

Job Description and Person Specification

Post	Associate Professorship (or Professorship) of Engineering Science (Digital Electronics)
Department	Engineering Science
Division	Mathematical, Physical and Life Sciences
College	Somerville College
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. to £63,463 p.a. plus additional benefits including a college housing allowance of £9,050 p.a. or free college accommodation or access to a joint equity scheme. Plus £435 p.a. for entertainment, £381 p.a. for books and the facility to apply for up to £2,000 p.a. for research support. An allowance of £2,754 p.a. would be payable upon award of Full Professor title.
Vacancy ID	141061

Overview of the post

The Department of Engineering Science and Somerville College are recruiting an Associate Professor of Engineering Science (Digital Electronics), who will play a pivotal role in developing Oxford's capacity in digital electronics, both in research and in teaching undergraduates who wish to specialise in electrical engineering in their third and fourth years.

The new Associate Professor will join the thriving Electrical Engineering (EE) cluster, one of seven research clusters in the Department (joining 13 other academic staff in the EE cluster). The cluster's core research themes are photonics, communications and electromagnetics, microelectronic circuits, and quantum information systems (all on the main Departmental site in Central Oxford), as well as energy storage and energy systems at Begbroke Science Park (just outside Oxford). The Department now wishes to strengthen the cluster's research activities in digital electronics, by appointing an Associate Professor with an internationally-leading track record in one or more of the following areas: sensors and instrumentation, the Internet of Things (IoT), system-on-chip (SoC) design, applications of Field-Programmable Gate Arrays (FPGAs) and Application-Specific Integrated Circuits (ASICs), system architectures (including Reduced Instruction Set (RISC) architectures), or digital communications (including video and audio coding and transmission).



The Department will also expect the new Associate Professor to be able to teach across the electrical engineering syllabus, from first-year digital logic circuits to the design and programming of embedded systems, and how to implement them in low-level hardware, for example using the ARM University education kits (3rd or 4th-year courses).

We are seeking to fill the post as soon as possible, and certainly some time during the academic year 2019-2020. 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.

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 FREng 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 digital electronics;
- 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:

- to engage in advanced study and research;
- to share responsibility for the organisation, supervision and teaching of Engineering Science at Somerville College including arrangements for the admission of new students;
- to undertake for the College up to six hours¹ 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;
- to act as College Advisor to Somerville 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 Somerville College, including attending Governing Body meetings, and acting as a member of College committees when called upon to do so.

¹ The College operates a weighting system whereby hours spent teaching groups larger than one person count for more than one hour.

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 the field of Electrical Engineering or a cognate subject;
- (b) Proven research record of high quality at international level in digital electronics, which may include: sensors and instrumentation, IoT, SoC design, FPGAs and ASICs, system architectures (including RISC), or digital communications; demonstrated by previous achievements, e.g. publications in recognised journals;
- (c) Significant research potential in geotechnical engineering; 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;
- (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.

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.

A teaching proposal is not required.

The name of the PDF attachment should be of the form DF19SOM_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 are 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 interview, 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 Friday 30 August**.

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 DF19SOM/141061 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.

Interviews will be held on Friday 18 October. 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 Somerville 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 Somerville 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.

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

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 first in the world in the latest *Times Higher Education World University Rankings* for Engineering & Technology, ahead of Stanford (2nd), Harvard (3rd), Caltech (4th), MIT (5th) and Cambridge (6th).

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 500 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 £29M in addition to general turnover of about £28M.

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.

Electriconic Engineering

There are 13 academic staff in this reserch cluster, who occupy 1700m² 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, and Tony Wilson). The Professor of Electrical and Electronic Engineering is Professor Lionel Tarassenko FREng, whose research, in signal processing, is mostly of biomedical application, and he is currently the Head of Department. 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. The most high-profile is the collaboration with the Departments of Physics, Materials and Computer Science in the £38M Oxford-led Networked Quantum Technologies (NQIT) Hub, a five-year programme to build the elements of a quantum computer. There are a wide range of other collaborations in 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 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 involvement in the NQIT Quantum Hub, and 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.

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) 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

Somerville College

There are 38 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.

Somerville Hall was founded in 1879 and named in honour of the Scottish mathematician and scientist Mary Somerville. There were just twelve students when it began but in singling out Mary Somerville, a public intellectual in an age against women pursuing academic careers, the founders made clear the hopes they had for the women who attended. It was also the first Oxford College to be non-denominational and it remains religiously non-aligned to this day.

For more information about Somerville College, please visit: www.some.ox.ac.uk.

Engineering Science at Somerville College

Engineering is one of the larger subjects, or 'schools' offered at Somerville. The course is centrally organised and the college has the great advantage of being only just across the road from the Engineering Science Department where all the lectures and practicals take place.

Students find it very convenient to be able to walk back and forth between lectures and classes in the Department, lunch in College, practicals in the Department, tutorials in College, and so forth. Somerville has made a special effort to foster Engineering and related subjects since we appointed our first lecturer in the subject in 1985, and the College continues to be committed to encouraging women in Engineering. It also seeks to provide a supportive background for those who have had limited practical experience before coming up to Oxford.

Tutorials are organised primarily within College but the range of subjects is wide and undergraduates are taught by tutors from outside College in the later part of the course.

