



The  
University  
Of  
Sheffield.

About  
The  
Job.

**Department of Civil & Structural Engineering**  
**Faculty of Engineering**

**Research Associate in  
Experimental Geotechnics  
(3 posts)**

**Pursue the extraordinary**

# Overview

## About the Department

The Department of Civil and Structural Engineering at Sheffield is respected internationally and is one of the largest in the UK ([www.shef.ac.uk/civil](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, ranked 4<sup>th</sup> in the UK, and it maintains world-class laboratories available to undergraduates and postgraduates. The Department's 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 and Earthquake Engineering, Blast and Impact Dynamics, Groundwater Protection and Restoration, the Urban Institute, Sheffield Water Group and the Geotechnical Engineering Group. Further details on each of the research areas can be accessed via the above Departmental web link.

The Department recently captured its key objectives of:

- inspiring and empowering world class scholarship;
- nurturing creativity to achieve excellence in research and education;
- engineering a sustainable future for people and planet.

We are now undertaking an exercise to map our activities to global challenges and to explore how to develop our focus upon the emerging societal challenge of the provision of infrastructure that supports humanity's ability to thrive within the carrying capacity of the planet

The Geotechnical Engineering Group of Sheffield consists of 5 academics. 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](http://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 collection/analysis aligned with the strategic research aims of the Centre outlined below, (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 you will have the opportunity to gain experience supervising/tutoring undergraduate and master student research projects in collaboration with academic supervisors. **This is one of three posts available.**

## Job Description

### Main Duties and Responsibilities

- Lead the co-ordination and delivery of short and long term research projects in one or more themed areas outlined above in line with the strategic research 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 devise, 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 (for example. LabVIEW, DasyLab, Matlab, C, etc.).	X	

6.	Ability to carry out complementary finite element analysis.	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	
Project management			
18.	Ability to assess and organise resources, and plan and progress work activities.	X	
Personal effectiveness			
19.	Enthusiastic and self-motivated.	X	
20.	Experience of adapting own skills to new circumstances.	X	
21.	Good organisational and time management skills.	X	

## Further Information

**This post is fixed-term** with an immediate start date available and an end date of 31 July 2018.

### **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/arrangements](http://www.sheffield.ac.uk/hr/guidance/flexible/arrangements)). 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, we encourage you to call or email the departmental contact listed below.

## Reward and Recognition – The Deal

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

**Salary for this grade:** £30,175 - £38,183 per annum.



The Deal is the pay, rewards and many benefits you earn for being a valued member of our University and by being ambitious and performing at your best.

If you join the University you will have access to The Deal and your own personalised pay, reward and benefits portal where you can access a comprehensive selection of benefits and offers to suit your changing lifestyle needs, for example childcare vouchers, Cycle to Work initiative, shopping discounts along with access to extensive development and training options – over a third of staff work in Investors in People (IiP)

To find out more visit [www.sheffield.ac.uk/hr/thedeal/benefits](http://www.sheffield.ac.uk/hr/thedeal/benefits)

Through The Deal we are committed to making the University a remarkable place to work and we support this through a number of sector leading initiatives such as Juice and Sheffield Leader.



Our innovative Health and Wellbeing programme, Juice, promotes happiness and wellbeing through a broad range of inclusive activities ([www.shef.ac.uk/juice](http://www.shef.ac.uk/juice))

## theSheffieldLEADER

Our leadership development has been designed to ensure that our leaders have the knowledge, skills and behaviours needed by the University ([www.sheffield.ac.uk/hr/sld/sheffieldleader](http://www.sheffield.ac.uk/hr/sld/sheffieldleader)).

We are also proud of our award-winning equality and diversity action which enhances working life for all. 91% of staff tell us they are treated with fairness and respect (staff survey 2014)

[www.shef.ac.uk/hr/equality](http://www.shef.ac.uk/hr/equality)

In our staff survey (2014) 94% of staff said they were proud to work for the University and 87 % of our staff would recommend Sheffield University as an excellent place to work. To find out more about what it's like to work here have a look at our webpages, [www.sheffield.ac.uk/staff/survey](http://www.sheffield.ac.uk/staff/survey) and [www.sheffield.ac.uk/jobs/staffbenefits](http://www.sheffield.ac.uk/jobs/staffbenefits).

**Closing date:** For details of the closing date please view this post on our web pages at <http://www.sheffield.ac.uk/jobs/>

**Informal enquiries:**

For informal enquiries about this job and the recruiting department, contact: Dr Jonathan Black on [j.a.black@sheffield.ac.uk](mailto:j.a.black@sheffield.ac.uk) or on 0114 222 5110.

For administration queries and details on the application process, contact the lead recruiter: Mrs Pat Rayner on [p.rayner@sheffield.ac.uk](mailto:p.rayner@sheffield.ac.uk) or on 0114 222 5758.

For all online application system queries and support, visit: <https://www.sheffield.ac.uk/jobs/applying>

**Health assessment:** All new employees will undertake a Health Assessment Questionnaire. The questionnaire is to assess the individual's fitness for the job role which they have been offered and ensures appropriate health advice and guidance can be provided. The assessment will be carried out on behalf of the University by Health Management Limited (HML).

## Selection-Next Step

Following the closing date, we will contact you by email to let you know whether or not you have been shortlisted 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.

It is anticipated that interviews and other selection action will be held in January 2017. Full details 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](http://www.sheffield.ac.uk/hr/equality/support/twoticks)



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



**2014**  
**THE AWARDS**  
AWARD WINNER  
OUTSTANDING SUPPORT FOR  
EARLY CAREER RESEARCHERS



**Pursue the extraordinary**

