University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Assistant	Job family and level	Research Level 4a
School/ Department	Electrical and Electronic Engineering	Location	Power Electronics and Machine Centre, Jubilee Campuses

Purpose of role

The purpose of this role will be helping deliver collaborative research in the area of MW-level electric propulsion system for future aircraft and will support delivery of one of our new EU-funded projects.

We are recruiting multiple research assistants (RAs) to work on different aspects of this MW-level electric propulsion system including power electronics modelling and testing, digital twin development and motor drive testing.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	To support planning, developing and conducting individual and/or collaborative research objectives, projects and proposals either as an individual or as part of a broader programme.	50%
2	To acquire, analyse, interpret and evaluate research findings/data using approaches, techniques, models and methods selected or developed for the purpose.	20%
3	Be responsible for resolving problems with support from other senior colleagues to meet research objectives and deadlines	10%
4	Be responsible for managing and/or monitoring assets and budgets allocated and the use of research resources to ensure that effective use is made of them.	10%
5	To communicate complex and conceptual ideas to those with limited knowledge and understanding as well as to peers, using high level skills and a range of media.	10%

Person specification

	Essential	Desirable
Skills	▪ Good oral and written communication skills, including the ability to communicate with clarity on complex information. ▪ Good skills of relevant to Altium Designer for PCB design and test of power electronic systems ▪ Creativity and analytical thinking skills to carry out as well as manage innovative and high-quality research ▪ Ability to work well in a team	▪ Proven experience with industrial collaboration. ▪ Relevant experience in an International leading research team
Knowledge and experience	▪ Good knowledge of WBG power electronic devices, motor drives or digital twin ▪ Strong practical hardware experience of power electronics development and testing ▪ Excellent knowledge of relevant to MATLAB/Simulink, PLECS for power electronics simulation ▪ Good understanding of control platform DSP or FPGA	▪ Good knowledge control platform development for power electronics applications
Qualifications, certification and training (relevant to role)	▪ Hold a bachelor's degree in electrical engineering, Power Electronics or a very closely related topic	▪ Hold or be shortly due to obtain a master's degree in electrical engineering, Power Electronics or a very closely related topic

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
Taking ownership	Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
Forward thinking	Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
Professional pride	Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
Always inclusive	Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others