



SCHOOL OF SCIENCE AND ENGINEERING

Vacancy for

Lecturer/Senior Lecturer/Reader in Geotechnical Engineering

Grade

Grade 7 (£34,956 – 38,183), Grade 8 (£39,324 – £46,924),
Grade 9 (£49,772 – £55,998)

Web Site: www.dundee.ac.uk/scienceengineering/

Further Particulars

1. Background

The University:

The University of Dundee aims to transform lives locally and globally through the creation, sharing and application of knowledge.

We reflect this aim by:

- excelling in teaching and research;
- contributing to social, economic and cultural development;
- shaping the future by solving important, real-world problems.

The University of Dundee aims to become Scotland's leading University and be recognised internationally for the quality of our graduates and the impact of our research. These research and teaching strengths have led to the University being named in 2015 as the Scottish University of the Year in *The Times & Sunday Times Good University Guide*.

The University of Dundee emphasises work that takes place across subject boundaries, bringing different expertise and viewpoints to approach issues in new, challenging and productive ways. In line with this interdisciplinary approach a new School of Science and Engineering has been formed which encompasses the disciplines of Computing, Civil Engineering, Mathematics, Mechanical Engineering and Physics as well as the Centre for Anatomy and Human Identification (CAHID). The School of Science and Engineering is looking to appoint a number of outstanding academics to join its internationally leading teaching and research groups.

School of Science and Engineering:

The School benefits from superb research infrastructure, substantial opportunities for interdisciplinary collaboration and the University's established excellence in delivering undergraduate and postgraduate taught courses that consistently lead to impressive National Student Survey scores.

All new appointees are expected to develop vigorous research programmes and contribute to enhancing the student experience through undergraduate and postgraduate teaching.

Staff appointed as a Grade 7 or 8 Lecturer join as probationary staff, moving to a permanent role after successfully completing the 3-year probation period. New staff are allocated mentors to support them throughout this time, to support staff with teaching and research responsibilities.

Staff appointed as a Senior Lecturer or Reader at Grade 9 will have sufficient experience in teaching and research to be appointed to a permanent position without the need for probation, and will be able to demonstrate an internationally leading research track record, current research funding and evidence of delivering taught courses at undergraduate and/or postgraduate level.

We would welcome applications from holders of personal research fellowships for this position, and informal inquiries about moving a fellowship to Dundee can be made via the contacts in section 7.

Discipline of Civil Engineering:

Civil Engineering at Dundee was ranked 3rd in the UK in the national Research Excellence Framework assessment in 2014 and a major contributor to this success was our internationally-recognised research in Geotechnical Engineering. The Geotechnics group is highly successful in winning research grants from EPSRC and other sources, currently holding about £2m in grants from the EPSRC alone. We have excellent research facilities, including the £3M centrifuge facility (with climate and earthquake simulation capabilities, and a robot for in-flight construction operations and load simulation) and the £2M Scottish Marine and Renewables Testing (SMART) Centre. The SMART centre provides the group with a range of advanced soil element test facilities to complement the centrifuge (including high-speed stress-path triaxial, variable-direction cyclic simple shear and environmentally controllable dynamic direct shear, amongst others).

Current research themes include:

- Offshore geotechnics (for hydrocarbons, renewables and aquaculture);
- Geotechnical earthquake engineering;
- Soil structure interaction;
- Novel foundation systems;
- Soil-vegetation interaction/Ecological engineering (collaborative with the James Hutton Institute);
- Soil behaviour at high rates of strain and under dynamic loading conditions.

The successful candidate will be expected to contribute to the continued development of our research activities in any of these areas, as well as having a commitment to excellence in teaching. The Geotechnics group runs a highly regarded MSc in Geotechnical Engineering which is heavily industrially-linked via significant external funding support from the Scottish Funding Council and SAIC (Scottish Aquaculture Innovation Centre).

We would particularly welcome applications from people who are working at the Geotechnics/Structures interface.

