

## Job Description

Job title	Research Fellow
Department	School of Engineering
Grade	FA6

Job purpose (a brief summary of the role)	Undertake research in order to support the work of the School and develop and enhance its reputation, both internally and externally. Assist the Principal Investigator and, where appropriate, project collaborators in the successful execution of the project.
Duties and responsibilities	<p><b>Research</b></p> <ol style="list-style-type: none"> <li>1. Help establish a sound research base within the departments in order to assist the development of research objectives and proposals for own or joint research.</li> <li>2. Conduct individual and collaborative research projects.</li> <li>3. To publish research outcomes in appropriate journals of international standing and to publish and disseminate the result of research to other reputable outlets.</li> <li>4. Translate knowledge of advances in the subject area into research activity.</li> <li>5. May contribute to preparing proposals and applications to external bodies, e.g. for funding and contractual purposes, to support a developing research agenda.</li> <li>6. May present information on research progress and outcomes to bodies supervising research, e.g. steering groups.</li> <li>7. May contribute to the preparation of papers for steering groups and other bodies.</li> <li>8. Communicate complex information (orally and in writing) and material of a specialist or highly technical nature.</li> <li>9. Continually update own knowledge and understanding in field or specialism.</li> </ol> <p><b>Teaching and Learning Support</b></p> <ol style="list-style-type: none"> <li>1. Could be expected to contribute to the teaching and learning programmes in the departments.</li> <li>2. Assist in the supervision of student projects and the development of student research skills.</li> <li>3. May be involved in the assessment of student knowledge and supervision of projects.</li> </ol> <p><b>The below will always be included:</b></p> <p><b>Administration and Other Activities</b></p> <ol style="list-style-type: none"> <li>1. To contribute to School of Engineering committees and administrative duties and tasks.</li> <li>2. Work within budget constraints.</li> <li>3. To ensure compliance with Health and Safety, and other University regulations and good working practices in all aspects of work.</li> </ol> <p>The duties and responsibilities outlined are for guidance on the main aspects of the job. The post holder will be expected to be flexible in their duties. Occasional weekend, evening and overseas working may be required, in turn the School offers flexible working where possible.</p>

### 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 (2.1 minimum) or equivalent in a Electrical Engineering/ Physics/Materials Science subject.	A
E2	You will have a PhD or equivalent (or nearing completion) in a relevant discipline (including a relevant branch of Materials Science/ Physics/ Electrical Engineering).	A
E3	Good knowledge of Power Electronics and Devices, including TCAD semiconductor simulations experience.	A,B & C
E4	You must have a strong record of publications and research outputs in the Power Electronics and Devices field and the ability to contribute to the development of funding proposals.	A,C & D
E5	Prior experience working in a semiconductor cleanroom.	A & C
E6	Proven ability in research and evidence of quality research output in relevant field.	A,C & D
E7	Ability or potential to contribute to the development of funding proposals in order to generate external funding (grants, contracts etc) to support research projects.	A,B & C
E8	Demonstrable ability to work collaboratively and effectively with academic and administrative colleagues, both within and outside the University, to promote a collegial environment, while contributing to the life and community of the School through various duties, such as supporting offer holder days and outreach activities, which may occasionally require weekend work.	A,C & D
E9	Good IT skills including Microsoft Office and proven ability to use IT to write technical research papers and presentations.	A,C & D
E10	Able to evidence excellent interpersonal skills with relevant experience of working independently and as part of a team.	A,C & D
E11	Able to evidence strong time management and organisational skills.	A,C & D
E12	Strong communication skills including the ability to communicate effectively in English, both verbally and in writing.	A,C & D
E13	Understanding of equal opportunity, safeguarding and prevent as they may impact on areas of research content.	C

Desirable Criterion No.	Desirable Criterion Description	<i>Measured by</i>
D1	Experience with devices experimental characterisation and evaluation at the wafer and package level.	A,C & D
D2	Knowledge of requirements for power devices operating in high stress and short-circuit conditions.	A,C & D
D3	Experience of industrial work.	A,C & D
D4	Experience with devices experimental characterisation and evaluation at the wafer and package level.	A,C & D
D5	Ability to teach, train and mentor junior researchers.	A & C