

# Seminar

## Mooring line and anchor-seabed interaction for floating wind turbines

by

**Dr. Shengjie Rui**

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Wednesday, 12<sup>th</sup> February 2025

Time: 14:30h- 16:30h

Location: C11 (IST Main building)

### Resume

Dr. Shengjie Rui is Doctor of Engineering at the Department of Offshore Energy of Norwegian Geotechnical Institute. He is working on offshore geotechnics and ocean engineering, including the bearing capacity of anchors, mooring line-soil interaction and the mooring system dynamics and sand-steel interface interaction. His study techniques include laboratory tests (centrifuge and element tests) and numerical simulations (Abaqus and Comsol).

The Seminar will focus on floating wind turbines require a mooring system composed of mooring lines and anchors for positioning, so the safety of the mooring system is crucial for the floating wind turbines. This presentation focuses on the interaction between the mooring system and seabed, and explores related geotechnical engineering issues. The main content includes: (1) introduction to the floating wind turbine and its mooring system; (2) Mooring line-clay interaction and seabed trenching; (3) Mooring line-sand interaction; (4) influence of seabed trenches on suction anchor in sand; (5) Novel caisson-plate gravity anchor as shared anchor; (6) Integrate analysis for floating wind turbines.