

Professor of Experimental Soil Mechanics for Sustainability

Department/faculty: Faculty Civil Engineering and Geosciences

Level: Doctorate

Working hours: 36-40 hours weekly

Contract: Permanent

Salary: 5582 - 8127 euros monthly (full-time basis)

Faculty Civil Engineering and Geosciences

The Department of Geoscience and Engineering encompasses 5 sections: Applied Geology, Applied Petrophysics and Geophysics, Geo-Engineering, Resource Engineering, and Petroleum Engineering. Within the department there is considerable scope and encouragement for inter-disciplinary research.

The Section of Geo-Engineering has 9 full-time and 5 part-time academic staff, and 25 PhD and post-doctoral researchers. Areas of expertise include soil mechanics, dykes and embankments, foundation engineering, underground space technology, engineering geology, and geo-environmental engineering. There are extensive experimental laboratory facilities, including large-scale soil-structure interaction testing facilities and a geotechnical centrifuge. The section has close links with the onshore and offshore industries and with the Dutch research institute Deltares.

The Department is part of the Faculty Civil Engineering and Geosciences (CEG). CEG is committed to outstanding international research and education in the field of civil engineering, applied earth sciences, traffic and transport, water technology and delta technology. The research covers global social issues and is closely connected to education as well as the work of a wide range of knowledge institutions. CEG is convinced that Open Science helps to realise these goals and supports its scientists in integrating Open Science in their research practice. The Faculty of CEG comprises 28 research groups in the following seven departments: Materials Mechanics Management & Design, Engineering Structures, Geoscience and Engineering, Geoscience and Remote Sensing, Transport & Planning, Hydraulic Engineering and Water Management.

Job description

Would you like to be our new professor of Experimental Soil Mechanics for Sustainability?

Increasing climate stresses and expanding use of the shallow subsurface are posing new challenges related to the resilience and the sustainability of geostructures including those for land protection and energy production. Understanding the impact of environmental pressures on the mechanical behaviour of soils is of crucial relevance to address these challenges and to reduce the risk of unsustainable development.

The position is proposed to improve our understanding of the fundamental mechanical behaviour of soils undergoing ageing and cyclic environmental loads, and to provide new solutions to the present and future challenges of the built environment. The focus is on developing new experimental techniques and strategies to better understand and tune the response of soils to increasingly high (time-dependent and dynamic) loadings. Emerging sensor and imaging technologies offer the opportunity to develop a new generation of experimental techniques for soil testing in the laboratory and in the field.

To achieve these goals, you will need to expand the world class laboratory facilities already available in the Department of Geoscience and Engineering. We aim for a professor with the capacities and desire to develop a fundamental research programme of international standing with a strong footing in the Dutch Geotechnical community. You should have proven research qualities in combination with proven capacities to reach out to the construction industry and the

wider geotechnical engineering community, in addition to a proven track record in attracting research funding. Therefore you are comfortable finding new connections and communicating easily with external parties, colleagues and students. Supervising colleagues and students will be part of your duties. Naturally, you will also contribute to the education portfolio of the Section and Department.

Requirements

You should have a PhD in Geotechnical Engineering or another related discipline with a strong expertise in soil element testing in the laboratory. You should have strong links with the international engineering profession and have a strong track record when it comes to publications in the field of experimental soil mechanics. You should enjoy pioneering and exploring new paths. You will be expected to initiate, acquire, execute and coordinate research projects. You should have good international connections in the field, be a real team builder and have good communication skills in English.

Additionally:

- We expect you to develop close working relations with the Dutch Geotechnical Industry; therefore speaking Dutch, or the willingness to learn Dutch within the first two years of your appointment, is essential.
- Close cooperation with other members of the scientific staff of the section and wider university is part of the job.
- You should be able to inspire students and develop their passion for and knowledge of experimental soil mechanics, for example via lectures.

Conditions of employment

The TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged and parttime employment is possible. You will also receive a start-up package. Coming to Delft Service and Partner Career Advice can support with advice for you and your accompanying partner about your individual settling needs in the Netherlands. Once arrived you can be supported with individual consults and diverse workshops. Located on Campus are the International Children's Centre and an international primary school which are subject to availability as well as several bilingual schools in the nearby surrounding. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

The TU Delft sets specific standards for the English competency of the teaching staff. The TU Delft offers training to improve English competency.

Inspiring, excellent education is our central aim. If you do not yet have your teaching certificate, you get the chance to obtain this within three years.

Information and application

For more information about this vacancy, you can contact Prof. Dr. M. A. Hicks, head of the Section of Geo-Engineering via m.a.hicks@tudelft.nl or tel: +31152787433. Or you can contact Prof. dr. ir. T. J. Heimovaara, head of the Department of Geoscience and Engineering, t.j.heimovaara@tudelft.nl, tel: +31152781969. To apply, please send a detailed CV, along with a short letter of motivation, a statement of research, teaching and leadership, contact information of three persons who can provide references and a publications list compiled into a single pdf file named lastname_firstname_CiTG19.37.pdf by 1st of September to recruitment-citg@tudelft.nl. When applying for this position, please refer to vacancy number CiTG19.37.

TU Delft creates equal opportunities and encourages women to apply.