

## PROFESSOR in PULSED POWER / ELECTROMAGNETIC SYSTEMS

Job Ref: REQ250335

**As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

Successful candidates will have a sustained and continuing record of excellence which has contributed to the furtherance of knowledge in their discipline and is recognised in a well-established and high profile international reputation. Evidence of significant academic leadership and a PhD or equivalent research experience are also essential.

### Job Description

#### Job Grade

Research, Teaching and Enterprise Grade 9

#### Job Purpose

To work with other senior academic staff to ensure that the ambitions set out in the University's Strategy, "*Creating better futures. Together*" are achieved.

To lead the development and implementation of research, innovation, and teaching strategies to maintain vitality in the activities of the Wolfson School of Mechanical, Electrical & Manufacturing Engineering generally and in the academic area *Pulsed Power and Electromagnetic Systems*, to lead research into the physics and technology of pulsed power-driven RF systems, used for such as developing new source technologies, investigating signal coupling and processing, as well as electromagnetic propagation. The candidate would be expected to lead in areas related to defence and non-defence applications and contribute to the DSTL EME Hub (<https://emehub.org/>) to develop a research portfolio in Electromagnetic Systems that may include supporting activities in: antennas, microwave theory and techniques, radio frequency circuits/devices, radar, radio spectrum monitoring, mm Wave and high frequency electromagnetics.

To engage personally with those activities, adding to the School's international reputation.

#### Job Duties

##### Academic Leadership

- To provide academic leadership for the activities of the School specifically in the academic area as well as more generally across the School and the University.
- To pursue excellence in research, teaching and enterprise and to inspire others to do the same.
- To play a lead role in the development and communication of the strategic vision for the academic area.
- To lead and participate in internal and external networks to foster collaboration and to promote, the School and the University, nationally and internationally.
- To monitor the external environment and ensure that the School and University capitalise on emerging opportunities and to review the scope of current academic provision.

##### Research

- To pursue an 'internationally competitive' personal research programme consistent with the research priorities of the School/Department that increases the global visibility and reputation of the University.
- To secure external research funding.
- To supervise and manage research projects.
- To publish the outcomes of research in outlets of international standing.
- To attend and contribute to the organisation of major international conferences.
- To supervise postgraduate students at Masters and Doctoral levels.
- To initiate, lead and collaborate in research initiatives with colleagues both within the University and externally.
- To initiate, lead and collaborate in research initiatives with other HEIs and other relevant bodies.

### **Teaching**

- To lead colleagues in the School in delivering an exceptional learning environment for students.
- To teach and inspire undergraduate and postgraduate students, and to conduct associated assessments.
- To provide academic and pastoral support to undergraduate and postgraduate students.
- To promote the use of a range of methods and techniques in teaching, learning and assessment.
- To engage in the evaluation and development of modules for which you have responsibility, in terms of content, delivery and assessment.
- To be responsible for the design and content of specific areas of teaching and learning within the School's undergraduate and postgraduate programmes.
- To lead colleagues in the continuous review and development of the School's taught programmes and the curriculum.

### **Enterprise**

- To initiate and lead engagement with business, public and voluntary organisations through knowledge exchange activities such as student projects and placements, research collaboration, consultancy and specialist training.
- To create social, cultural and economic impacts from academic, especially research, activity.
- To secure external funding in support of these activities.
- To seek opportunities for the commercialisation of research and the formation of social enterprises.

### **Related Activities and Functions**

- To appraise and advise staff on personal and career development plans.
- To work effectively with relevant administrative, technical and academic staff in the School and across the University.
- To carry out specific administrative roles and functions as may be reasonably required.
- To take part in and, on occasion, act as chair of one or more of the School's committees.
- To engage in training programmes in the University (e.g. through Staff Development) which are consistent with your needs and aspirations and those of the School.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.
- To engage fully with the annual Performance and Development Review (PDR) process.

### **Points to Note**

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed

### **Special Conditions**

Appointment to this post is conditional on the selected candidate achieving the appropriate security clearance relevant to the role.

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equity, Diversity and Inclusion policy and procedures at all times. Duties must be carried out in accordance with relevant Equity & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Belonging and Inclusion and, where appropriate, Recruitment and Selection.

## Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application.

Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

### Essential Criteria

Area	Criteria	Stage
<b>Experience</b>	Significant leadership experience gained within university or business settings which may include: <ul style="list-style-type: none"> <li>• project management</li> <li>• leading collaborations</li> <li>• managing professional staff (academic or otherwise) within a team.</li> <li>• managing budgets</li> </ul>	1,3
	Evidence of research and/or academic activity in Pulsed Power and/or Electromagnetic Systems consistent with the needs of the School, or equivalent experience from industry, with the ability to transition successfully into an academic environment.	1
	A sustained and continuing record of excellence which has contributed to the furtherance of knowledge in Pulsed Power and Electromagnetic Systems, and is recognised by an established and high profile international reputation in that area.	1, 3
	Evidence of authoring a substantial body of original work, in the highest quality refereed academic journals as judged against international norms.	1
	Extended experience of successfully supervising the projects of taught and research students or company staff at equivalent levels.	1,3
	Experience of presenting research work at international scientific conferences.	1
	Experience of work in or in collaboration with other businesses	1
<b>Skills and Abilities</b>	Demonstrated ability to develop a major original research programme on your own initiative and to persuade others of its importance orally and on paper.	2,3
	Demonstrated ability to secure substantial research funding and/or enterprise funds from external / company sources on a regular basis.	1,3
	Demonstrated ability to create social / cultural / economic impacts from professional activity.	2,3
	Excellent communication and interpersonal skills which give you the ability to engage with students, colleagues, business and other agencies on a wide variety of matters.	1,2,3
<b>Training</b>	Commitment to and evidence of continuing professional development.	1.3

<b>Qualifications</b>	Relevant PhD or equivalent research experience in electrical engineering, plasma physics, electromagnetic science/engineering or other relevant disciplines.	1
<b>Other</b>	Commitment to observing the University's Equity, Diversity and Inclusion policy at all times.	1,3
	Must be eligible to obtain and maintain a UK security clearance.	1

### Desirable Criteria

Area	Criteria	Stage
<b>Experience</b>	Experience at research group head or equivalent level including: <ul style="list-style-type: none"> <li>Strategic planning and delivery.</li> <li>Promoting your organisation.</li> </ul>	1,3
	Experience in commercial exploitation of products / services or formation of social enterprises.	1,3
	Experience of teaching and assessment at undergraduate and postgraduate level and of curriculum development.	1,3
<b>Skills and abilities</b>	A sound understanding of the structure of universities and issues facing the UK higher education sector, for example: <ul style="list-style-type: none"> <li>Research funding opportunities in UK HE.</li> <li>The challenges faced in recruiting students to UK HE.</li> </ul>	2,3 1
<b>Qualifications</b>	Appropriate professional status e.g, membership of a recognised professional institution, CEng, status CPhys status etc, or equivalent	1
	Fellow of the Higher Education Academy or equivalent	1

### Conditions of Service

Salary will be on Research, Teaching and Enterprise Grade 9, minimum £74,865 per annum, at a starting salary to be confirmed on offer of appointment, which is subject to annual pay review.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available [here](#))

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see [here](#).