Candidate Information

Position:	Research Fellow (AI Security/Neuromorphic Computing)
School/Department:	School of Electronics, Electrical Engineering and Computer Science
Reference:	25/113078
Closing Date:	Monday 26 January 2026
Salary:	£41,519 per annum
Anticipated Interview Date:	Monday 9 February 2026
Duration:	Available until 30 June 2027

JOB PURPOSE:

To conduct research and be part of the international research team working on the project “TruBrain: Trustworthy Distributed Brain-inspired Systems: Theoretical Basis and Hardware Implementation”. This project is funding by the EU funding schema CHIST-ERA and comprises a European consortium. This consortium is led by the Centre for Secure Information Technologies (CSIT: https://www.qub.ac.uk/ecit/CSIT), Queen’s University Belfast. CSIT is the UK’s Innovation and Knowledge Centre for cyber security, and the UK’s largest cyber security focused university technology research, development and innovation centre.

The project is collaborative with EPFL, Lausanne Switzerland, Sorbonne University, Paris and TUBITAK, Türkiye and offers a great opportunity for joint work and international visibility for early career researchers.

MAJOR DUTIES:

1. Undertake high quality and novel research in distributed learning and neuromorphic computing.
2. Design, develop and refine experiments to evaluate trustworthy federated learning algorithm performance.
3. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to TruBrain.
4. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
5. Prepare, often in consultation with line manager, material for publication in national and international journals and presentations at international conferences such as IEEE Security and Privacy, ACM in Computers and Communication Security, IEEE/CVF CVPR, etc.

ESSENTIAL CRITERIA:

1. Minimum of 2:1 Honours degree in Computer Science/Mathematics/ Electrical and Electronic Engineering (or related discipline)
2. Have, or be about to obtain*, a PhD in a relevant subject (must be obtained within 3 months of closing date of post)
3. Significant, relevant, recent high quality research experience in engineering or physical sciences, or both, as evidenced by a strong track record of publications in leading journals and conferences in relevant areas.
4. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
5. Sufficient programming skills
6. Ability to communicate complex information clearly.
7. Ability to build contacts and participate in internal and external networks.
8. Ability to assess and organise resources. Independent time management skills, attention to detail.
9. A consummate team player who is open-minded and is prepared to work closely with other members of a large multidisciplinary research and development team.
10. Willingness to travel to Europe to attend workshops as required by the project.

DESIRABLE CRITERIA:

1. Have or be about to obtain a PhD with focus on machine learning/AI, distributed/federated systems, neuromorphic systems and/or adversarial attacks.

2. High quality research experience in machine learning/AI, distributed/federated systems, neuromorphic systems and/or adversarial attacks, as evidenced by a strong track record of publications in leading journals and conferences in relevant areas.
3. Experience of collaborative research working in a team with other research institutions.
4. Experience in initiating and developing research plans.
5. Proficient in Python or similar languages.
6. Experience using PyTorch and/or Keras, and/or TensorFlow. Jupyter Notebook.
7. Ability to design, train and test machine learning/AI systems using appropriate datasets, particularly distributed learning systems.
8. Ability to design and prevent attacks to machine learning/AI systems.
9. Familiarity with the theory of Machine Learning fundamentals (Statistics, Optimization, Linear Algebra, Partial Derivative Equations, etc.)
10. Ability to give good audio-visual presentations.
11. Ability to contribute to broader project objectives and administrative processes.
12. Experience of collaborative research or working in a team is desirable.