

# PhD in Computational Soil Mechanics

**Faculty/department** Civil Engineering and Geosciences

**Level** Master degree

**Maximum employment** 38 hours per week (1 FTE)

**Duration of contract** 4 years

**Salary scale** €2191 to €2801 per month gross

## Civil Engineering and Geosciences

The Faculty of Civil Engineering and Geosciences of Delft University of Technology (TU Delft) provides leading international research and education, with innovation and sustainability as central themes. Research and education are closely interwoven and address societal challenges. The Faculty consists of the departments of Transport and Planning, Structural Engineering, Geoscience and Engineering, Water Management, Hydraulic Engineering, and Geoscience and Remote Sensing.

The Department of Geoscience and Engineering resides within the Faculty of Civil Engineering and Geosciences, and 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. Current collaborations between Geo-Engineering and the wider Faculty include the Section of Offshore Engineering, and the Departments of Structural Engineering, Hydraulic Engineering, and Geoscience and Remote Sensing.

The Section of Geo-Engineering has 10 full-time and 6 part-time academic staff, and 30 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, as well as excellent computing facilities including access to national High Performance Computing networks.

## Job description

Applications are invited for a PhD student in Computational Soil Mechanics, to be based within the Section of Geo-Engineering. The research is funded by the Dutch Research Council STW, and focuses on the influence of soil heterogeneity on the behaviour and design of dykes and embankments. It involves the statistical characterisation and numerical modelling of in situ soil heterogeneity, the 3D finite element modelling of slopes, and the assessment of slope stability within a reliability-based framework.

The PhD research is part of a larger STW project, entitled "All-Risk: Implementation of new risk standards in the Dutch flood protection program". The project is supported by stakeholders from the Dutch government, waterboards, knowledge institutes and industry. The successful candidate will be one of a team of PhD, Post Doc and academic researchers engaged in research in numerical modelling in geotechnical engineering.

## **Requirements**

Applicants should possess a good first degree in Civil Engineering or other related discipline. An interest in, and an aptitude for, numerical modelling is essential. Communication skills are important, and applicants should have a high level of proficiency in written and spoken English. The successful candidate will be expected to cooperate closely with other members of the research team.

## **Conditions of employment**

TU Delft offers an attractive benefits package, including a flexible working week and the option of assembling a customised compensation and benefits package (the 'IKA'). Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities. As a PhD candidate you will be enrolled in the TU Delft Graduate School. Please visit [www.phd.tudelft.nl](http://www.phd.tudelft.nl) for more information.

## **Information and application**

For more information about this position, please contact Prof.dr. M.A. Hicks, phone: +31 (0)15-2787433, e-mail: [m.a.hicks@tudelft.nl](mailto:m.a.hicks@tudelft.nl). To apply, please e-mail a detailed CV, summary of academic record or research experience, abstract of your MSc thesis (1 page), list of any publications, grades list, proof of English language proficiency and contact details of two referees, along with a letter of application by 15 June 2017 to [Recruitment-CiTG@tudelft.nl](mailto:Recruitment-CiTG@tudelft.nl). When applying for this position, please refer to vacancy number CiTG17-09.