UNIVERSITY OF OXFORD

Department of Computer Science

DEPARTMENTAL LECTURER IN SYSTEMS SECURITY

Description of Appointment and Application Procedure

The Department of Computer Science wishes to appoint a full-time Departmental Lecturer in Systems Security. This will be a fixed-term appointment for four years from 1 October 2013 or as soon as possible after that. The salary will be on a scale up to £44,607 per annum. The postholder will be a member of the team responsible for the delivery of an advanced, professional programme of education in Software and Systems Security.

Duties

Working as part of the course team, the postholder will develop and deliver courses in systems security. The current selection of courses is available on the Department website, at the location http://www.cs.ox.ac.uk/softeng/security/ Modules in the Software Engineering Programme are always accompanied by high quality supporting material and the appointee will be expected develop this as part of their course preparation. The postholder will be expected to share in the development and administration of the teaching programme, as well as in the supervision of students. The postholder will be expected to participate in the recruitment and selection of future students.

In delivering courses, the postholder will supervise teaching assistants and act as an assessor for the examiners. He/she will take account of feedback from all stakeholders in the delivery of future courses.

The courses on the teaching programme are at the leading edge of professional practice, and the postholder will be expected to engage in a complementary programme of research. The Department is developing significant research capacity in the area of systems security, including a funded centre of excellence and a centre for doctoral training in cybersecurity. The postholder would be expected to participate in applications for research funding, to produce high-quality research outputs, and to supervise doctoral students in this area.

Departmental Lecturers are expected to teach or assist with six (one-week) courses a year. Some of these courses may fall outside term-time at Oxford. They are expected to undertake their share of assessment, examining, and supervisory duties, as allocated by the Programme Director in consultation with the Head of Department.

As an academic in the department of computer science, the postholder will be expected to do advanced research, publish top quality papers in journals and conferences, to apply for research funding and manage the resulting projects.

Selection Criteria

Applicants should have a doctoral degree in a relevant scientific discipline. They should have demonstrable teaching ability, and evidence of research potential. This is a career development position for a junior academic. The contract will not be renewable. It is an opportunity to gain teaching experience, and to undertake world-class research in an area of significant importance.

The selection committee will consider the extent to which each candidate meets the following selection criteria:

Essential

- Have or be about to complete a doctoral degree in computer science.
- Ability, by the end of the first year of appointment, to teach *three or more* of our existing course topics in Systems Security [http://www.cs.ox.ac.uk/softeng/security/]
- Ability to provide excellent teaching to an audience consisting of professional software engineers and security practitioners.
- Excellent research record in security.
- Excellent written and spoken communication skills; evidence of ability to organise and present complex and detailed information.
- Demonstrated ability to work as a member of a team.

Desirable

- Suitability for inclusion in the Department's submission to REF 2014. [Note that where this is the successful candidate's first academic job, this is likely to qualify them as an Early Career Researcher needing only one high quality output.]
- Experience of teaching courses to a professional audience
- Research and/or teaching interests which complement those of the existing team.
- Capability to produce research impacts suitable for reporting in the Department's REF return.
- Experience as a security practitioner.
- Experience of the following
    o course design;
    o educational quality assurance;
    o examining (written exams; assignments; dissertations);
    o supervision of Master's students

Application Procedure

In order to apply for this post, click on the **Apply Now** button on the 'Job Details' page and follow the on-screen instructions to register as a user. You will then be required to complete a number of screens with your application details, relating to your skills and experience. You will also be required to submit: a full curriculum vitae; details of teaching experience, and a statement explaining how you would address teaching for a professional audience; a list of publications, and a statement of research interests; together with the names and addresses of three referees (not more than two of whom should be from the same institution). Your application will be judged solely on the basis of how you demonstrate 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.

Candidates must ask their referees to consider the further particulars and email their reference directly to job03@cs.ox.ac.uk or, alternatively, post or fax it to: PA to the Head of Department, Department of Computer Science, Wolfson Building, Parks Road, Oxford OX1 3QD, such that the reference arrives by, or shortly after, the advertised closing date.

Candidates who wish a referee or referees to be approached only with their specific permission and/or if they are being called for interview on the final shortlist or are in receipt of a conditional offer are asked to state such requirements explicitly alongside the details of the relevant referee(s).

