topics within the fields of solid mechanics, materials engineering and related topics in the context of our general Engineering Science course;
- (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;
- (i) Ability and willingness to undertake the full range of pastoral and administrative duties both within the Department and the College.
- (j) A firm commitment to undergraduate teaching.

Desirable

- (k) Excellent track record of obtaining research grants;
- (l) Experience of research collaborations at national and international level;
- (m) Experience of supervising research students;
- (n) Experience of or an interest in developing links with Industry;
- (o) Ability to teach elements of the First Year and Second Year Engineering Science undergraduate mathematics courses (Papers P1 and A1) would be an advantage but is not a requirement.

How to apply

To apply, visit <https://www.ox.ac.uk/about/jobs/academic/index/>, 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.

You will be asked to upload a full CV with publications list, a supporting statement and a research proposal:

- 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.

The name of the PDF attachment should be of the form DF18CCH_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.**

You will also be asked to 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 the following for details: www.admin.ox.ac.uk/eop/disab/. 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 www.admin.ox.ac.uk/access/

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

The deadline for applications is **12.00 noon on Thursday 18th October 2018**

Should you have any queries about matters that are not addressed in this document, please contact Professor Lionel Tarassenko CBE FREng FMedSci, Head of Department at head@eng.ox.ac.uk, or telephone: +44 (0) 1865 273003. Please quote DF18CCH 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 will be asked to give a short presentation to the committee as part of the interview.

It is expected that interviews will be held on **Monday 26th or Tuesday 27th November 2018 [TBC]**. The interview process for the final short-listed candidates is expected to be as follows:

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

Afternoon: The formal interview by the Selection Committee will be held in the Department of Engineering Science. 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 the interview.

During the time they are not giving their seminar, short-listed candidates will have an opportunity to visit the Department and College. Neither of these visits constitutes any part of the selection process. Overnight accommodation will be arranged, if desired.

Applications for this post will be considered by a selection committee containing representatives from both the Department of Engineering Science and Christ Church. 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 Christ Church 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.

Essential Information for Applicants for the Associate Professorship in Engineering Science (Materials Engineering)

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, clerical 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 third in the world in the latest *Times Higher Education World University Rankings* for Engineering & Technology, behind Stanford and Caltech, but ahead of MIT (4th), Cambridge (5th), Princeton (6th) and Imperial (10th).

Further information about the Department is available at www.eng.ox.ac.uk

Teaching

We aim to admit 170-180 undergraduates per year, all of whom take 4-year courses 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 400 research students and about 220 postdoctoral researchers. Direct funding of research grants and contracts, from a variety of sources, amounts to an annual turnover of approximately £25M in addition to general turnover of about £24M.

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 Engineering and Mechanics; Civil and Offshore; Electrical and Optoelectronic; Chemical and Process; Biomedical Engineering.

Solid Mechanics and Materials Engineering

Research in Solid Mechanics and Materials Engineering has a long tradition in Oxford, initiated by Hooke, whose work on the elasticity of springs may be regarded as the foundation of the mechanics of deformable solids. At present activities encompass many techniques (experimental, theoretical and numerical) and spread over a wide range of materials (composites, metals, polymers, biomaterials, etc.). The department is seeking to make an academic appointment in the general area of solid mechanics and materials engineering. Research activities in this domain are highly inter-disciplinary, with a strong focus on industrial applications. The main activity centres primarily on the development and use of novel structural and functional materials for a wide range of technological applications. This includes advanced engineering alloys such as nickel based superalloys, ferroelectrics, polymers, metal-organic frameworks, energy storage materials, nanocomposites and coatings. Complex structure-property relationships are established using state-of-the-art materials characterisation techniques, ranging from atomic force microscopy, electron microscopy and nano-indentation, all the way to synchrotron diffraction, micro-tomography, and neutron scattering at large-scale facilities.

The group has strong links with industry, particularly in the energy and aerospace sectors. Much of the aerospace related research takes place in the Rolls-Royce funded UTC in Solid Mechanics. The UTC was established in 1990 with the aim of undertaking strategic and applied research relevant to Rolls-Royce's technology base (power systems providing power for land, sea and air). The UTC receives annual infrastructure funding from the company in addition to support for a number of specific projects, with a current focus on structural integrity. The performance of materials and structures under dynamic and quasi-static loading conditions, including multiaxial stress states and high stress gradients, has been extensively studied within the UTC. Recent work has been in the areas of contact mechanics, fretting fatigue and impact, with an extensive range of testing machines in the Department available to provide model validation. Other work focuses on residual stress at the micro- and macro-scale and on how this affects fatigue performance.

The group also has extensive research activities related to the defence and energy sectors and are further developing their research interests in power generation through collaborations with EDF Energy, Siemens and Mitsubishi Heavy Industries. Collaborations and research projects with healthcare and other industrial sectors exist, which allow the group to maintain a balanced and progressive portfolio of research projects.

More information on the activities of academic staff working in materials engineering and solid mechanics can be found at <http://www.eng.ox.ac.uk/solidmech>.

We welcome applications from candidates from any branch of solid mechanics or materials engineering, but especially those with expertise and a strong interest in materials for energy or aerospace applications.

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. The disciplines within the MPLS Division regularly appear at the highest levels in world rankings and have been evaluated as conducting world-leading and internationally excellent research in UK research assessments, and Mathematical, physical and life sciences research at Oxford is the best in the country according to the 2014 Research Excellence Framework (REF) assessment exercise carried out by HEFCE.

