![Queen's University Belfast logo]

Candidate Information

Position: Research Assistant
School/Department: School Office (Elect, Elect Eng & Comp Sci)
Reference: 24/111861
Closing Date: Monday 20 May 2024
Salary: £32,024 per annum
Anticipated Interview Date: Tuesday 11 June 2024
Duration: 21 months or available until 31/03/2026, whichever is sooner

JOB PURPOSE:

To be a highly productive, ambitious, and collaborative member of the Advanced Research and Engineering centre within Northern Ireland. This Centre will drive future technological innovations and enhance our capabilities in critical research areas such as robotic process automation (RPA), workflow automation, visualisation, data analytics and artificial intelligence (AI). The Centre combines expertise from PwC, the University of Ulster, and Queen's University Belfast. This research project aligns with the cyber security workflow and AI streams within the Centre.

The Research Assistant will explore operable cyber security risks in business processes over a complex network covering multiple data sources dealing with classical, quantum and post-quantum threats. Depending on the type of data, the complexity of the porting software, and the dependencies between the data, these data sources may have synchronous, asynchronous, or both characteristics. The business networks make decisions based on these inputs and are susceptible to error due to the data's multiple interconnections. As a result of the associated complexities and interdependence of the data points, several cyber security risks are frequently overlooked when a model of operations is so intricate. The Research Assistant will help develop novel security solutions, particularly model security, authentication, and authorisation.

MAJOR DUTIES:

1. To assist in cyber security work related to ARC projects focusing on the model security, authentication and authorisation along with cyber risk assessment.
2. Produce high quality research outputs in oral and written format.
3. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs.
4. In consultation with the project team, promote research milestones and outputs at national and international conferences.
5. Assist grant holder in the preparation of funding proposals and applications to external bodies.
6. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
7. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. 2.1 Honours Degree (or equivalent) in Applied Mathematics, Computer Science, Electronics, Electrical Engineering, or a closely related discipline.
2. Research experience in at least one of the following: cyber risk assessment, AI-model security, authentication.
3. Demonstrable experience of: - software development at the systems (preferably (but not limited to) C/C++/Python/Java/C#).
4. Willingness to undertake additional training in research methods and other related skills as required.
5. Practical problem-solving skills, independence of thought and initiative.
6. Ability to communicate complex information effectively in oral and written format.
7. Ability to build relationships to develop internal and external networks.
8. Ability to assess and organise resources.

9. Willingness to travel to meet the requirements of the research project.

DESIRABLE CRITERIA:
1. A publication record which is commensurate with career stage and experience OR Proof of concepts towards authentication approaches