

## PROFESSOR IN WATER ENGINEERING

### 2 Posts

Job Ref: REQ17723

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

### School of Architecture Building and Civil Engineering

#### Teaching and Learning

The School offers a wide range of undergraduate programmes including Civil Engineering, Construction Engineering Management, Commercial Management and Quantity Surveying, Architectural Engineering and Design Management, Air Transport Management, Transport and Business Management and Architecture.

The content of our programmes is directly aligned to the needs of the industry with a high level of sponsorship in our portfolio of programmes and our record of graduate employment is second to none. Further information on our teaching may be found at: <http://www.lboro.ac.uk/departments/civil-building/>

At MRes level we train the next generation of multi-disciplinary researchers in energy demand. At MSc level, we offer programmes in Water and Waste Engineering, Construction Management, Low Energy Building Services Engineering and an MSc in Air Transport Management. These programmes are all accredited by the Professional Institutions.

#### Research

The School has an established record for research excellence. In the recent assessment, Research Excellence Framework (REF), undertaken in 2014, Loughborough University was ranked 14th out of 128 universities based on research intensity. In the School of Civil and Building Engineering we return our staff to two units of assessment: Architecture, Built Environment and Planning, where we were ranked 2nd (out of 45) on research intensity; and Civil and Construction Engineering, being ranked 5th (out of 14) on research intensity.

The REF2014 results also showed:

- Quality - Over 75% of the School's research was rated as world-leading or internationally excellent
- Impact - 95% of our research was rated as world-leading or internationally excellent for its influence on society, the economy and policy <http://www.lboro.ac.uk/research/our-research/case-studies/>
- Environment – Ranked first in Architecture, Built Environment and Planning
- Uniquely in UK civil engineering and built environment research, 100% of eligible staff are research active

Further information on our research may be found at: <http://www.lboro.ac.uk/departments/cv/research/index.html>

#### International Standing and Excellence

Collaborations are encouraged and research links have been formed with many of the top universities both nationally and internationally. We are also proud of our collaborations with industry where organisations such as Foster & Partners, AECOM, Atkins Buro Happold, Cambridge Architectural Research Limited, J&P Building Systems Limited, Mallinson Architects & Engineers, SE Controls Ltd, Solidspace, Ford, Renault, Heathrow, British Airways, MAG, and Structerm are our partners. The development of these long-term, national and international links is a vital element of the School's on-going research strategy.

#### Water Engineering Group

The School has a vibrant and growing water research group currently comprising fourteen academic staff with this post being part of four new water appointments. The group has a wide range of water research strengths and interests which include water quality, pollution, hydrodynamics, hydrology, flooding (catchment and urban scale), and water engineering in developing countries covering water supply, sanitation and waste management. Some of our recent research activities include; sediment transport in shallow overland flow, the use of photogrammetry for estimating water levels in rivers, the impact of vegetation on flow in rivers and on floodplains, the development of

surveillance control and data acquisition systems for monitoring river flows to assist flood prediction, and the role of natural flood management and soil in mitigating catchment flood risk. The group also has a very strong reputation in research on water engineering in developing countries which is conducted through WEDC. Their focus on water, sanitation and hygiene has led to significant funding through DFID, UNICEF, WHO, World Bank and the Bill Gates Foundation. The group has well established working links with other Schools within Loughborough as well as strong collaborations with leading national and international Universities.

We are looking to appoint two Chairs in Water Engineering and we would specifically encourage applications in the areas of: Fresh Water Hydrodynamics, Hydraulics, Hydrology and Water Quality including Sanitation and Wastewater Engineering. The successful applicant must contribute to the development and delivery of research, enterprise and teaching in the Water Engineering Group. Applications which provide evidence of contribution to both original scientific knowledge and to water engineering in developing countries would be particularly welcome.

## **Job Description**

**Please note that this is a generic job description for the position of Professor.**

### **Job Grade**

Research, Teaching and Enterprise Grade 9

### **Job Purpose**

To work with other senior academic staff in Water Engineering to ensure that the ambitions set out in the University's Strategy, Building Excellence are achieved.

To lead the development and implementation of research, teaching and enterprise strategy to maintain vitality in the activities of the School of Civil and Building Engineering generally and in the area of Water Engineering specifically.

To engage personally with those activities, adding to the School's international reputation in Water Engineering

### **Job Duties**

#### ***Academic Leadership***

- To provide academic leadership for the activities of the School specifically in the area of Water Engineering 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 Water Engineering.
- To lead and participate in internal and external networks to foster collaboration and to promote Water Engineering, 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 of Civil and Building Engineering 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**

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 with respect to meeting the essential and desirable criteria listed below. 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	Leadership experience gained within university or business settings including: <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 water engineering that is consistent with the needs of the School of Civil and Building Engineering.	1
	A sustained and continuing record of excellence which has contributed to the furtherance of knowledge in Water Engineering, and is recognised by an international reputation in that area.	1, 3
	Experience of leading and participating in projects in an internationally recognised academic research including sustained experience at a senior level.	1
	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 teaching and assessment at undergraduate and postgraduate level and of curriculum development.	1,3
	Experience of work in or in collaboration with industry, and/or with international development stakeholders.	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	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
	Ability to stimulate and inspire others as reflected in academic leadership and influence beyond own discipline/institution.	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
	Experience of leading a team.	2,3
	Excellent IT skills.	1
Training	Commitment to and evidence of continuing professional development.	1.3

Qualifications	Relevant PhD or equivalent experience.	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3
	Formal recognition of professional standing in teaching (e.g. Fellow of the HEA) or commitment to obtaining this within a reasonable timeframe.	1

### Desirable Criteria

Area	Criteria	Stage
Experience	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
Skills and abilities	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> </ul>	2,3
	<ul style="list-style-type: none"> <li>the challenges faced in recruiting students to UK HE.</li> </ul>	1
Qualifications	Appropriate professional status	1

### Conditions of Service

The position is full time and open-ended. Salary will be on the Research Teaching and Enterprise Grade 9, Professorial Salary Band. The minimum salary on this scale is £63,008 per annum, starting salary to be confirmed on offer of appointment. Subject to annual pay award.

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 School 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 Tony Thorpe, Dean of School by email at [a.thorpe@lboro.ac.uk](mailto:a.thorpe@lboro.ac.uk) or by telephone on +44 (0)1509 223771.

### Applications

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