



The
University
Of
Sheffield.

About
The
Job.

Department of Civil & Structural Engineering
Faculty of Engineering

**Research Associate in
Experimental Geotechnics**

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Overview

About the Department

The Department of Civil & Structural Engineering at Sheffield is respected internationally and is one of the largest in the UK (<http://www.shef.ac.uk/civil>). The Department currently has over 40 academic staff, 80 researchers and a student community of approximately 650 on its undergraduate and postgraduate taught programmes. The Department's teaching is underpinned by international leading research and it maintains world class laboratories available to undergraduates and postgraduates. The Department research activities are organised into two main research groupings of Structural Engineering and Environmental Engineering, which contain specialist sub-themes and research clusters including: Computational Mechanics and Design, Steel and Composite Structures, Concrete & Earthquake Engineering, Blast and Impact Dynamics, Groundwater Protection and Restoration, Catchment Science Centre, Cell-Mineral Research Centre, Pennine Water Group and the Geotechnical Engineering Group.

The Geotechnical Engineering Group of Sheffield consists of 5 academics, 1 post-doctoral researcher and 11 PhD students. The group has a strong history in physical modelling and has recently established a new research centre, 'Centre for Energy and Infrastructure Ground Research' (www.shef.ac.uk/ceigr), which boasts a new 4m diameter geotechnical beam centrifuge. This facility represents the pinnacle of modern physical modelling capabilities as it enables experimental models up to 500 kg to be rotated at high speed, applying forces equivalent to 100 times normal gravity, such that the model test offers insight of full scale field behavior. The Centre is supported by the Engineering Physical Sciences Research Council (EPSRC) and aims to deliver transformative research in key challenge themes affecting UK society of Energy, Living with Environmental Change and Manufacturing the Future. In addition to supporting the research group, the Centre will serve as a hub to a regional network of research and industry partners who will visit to complete experiments.

Job Role

The post holder will be responsible for: (i) planning and delivering programmes of experimental research and data interpretation/analysis aligned with the aims of the Centre, (ii) reporting of experimental data in technical reports and high quality journal articles, (iii) designing and commissioning innovative model laboratory testing equipment for use on the centrifuge, (iv) supporting undergraduate and postgraduate research students, and (v) working/liasing with external stakeholder involved in the Centre network.

The post holder will work closely within a team of academics, researchers and technical staff to deliver research that is highly important for the Centre and potentially world-leading in application.

Furthermore, it will be necessary to liaise with other researchers within the Centre network from partnering institutions and industry representatives in order to support/advise on the delivery of experimental work to a high quality. In addition the post holder will have the opportunity to gain experience supervising/tutoring undergraduate and master student research projects in collaboration with academic supervisors.

Job Description

Main Duties and Responsibilities

- Lead the co-ordination and delivery of short and long term research projects to a high standard in line with the aims of the Centre.
- Responsible for planning and co-ordinating physical centrifuge model tests.
- Interpret and analyse experimental data and produce reports to the academic supervisory team via technical reports and presentations as required.
- Lead the production of high quality journal and conference articles arising from research projects delivered.
- Design and commission innovative laboratory testing equipment that will enhance the facilities of the centre.
- Work closely with academic staff to develop and deliver innovative research programmes.
- Take an active role in co-ordinating technical staff and resources to support the management and operation of the centre.
- Take a lead role in developing research projects that will make a positive contribution to the Centre activities.
- Work closely with the academic team in the development and preparation of funding applications.
- Support the academic team in the dissemination of centre activities and visitor events.
- Supervise junior researchers, including undergraduate and post-graduate students.
- Co-ordinate and manage commercial testing contracts as required.
- Act in a management capacity to liaise and co-ordinate access to the centrifuge for network partners.
- Participate in the supervision of undergraduate and postgraduate research students, including those from other institutions and industry as appropriate.
- Any other duties, commensurate with the grade of the post.

Person Specification

Applicants should provide evidence in their applications that they meet the following criteria. We will use a range of selection methods to measure candidates' abilities in these areas including

reviewing your on-line application, seeking references, inviting shortlisted candidates to interview and other forms of assessment action relevant to the post.

	Criteria	Essential	Desirable
Qualifications and experience			
1.	Have a good honours degree in Civil, Structural, General Engineering or other relevant area.	X	
2.	Hold (or be near to completion of) a relevant PhD (or equivalent experience), together with relevant experience of experimental research.	X	
3.	Evidence of ability to device, plan and execute high-quality laboratory-based (or field) experimental programmes.	X	
4.	Evidence of the ability to evaluate, interpret and report laboratory-based experimental data to a high standard (i.e. reports or journal articles).	X	
5.	Understanding of data acquisition, software packages, and programming (e.g. LabVIEW, DasyLab, Matlab, C, etc.).		X
6.	Ability to carry out finite element analysis could be beneficial, if required.		X
Management skills			
7.	Ability to assess and organise resources, plan and progress work activities of planned and reactive tasks.	X	
8.	Ability to prioritise work based on different needs.	X	
9.	Ability to work independently and as an effective member of a team.	X	
10.	Able to demonstrate good laboratory practice and safety with record keeping.		X
Communication skills			
11.	Effective communication skills, both written and verbal.	X	
12.	Ability to write up research findings for submission to peer reviewed conferences and journals.		X
13.	Ability to deliver presentations and articulate research aspects to staff and external visitors.	X	
Team working			
14.	Experience of working within a team and aligning the day-to-day work and goals of the team with the organisation's strategic vision.	X	
15.	Ability to motivate high performance in others.		X

Problem solving and decision making			
16.	Ability to develop creative approaches to problem solving.	X	
17.	Ability to act independent of direct supervision.	X	
Personal effectiveness			
18.	Enthusiastic and self-motivated.	X	
19.	Experience of adapting own skills to new circumstances.	X	
20.	Good organisational and time management skills.	X	

Further Information

This post is fixed term for 18 months in the first instance, starting 19 May 2014 or as soon as possible thereafter.

This post is full-time:

This role has been identified as a full-time post, but we are committed to exploring flexible working opportunities with our staff which benefit both the individual and the University (See www.sheffield.ac.uk/hr/guidance/flexible). Therefore, we would consider flexible delivery of the role subject to meeting the business needs of the post. If you wish to explore flexible working opportunities in relation to this post, please contact the recruiting department via the contact details provided below.

Benefits

Terms and conditions of employment: Will be those for Grade 7 staff.

Salary for this post: £28,972 per annum, depending on experience.

More details on salaries, terms and conditions and our wide range of benefits for staff are available at www.sheffield.ac.uk/hr/reward/structures

Closing date: 23 April 2014

Informal enquiries:

For all on-line application system queries and support, contact: e-Recruitment@sheffield.ac.uk .

For informal enquiries about this job and department, contact: Dr Jonathan Black on j.a.black@sheffield.ac.uk or on 0114 222 5110.

Selection-Next Step

Following the closing date, you will be informed by email whether or not you have been shortlisted to be invited to participate in the next stage of the selection process. Please note that due to the large number of applications that we receive, it may take up to two working weeks following the closing date before the recruiting department will be able to contact you.

Full details of interviews and other selection action will be provided to invited candidates.

The University of Sheffield is committed to achieving excellence through inclusion.

The University of Sheffield is proud to be a Two Ticks employer
www.sheffield.ac.uk/hr/equality/support/twoticks/



The University has achieved the Athena SWAN award for Women in Science, Engineering and Medicine



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