



Job Description and Person Specification

Post	University Lecturership (TF) in Plasma Theory for Magnetic Confinement Fusion
Department/Faculty	Physics
Division	Mathematical, Physical and Life Sciences
College	Worcester
Salary	Grade 10a: £42,883 to £57,581

Overview of the post

Applications are invited for the post of University Lecturer in *Plasma Theory for Magnetic Confinement Fusion* with effect from 1 October 2013 or as soon as possible thereafter. The successful candidate will also be appointed to a Tutorial Fellowship at Worcester College.

The successful candidate is expected to become a major player in the drive to establish fusion as the long-term global energy source by developing the interaction between Oxford University and the nearby Culham Centre for Fusion Energy. S/he will help Oxford Physics educate the next generation of physicists through stimulating teaching at both undergraduate and graduate levels.

Preference may be given to candidates working in the area of magnetic confinement fusion. However, candidates currently working in another area of plasma physics but willing and able to devote a substantial amount of their time in the future to magnetic confinement fusion will also be considered.

Queries about the post should be addressed to Prof James Binney (E-mail binney@thphys.ox.ac.uk or telephone: +44 (0) 1865 273979).

All enquiries will be treated in strict confidence; they will not form part of the selection decision.

Duties of the post

The University Lecturer will be a member of both the University and Worcester College. He or she will be part of a lively and intellectually stimulating research community which performs to the highest international levels in research, publishes in leading journals and presents at key conferences, and will have access to the excellent research facilities which Oxford offers. He or she will be a member of Congregation, the University's highest authority, and a member of the Governing Body of Worcester College.

The main duties of the **University** post are as follows:

Research

- to engage in original research in the field of Plasma Theory for Magnetic Confinement Fusion;
- to secure research funding and engage in the management of research projects;
- to disseminate his/her 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 levels 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 when requested to do so.

Administration

- to participate in the administration of the Department of Physics when requested by the Head of Department.

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

- to engage in advanced study and research;
- to organise teaching and to teach undergraduates in tutorials and small classes for a maximum of six hours per week (weighted by group size) averaged over the three eight-week terms which constitute the undergraduate teaching year;
- to share responsibility of academic and pastoral care for undergraduate students
- studying Physics and Physics and Philosophy (i.e. to act as their 'Moral Tutor'); to take part in the annual admissions procedures for the selection of undergraduates in Physics and the joint degree and to participate in Open Days and access initiatives.
- to act as college adviser to some of the graduate students of the College reading for higher degrees in Physics and other related subjects;
- as a Trustee of the College and a member of the Governing Body, to attend Governing Body meetings (normally two per term) and Tutors' Committee meetings (normally three per term);
- to take an appropriate share of the committee and administrative work of the College;

Person specification

Applications will be judged only against the criteria which are set out below. Applicants should make sure that their application shows very clearly how they believe that their skills and experience meet these criteria.

Oxford is committed to fairness, consistency and transparency in selection decisions. The chair of the selection committees will be aware of the principles of equality of opportunity and fair selection and there will be a member of each gender on the committee.

The successful candidate will demonstrate the following:

Essential

- (a) A doctorate in physics, applied mathematics or a related field;
- (b) Record of high-quality research in the theory of magnetised plasmas at international level;
- (c) Ability to develop an independent programme of research and to attract the necessary research funding for it;
- (d) Ability to teach effectively, both at undergraduate and graduate level, a wide range of topics within the field of physics
- (e) Ability to supervise graduate students;
- (f) Excellent interpersonal skills necessary for tutorial teaching and the pastoral care of students;
- (g) Ability and willingness to undertake the full range of administrative duties both within the Department and the College;
- (h) Willingness to establish a strong interaction with the Culham Laboratory;

Desirable

- (j) Experience of research in plasma theory applied to magnetic confinement fusion. (Candidates currently working in another area of plasma physics but willing and able to devote a substantial amount of their time in the future to magnetic confinement fusion will also be considered.)

