

MARUM – Centre for Marine Environmental Sciences, Universität Bremen, Germany - under the condition of job release -

A PhD position in the field of numerical modelling for offshore geotechnics/engineering

Marine Engineering Geology group, MARUM, University of Bremen

We are searching for a highly motivated and excellently qualified young scientist/engineer in our starting joint research project:

Long term set-up effect of XL offshore monopiles

Pile capacity is increasing in time; this process is known as set-up effect. Set-up factors in the range of 1.2 to 2 have been reported, showing the significance of this phenomenon. However, the exact mechanism and the relationship of the set-up factor to some parameters such as soil type, soil condition or installation methods are not well understood making it difficult to implement this factor in engineering design. The general objective of this research program is to shed light on the set-up process and provide more ground for its use in practice through a comprehensive experimental laboratory and field studies, as well as theoretical numerical studies.



This project is a joint research project with MARUM/Universität Bremen, Fraunhofer IWES, Innogy SE, and Geo-Engineering.org GmbH.

The PhD program mainly focuses on implementing advanced numerical methods and soil constitutive models to analyze field tests (cone penetration test) and laboratory tests (CPT in calibration chamber, triaxial test, etc.), to understand the set-up process around monopile foundations (changes in soil state and stress state), and to compare modelling results with large scale pile tests.

Your personal attributes:

- A completed MSc or diploma degree in civil engineering, geotechnics, engineering-geology, or related fields with a total of 300 CP or equivalent course.
- Profound theoretical understanding of geotechnical soil behavior or physics of granular media.
- Main expertise and interest in soil constitutive modeling, finite element and/or material point methods
- Skills and experience in scientific programming (Fortran, C++, Matlab) and parallel computing are highly welcome.
- English level C1 or better.

A PhD project in Bremen commonly takes three years and that's the duration of the funding. Salary and benefits are according to the German state employees' salary scheme TV-L E 13 (66%). The employment is fixed-term and governed by the Act of Academic Fixed-Term Contract, §2 I (Wissenschaftszeitvertragsgesetz – WissZeitVG). Therefore, candidates may only be considered for appointment if they still have the respective qualification periods available in accordance with § 2 (1) WissZeitVG. International candidates are encouraged to apply. The

University of Bremen aims at increasing the number of women in science and therefore explicitly encourages applications from female candidates. Disabled persons will be given preference in case of equal qualification. Applicants with a migration background are welcome. The position is available starting as soon as possible. Applications will be reviewed until the position is filled.

Applicants are asked submit their CV, a one-page synopsis of their master/diploma thesis, other previous research achievements, and the covering letter should indicate at least two referees. All documents should be send with the reference number A57/18 to the address below:

Prof. Dr. Tobias Mörz
Universität Bremen
MARUM
Leobener Straße 8
28359 Bremen
Germany

or by Email to tmoerz@uni-bremen.de & ssawitzki@marum.de bundled in one PDF-file, not exceeding 5 MB

Deadline for applications: 01.06.2018

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Afa

Kopie an:

- K
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