Post-doctoral research associate in offshore geotechnical engineering – 12 months

Project: SEAMLESS 'SharEd Anchor Multidirectional Load Envelopes with Strength Synthesis'

Funding: Supergen ORE Hub & Royal Academy of Engineering Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering.

Challenges: The project will investigate pile-type shared anchor behaviour while subjected to cyclic loading in varying directions, with the objective of de-risking and de-costing floating offshore renewable technologies. The role of the post-doctoral research associate is to:

- Design and undertake geotechnical beam centrifuge experiments;
- Develop a centrifuge testing rig to apply adequate loading in-flight;
- Undertake element testing to characterise the sand material;
- Liaise with the µ-vis centre to undertake X-ray tomography forensic of sand samples;
- Develop a design framework based on the centrifuge results.

Opportunities: This project offers many opportunities to develop as an early-career researcher.

- The project is very topical. Floating offshore renewable will develop exponentially in the future, as well as the need for adequate design methods for anchors. Anchoring will be at the forefront of research in years to come.
- The project is funded by the Supergen ORE Hub and the research associate will benefit from exposure by presenting their work to the network.
- The project is actively supported by industry partners (see below), which will give many opportunities to interact with industry and develop a broader network. A trip to the NGI in Oslo is planned for the design framework development.
- The University of Southampton is a very dynamic research environment, at the cross-roads between several disciplines involved in offshore engineering, with the new National Infrastructure Laboratory hosting the beam-centrifuge, the Royal Academy of Engineering Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering, the Southampton Marine and Maritime Institute, a state of the art towing tank and much more. This environment offers many opportunities to collaborate and interact to enhance the research associate profile.

Industry partners:

Job advert: https://jobs.soton.ac.uk/Vacancy.aspx?ref=1416021DA