



DEPARTMENT OF
**COMPUTER
SCIENCE**

University of Oxford Department of Computer Science

Job description and selection criteria

Job title	Research Fellow, Global Cyber Security Capacity Centre
Division	MPLS
Department	Computer Science
Location	Wolfson Building, Parks Road, Oxford.
Grade and salary	Grade 8: Salary £39,992 – £43,685 p.a.
Hours	Full Time
Contract type	Fixed-term until 31 January 2020
Reporting to	Professor Michael Goldsmith
Vacancy reference	131084



The role

The Department of Computer Science is looking to employ a Research Fellow with specific focus on regional collaboration, to work in the Global Cyber Security Capacity Centre (GCSCC or The Capacity Centre), a leading research centre and a global knowledge resource for effective cybersecurity capacity-building. The Capacity Centre is located at the Oxford Martin School, which specialises in supporting interdisciplinary research communities working to address the most pressing global challenges and opportunities of the 21st century. The Centre's aim is to understand and communicate how best to deliver effective cybersecurity both within the UK and across the world. We make this knowledge available to governments, communities and organisations to underpin an increase of their capacity in ways appropriate to ensuring a cyberspace, which can continue to grow and innovate in support of well-being, human rights and prosperity for all.

This is an exciting opportunity for an experienced researcher with strong field-work experience and a methodological or theoretical background in an applicable discipline, either computer science, information systems or one of the social sciences; or, alternatively, a practitioner with substantial experience in capacity building, cybersecurity or other related fields. The specific focus of this post is to support the Oceania Cyber Security Centre in Melbourne, Australia, in their deployment of the Capacity Centre's maturity model across the Pacific island states. In addition, the successful candidate will be expected to develop and provide world-leading expertise in the area of cyber-security capacity-building, particularly in its regional hubs. The post-holder will be responsible for helping to deliver the Capacity Centre's research programme, joining a dynamic and diverse team of researchers and knowledge-exchange experts. The programme includes delivering global cyber-security capacity-building expertise, and developing knowledge-transfer material on the Capacity Centre's website. The work also includes close work with high-level stakeholders in governments, regional and international organisations, academia and industry to promote and develop this work.

They will raise the profile of the centre through their peer-reviewed publications, and present results at conferences held globally, as well as participating in the Capacity Centre's programme of meetings and events. An important portion of this role involves travel to conduct in-country consultations on various nations' cybersecurity capacity maturity, but we also expect this post to deliver high-quality research outputs in Oxford.

The successful candidate will work under the directorship of the Director of the GCSCC and other senior academics from the Saïd Business School, the department of Computer Science, Oxford Internet Institute at the University of Oxford; and also Michigan State University, the University of Johannesburg, and others. These academics form the leadership (the Technical Board) of the Capacity Centre. Applicants must therefore be keen to work as part of a collaborative team, be exceptionally able to deal with change and to learn about areas of cyber security not immediately within their domain of expertise, and be keen and able to travel.

The post is funded by the Department of Economic Development, Jobs, Transport and Resources of the Government State of Victoria, Australia and is fixed-term until 31st January 2020 and available for immediate start.

Research project	Global Cyber Security Capacity Centre
Principal Investigator / supervisor	Professor Michael Goldsmith
Funding partner	Department of Economic Development, Jobs, Transport and Resources of the Government State of Victoria, Australia

Responsibilities

The main duties of the successful candidate will include:

- To take responsibility for the execution of the research of the GCSCC alongside other researchers and under the guidance of the Technical Board. This will include:
 - Delivering global cyber-security capacity-building expertise
 - Co-ordination of primary data collection exercises and fieldwork
 - Liaise and coordinate the work with the Regional Centres
 - Working with partners and key stakeholders to promote a collaborative approach and uptake of the Capacity Centre's products
 - Supporting the Director of Strategy and Engagement in influencing and gaining the trust of internal and external partners in order to build and use extensive networks
 - Development of written examples and case studies of cyber-security capacity-building experience
 - Promoting the Capacity Centre's already existing Cyber Security Maturity Model through country reviews
 - Supporting the convening of meetings of senior academics and members of the advisory board of the Capacity Centre, synthesising the ideas and knowledge generated within the research plan
 - Helping to provide the Portal Manager with material for dissemination;
- To work with the Director of Strategy and Engagement to help lead and deliver a global programme of enhanced engagement, to facilitate the upscaling of the Capacity Centre's reach and influence and showcase the products of its research;
- Agree clear task objectives, organise, and work with other members on specialist methodologies and procedures;
- To work closely with teams in regional centres affiliated with the Capacity Centre; in particular to support the Oceania Cyber Security Centre in Melbourne in their deployment of the maturity model across the nation states of Oceania;
- To build the profile of the Capacity Centre through public engagements and writing publications at a national level for peer-reviewed journals, book chapters, and reviews;
- To present results at international conferences, meetings with international stakeholders and grant review meetings; travel may be required for this;
- To participate actively in the Capacity Centre's programme of meetings and events, including those aimed at non-academic audiences;
- To help direct students and interns who are associated with the project by setting goals and managing the resources available;
- To participate in centre administration, as required;
- To develop research questions within a specific context, to conduct individual research, analysing detailed and complex qualitative and/or quantitative data from a variety of sources, and to generate original ideas by building on existing concepts;
- To share responsibility for shaping the Capacity Centre's plans, writing of funding applications and budgeting for specific projects as part of sustainability-planning exercises;

