

## Job Description: Assistant Professor (Research and Education)

Post title and post number	Assistant Professor in Cybersecurity (Research and Education) - 103063
College/Budget Centre	EPS
School/Department	Computer Science
Full time/Part time	Full time
Duration of the Post	Open
Salary	Grade 8
Additional information	Informal enquiries can be made to the Head of School, Aad van Moorsel <a href="mailto:a.vanmoorsel@bham.ac.uk">a.vanmoorsel@bham.ac.uk</a>
Terms and Conditions	Academic Teaching Staff
Closing Date	16 June 2024
Grade	8
<b>Information for applicants</b>	
<p>The School of Computer Science at the University of Birmingham, UK, seeks to recruit talented computer scientists from diverse backgrounds for the role of Assistant or Associate Professor. Successful candidates will join a vibrant School, regarded as one of the best in the UK in academic research, societal impact and education. This round welcomes applications from enthusiastic academics in Computer Science, particularly emphasising cyber security. Successful candidates will join in pursuing collaborative, challenge-led, research based on interdisciplinary research funding and in further improving diversity and inclusion in computer science research and education. New staff will also benefit from a programme of dedicated support for career development through Birmingham's Academic Development Programme.</p>	
<b>Summary of Role</b>	

The School of Computer Science at the University of Birmingham is recruiting new academic staff to fulfil its ambitions as a leading UK university for computer science. We seek to recruit in the area of Cybersecurity, with a specific interest in applied cryptography in the context of hardware and embedded systems security (e.g. pre-silicon leakage and fault analysis, secure embedded software development, statistical side channel and fault evaluation techniques, machine and deep learning for side channels). We encourage applications from across the area of Cybersecurity.

Computer Science at the University of Birmingham is one of the leading UK institutions for research and teaching in computer science. Our research is ranked 3rd across all UK universities according to the latest UK-wide Research Excellence Framework. Education is ranked 7<sup>th</sup> in the UK for computer science, according to 2023 tables. While pursuing excellence in research and education, we also aim to optimize our positive impact on society—examples include collaborations with industry partners and charities, commercialisation activities and an extensive wider participation programme. To support its aims, the School offers a vibrant, open and intellectually stimulating work environment in its dedicated computer science building, educating well over 1500 students.

We value diversity and inclusion and welcome applications from all sections of the community and are open to discussions around all forms of flexible working. We support and mentor new staff through the Academic Development Programme, which provides a 5-year development programme, at the end of which staff are expected to be promoted to Associate Professor. The programme consists of a variety of development opportunities and the time to reflect and develop, provides mentoring, grant writing workshops/training and exposes you to colleagues across the disciplines and in our business and entrepreneurship units.

[The Birmingham Centre for Cyber Security and Privacy](#) is recognised by EPSRC/NCSC as a UK Academic Centre of Excellence in Cyber Security Research, conducting outstanding research in cyber security and privacy. Areas of interest include, but are not limited to applied cryptography, hardware-based security, embedded systems security (including automotive security), side-channel and fault-based attacks and security protocol analysis.

This post is for both Assistant Professor and Associate Professor level. Candidates should state which level they are applying for in the application.

Interested candidates are encouraged to make informal enquiries to Prof Elisabeth Oswald [m.e.oswald@bham.ac.uk](mailto:m.e.oswald@bham.ac.uk). For general inquiries contact the Head of School - Prof Aad van Moorsel [a.vanmoorsel@bham.ac.uk](mailto:a.vanmoorsel@bham.ac.uk).

Candidates are **required** to upload their CV, which includes full citations plus URLs for 4 selected publications in the last 5 years. They are also recommended to upload below documents to support their applications:

- Covering letter, which can be filled in the application, so the document upload is optional
- Research Statement
- Teaching Statement

This advert will close on 16 June 2024. We follow a two-stage appointment process: mid/late August, longlisted candidates will be invited to give an online, 20-minute, research presentation, based on which shortlisting takes place. Shortlisted candidates will then be invited to visit the University of Birmingham (early September), meet with staff members and students (if possible), and conduct a panel interview.

