

## Lecturer in Digital Electronics

Job Ref: REQ17848

**As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

### ***About the Wolfson School of Mechanical, Electrical and Manufacturing Engineering***

The home of world leading engineering, we have an international reputation for being at the forefront of technological innovation and for maintaining extensive links with industry. The School is one of the largest engineering schools of its kind in the UK, comprising 123 academic staff, 122 research staff, 215 PhD students, 30 administrative staff, 46 technicians and 17 management and specialist staff.

We aim to provide international leadership in research and innovation and an unrivalled educational experience. Our graduates, who are highly sought after, are testament to our success, helping to provide industry with the skills and knowledge to give them the competitive edge required to succeed in the 21st century. We bring together outstanding facilities, superb teaching and strong links with industry to make sure our graduates are completely ready for their future career. Enterprise is especially embedded in our programmes, including industry based individual and group projects with commercial customers, more than 66% of our undergraduates spending a year in industry, commercialisation of our graduate, post graduate and research projects and knowledge exchange activities with the public, private, third sector and government.

The vision for our research endeavours is to provide world leading engineering solutions to today's global challenges. Research grants, principally from the UK Research Councils and the EU, and extensive industrial collaborations generate annual research funds currently in excess of £10m/year and provides a portfolio at present of >£52M. In addition to holding two prestigious Queen's Anniversary Prizes for our research, we are currently home to three EPSRC national centres, for Innovative Manufacturing in Regenerative Medicine, for Innovative Manufacturing in Intelligent Automation and a Centre for Doctoral Training in Embedded Intelligence. We are also lead collaborators in an additional three EPSRC Centres for Innovative Manufacturing and another four Centres for Doctoral Training.

The breadth of our research activity is captured in our six Research Themes, that are populated and resourced from our fifteen research groups and four research centres. Our themes focus our attention on the global challenges that engineering can respond to, including: energy engineering, engineering for health, engineering systems, advanced manufacturing, communications and engineering design and analysis. Supporting us and helping to ensure that our output reaches and benefits society at large are our strong partnerships with many of the

leading British and global technical and engineering organisations. We deliver real impact through our collaborative partnerships with organisations across the world, adding wide-ranging value to our partners. Our research and development activity is second to none, aimed at engaging with the wider community and commercial activity as a part of our 'research that matters' culture throughout the University.

## **Job Description**

### **Job Grade**

Research, Teaching and Enterprise Grade 7

### **Job Purpose**

To contribute to and enhance the research, teaching and enterprise activities of the Wolfson School of Mechanical, Electrical and Manufacturing Engineering in the area of Digital Electronics in support of the University Strategy, Building Excellence. The School is seeking candidates who are highly research active in the broad area of Digital Electronics and with a background in the general area of Electronic/Electrical Engineering. Candidates should be capable of delivering taught material including (but not limited to) VLSI systems architecture, ASICs, microprocessors (including sensors, architecture, programming and applications), FPGAs, and the fundamental concepts of electronics at all levels of study.

### **Job Duties**

#### ***Research***

- To pursue a personal research programme consistent with the research priorities of the School 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 major international conferences.
- To supervise postgraduate students at Masters and Doctoral levels.
- To collaborate in research initiatives with colleagues both within the University and externally.

#### ***Teaching***

- To work with colleagues in the School to deliver 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 cooperate with colleagues in the continuous review and development of the School's taught programmes and curriculum.
- To contribute, if required, to any year of study and to sustain/actively pursue membership of the Higher Education Academy.
- To be dedicated to perform at a high level consistent with Loughborough University's Gold Award in the Teaching Excellence Framework (TEF).
- To visit, advise and support students who are pursuing industry placements.

#### ***Enterprise***

- To engage 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 impact 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 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 School 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**

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 Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

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

### **Organisational Responsibility**

Reports to the Dean of School.

## 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
Experience	Background in engineering with specific and current expertise relevant to the job title.	1, 2, 3
	Evidence of research and/or academic activity in Digital Electronics consistent with the needs of the Wolfson School.	1
	Experience of working in a high quality academic research environment including experience at post-doctoral (or equivalent) level.	1
	Evidence of authoring original work in the highest quality refereed academic journals.	1
	Candidates from outside of academia must be able to demonstrate the ability to make the transition to becoming a top academic	1,2,3
Skills and abilities	Ability to develop an original research programme on your own initiative and to persuade others (both orally and in written form) of its importance.	2,3
	Ability to identify and develop potential social / cultural / economic impact from professional activity.	2,3
	Knowledge of research and enterprise funding opportunities in UK HE and understanding of how to secure funding.	2,3
	A clear trajectory towards achievements at a higher academic level.	1,2,3
	Excellent communication and interpersonal skills which give you the ability to engage with students, colleagues, commercial companies, relevant charities, and other agencies on a wide variety of matters.	1,2,3
	Ability to teach and supervise undergraduate and postgraduate students in engineering.	2,3
	Ability and willingness to teach general subjects relating to electronic/electrical disciplines including VLSI, ASICs, microprocessors, FPGAs and the fundamental concepts of electronics at all levels of study.	1, 2
	Ability to provide tutorial and counselling advice to students.	1,3
	Ability to work independently and also as part of and to lead a team.	1, 2, 3
	Excellent IT skills.	1
Training	Commitment to and evidence of continuing professional development.	1.3
Qualifications	Relevant PhD or equivalent experience in the area of Digital Electronics.	1
	Commitment to sustaining or obtaining registration with the Higher Education Academy at a minimum of Fellow level.	1

Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3
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### Desirable Criteria

Area	Criteria	Stage
Experience	Experience of presenting research work at international conferences.	1
	Experience of teaching and assessment at undergraduate and postgraduate level.	1,3
	Experience of contributing to successful funding applications.	1
	Experience of successfully supervising the projects of taught and research students or company staff at equivalent levels.	1,3
	Experience of work in or in collaboration with business and industry in the area of Digital Electronics.	1
Skills and abilities	Ability to take part in module and programme development.	3
	Knowledge of the challenges faced in UK HE.	1
Qualifications	Achieved or progressing towards being a Chartered Engineer or international equivalent.	1

### Conditions of Service

The position is full time and open ended. Salary will be on Grade 7 (£39,992 - £47,722) per annum at a starting salary to be confirmed on offer of appointment.

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 at <http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html>.

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 at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

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 <http://www.lboro.ac.uk/services/hr/athena-swan/>

### Informal Enquiries

Informal enquiries should be made to Professor Paul Conway, Dean of School, by email at [P.P.Conway@lboro.ac.uk](mailto:P.P.Conway@lboro.ac.uk) or by telephone on +44 (0)1509 227505.

### Applications

The closing date for receipt of applications is **12 October 2017**.

To apply, you must complete the standard online application form, including full education details. You should also provide a single document consisting of a full CV, with full publications list, together with an outline proposal (no more than 2 pages of A4) setting out your intentions in the post in respect of research and teaching. Incomplete applications will not be considered.

Interviews are planned to take place during October 2017.