UNIVERSITY OF WARWICK

Job Description

Job title	Research Fellow
Department	WMG
Grade	6

Job purpose (a brief summary of the role)	You will undertake research in order to support the work of the department and develop and enhance its reputation, both internally and externally. Assist the Project Leader and, where appropriate, project collaborators in the successful execution of the project.
Duties and responsibilities	**Project Specific Responsibilities** 1. The researcher will be responsible for defining the research challenges at the intersection of the future electrical grid and future electrified mobility solutions. 2. The researcher is expected to lead modelling – simulation studies across multiple transport modes and their interactions with the electrical grid. 3. The researcher will develop an integrated vehicle – mobility – electrical grid energy model framework to be applied in conjunction with the wider research team. 4. The researcher will interface with other project research staff based in Australia, Italy and Malaysia. **Principal Accountabilities** 1. To work with the academic investigator, to create and maintain a research plan aligned to project requirements, that will include experimental research, academic reporting/presentation and publication. 2. To present and report research findings to our academic partners and funder. 3. To disseminate research outputs through appropriate academic journals and conferences. 4. To support the research, education, dissemination and operational activities of the wider research group, as defined by the Head of Group. **Research and Scholarship** 1. Help establish a sound research base within the department in order to assist the development of research objectives and proposals for own or joint research. 2. Conduct individual and collaborative research projects. 3. Write up research work for publication. 4. Translate knowledge of advances in the subject area into research activity. 5. May contribute to preparing proposals and applications to external bodies, e.g. for funding and contractual purposes, to support a developing research agenda. 6. May present information on research progress and outcomes to bodies supervising research, e.g. steering groups. 7. May contribute to the preparation of papers for steering groups and other bodies. 8. Communicate complex information (orally and in writing) and material of a specialist or highly technical nature. 9. Continually update own knowledge and understanding in field or specialism. **Teaching and Learning Support** 1. Could be expected to contribute to the teaching and learning programmes in the department.

	2. Assist in the supervision of student projects and the development of student research skills. 3. May be involved in the assessment of student knowledge and supervision of projects. **Administration and Other Activities** 1. Collaborate actively within and out side of the institution to complete research projects and advance thinking. 2. Undertake specific departmental roles as may be required. 3. May be required to attend departmental meetings and to participate (where necessary) in other committees and working groups within the department, the faculty and the University. 4. Participate in relevant professional activities. 5. Ensure compliance with health and safety in all aspects of work and, when appropriate, undertake risk assessments. 6. Participate in and develop external networks, for example to identify sources of funding, generate income, obtain projects, or build relationships for future activities.

Person Specification

The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.

Essential Criterion No.	Essential Criterion Description	Measured by
E1	Good honours degree and possession of a PhD or equivalent doctoral qualification in relevant discipline (Maths, Physics, Engineering). Candidates nearing completion of PhD or equivalent will be appointed at Research Assistant level until awarded.	A
E2	Skilled in a range of modelling tools and related packages ranging from Python coding through Matlab/Simulink to electrical grid modelling packages (e.g. ETAP, ESME).	A,C & D
E3	Expertise in the effects of transportation electrification on electrical grids. Experience in data analysis and modelling at the interface between electrical grid and electrified assets is of particular relevance.	A,C & D
E4	Significant expertise in systems thinking to solving complex problems, particularly in a transportation context.	A,C & D
E5	Proven ability and achievements in research co-creation, formulation, delivery and reporting, with evidence of quality research outputs in relevant field.	A,C & D
E6	A developing research profile with the evidence of publications and/or high-quality research outputs.	A & C
E7	Sufficient breadth or depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.	A,C & D
E8	Ability to contribute to the development of funding proposals in order to generate external funding to support research projects.	A & C
E9	An understanding of equal opportunity issues as they may impact on areas of research content.	A & C
E10	Good effective communication (oral and written) skills, presentation and training skills.	A,C & D
E11	Good interpersonal skills.	A & C
E12	Ability and willingness to work as a member of a team and contribute positively to a collegial team environment and to be able to work independently.	A & C
E13	Ability to initiate, plan, organise, implement and deliver programmes of work to tight deadlines.	A & C
E14	Ability to write research reports and papers in styles accessible to both academic and, where relevant, industry audiences.	A & C