**Job Summary**

**Job Title:** Professor in Computing Systems

**Overview**

Northern Ireland needs to avail itself of the considerable potential offered by artificial intelligence and data science by exploiting state-of-the-art algorithms and technology developments. Queen's University Belfast and the School of Electronics, Electrical Engineering and Computer Science (EEECS) in particular, is at the very centre of developing an ecosystem around AI and computational challenges relevant to big data phenomena. The School provides a vibrant, stimulating, and collaborative environment with strong partnerships with global industry and world-class facilities for research excellence and new collaborations.

We are uniquely positioned within the Higher Education Sector with established facilities, including the creation of the new £58 million Global Innovation Institute (GII) which will host more than 550 researchers and become a nexus for multidisciplinary co-innovation between researchers and industry in our digital future. It builds upon the existing £37 million investment which houses the Centre for Secure Information Technologies, the Centre for Wireless Innovation and the Centre for Data Science and Scalable Computing.

The post will benefit from a investment in the NI-HPC Centre which is a UK Tier-2 National High-Performance Computing facility focused on accelerating AI-based computing and potential and exposure to advanced research offered by the University's Turing Development Award. There is also major investment in the Centre for Intelligent Autonomous Manufacutring Systems (i-AMS), which is a cross-faculty interdisciplinary research centre spanning the disciplines of Computer Science, Engineering, Applied Mathematics and Psychology established to develop innovative technologies and solutions to address the challenges faced by industry in embracing the 4th industrial revolution (Industry 4.0).

The unprecedented development and growth of the School make it a particularly exciting time to join us, and explore the emerging opportunities alongside truly excellent academics, shaping a better world together.

**ABOUT THE ROLE:**

Queen's University Belfast is looking for a Professor in Computing Systems to undertake advanced research on Computing Systems, drive forward our ambitious research agenda and lead University-wide efforts to establish Queen's as an international leader in Computer Science and the application of this research to address global challenges. The post holder is expected to capitalise on the major opportunities available in this area by the recently announced UK Industrial Strategy, UKRI, many European and Global initiatives and the ongoing investment in the GII and the ACII.

**Research**

- To grow an internationally leading research programme in Computing Systems, and to secure substantial external funding and develop large, income-generating collaborative and interdisciplinary research activities
- To publish in the most prestigious international journals and conferences in the field of Computing Systems
- To engage in knowledge transfer and innovation activity and to deliver research impact

- To engage with regional and national Government initiatives in the space of Computing Systems, notably the UK industrial strategy and UKRI initiatives
- To contribute to the strategic growth and mission of ECIT and the School of EEECS
- To attract and supervise postgraduate research students and post-doctoral research fellows

**Education**

- To be responsible for the design and delivery of Computing Systems content in the Computer Science curricula
- To provide leadership in Computer Science, and Software Engineering curriculum development as expected by a senior member of staff
- To contribute to the School's efforts to develop 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 supervise Final Year Projects and MSc/MEng dissertations

**Leadership and Citizenship**

- To provide strong leadership in the School of EEECS and ECIT, particularly in supporting early career staff and in developing an ethos of collegiality and collaboration
- To provide leadership, line management and mentoring to help staff raise their ambition and develop their career within the School
- To participate in relevant committees at School, Institute, Faculty and University level
- To undertake senior external service commitments commensurate with the Professorial academic profile
- To be an advocate and an ambassador of the University

**Person Specification:**

The appointed person will have an established international profile in Computing Systems and the drive and ability to make more possible. Their personal values and work ethic will reflect ours - integrity, collaboration, ambition, respect, and the pursuit of excellence. For us to be right for you, you will be someone who thrives in a team environment, and has a passion for developing and mentoring the potential of others. We will share a common objective of pursuing research excellence and developing the skills for future generations as part of a local community aspiring to shape Computing Systems development globally. Applications will be required to demonstrate the following:

**Essential**

**Education and Qualifications**

- A PhD in Computer Engineering/Computer Science (or similar discipline)

**Experience**

**Research**

- Research and Outputs in the field of Computing Systems commensurate to stage in career with a sustained and distinguished record of publication of internationally excellent research outputs, with demonstrable impact on leading researchers and the research agenda in Computing Systems
- Sustained record of earning research income as Principal Investigator

- Evidence of contribution to national and international collaborations
- Evidence of successful, sustained PhD supervision as primary supervisor

**Education**

- Evidence of excellent standard of teaching performance at undergraduate and postgraduate level as judged by helping students achieve their potential
- Evidence of development of new approaches to lead innovation in the development or modernisation of the curriculum and in turn enhance the student experience

**Leadership and Impact**

- Sustained research leadership at international level in the wider research community with demonstrable impact on the strategic direction of future Computing Systems research
- Sustained record of success in knowledge creation and transfer
- Leadership role in a relevant wider academic or professional international community with demonstrable impact on the strategic direction of Computing Systems Sustained record of success in knowledge creation and transfer
- Evidence of social engagement and outreach activities

**Personal Qualities**

- Ability to communicate effectively complex information to a variety of audiences
- A commitment to creating an inclusive and supportive academic environment enhancing equality, diversity, and supporting early career academics

**Desirable**

**Education and Qualifications**

- Senior Membership or Fellowship of learned societies such as IEEE, ACM, AAAI, IET, BCS,

**Experience**

**Research**

- Significant research expertise in relevant areas of Computing Systems, including but not limited to Edge Computing, Cyber-Physical Systems, and High Performance Computing
- Major paper awards and prizes from leading journals or conferences in Computing Systems
- Major research grants such as EPSRC Programme, Platform, CDT grants, ERC grants
- Successful coordination of major research consortia based in the UK, EU, or internationally
- Major roles in leading conferences in Computing Systems, such as General Chair, Program Chair, or Track Chair

**Education**

- Successful creation of undergraduate or postgraduate programmes in Computer Science, Computing Systems, or cross-cutting themes

**Leadership and Impact**

- Track record of participation in Government / Industry advisory groups, funding panels
- Senior School Leadership experience (e.g. Director of Research, Director of Education, Head/Chair) or at the Faculty or University level
- Track record of influencing government or policy on the role of Computing Systems