College Duties

The College will expect the Fellow and Tutor to share the organisation, supervision and teaching of Engineering with Professor Richard Stone, including arrangements for admission to the subject and pastoral duties, and to undertake up to six hours college teaching a week averaged over the three terms (twenty-four weeks) of the academic year. As noted above, the College operates a weighting system whereby hours spent teaching groups larger than one person count for more than one hour. This obligation for College teaching is in addition to the teaching obligation that attaches to the Associate Professorship.

The College has a preference for teaching ability in the first-year *P2 Electronics and Information Engineering* paper and the second-year *A2 Electronics and Information Engineering* paper.

The normal duties of a College Tutor include the selection of undergraduate candidates, attendance at meetings of the Governing Body, and participation in the administration of the College. The Fellow and Tutor will also be required to undertake advanced study or research in the area of Engineering Science. Candidates are advised to consult the Template of Duties below which summarises the range of duties and expectations of a Tutorial Fellow.

A Tutor, in common with other Fellows of the College, must expect to be asked to advise the Tutor for Graduates on the admission of graduate students. Tutors also serve as College Advisors (in-College mentors) for graduate students. On joining the College a Tutor will be notified of the names of those students for whom he or she is asked to act as College Advisor. College Advisors are expected to make contact with the graduate students under their care normally at least once a term, and to entertain them at lunch or dinner in the College once a term at the expense of the College.

Candidates who wish to speak to someone informally about the College post may contact Professor Richard Stone (Richard.stone@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), 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

Benefits available to all University staff are listed below 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 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, 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/.

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.

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

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

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

Other benefits and discounts for University employees

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

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

Pre-employment screening

All offers of employment are made subject to standard pre-employment screening, as applicable to the post.

If you are offered the post, you will be asked to provide proof of your right-to-work, your identity, and we will contact the referees you have nominated. You will also be asked to complete a health declaration (so that you can tell us about any health conditions or disabilities so that we can discuss appropriate adjustments with you), and a declaration of any unspent criminal convictions.

We advise all applicants to read the candidate notes on the University's pre-employment screening procedures, found 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/acrelretire8+/ For **existing** employees, any employment beyond the retirement age is subject to approval through the EJRA procedures. Further details can be found at www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/

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/.

College Benefits, Terms and Conditions

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

For Tutorial Fellows of Somerville there are tax-free entertainment allowance of £435 p.a., a book allowance of £381 p.a. and research support up to £2,000 p.a. which can be accumulated to a maximum of £4,000 over two years.

A teaching room in College will be available, and residential accommodation in College may be available for the successful candidate.

A taxable and pensionable housing allowance, currently £9,050 per annum, is paid to Tutorial Fellows who do not live in College. Additionally, a Tutorial Fellow may apply to the College for assistance in the purchase of a house by way of a joint equity agreement, with the College buying a share up to 50% of the value of the property, subject to an upper limit of £203,885 (current details on request).

There is a right to Common Table (i.e. breakfast, lunch and dinner are provided free of charge on weekdays when the College is open).

The College sabbatical leave scheme provides for one term's absence after 6 terms of service, two terms after 12 terms of service, or three terms after 18 terms of service. Applications for leave must be approved by Governing Body, who will check that college teaching is satisfactorily covered during the periods of leave. Normally, there is no deduction from stipend.

The Fellowship will be held under the Statutes and By-Laws of the College, which may be varied from time to time.

The appointment will be for a period of up to five years in the first instance. On completion of the initial period of office, a Tutorial Fellow is eligible for reappointment to retirement (providing that she or he continues to hold the associated University post), subject to the provisions of the Statutes and By-Laws of the College. Evidence of a satisfactory performance in all the duties of the post is a prerequisite for re-election after the initial period of five years.

The College operates an employer justified retirement age for all academic posts, for which the retirement date is 30 September immediately preceding the 69th birthday. There is a procedure for requesting an extension of employment beyond that date. The appointment is subject to septennial renewal under the terms of the Statutes and By-Laws of the College.

Offer of employment

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

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See www.admin.ox.ac.uk/personnel/staffinfo/benefits.

University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and www.sport.ox.ac.uk/oxford-university-sports-facilities.

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 www.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 www.admin.ox.ac.uk/personnel/permits/reimburse&loanscheme/.

Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to My Family Care, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See www.admin.ox.ac.uk/personnel/staffinfo/benefits/family/mfc/.

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 www.admin.ox.ac.uk/childcare/.

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 www.admin.ox.ac.uk/eop/disab/staff.

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 www.admin.ox.ac.uk/eop/inpractice/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.

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 2018)

Grade (30S)				
Scale point	National Pay spine	University Salary	College Salary	Total Salary
11	52	£53,226	£10,237	£63,463
10	51	£51,679	£9,939	£61,618
9	50	£50,178	£9,650	£59,828
8	49	£48,719	£9,370	£58,089
7	48	£47,305	£9,098	£56,403
6	47	£45,931	£8,834	£54,765
5	46	£44,597	£8,577	£53,174
4	45	£43,302	£8,328	£51,630
3	44	£42,046	£8,086	£50,132
2	43	£40,825	£7,852	£48,677
1	42	£39,639	£7,624	£47,263