2. Job Information

Job Title: Lecturer/Senior Lecturer/Reader in Geotechnical Engineering
Discipline: Civil Engineering
Job category: Academic
Grade of post/salary: Grade 7 or 8 (Lecturer) or 9 (Senior Lecturer/Reader)

3. Job Summary

The appointee will be expected to contribute to research in Civil Engineering and to teaching and administration within the School of Science and Engineering. They will be expected to:

- Contribute to the ongoing research in Geotechnical Engineering or at the Geotechnics-structures interface, and develop new avenues of research.
- Contribute to the generation of external research funding.
- Publish in high quality research journals and major international conferences.

- Teach at undergraduate and post-graduate level.
- Supervise students at all levels (honours and MSc projects, PhD).
- Undertake administrative duties.

4. Person specification

Essential:

All Grades:

- PhD in a relevant subject.
- Ability to produce research outputs of internationally excellent quality.
- Ability to generate external funding for research projects.
- Ambitious research plans which will be competitive for RCUK, EU or equivalent funding streams and/or for industrial funding mechanisms.
- Experience of teaching at university (or equivalent) level.
- Clear evidence of learning and teaching competence.
- Excellent communication and interpersonal skills.
- Evidence of ability and willingness to work collaboratively with others.
- Evidence of effective team membership (Lecturer/Senior Lecturer); Evidence of effective team leadership (Reader).
- Ability to prioritise and balance competing demands.
- Willingness to engage with UK and overseas student recruitment.

Grade 8

- Evidence of recent research outputs, ideally as senior author, that are considered internationally-leading.
- Demonstrated ability to secure external research funding.
- Demonstrated experience of excellent University teaching and module leadership.
- Evidence or appreciation of use of innovative teaching methods.
- Experience of successful supervision of BSc/BEng/MEng and/or taught MSc student projects.

Grade 9 (Senior Lecturer/Reader)

- Strong track record of internationally-leading research outputs.
- Demonstrated ability to lead a research group.
- Demonstrated ability to secure significant external research funding, especially from RCUK or equivalent (for SL/R) over a sustained period of time (for R).
- Evidence of strong University and research/teaching community service activities.

Desirable:

- Experience of curriculum development
- Clear evidence of administering, or assisting in administering, and examining modules.
- Evidence of use of innovative teaching methods.
- Experience of commercialisation of research and/or industry interactions (strongly desirable for appointment at Reader).
- Evidence of successful PhD supervision (strongly desirable for SL/R appointments).
- Experience of successful international recruitment.

- Ability to collaborate with existing members of a research group.
- Experience of public engagement with science.
- Chartered status (UK), or ability to obtain this.

5. Key responsibilities

- Develop externally funded research activities in relevant areas.
- Collaborate on research projects with academic and/or industrial partners from other parts of the UK and internationally.
- Supervise students on undergraduate, postgraduate and PhD projects.
- Carry a normal teaching load at undergraduate and Masters level. This will include topics in Geotechnical Engineering, but could also include Structural Engineering and other core areas relevant to Engineering degrees (e.g. Maths, Surveying, etc.).
- Contribute to the School's academic and pastoral support for undergraduate and postgraduate students.
- Contribute to the School's general teaching and administrative duties.
- An appointee at the higher grades (Senior Lecturer/Reader) would also be expected to:
 - Create, lead and participate in collaborative research that is externally funded.
 - Develop graduating engineering professionals and early career researchers.
 - Undertake senior administrative duties within the School and University.
 - Contribute strongly to raising the international research profile of Civil Engineering at Dundee.

6. Application Requirements

In addition to the online form, applicants must include with their application:

- A cover letter, outlining fit to role.
- A research plan (1-2 pages) covering proposed research over the first three years of the appointment.
- A teaching plan (1-2 pages) outlining fit to current teaching at Dundee and teaching methodology.

7. Contacts

To further discuss the details of this post, informal inquiries may be made to the Dr Mike Brown: m.j.z.brown@dundee.ac.uk