



University of Oxford Department of Computer Science

## Job description and selection criteria

<b>Job title</b>	Research Assistant
<b>Division</b>	MPLS
<b>Department</b>	Computer Science
<b>Location</b>	Wolfson Building, Parks Road, Oxford.
<b>Grade and salary</b>	Grade 7: Salary £29,099-£35,788
<b>Hours</b>	Full Time
<b>Contract type</b>	Fixed Term Contract up to 2 years
<b>Reporting to</b>	Dr Andrew Martin
<b>Start date:</b>	1 <sup>st</sup> April 2012 (or as soon as possible thereafter)

## Introduction

### The University

The University of Oxford is a complex and stimulating organisation, which enjoys an international reputation as a world-class centre of excellence in research and teaching. It employs over 10,000 staff and has a student population of over 21,000.

Most staff are directly appointed and managed by one of the University's 130 departments or other units within a highly devolved operational structure - this includes 5,900 'academic-related' staff (postgraduate research, computing, senior library, and administrative staff) and 2,820 'support' staff (including clerical, library, technical, and manual staff). There are also over 1,600 academic staff (professors, readers, lecturers), whose appointments are in the main overseen by a combination of broader divisional and local faculty board/departmental structures. Academics are generally all also employed by one of the 38 constituent colleges of the University as well as by the central University itself.

Our annual income in 2009/10 was £879.8m. Oxford is one of Europe's most innovative and entrepreneurial universities: income from external research contracts exceeds £367m p.a., and more than 60 spin-off companies have been created.

For more information please visit [www.ox.ac.uk](http://www.ox.ac.uk)

## MPLS Division

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, Department of Computer Science, the Department of Earth Sciences, the Department of Engineering Science, the Department of Materials, Mathematical Institute, the Department of Physics, Department of Plant Sciences, Department of Zoology and Statistics. The division provides a framework for interdisciplinary teaching and research. There are also links with the Medical Sciences Division.

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

## Department of Computer Science

The Department of Computer Science, University of Oxford has one of the longest-established Computer Science departments in the country. Formerly known as the Oxford University Computing Laboratory, it is home to a community of world-class research and teaching. Research activities encompass core Computer Science, as well as computational biology, quantum computing, computational linguistics, information systems, software verification and software engineering. The department is home to undergraduates, full-time and part-time Master's students, and has a strong doctoral programme.

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

## Job description

<b>Research topic</b>	“Trust Domains” project.
<b>Principal Investigator / supervisor</b>	Dr Andrew Martin
<b>Funding partner</b>	TSB

Trust Domains is a collaborative project between the University of Oxford, Hewlett Packard Labs, Perpetuity Research and Consultancy, and the Universities of Birmingham and Aberdeen. The post-holder will work in Oxford.

The project aims to develop Trust Domains as a basic concept for separating information, processes, and concerns, and as a modelling and design paradigm for risk-tailored architectures. The project expects to provide security-enhanced, distributed containers for the next generation of composite electronic services for supporting collaboration and data exchange within and across multiple organisations. The Oxford contribution concentrates on the definition of architectures with measurable trust characteristics, and the delivery of one or more components which help to advance the state of the art in such systems.

## Main Duties and Responsibilities

Holders of this post will be expected to undertake original research, under the direction of Dr Andrew Martin, in Oxford University Department of Computer Science. The research results will take the form of the preparation of reports, presentations, designs, prototype software, and academic papers, and the post-holders will need to take a central and self-organising role in this work.

Project staff will need to be willing and able to travel to project meetings elsewhere in the UK, to travel to international conferences, and to participate in phone and video conferences. An overview of the project can be found here:

[http://www.hpl.hp.com/research/cloud\\_security/TrustDomains.pdf](http://www.hpl.hp.com/research/cloud_security/TrustDomains.pdf)

## Selection Criteria

- Master's degree in a relevant subject (or substantial equivalent experience)
- proven ability to work as part of a team
- evidence of ability to express themselves clearly in writing and oral presentations
- experience of software architecture
- demonstrated understanding of the core concepts of information security in a distributed systems context
- proven ability to implement prototype solutions using high-level programming languages and tools

Skills or experience in any or all of the following areas will also be beneficial:

- Trusted Infrastructure: appreciation of the principles of trusted computing
- Distributed Systems: understanding of current trends in cloud and virtualization architectures, identity management, access control, auditing, provenance
- Secure System Design: architecture and design for security, privacy, usability issues in system design, trusted computing base minimization
- Software development in a web environment, with security-critical APIs
- PhD or equivalent experience in a these topics
- Training and education in these topics

## Working at the University of Oxford

For further information about working at Oxford, please see:

[http://www.ox.ac.uk/about\\_the\\_university/jobs/research/](http://www.ox.ac.uk/about_the_university/jobs/research/)

## Salary and Benefits

The post, which is a full time appointment, is funded by funded by EPSRC and is available initially for up to 2 years. The post has a salary on the University grade 07 scale (currently £29,099 to £35,788 This includes membership of the University Superannuation Scheme (USS) and has an annual leave entitlement of 38 days per year (inclusive of all public holidays and university closed periods).

## How to apply

If you consider that you meet the selection criteria, 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. When prompted, please provide details of two referees and indicate whether we can contact them at this stage. You will also be required to upload a CV and supporting statement. The supporting statement 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.

Please save all uploaded documents to show your name and the document type.

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

Candidates must also ask their referees to consider this job description and email their reference directly to [job22@cs.ox.ac.uk](mailto:job22@cs.ox.ac.uk) or, alternatively, post or fax it to: The Administrator, Department of Computer Science, Wolfson Building, Parks Road, Oxford OX1 3QD, such that the reference arrives by, or shortly after, the advertised closing date.

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

To return to the online application at any stage, please click on the following link [www.recruit.ox.ac.uk](http://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.