

## Candidate Information

<b>Position:</b>	Lecturer/Senior Lecturer/Reader, CSIT
<b>School/Department:</b>	School of Electronics, Electrical Engineering and Computer Science
<b>Reference:</b>	18/106896
<b>Closing Date:</b>	Thursday 22 November 2018
<b>Salary:</b>	£40,792 - £50,132 per annum (potential to progress to £53,175 per annum through sustained exceptional contribution)

### JOB DETAILS:

To undertake research within the Centre for Secure Information Technologies (CSIT) aimed at developing the UK's cyber security capability, to teach undergraduate and postgraduate students in the School of Electronics, Electrical Engineering and Computer Science, and to contribute to administration and outreach activity. Candidates at Reader level will lead distinctive research initiatives.

### MAIN ACTIVITIES/RESPONSIBILITIES:

#### 1. Research (40%-60% of time spent)

- To undertake research in Software Security, Hardware Security, Cloud/Network Security or Security Analytics.
- To lead relevant research programmes, both individually and as part of larger teams.
- To regularly publish research in internationally recognised peer reviewed journals or conferences, commensurate with career stage.
- To secure appropriate external funding through research applications and individual fellowships and, for Senior Lecturer and Reader grades, develop and lead larger, income-generating collaborative and interdisciplinary research projects, working as part of a team.
- To engage in knowledge transfer and innovation activity and to demonstrate tangible research impact (Senior Lecturer/Reader) or potential for research impact, beyond the academic discipline (e.g. economic or societal impact) (Lecturer).
- To attract and supervise post-graduate research students and mentor post-doctoral researchers.
- Lead an active team of post-graduate research students and post-doctoral researchers (Senior Lecturer/Reader) or demonstrate ability to engage and work with post-graduate or post-doctoral researchers (Lecturer).
- To develop and maintain an international research profile, evidenced by relevant measures of esteem and peer reviews of research output quality and impact (Senior Lecturer/Reader).

#### 2. Education (20%-40% of time spent)

- To deliver teaching and assessment activities across a variety of computing and engineering degrees, including lectures, setting/marking coursework and practicals to undergraduates and postgraduates.
- To supervise undergraduate and postgraduate taught students in practical and project-based work including Final Year Projects and MSc/MEng dissertations.
- To contribute to the development of new teaching delivery methods, including but not limited to new blended learning and research-led teaching methods.
- To undertake initiatives to improve the overall student experience, by new methods of assessment, feedback, and student engagement.
- To lead major elements of programme development, including new course structures and curricula (Senior Lecturer/Reader).
- To manage major teaching administrative functions such as accreditation and quality enhancement (Senior Lecturer/Reader).

#### 3. Leadership and Administration (10%-20% of time spent)

- To act as mentor to colleagues advising on their personal development (Senior Lecturer/Reader).
- To actively engage with and contribute to the full range of student recruitment activities such as Open Days and taster events.

- To actively engage with and contribute to the School's internationalisation efforts with a view to attracting a significantly higher number of international students.
- To carry out designated School educational and research related administrative duties including, for example, University committee membership, working group leadership or course administration, or leadership activities.
- To contribute to senior management activities by taking on appropriate roles such as Director of Education, Director of Research, Director of Internationalisation, Module/Year/Programme Co-ordinator or other recognised official University roles (Senior Lecturer/Reader).

#### **ESSENTIAL CRITERIA:**

- Hold or be about to obtain a PhD in Computer Science, Electronic Engineering or a closely related discipline.
- Excellent oral communication and presentation skills, with sufficiently developed English Language skills to deliver Undergraduate and Postgraduate education.
- Ability to form and mentor a sizeable research team, including a track record of post-graduate student and post-doctoral staff supervision (Senior Lecturer / Reader).
- Record of publication of internationally recognised research outputs (commensurate with career stage) in one or more of the following areas: Cloud/Network Security; Software Security; Hardware Security; or Security Analytics.
- Evidence of independent contribution in research projects and outputs and potential to establish an independent research program in an area related to Applied Cybersecurity or Security Analytics (Lecturer).
- Track record of earning research income as Principal Investigator (Senior Lecturer / Reader), or evidence of potential to secure research income (Lecturer).
- Ability to lead distinctive research initiatives in an area related to Applied Cybersecurity or Security Analytics (Reader).
- Teaching experience commensurate with career stage, including undergraduate or postgraduate teaching, project supervision, assessment and/or feedback experience.
- Ability to teach in computer science and computing related courses (e.g., Software engineering; Intelligent Automation, Artificial intelligence; Data analytics; Cloud computing; Cyber security).

#### **DESIRABLE CRITERIA:**

- Membership or Senior Membership of learned societies such as IEEE, ACM, IET, BCS, AAI.
- PGCHET or equivalent teaching qualification or membership of professional teaching body e.g. HEA.
- Evidence of active international research collaboration or participation in international research networks.
- Significant research expertise in relevant areas depending on academic position, as follows:
  - Cloud/Network Security: security and privacy of cloud computing, application layer DDoS detection/mitigation, Web Application Firewall (WAF), network/cloud intrusion detection/prevention, malware and security models for trusted execution on the cloud.
  - Software Security: Security protocol and crypto algorithm implementation, instruction set extensions for crypto, software analysis, and/or software vulnerability detection.
  - Hardware Security: Micro-architectural security, SCA, Hardware Trojans, or PUF.
  - Security Analytics: AI for Cybersecurity intelligence automation and threat response automation (data-fusion); or AI technologies for cyber-social-physical security. Including deep learning, particularly adversarial, graph mining, and reasoning with uncertainty. Applications include malware detection, software vulnerability recognition, total network defence, fraud detection, open-source intelligence and surveillance video analytics.
- Strong teaching evaluations or peer reviews of teaching in a computing-related discipline (e.g. Software engineering; Intelligent Automation, Artificial intelligence; Data analytics; Cloud computing; Cyber security).