PhD in Risk Assessment & Hazard Integration

Faculty / department Civil Engineering and Geosciences
Level Master degree
Maximum employment 38 hours per week (1 FTE)
Duration of contract 4 years
Salary scale €2222 to €2840 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 PhD position is hosted within the Geo-Engineering section in the Faculty of Civil Engineering and Geosciences, with close collaboration with the Safety and Security Science section in the Faculty of Technology, Policy and Management. The Geo-Engineering section has 10 full-time and six part-time academic staff members 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 study in Risk Assessment and Hazard Integration, to be based within the Geo-Engineering section. The research is funded by the European Commission via the H2020 programme and focuses on the quantitative risk and hazard assessment regarding existing nuclear power plants. It is anticipated that the student will work on assessing and integrating the technical (structures, systems and components) and social (human and organisational) aspects with a focus on understanding the uncertainties. Focus will be made on extreme events, e.g. arising from earthquakes or flooding. A specific case study of geotechnical failure, i.e. flood defence failure from, for example, a tsunami, will be made.

The PhD research is part of a larger project entitled “NARSIS: New approach to reactor safety improvements”. The project involves 18 partners from 10 countries in Europe. The successful candidate will work within the TU Delft in conjunction with one post-doctoral researcher and a team of four academic staff members.

Requirements

Applicants should possess a good first degree in Mathematics, Engineering, or another related discipline. An interest in and an aptitude for numerical and/or statistical 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

The TU Delft offers an attractive, customisable compensation and benefits package, including a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers day care, before- and after-school care and an international primary school. Dual Career Services offers support to accompanying partners. 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. The TU Delft Graduate School provides an inspiring research environment; an excellent team of supervisors, academic staff and a mentor; and a Doctoral Education Programme aimed at developing your transferable, discipline-related and research skills. Please visit http://graduateschool.tudelft.nl/ for more information.

Information and application

For more information about this position, please contact Dr. P.J. Vardon, phone: +31 (0)15-2781456, e-mail: p.j.vardon@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 references, along with a letter of application by 20 June 2017 to Recruitment-CiTG@tudelft.nl. When applying for this position, please refer to vacancy number CiTG17-10.