All applications must be received by **midday** on the closing date stated in the online advertisement.

Should you experience any difficulties using the online application system, please email recruitment.support@admin.ox.ac.uk

To return to the online application at any stage, please click on the following link www.recruit.ox.ac.uk

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

Section II

UNIVERSITY OF OXFORD

DEPARTMENTAL LECTURERSHIP IN SYSTEMS SECURITY

FURTHER DETAILS CONCERNING THE POST

A. *The Department*

The University of Oxford employs around 9,500 academic, research and support staff across a wide range of academic disciplines. Its mission is to achieve and sustain excellence in every area of its teaching and research, maintaining and developing its historical position as a world-class university, and enriching the international, national, and regional communities through the fruits of its research and the skills of its graduates.

The academic administration of the University is conducted through four divisions: Humanities, Social Sciences, Mathematical, Physical and Life Sciences, and Medical Sciences. The Mathematical, Physical and Life Sciences Division consists of ten constituent departments: the Department of Chemistry, the Department of Computer Science, the Department of Earth Sciences, the Department of Engineering Science, the Department of Materials, the Mathematical Institute, the Department of Physics, the Department of Plant Sciences, the Department of Statistics and Department of Zoology. The division provides a framework for interdisciplinary teaching and research, with strong links to the Medical Sciences Division.

The Department of Computer Science (DoCS) was established in 1957. It is one of the UK's leading Computer Science Departments (ranked first in a number of newspaper rankings, and third in terms of research power). In the RAE in 2008, 80% of the submitted research was found to be in the top two tiers, either 4* (world-leading) or 3* (internationally excellent). Many members of the Department are active in externally sponsored research, with both government and industrial funding. At present there are 52 members of academic staff and over 80 research staff.

DoCS has close links with government, industry, and other departments within the University. Among the latter are Mathematics, Engineering, Physics, Statistics and a number of life sciences departments. It has a major role in the rapidly-developing field of e-Science alongside the Oxford e-Research Centre, an independent unit with which we share a building. This is an essentially inter-disciplinary activity which is at present attracting major funding from a number of sources. At present DoCS holds £37m in external research contracts.

Research in DoCS is currently managed in eight themes. *Software Engineering* (led by Professor Jim Davies), works on a wide variety of areas including medical informatics and model-driven development; *Programming Languages* (led by Professor Jeremy Gibbons and including Professor Oege de Moor and Dr Ralf Hinze); *Security* (leader Professor Bill Roscoe, with Professor Sadie Creese leading a new Cyber Security Centre, and Professor Gavin Lowe); *Automated Verification* (leader Professor Marta Kwiatkowska) covering probabilistic and software model checking (Professor Daniel Kroening) with time and concurrency (Professor Joel Ouaknine, Professor James Worrell, and Professors Roscoe and Lowe), and automated verification of hardware (Professor Tom Melham); *Computational Biology* (led by Professor David Gavaghan and including Professors Kevin Burrage and Helen Byrne) is one of the world's leading groups building computational models of biological systems and is particularly well known for its work on the heart; and *Foundations, Logic and Structures*, (leader, Professor Samson Abramsky) which includes groups working on quantum information and computation (Abramsky and Professor Bob Coecke), game semantics and

verification (Professor Luke Ong) and constraints (Professor Peter Jeavons); *Algorithms* (leader Professor Georg Gottlob and including Professors Mike Wooldridge (Agent Based Systems) and Elias Koutsoupias; *Information Systems* (led by Ian Horrocks and including Professor Stephen Pulman, who works on Computational Linguistics, and Professor Michael Benedikt.

Software Engineering Programme

The Software Engineering Programme has been providing professional education to practising software engineers since 1993. Students come from all round the world, for stand-alone one-week courses and for matriculated masters' degrees from the University. They are developers, managers, architects, analysts, and customers, from the IT industry and from domains such as finance, public sector, defence, telecommunications, and embedded systems.

It presently offers two MSc degrees: Software Engineering and Software and Systems Security. Following a recent review the range of part-time offerings is expected to expand. The Programme presently offers about 60 courses a year, in over 30 different subjects, and has over 300 MSc students currently in flight.