How to apply

You are required to send your CV, research proposal, publication list and a covering letter outlining how you meet our criteria to TPUL@physics.ox.ac.uk. The deadline for applications is 2 December 2012. All documents should be in PDF format. Your CV should describe what you have been doing over at least the last 10 years. This may have been employment, education, or you may have taken time away from these activities in order to raise a family, care for a dependant, or travel for example. Your application will be judged solely on the basis of how you demonstrate that that you meet the selection criteria outlined above and we are happy to consider evidence of transferable skills or experience which you may have gained outside the context of paid employment or education.

You should ask **three** referees to send a letter of recommendation to Professor Binney c/o Michelle Boshier (michelle.bosher@physics.ox.ac.uk) by the closing date. Please ensure your referees are aware of the requirements for the post.

If you would prefer your referees to be approached only if you are being called for interview, you must state this in your application, alongside the details of the relevant referee(s). You should provide the names and full contact details of three referees even if you do not wish them to be contacted yet.

Should you have any queries about how to apply, please contact Michelle Boshier
(Michelle.Boshier@physics.ox.ac.uk)

All applications will be acknowledged after receipt and will be considered by the selection committee as soon as possible after the closing date. All shortlisted candidates will be interviewed and will be asked to give a short presentation to the committee and interested members of the Physics Department.

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

Information for Applicants for the University Lecturership in Plasma Theory for Magnetic Confinement Fusion

The University

The University of Oxford aims to sustain excellence in every area of its teaching and research, and to maintain and develop its position as a leader amongst world-class universities. Placing an equally high value on research and on teaching, the colleges, and departments of Oxford aspire both to lead the international research agenda and to offer a unique and exceptional education to our undergraduate and graduate students.

Oxford's self-governing community of scholars includes university professors, readers, and lecturers, college tutors, senior and junior research fellows and over 2,500 other university research staff. The University aims to provide facilities and support for colleagues to pursue innovative research and outstanding teaching, by responding to developments in the intellectual environment and society at large, and by forging close links with the wider academic world, the professions, industry and commerce. The Strategic Plan, detailing strategy for the period 2008-12, can be found at <http://www.admin.ox.ac.uk/pra/planningcycle/stratplan.shtml>.

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, from deciphering ancient texts and inscriptions using modern scientific and computational methods developed in Oxford, through to global health, climate change, ageing, energy and the effects on our world of rapid technological change.

Oxford seeks to admit undergraduate students with the intellectual potential to benefit fully from the college tutorial system and 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's postgraduate student body now numbers about 7,000, well over a third of the full-time students. 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

The Mathematical, Physical, and Life Sciences Division

The Mathematical, Physical, and Life Sciences Division (MPLS) is one of the four academic divisions of the University. Oxford is widely recognised as one of the world's leading science universities. In the 2008 UK Research Assessment Exercise over 70% of research activity in MPLS was judged to be world-leading (4*) or internationally excellent (3*), and Oxford was ranked first in the UK across the mathematical sciences as a whole.

The MPLS Division's ten departments and three interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. We have over 6,000 students and research staff, and generate over half of our funding from external research grants. Our research addresses major societal and technological challenges and is increasingly interdisciplinary in nature. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, as well as with researchers from around the world.

For more information, please visit: <http://www.mpls.ox.ac.uk/>

The Department of Physics

The Department of Physics at the University of Oxford (<http://www2.physics.ox.ac.uk/>) is made up of seven sub-departments of which one is the Rudolf Peierls Centre for Theoretical Physics and the others are Astrophysics, Atmospheric Oceanic and Planetary Physics, Atomic and Laser Physics, Condensed Matter Physics, Particle Physics and Teaching. It is one of the largest Physics departments in Europe, with approximately 104 permanent academic staff, 24 long-term research fellows, approximately 185 other postdoctoral researchers and visitors, 303 graduate students and 721 FTE undergraduates.

The management of the Department is in the hands of the Chairman of Physics, currently Dr John Wheeler, advised by the Physics Management Committee. Members of all sub-departments take part in teaching and matters such as examinations, discussions of syllabuses, lectures and liaison with undergraduates and postgraduates.