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 the successful candidate will be allowed to start work:

- Work in hot or cold environments
- Travel outside of Europe or North America on University Business

Selection Criteria

Essential

- Hold a relevant PhD/DPhil with post-qualification research experience OR comparable professional experience in a closely related field with international profile;
- An excellent track record of methodologically or theoretically innovative research; grounding in one or more disciplines relevant to the dimensions of cyber-security capacity being studied by the Capacity Centre;
- A distinguished research record in a relevant area with publication of articles in high-impact refereed journals;
- Ability and willingness to address high-level influential audiences with authority;
- Sufficient specialist knowledge in their discipline to develop research projects and methodologies;
- Proven interpersonal skills and the ability to interact effectively and confidentially with senior decision-makers and high-level partners;
- Outstanding communication and writing skills, with the ability to disseminate results of research to a variety of audiences and to frame recommendations at a national policy level;
- Excellent influencing skills and the commercial awareness necessary to develop existing and build new key stakeholder relationships and networks within the UK and internationally;
- Ability to take a proactive, enthusiastic and flexible approach to delivery, and to utilise new opportunities as they arise;
- Proven ability to think laterally and creatively, with the drive and initiative to work both independently and with the Capacity Centre's research team to maximise effectiveness;
- Proven ability to work effectively with colleagues as part of a professional and diverse team;
- Willingness to participate in collaborative, multi-disciplinary research projects;
- Experience of research planning, engagement and organisation;
- Ability to independently plan and manage a research project, including a research budget;
- Ability to raise research funds through making grant applications.

Desirable

- Experience of cyber-security capacity-building activities;
- Experience of multi-disciplinary working;
- A good knowledge of statistical analytic techniques;
- Experience of working with senior officials of government and organisations;

- Experience of putting together grant applications.

About the University of Oxford

Welcome to the University of Oxford. We 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.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, and in providing all of our 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, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities. Income from external research contracts in 2014/15 exceeded £522.9m and ranked first in the UK for university spin-outs, with more than 130 spin-off companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information please visit www.ox.ac.uk/about/organisation

Department of Computer Science

The Department of Computer Science was established in 1957, making it one of the longest-established Computer Science departments in the country. It is one of the UK's leading Computer Science Departments (ranked first in a number of international rankings). The Research Excellence Framework (REF) in December 2014 resulted in 74 members of the Department having 53% of their research activity ranked in the top category of 4* (world-leading). Overall, we received an average of 3.34 across the department (3* being internationally excellent). A significant majority of the Department are active in externally sponsored research, with both government and industrial funding. At present there are 69 members of academic staff and almost 100 research staff.

The Department 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. The Department is housed across multiple sites within the University's South Parks Road Science area, facilitating strong collaborative links with research groups and institutes in closely allied areas (including the Oxford Internet Institute and the Oxford e-Research Centre). This is an essentially inter-disciplinary activity which is at present attracting major funding from a number of sources. At present the Department holds over £50m in external research contracts.

Research in the Department is currently managed in seven themes:

- *Algorithms* (led by Professor Leslie Ann Goldberg) covers computational complexity, algorithmic game theory, and constraint satisfaction;
- *Automated Verification* (led by Professor Marta Kwiatkowska) covers probabilistic and software model checking, time and concurrency, and hardware;
- *Computational Biology* (led by Professor David Gavaghan) 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;
- *Foundations, Logic and Structures* (led by Professor Samson Abramsky) includes groups working on quantum information and computation, game semantics, and verification;
- *Information Systems* (led by Professor Ian Horrocks) has groups working on databases, knowledge representation and reasoning, multi-agent systems, and computational linguistics;
- *Programming Languages and Software Engineering* (led by Professor Luke Ong) covers model-driven development, functional programming, program analysis, cyber physical systems, social computing
- *Security* (led by Professor Bill Roscoe) specialises in cybersecurity, protocol analysis, systems security, trusted computing, human-centred security, and networking.