MSc in Software and Systems Security

The successful applicant will be responsible for delivering courses associated with the MSc in Software and Systems Security, which is offered by the Software Engineering Programme. Along with other members of the Programme (Martin, Flechais, Martinovic, Simpson, and (from October 2013) Cremers), they will contribute to the significant research undertaken in the broad area of security within the department. The Security research group brings together those conducting practical and theoretical research into a wide variety of security topics, including protocol analysis, trusted computing, wireless security, network security, and human factors. The University's Cyber Security Centre (recently augmented by a Capacity Building grant from the Foreign and Commonwealth Office and led by Professor Sadie Creese) is a multi-disciplinary initiative that allows researchers from within the Department of Computer Science to engage with colleagues from other departments to jointly address emerging cybersecurity challenges. Oxford's long track record in this area has been recognised by GCHQ and EPSRC as an Academic Centre of Excellence in Cyber Security Research and by the recent creation of a Centre for Doctoral Training in Cyber Security (both led by Dr Andrew Martin).

B.   Standard Terms and Conditions

1.   Applications for this post will be considered by a selection committee containing representatives from the Department of Computer Science including software engineers. The selection committee is responsible for conducting all aspects of the recruitment and selection process, including making a recommendation on who should be appointed.

2.   The successful candidate will be appointed on the department's scale for departmental lecturers, (£37,382-44,607, Grade 8). Lecturers appointed below the top of this range will receive annual increments. 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.

The lecturer will have the option of becoming or remaining a member of the Universities Superannuation Scheme (USS).

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

4.   All appointments are subject to the relevant provisions of the Statutes and Regulations of the University in force from time to time, as published from time to time in the University Gazette.

5.   The University encourages links with industry and other outside bodies. Although the holding of outside appointments such as consultancies must be approved by the head of department, no limit as such is set on the amount of money individuals may receive in this way. The criterion is the amount of time such appointments take up: a maximum of 30 days per annum may be spent on such activities before any deduction in stipend is considered.

6.   The Statutes and Regulations of the University record the extent of the University's claims to intellectual property, and the proportions in which exploitation revenues are shared with researchers. Copies of the relevant extracts are available on request.

7.   All staff participate in the University's appraisal scheme which is currently under review.

8.   The University has generous maternity leave arrangements. Provided that they have at least 26 weeks' service with the University at the fifteenth week before the expected week of childbirth, women may take up to 26 weeks leave on full pay, plus 13 weeks SMP, plus a further 13 weeks unpaid leave. Arrangements are available to enable a phased return to full duties; for women to return to work on a part-time basis after the birth of their child; and for paternity leave. Requests for flexible working arrangements will be considered.

9.   The University has three subsidised nurseries and also subsidises places at some local nurseries, although at present there is a waiting list. In addition, staff have access to a childminding network. There is also a salary sacrifice scheme whereby parents with children at university nurseries are able to save on income tax and national insurance contributions, and a virtual voucher scheme for parents with children not at university nurseries or placed with childminders through the network whereby a saving is made on national insurance contributions. There is also a holiday play scheme for school-age children. Further information may be obtained from the childcare website (www.admin.ox.ac.uk/eop/child) or by e-mailing childcare@admin.ox.ac.uk, or writing to the Diversity and Equal Opportunities Unit, University of Oxford, University Offices, Wellington Square, Oxford OX1 2JD.

10.   *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 his or her gender, marital or civil partnership status, sexual orientation, religion or belief, racial group, age or disability.

Where suitably qualified individuals are available, selection committees will contain at least one member of each sex.

11. All data supplied by applicants will be used only for the purposes of determining their suitability for the post[1] and will be held in accordance with the principles of the Data Protection Act 1998 and the University's Data Protection Policy.

12. The appointment will be subject to 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 new 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 basic 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 dependants until they receive their first salary payment.

Further information is available at: http://www.ukba.homeoffice.gov.uk/workingintheuk/tier2/generalarrangements/eligibility/.

13. All reasonable interview expenses will be reimbursed. Removal expenses and travelling expenses in connection with the move to Oxford of the successful candidate are generally paid in full in appropriate cases. Professional expenses of up to £6,500 also are available where appropriate to cover solicitors' and other costs in connection with a move. Further details are available on request.

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[1] But NB if the appointee to the post is a migrant sponsored under the UK's new points-based migration system, we are required to retain all applications for the duration of the sponsorship.