The Rudolf Peierls Centre for Theoretical Physics

The Rudolf Peierls Centre is the sub-department of Oxford Physics that is devoted to theory. It is currently headed by Prof James Binney FRS and has 20 permanent staff members, 8 active Emeritus Professors, 5 Research Fellows, 8 postdoctoral research assistants, 49 graduate students and 15 long-term visitors and associates. Members of the Centre have a wide range of research interests covering astro and plasma physics, soft and hard condensed-matter physics, and particle physics. There is a considerable interaction between these groups and several research activities span these categories. The Centre runs a full course of lectures for first-year graduate students and a general Theoretical Physics Colloquium in addition to more specialised seminars organised by the individual groups.

The astro-plasma group currently consists of Prof James Binney and Dr John Magorrian, both specialising in stellar systems (gravitational plasmas) and Dr Alex Schekochihin, who works on both astrophysical and laboratory plasmas. While our involvement with astrophysical plasmas is of very long standing, our involvement with fusion plasmas is of recent origin and has been growing rapidly. Currently we have two Junior Research Fellows and four DPhil students working on fusion plasmas, as well as Visiting Professors William Dorland (University of Maryland) and Christopher Llewellyn-Smith FRS. The Culham Centre for Fusion Energy (<http://www.ccf.ac.uk/>) is just outside Oxford and we have been forging links with it. There are now students and postdocs who work both here and at Culham and a number of CCFE researchers are long-term visitors at the Peierls Centre (Prof Jack Connor FRS, Prof Steve Cowley, Dr A. R. Field, Dr R. J. Hastie, Prof J. B. Taylor FRS). We also interact extensively with plasma-oriented groups in other parts of Physics and Mathematics led by Prof Steve Balbus, Prof Katherine Blundell, Dr Julien Devriendt and Dr Adrienne Slyz (Astrophysics), Prof Tony Bell, Dr Gianluca Gregori, Prof Simon Hooker and Prof Justin Wark (Atomic & Laser Physics), and Dr Paul Dellar (Mathematical Institute).

Worcester College

Worcester College is one of the 38 constituent colleges of the University of Oxford. Founded in 1714, it occupies a 26-acre site on the western side of the city where the Benedictines first founded Gloucester College in 1283. Some of the buildings of the earlier College survive, and the resulting mixture of architectural styles, together with wooded grounds, lake and playing fields, make Worcester one of the most attractive places in Oxford. Currently the College has 402 undergraduates (48% men, 52% women) and 221 graduate students (57% men, 43% women) in residence. There are also up to 20 Junior Year Abroad students in residence who, like their undergraduate contemporaries, live in College.

Like all Oxford Colleges, Worcester is an independent, self-governing institution, established by Royal Charter. The College is a charity, and all 49 members of the Governing Body are legally its Trustees.

Membership comprises the Provost, all Official Fellows (Tutorial and Non-Tutorial) and Professorial Fellows

(persons whose posts are Statutory Professorships permanently associated with the College). There are 4 other categories of Fellowship – Supernumerary, Research, Emeritus and Honorary – holders of the first two of which may be elected to membership of the Governing Body. At present, the Governing Body has 33 Official Tutorial Fellows (of whom 6 have the title of Professor and 2 of Reader), 2 Official Non-Tutorial Fellows, 8 Professorial Fellows and 5 Supernumerary Fellows (of whom 3 have the title of Professor) as members.

The College admits six undergraduates per year to read Physics (the 3- or 4-year courses), which may include one place for Physics and Philosophy. Tutorial Fellows in the relevant areas are Professor Paul Ewart (Physics) and Drs Stephen Williams and Michail Peramatzis (Philosophy). In addition the College employs a Lecturer in Physics, Dr Huw Davies, and a Junior Research Fellow and Lecturer in Philosophy, Mr Steven Methven.

