INTERNSHIP OFFER @Oxan Energy in 2027
#2 Offshore Wind Anchor Design

As an intern in the Technical department, you will support the development of engineering tools for the anchor design and mooring system performance analysis for floating offshore wind turbines.

Internship Scope of Work

Working at the interface between station keeping and geotechnics, you will focus on the geotechnical design of different anchor types in various soil conditions.
The work builds on the mooring system coupled mooring analyses developed in a parallel internship, and shares geotechnical inputs and modelling principles with a complementary internship focused on monopile design.
The scope of the internship will be divided in 4 main tasks:

Bibliographic research:

- Review the design approaches for different anchor types and their applicability (design standards, geotechnical models, design drivers).
- Review existing preliminary design methods and simplified tools, and identify the most relevant modelling choices with regard to our needs (level of fidelity, computation time).

Tool development:

- Implement preliminary geotechnical design tools for several anchor solutions, including typically drag embedment anchors (DEA), driven piles and suction anchors.

Mooring system analysis:

- Perform coupled mooring analysis based on an existing model to derive design load envelopes relevant for the anchor design.

Integrated cost assessment

- Assess the cost of procurement of the mooring equipment and anchors.
- Assess the installation means needed for construction, the durations and the resulting costs.
- Integrate these in a CAPEX estimation tool.

Synergies with the other internships

Shared soil data structure and geotechnical modelling principles with the monopile design internship.
Use of a design tool developed in the coupled mooring system analysis internship.
Common Python framework and documentation standards.

Profile

- Master student graduating in a relevant field of engineering (Geotechnical and Civil Engineering, Structural Engineering, Marine Engineering, Mechanical Engineering…)
- Background in geotechnical and civil, naval architecture, marine or structural engineering
- Sound understanding of geotechnical design principles and key soil properties
- Nice to have: first experience with a geotechnical design tool (Opile, Plaxis, or similar)

General

- Duration: 6 months
- Full-Time
- Start date : February to May 2027
- Location : Oxan Energy office in Nantes or Paris.
- Internship Supervisor: Benjamin Souviat Benjamin.souviat@oxan.energy

About the company

Oxan Energy is a developer of renewable energy projects specialized in marine energies and particularly in bottom-fixed and floating offshore wind. Created in 2023 and based in France, the company is active internationally, mainly on European markets. With its team of recognised experts, Oxan Energy relies on 15 years of experience in floating offshore wind and gathers all the relevant technical and management skills for the development of bottom-fixed and floating offshore wind projects.

Oxan Energy is genuinely engaged in the energy transition, committed to figuring out solutions for a viable future for energy using offshore natural resources.