

Candidate Information

Position: Research Fellow
School/Department: School of Electronics, Electrical Engineering and Computer Science
Reference: 26/113678
Closing Date: Monday 19 October 2026
Salary: £42,972 to £44,253 per annum
Anticipated Interview Date: Monday 2 November 2026
Duration: Fixed Term - Full Time; available until 9 April 2027

JOB PURPOSE:

To develop and design a power converter for EV rapid charging and big renewable hookups. This will be carried out as part of a research team, within an exciting, prestigious project funded by Invest NI, aiming to implement a power converter with the view to boosting its efficiency reliability and scale. This is a unique opportunity to build the next generation of renewable energy interfaces and work at one of the leading institutions in the United Kingdom, Queen's University Belfast, collaborating with a team of academics and industry. The successful candidate will become an active member of the Energy, Power and Intelligent Control (EPIC) research centre within the School of Electronics, Electrical Engineering and Computer Science (EEECS), contributing to world leading research outputs and completely new research initiatives in the broader area of Power Electronics and Renewable Energy Conversion.

MAJOR DUTIES:

1. Lead the design and development of power converter with single-stage high-frequency architecture.
2. Run system simulations and real-lab tests using MATLAB/Simulink PLECS and more to hit key efficiency and stability targets.
3. Carry out hardware testing and validate converter performance under real-world grid and EV charging conditions.
4. Keep detailed technical documentation and maintain project records.
5. Work closely with industry and manufacturing partners to align technical specs with commercial needs.
6. Contribute to business case development cost analysis and market readiness planning.
7. Lead or support regulatory certification and compliance testing processes.
8. Prepare publications and present findings at both academic and industry-facing conferences.
9. Carry out project admin including risk assessments lab logistics and component sourcing.

ESSENTIAL CRITERIA:

1. Hold, or about to obtain*, a PhD in Power Electronics, Electronic/Electrical Engineering or closely related discipline.(must be obtained within 3 months of closing date of post).
2. Significant, relevant experience with a demonstrable background in in the broad area of electrical engineering.
3. Experience communicating to both technical and non-technical audiences.
4. Experience of completing ICure Engage or Discover programme.
5. Strong skills in MATLAB, Python, and simulation tools like COMSOL or Ansys.
6. Knowledge of commercialisation, market studies or IP processes.
7. Strong organisational skills and attention to detail.
8. Ability to build contacts and participate in internal and external networks.
9. Ability to work well independently as well as part of a team.

DESIRABLE CRITERIA:

1. Practical hands-on experience in the implementation and testing of high-power devices.
2. Experience in modelling device power losses and undertaking associated thermal analysis.
3. Experience of publishing research in international conference proceedings and/or peer-reviewed journals such as IET, IEEE Transactions or ACS journals.
4. Experience of technology transfer, licensing or industry collaboration.

5. Experience of writing business cases or supporting grant applications for commercialisation.
6. Experience of presenting research or technical work at academic and industry events.