The MPLS Division is home to the non-medical sciences at Oxford and its 10 academic departments 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.

MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. Our senior researchers have been awarded some of the most significant scientific honours (including Nobel prizes and prestigious titles such as FRS and FREng) and we have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships. The Division is also the proud holder of ten Athena Swan Awards (3 Silver and 7 Bronze) illustrating our commitment to ensure good practice and to encourage women in science at all levels in the division.

We have around 6,000 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 major mathematical, scientific and engineering problems.

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

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

Christ Church

(a) Introduction

Oxford has 38 self-governing and independent Colleges, enabling academic staff and students to reap the benefits of belonging to a small, interdisciplinary community as well as a large, internationally renowned University. The collegiate system fosters a strong sense of community, bringing together leading academics and students across subjects, and from different cultures and countries.

Christ Church is a unique institution founded by Henry VIII in 1546: one of the largest colleges in the University and, at the same time, the cathedral for the Diocese of Oxford. Its junior members, both undergraduate (430) and graduate students (250), cover almost all the major academic disciplines in the Sciences, Humanities and Social Sciences, as do its senior academic staff (60). It aims at high academic achievement and individual fulfilment in a friendly, tolerant and mutually supportive environment.

More general information about the College may be obtained at www.chch.ox.ac.uk. Information about undergraduate and graduate provision is detailed under 'Admissions' and college teaching staff are listed under 'Academic and Research Staff', both in the 'College' section of the website.

Christ Church gives a College base to several senior University Professors. It also sponsors research by the appointment, at any one time, of approximately 18 Junior Research Fellows. This number includes two Junior Research Fellows in the Sciences and two in the Humanities and Social Sciences (for a period of three or four years), chosen in open competition each year.

The college has an excellent library. There are a number of well-appointed guest rooms which are available for short-term academic visitors, and a number of seminar rooms, including a lecture theatre in the Blue Boar building.

The role of a Tutorial Fellow is outlined in the general template of duties at the end of this document.

(b) Engineering at Christ Church

Christ Church currently admits six undergraduates a year to read Engineering, with 24 students therefore enrolled at any time. Applications for places are very strong and recent progression rates have been 95%, with 92% of students graduating with a good degree (upper-Second or First). The current permanent teaching establishment in engineering at Christ Church comprises Professor Malcolm McCulloch, who primarily teaches in electricity, energy systems and Engineering in Society. Tutorial teaching at the College is also provided by College Lecturers, who cover the teaching of Mathematics and Fluid and Thermodynamics.

The College's Governing Body also includes Professor Mihaela van der Schaar who has a Chair (in Quantitative Finance) in the Department of Engineering Science.

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), and is ranked first in the UK for university spin-outs, with more than 150 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

University Benefits, Terms and Conditions

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 until they reach the top point. There is also an annual 'cost-of-living' review. In exceptional cases, the Departmental 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 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 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.

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 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 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, graduate students and newly appointed academic members of the University to settle in and to give them the opportunity 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 immigration process (for Tier 1 and Tier 2 visas) from job offer through to arrival in the UK.

Relocation

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

Promoting diversity

The University and its Colleges are 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/

College-specific benefits

- Subject to availability, the postholder may have free single accommodation in College (in this case, no housing allowance will be paid).
- If the postholder lives in their own accommodation, they will be paid a taxable and pensionable housing allowance of £14,466p.a. (as at 1 August 2017),
- Christ Church also has a Shared Equity Scheme to assist with house purchase. Participation in the Scheme involves a reduction in the housing allowance payable. Details of the Scheme are available from the Treasurer.
- The postholder is further entitled to a taxable Official Student Allowance (£1,000p.a.), and Entertainment Allowance (up to £450p.a.), a Book Allowance (up to £1,140.p.a.) and a Research and Equipment Allowance of up to £2,200p.a.
- There is optional membership of a private medical insurance scheme (which currently extends to the immediate family of up to two adults and two children). This medical cover, if taken, is a taxable benefit.
- The postholder will be entitled to a room in College for teaching.
- The postholder will be entitled to Senior Common Room lunch and Common Table dinner (free of charge) in College, when available.

Pre-employment screening

The appointment of the successful candidate 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 www.ox.ac.uk/about/jobs/preemploymentscreening/.

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

www.admin.ox.ac.uk/personnel/end/retirement/revisedejra/revaim/

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/acrelretire/

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection

legislation. For further information, please see the University's Privacy Notice for Job Applicants at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/privacynotices/job/.

The University's Policy on Data Protection is available at: www.admin.ox.ac.uk/councilsec/compliance/gdpr/universitypolicyondataprotection/.

Offer of employment

Applications for this post will be considered by a selection committee containing representatives from both the Department of Engineering Science and Christ Church. 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 Christ Church 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.

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 further particulars, 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 2018)

THIS TABLE NEEDS TO BE UPDATED

Grade (30S)				
Scale point	National Pay spine	University Salary	College Salary	Total Salary
11	52	£52,183	£10,036	£62,219
10	51	£50,666	£9,744	£60,410
9	50	£49,194	£9,461	£58,655
8	49	£47,764	£9,186	£56,950
7	48	£46,378	£8,919	£55,297
6	47	£45,031	£8,660	£53,691
5	46	£43,723	£8,409	£52,132
4	45	£42,453	£8,165	£50,618
3	44	£41,221	£7,928	£49,149
2	43	£40,024	£7,698	£47,722
1	42	£38,862	£7,474	£46,336