

Research Role Profile

<b>Job Title:</b>	Research Fellow A
-------------------	-------------------

<b>Responsible to:</b>	Head of research group, or principal investigator
------------------------	---

<b>Responsible for:</b>	Not applicable
-------------------------	----------------

<b>Job Summary and Purpose:</b>
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

<b>Main Responsibilities/Activities</b>
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

## Research Role Profile

### Person Specification

#### The post holder must have:

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years of experience in specified / relevant fields.

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

### Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

### Special Requirements

To be available to participate in fieldwork as required by the specified research project

#### All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

Research Role Profile

Addendum to Role Profile

<b>Job Title:</b>	Research Fellow (A)
-------------------	---------------------

**Job Summary and Purpose:**

This information sheet should be read in conjunction with the accompanying generic Research Fellow A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

Undertake research in the verification of secure systems with a particular focus on authentication and attestation techniques that encompasses passwordless technologies and IoT systems.

**Main Responsibilities/Activities**

In addition to the activities outlined in the role description, the following provide more specificity related to the particular research area:

- To undertake a range of research activities within the project area, assuming responsibility for specific areas of the research in particular for the security modelling, analysis and critical evaluation of systems in the areas of future authentication technologies;
- To plan and manage own research activity in collaboration with others;
- Detailed analysis and interpreting results of own research;
- Liaise closely and regularly with other members of the research group and seeking opportunities to develop collaborations with industrial and external partners;
- Writing up results and preparing papers for submission to appropriate journals and highly-rated conferences within the field of verification and security, and other outputs as required and/or appropriate;
- Perform any other duties associated with the result as deemed appropriate by the supervisor.

**Person Specification**

## Research Role Profile

### The post holder must have:

#### Essential

- A PhD in Computer Science, Mathematics, or other closely related area, or relevant experience.
- Understanding of cyber security.
- Knowledge of verification techniques
- Strong critical thinking skills and ability to develop novel solutions.
- Ability to communicate effectively and work efficiently within a research team.
- Ability to take initiative, learn how to use the necessary tools for the research, and work independently.
- Ability to present ideas to other experts in the area, as evidenced by conference presentations, seminars, invited talks, or similar.

#### Desirable

- Peer-reviewed publications, or other similar output.
- Experience of using security analysis tools (e.g. Tamarin, Squirrel), and/or theorem provers (e.g. Isabelle, Coq) and/or model checkers (e.g. NuSMV, Spin, PAT).

### Relationships and Contacts

Direct responsibility is to the principal investigator, Professor Helen Treharne. The successful applicant will also work with researchers and PhD students within the Surrey Centre for Cyber Security, including Professor Ioana Boureau and Dr Sasa Radomirovic, Dr Daniel Gardham and with a possibility to work with local and international collaborators.