## Main Duties / Responsibilities

### **Education**

Using a variety of methods in teaching and advising individuals and groups of undergraduates, postgraduates, or short course students, including (as appropriate):

- teaching and examining courses at a range of levels;
- planning and reviewing your own teaching approaches and encouraging others to do the same;
- designing contemporary, inclusive, engaging and academically challenging curriculum content;
- working collaboratively with colleagues to design and deliver teaching, learning and assessment;
- using digital resources/environments effectively to support learning and assessment;
- developing programme proposals and making substantial contributions to the design of teaching programmes more widely;
- where appropriate, undertaking and developing the full range of responsibilities in relation to supervision, marking and examining;
- developing and advising others on learning and teaching tasks and methods;
- developing and making substantial contributions to knowledge transfer, enterprise, business engagement, public engagement activities or similar on own specialism that enhances the student experience or employability and which benefits the College and University;
- devising and supervising projects, student dissertations and practical work.

### **Research**

Planning and carrying out research, including (as appropriate):

- planning and publishing high quality research, including winning financial support;
- project managing research activities, and/or supervising other research staff;
- presenting findings in publications and conference proceedings;
- effectively supervising and mentoring PhD students or early Career Researchers;
- providing expert advice to staff and students within the discipline;
- participating in research-related enabling activities such as adding value to a cross disciplinary network;
- applying knowledge in a way which develops new intellectual understanding;
- developing and making substantial contributions to knowledge transfer, and enterprise (including business engagement, public engagement) and similar activity that is of benefit to the College and the University, including ensuring that the impact of your activities is realised fully and the impact is documented.

### **Management/Administration**

Contributing to Departmental/School administration, including:

- contributing to the administration/management of research and/or teaching across the Department/School;
- leading and managing a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive);
- advising on personal development of colleagues and students;
- making a major contribution to some administrative activities within the University (e.g. appeals panels, working groups);
- managing enterprise, business development, and public engagement activities;
- developing and making substantial contributions to knowledge transfer, enterprise, business engagement, public engagement, widening participation, schools outreach.
- actively manages equality, diversity and inclusion through monitoring and evaluation and actively challenging unacceptable behaviour.

### **Citizenship**

Contributing to an inclusive working environment:

- demonstrating a willingness to be involved in a variety of activities supporting University life (e.g., participation in graduation, Departmental/School committees);
- demonstrating support for colleagues, such as sharing resources, providing advice;
- willingness to volunteer for one-off duties (such as supporting School, Institute, and Departmental projects);
- positively engaging in School strategic initiatives;
- proactive support and involvement in activities specifically contributing to a positive and inclusive community spirit across the School/College/University.

### **Person Specification**

- Normally, a higher degree relevant to the research/teaching area (usually PhD) or equivalent qualifications
- Extensive research/teaching experience and scholarship within subject specialism
- Proven ability to devise, advise on and manage learning/research
- Skills in managing, motivating and mentoring others successfully at all levels

### **Teaching**

- Ability to design, deliver, assess and revise teaching programmes
- Extensive experience and demonstrated success in developing appropriate approaches to learning and teaching, and advising colleagues
- Experience and success in knowledge transfer, enterprise and similar activity that enhances the student experience or employability

### **Research**

- Experience and achievement reflected in a growing reputation
- Extensive experience and demonstrated success in planning, undertaking and project managing research to deliver high quality results
- Extensive experience of applying and/or developing and devising successful models, techniques and methods
- Experience and achievement in knowledge transfer, enterprise and similar activity

### **Management Administration**

- Ability to contribute to School/Departmental management processes
- Ability to assess and organise resources effectively
- Understanding of and ability to contribute to broader management/administration processes
- Experience of championing Equality, Diversity and Inclusion in own work area
- Ability to monitor and evaluate the extent to which equality and diversity legislation, policies, procedures are applied
- Ability to identify issues with the potential to impact on protected groups and take appropriate action