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

The Mathematical, Physical, and Life Sciences Division (MPLS)

The Mathematical, Physical, and Life Sciences (MPLS) Division is one of the four academic divisions of the University. Oxford is widely recognised as one of the world's leading science universities. The disciplines within the MPLS Division regularly appear at the highest levels in world rankings. In the results of the six-yearly UK-wide assessment of university research, REF2014, the MPLS division received the highest overall grade point average (GPA) and the highest GPA for outputs. We received the highest proportion of 4* outputs, and the

highest proportion of 4* activity overall. More than 50 per cent of MPLS activity was assessed as world leading.

The MPLS Division's 10 departments and 3 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. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

MPLS is proud to be the home of some of the most creative and innovative scientific thinkers and leaders working in academe. Our senior researchers have been awarded some of the most significant scientific honours (including Nobel prizes and prestigious titles such as FRS and FR.Eng) and we have a strong tradition of attracting and nurturing the very best early career researchers who regularly secure prestigious fellowships. The Division is also the proud holder of eight Athena Swan Awards (4 Silver and 4 Bronze) illustrating our commitment to ensure good practice and to encourage women in science at all levels in the division.

We have around 6,000 students and play a major role in training the next generation of leading scientists. Oxford's international reputation for excellence in teaching is reflected in its position at the top of the major league tables and subject assessments. MPLS academics educate students of high academic merit and potential from all over the world. Through a mixture of lectures, practical work and the distinctive college tutorial system, students develop their ability to solve major mathematical, scientific and engineering problems.

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

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

How to apply

Before submitting an application, you may find it helpful to read the 'Tips on applying for a job at the University of Oxford' document, at www.ox.ac.uk/about/jobs/supportandtechnical/.

If you would like to apply, 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 provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and a supporting statement. 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).

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

Please upload all documents **as PDF files** with your name and the document type in the filename.

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

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing departments.

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments)

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/. To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

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.

Important information for candidates

Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard pre-employment screening, as applicable to the post. This will include right-to-work, proof of identity and references. 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/.

The University's policy on retirement

The University operates an employer justified retirement age for all academic and academic-related posts (grade 6 and above), for which the retirement date is the 30 September immediately preceding the 68th birthday. The justification for this is explained at: www.admin.ox.ac.uk/personnel/end/retirement/revisedejra/revaim/.

For **existing** employees any employment beyond the retirement age is subject to approval through the procedures: www.admin.ox.ac.uk/personnel/end/retirement/revisedejra/revproc/

There is no normal or fixed age at which **support staff** in posts at **grades 1–5** have to retire. Support staff may retire once they reach the minimum pension age stipulated in the Rules of the pension scheme to which they belong.

Equality of Opportunity

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. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Training and Development

A range of training and development opportunities are available at the University. Further details can be found at

www.ox.ac.uk/staff/working_at_oxford/training_development/index.html.

For research staff only: Support for Research Staff

There is a particularly wide range of support for career development for research staff. Please visit: www.ox.ac.uk/research/support-researchers to find out more.

Pensions

The University offers generous occupational pension schemes for eligible staff members. Further details can be found at www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/.

Information for international staff *(or those relocating from another part of the UK)*

A wealth of information is available on the University's International Staff website for staff who are relocating to Oxford from abroad, at www.admin.ox.ac.uk/personnel/staffinfo/international/.

The University of Oxford Newcomers' Club

The Newcomers' Club is aimed at helping partners of newly-arrived visiting scholars, graduate students and academic members of the University to settle in and to meet people in Oxford.

Transport schemes

The University offers a range of travel schemes and public transport travel discounts to staff. Full details are available at www.admin.ox.ac.uk/estates/ourservices/travel/.

University Club and University Sports Facilities

The University Club provides social, sporting and hospitality facilities. It incorporates a Club bar, a cafe and sporting facilities, including a gym. See www.club.ox.ac.uk for all further details.

University staff can use the University Sports Centre at discounted rates, and have the chance to join sports clubs. Please visit www.sport.ox.ac.uk/oxford-university-sports-facilities.

Childcare and Childcare Vouchers

The University offers quality childcare provision services at affordable prices to its employees. For full details about the services offered, please visit www.admin.ox.ac.uk/childcare/. **NB: Due to the high demand for the University's nursery places there is a long waiting list.**

The University also offers nursery fee payment schemes to eligible staff as an opportunity to save tax and national insurance on childcare costs. Please visit www.admin.ox.ac.uk/childcare.

Disabled staff

The University is committed to supporting members of staff with a disability or long-term health condition and has a dedicated Staff Disability Advisor. Please visit www.admin.ox.ac.uk/eop/disab/staff for further details.

BUPA - Eduhealth

Bupa Eduhealth Essentials private medical insurance offers special rates for University of Oxford staff and their families www.eduhealth.co.uk/mini-site/.

All other benefits

For other benefits, such as free entry to colleges, the Botanic Gardens and staff discounts offered by third party companies, please see www.admin.ox.ac.uk/personnel/staffinfo/benefits/.