

Candidate Information

Position:	Research Fellow, Energy-Efficient & Dependable Computing Systems
School/Department:	Centre for Data Science and Scalable Computing
Reference:	20/108363
Closing Date:	Wednesday 7 October 2020
Salary:	£33,797- £35,845 per annum
Anticipated Interview Date:	Thursday 22 October 2020
Duration:	12 months

JOB PURPOSE:

To be an active research member of the DSSC centre at the ECIT Institute by: (i) conducting research on the design of energy efficient and dependable circuits and systems, (ii) assisting in the development of research proposals, (iii) contributing to the supervision of research students, and (iv) planning and delivering the research activity to meet relevant objectives.

MAJOR DUTIES:

1. Actively contribute to the general planning and delivery of research activities relevant to the design of energy efficient and dependable computing systems.
2. Prepare, in consultation with the Principal Investigator, material for publication in reputed journals (for example, IEEE TC, TCAD, TCAS, TVLSI) and conferences (for example, IEEE/ACM DAC, DATE, MICRO, DSN, ISLPED).
3. Present regular progress reports on research to internal and external audiences to disseminate and publicise research findings.
4. Assist in the preparation of funding proposals and applications to external bodies.
5. Collaborate with other members of the group and drive collaboration with researchers within QUB or externally.
6. Contribute to the supervision of PhD candidates and carry out occasional undergraduate/postgraduate project 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. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.
8. Any other duties related to research that may reasonably be requested by the Principal Investigator.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-3 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to day activity within framework of the agreed research programme.
4. Plan in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
2. Join external networks to share information and ideas.
3. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Degree in Computer Science (or related discipline).
2. Have, or be about to obtain a relevant PhD.
3. At least 3 years' relevant research experience in the design of circuits and systems, processing architectures with emphasis on low power, reliable and/or secure operation.
4. Evidence of a strong publication record commensurate with career stage and experience.
5. Ability to contribute to broader management and administrative processes.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programme relevant to the design of low power and dependable circuits and systems.
7. Good written and verbal communication skills with an ability to communicate complex information clearly.
8. Ability to innovate and rapidly contribute to research projects.
9. Ability to assess and organise resources.
10. Willingness to travel both within the UK and outside for collaborative visits, attending and presenting at conferences.

DESIRABLE CRITERIA:

1. A strong background in Computer Science or Computer Engineering; for example, a first class undergraduate degree or MSc distinction (or international equivalent).
2. Degree with major on computer architecture, circuits and systems, embedded systems.
3. PhD in Computer architecture, circuits and systems, embedded systems or closely related field.
4. Demonstrable expertise in developing circuits and systems by applying the VLSI and/or FPGA design flows.
5. Experience on the application of low power and reliability aware methods.
6. Have or be about to win research awards.
7. Potential to enhance the research conducted within the DSSC centre on the design of low power and dependable systems.
8. Any experience contributing to student project supervision.
9. Experience of collaborative research or working in a team.