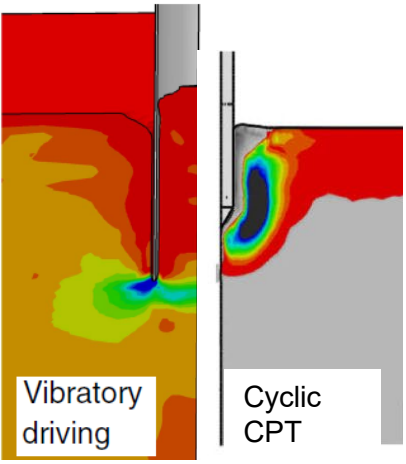

THE UNIVERSITY OF WESTERN AUSTRALIA

CENTRE FOR OFFSHORE FOUNDATION SYSTEMS

In collaboration with Bauhaus-Universität Weimar

Postgraduate Research Opportunities

We are seeking three passionate PhD students with a strong background in geotechnical engineering to conduct research in offshore foundations. They successful applicants will work in a large globally recognised dynamic group at UWA with access to state-of-the-art experimental and numerical facilities with strong engagement with industry, regulatory and government bodies in the offshore renewable energy space.

Predicting vibro-driven pile installation from cyclic cone penetration testing

Vibro-installed piles are a promising alternative to impact-driven piles, which support the majority of offshore wind turbines. Geotechnical site investigation typically includes cone penetrometer testing. The aim of this research is to advance understanding of the physical processes occurring during vibratory installation of piles in different soils and the possibility to predict this response on the basis of cyclic penetrometer tests. The selected PhD students will conduct a combination of centrifuge experiments and numerical modelling at the forefront of innovation, thereby contributing to improving design methods.

- **PhD1** will focus on **vibro-driven pile** response in **sandy soils**
- **PhD2** will focus on **vibro-driven pile** response in **clayey soils**
- **PhD3** will focus on the evolution of **cyclic cone penetration** response across a range of soils.

The students will be supervised by a combination of Britta Bienen, Patrick Staubach* and Fraser Bransby and other members of the COFS academic team (* Bauhaus University Weimar)

The successful applicants should have a first-class honours in Civil Engineering and experience or interest in offshore geotechnical engineering for offshore wind. A tax-free scholarship stipend of AU$38,850, indexed annually, will be provided by UWA to the successful students, as well as covering tuition fees (if applicable).

To submit your interest for any of the three PhD projects, please email your information:

- a curriculum vitae
- full academic transcripts
- details of any published papers
- results of English test such as IELTS (if applicable)

to Britta Bienen at britta.bienen@uwa.edu.au.

For information on how to apply visit https://researchdegrees.uwa.edu.au/.

The closing date for these PhD opportunities is 15 December 2025.