

Candidate Information

Position:	Research Fellow (Channel and Spectrum Modelling for Future Wireless Systems)
School/Department:	School of Electronics, Electrical Engineering and Computer Science
Reference:	25/113002
Closing Date:	Monday 29 December 2025
Salary:	£41,519 per annum
Anticipated Interview Date:	Monday 19 January 2206
Duration:	Available until 31 March 2027

JOB PURPOSE:

To be a highly motivated, collaborative member of the Hub on All Spectrum Connectivity (HASC), funded by the Engineering and Physical Sciences Research Council (EPSRC). Collaborators in HASC include the University of Oxford, University of Bristol, University of Southampton, University of Cambridge, University College London and Imperial College London.

To conduct a series of channel and spectrum simulations and measurements at microwave and millimetre-wave (mmWave) frequencies. Building upon this, develop a new generation of spatio-temporal channel and spectrum models tailored to these systems.

The successful candidate will become an active member of the Centre for Wireless Innovation and the School of Electronics, Electrical Engineering and Computer Science (EEECs) at Queen's University Belfast QUB, assisting in the production of world leading research output.

MAJOR DUTIES:

1. Conduct a series of channel and spectrum simulations and measurements within agreed microwave and mmWave frequency bands.
2. Develop new, data-driven spatio-temporal models for the wireless channel and spectrum occupancy.
3. Explore the use of AI and machine learning in channel and spectrum modelling and prediction.
4. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to channel and spectrum modelling, particularly for microwave and millimetre-wave communications.
5. Present regular progress reports on research to research group members or external audiences to disseminate and publicise research findings.
6. Prepare, often in consultation with the supervisor, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications to external bodies.
8. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget.
9. Carry out occasional undergraduate (final year, MEng) 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.

ESSENTIAL CRITERIA:

1. Have, or be about to obtain*, a PhD in Electronics, Electrical Engineering, or closely related discipline. *must be obtained within 3 months of closing date of post.
2. Significant, relevant research experience in wireless communications or related area.
3. Evidence of strong publication record commensurate with stage of career.
4. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
5. Strong communication skills with a demonstrable ability to communicate complex information clearly.
6. Proven ability to build contacts and participate in internal and external networks.

7. Ability to travel and present at project meetings, and international conferences.

DESIRABLE CRITERIA:

1. Able to demonstrate:
 - Experience in channel sounding / measurements.
 - Data processing, statistical characterisation.
 - Channel and/or spectrum modelling.
 - Algorithm development.
 - Knowledge of AI and machine learning.
2. Experience in EU or RCUK projects, in particular in project task management and reporting through periodic deliverables.
3. Experience in producing timely technical documentation on research projects (deliverables, reports).
4. Experience with presentations of research outputs in conferences, workshops, or seminars.