Detailed information about Worcester College, including the research interests of Fellows, may be found at: www.worc.ox.ac.uk

College Terms and Conditions: Tutorial Fellows of Worcester College currently have the following entitlements:

- (i) A teaching room in College.
- (ii) Free lunches in the Senior Common Room (of which the Fellow will be a full member) in term and vacation (except when the kitchens are closed).
- (iii) Free dinners in term and vacation (except when the kitchens are closed).
- (iv) An entertainment allowance of up to £419 p.a. and an allowance of up to £1,211 p.a. for the purchase of books and other items needed for teaching or research (such items remain the property of the College). The College usually provides a computer for new Fellows. There is a fund to which Fellows may apply for assistance with travel.
- (v) The sabbatical leave scheme allows Tutorial Fellows one term's research leave after six qualifying terms, two terms after twelve terms and three terms after eighteen terms of service. The College will not normally reduce its contribution to a Fellow's stipend during sabbatical leave, but will do so if a salary is being received from another institution. Qualifying services does not accrue beyond 18 terms.
- (vi) The tenure of the Tutorial Fellowship is initially for five years, the usual probationary period.
- (vii) At present, the College can provide health insurance by enrolling Tutorial Fellows in BUPA, if requested; the subscription paid by the College is a taxable benefit. Fellows' families may be enrolled at a modest extra charge.
- (viii) The College conforms to the University's policy on parental leave and participates in the University's nursery scheme.
- (ix) **Assistance with Housing**
In addition to a teaching room in College, Tutorial Fellows can receive assistance with housing. This can take a number of forms.
 - (a) **Live-in Accommodation**
It is sometimes possible to provide single live-in accommodation within College; this would incorporate the Fellow's teaching room. The number of such sets of rooms in College is

very small, and they become available (through retirement or because the previous Fellow decides to move out of College) rarely.

(b) College Houses

To assist new Tutorial Fellows to locate themselves in Oxford, it is sometimes possible to offer them use of a College-owned house or flat. Such accommodation is generally small, but equipped with essential furniture; it is always in the vicinity of the College. If available, such accommodation may be occupied by the Fellow for up to, but not more than, six years. No housing allowance is payable by the College to the Fellow in such cases. The Fellow pays Council Tax and utility bills, and any insurance of personal contents; the College insures the building and its own furniture and is responsible for routine maintenance.

(c) Housing Allowance

Tutorial Fellows who do not live in College or a College owned house are entitled to a housing allowance. This is reviewed annually. The housing allowance is pensionable; it attracts income tax, and national insurance and USS contributions from both the Fellow and the College. Its current value is £7,233 p.a.

(d) General

In all cases of housing provision, the College acts in the furtherance of its academic aims; it is in the interest of the College to recruit the best academic staff and to enable them to live within reasonable distance of the College so that they can be available for teaching and administrative duties.

Standard Terms and Conditions

Salary, benefits and pension

The successful candidate will be appointed on the Oxford scale for University Lecturers (£42,883 - £57,581). The successful candidate will have two separate contracts of employment, one with the University and one with the College, and payment of this combined salary will be divided between the University and the College in accordance with the normal university arrangements. Lecturers appointed below the top of this range will receive annual increments until they reach the top point. There is also an annual 'cost-of-living' review. Departments may also, in wholly exceptional cases, propose the awarding within the substantive scale of additional increments to lecturers at any time during their appointment.

Additional remuneration is currently paid to those undertaking examining and graduate supervision.

Eligible staff may join the Universities Superannuation Scheme. Details are available on the website at <http://www.admin.ox.ac.uk/finance/pensions/uss/>.

Length of appointment

Upon completion of an initial period of appointment (which is normally five years), a university lecturer is eligible for reappointment until retiring age, subject to the provisions of the Statutes and Regulations of the University. Evidence of lecturing competence and of substantial progress in research are prerequisites for reappointment to the retiring age.

For all academic and academic-related staff the University has adopted a retirement age of 30 September before the 68th birthday. There is a procedure for requesting an extension of employment beyond that date.

Sabbatical leave and outside commitments

All lecturers may apply for sabbatical leave to allow them to focus on their 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. Qualifying service does not accrue beyond 18 terms.

