Postdoctoral Research Associate in Computational Geomechanics

The University of Liverpool

Department of Civil Engineering and Industrial Design

This position is funded by the EPSRC New Investigator Award scheme. The aim of the project is to develop advanced computer models capable of predicting the mechanical response of carbonate sands at offshore foundations from the installation stage to the operational stage. In the project, a novel continuum numerical approach will be developed for analyzing large deformation soil-water-foundation interactions. Additionally, a self-learning simulation framework based on advanced deep-learning techniques will be constructed for training data-drive constitutive models for carbonate soils.

Please contact Dr Xue Zhang (**email: xue.zhang2@liverpool.ac.uk**) for all enquiries for the application.

https://www.liverpool.ac.uk/engineering/staff/xue-zhang/

Grade: 7

Salary: £34,805 - £40,322

Hours of Work: Full-Time

Tenure: From 1 May 2021 until 30 April 2023

Application Deadlines: Open until Filled

Prerequisites

Qualifications

- A good first degree in engineering.
- A PhD (or be close to submission) in geotechnical engineering, computational mechanics or a related subject.

Experience

- Experience in the development and/or application of continuum approaches, such as the FEM, PFEM, MPM, SPH, etc., for modelling geotechnical problems.
- Experience in the development of machine learning based constitutive models (desirable).
- Experience in conducting high quality academic research.
- Demonstrable ability to write material of a quality commensurate with publication in highly ranked journals.
- Demonstrable ability to present research papers at international conferences and communicate complex information to specialists and within the wider academic community.

Skills

- Knowledge in programming languages such as MATLAB, Python, C, C++, Fortran, etc.
- Demonstrable ability to work as a member of a team.
- Ability to work independently on own initiative and to strict deadlines.
- Ability to supervise, motivate, and train early-stage researchers.
- Excellent interpersonal and communication skills.