Lecturers may also spend up to 30 working days in each year on projects outside their employment duties, such as consultancy, spin-out activities and membership of research councils and other bodies. There is no limit to the amount of remuneration which staff may earn from these activities. Full details are available on the university website at

<http://www.admin.ox.ac.uk/personnel/staffinfo/academic/approvaltoholdoutsideappointments/>

Guidance on ownership of intellectual property (<http://www.admin.ox.ac.uk/statutes/regulations/182-052.shtml>) and managing conflicts of interest

(<http://www.admin.ox.ac.uk/researchsupport/integrity/conflict/policy/>) is also available on the university website.

Relocation expenses

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

Further details are available on the website at

<http://www.admin.ox.ac.uk/finance/expenses/relocationscheme/>.

Family support

The University has generous maternity and adoption leave arrangements, and also offers support leave to fathers and partners. Details are available on the website at

<http://www.admin.ox.ac.uk/personnel/staffinfo/academic/maternityleaveforacademicstaffandrelatedmatters/>

All staff are eligible to apply to use the University nurseries (although there is a long waiting list for nursery places), and the full range of tax and National Insurance savings scheme is in operation. Details are available on the University's childcare website at <http://www.admin.ox.ac.uk/eop/childcare/>.

The University will try to accommodate flexible working patterns as far as possible and there is considerable flexibility in the organisation of duties. More information on family support and flexible working policies is available on the website at <http://www.admin.ox.ac.uk/personnel/during/family/>.

Facilities and services

The University has a range of facilities and benefits for its staff; more details are available on the website at <http://www.admin.ox.ac.uk/personnel/staffinfo/benefits/>.

The University Disability Office provides support to staff and students with a disability and may be contacted through its website at <http://www.admin.ox.ac.uk/eop/disab/>.

Equality of opportunity

The policy and practice of the University of Oxford require that all staff are offered equal opportunities within employment. Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. Subject to statutory provisions, no applicant or member of staff will be treated less favourably than another because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Medical questionnaire and the right to work in the UK

The appointment will be subject to the satisfactory completion of a medical questionnaire and the provision of proof of the right to work in the UK.

Applicants who would need a work visa if appointed to the post are asked to note that under the UK's points-based migration system they will need to demonstrate that they have sufficient points, and in particular that:

(i) they have sufficient English language skills (evidenced by having passed a test in English, *or* coming from a majority English-speaking country, *or* having taken a degree taught in English)

and

(ii) that they have sufficient funds to maintain themselves and any dependents until they receive their first salary payment.

Further information is available at:

<http://www.ind.homeoffice.gov.uk/workingintheuk/tier2/general/>

Special arrangements

Oxford welcomes applications from candidates who have a disability. These documents will be made available in large print, audio or other formats on request. Applicants invited for interview will be asked whether they require any particular arrangements to make the interview more convenient and effective for them.

Data Protection

All data supplied by candidates will be used only for the purposes of determining their suitability for the post¹ and will be held in accordance with the principles of the Data Protection Act 1998 and the University's Data Protection Policy (available on the website at <http://www.admin.ox.ac.uk/councilsec/dp/policy.shtml>).

¹ But NB if the person appointed to the post is a migrant sponsored under the UK's points-based migration system, we are required to retain the applications of all shortlisted candidates for the duration of the sponsorship or for one year, whichever is the shorter.

ANNEXE

PAY SCALE FOR UNIVERSITY LECTURERS WITH TUTORIAL FELLOWSHIPS

(with effect from 1 August 2011)

Main Lecturer Grade (10a)				
Scale point	National Pay spine	University Salary	College Salary	Total Salary
11	52	£48,293	£9,288	£57,581
10	51	£46,890	£9,018	£55,908
9	50	£45,527	£8,756	£54,283
8	49	£44,205	£8,501	£52,706
7	48	£42,920	£8,255	£51,175
6	47	£41,674	£8,015	£49,689
5	46	£40,464	£7,782	£48,246
4	45	£39,290	£7,556	£46,846
3	44	£38,149	£7,337	£45,486
2	43	£37,042	£7,124	£44,166
1	42	£35,966	£6,917	£42,883

Last updated: 30 April 2012