

## 2 years position at ENSTA Bretagne Project Windkeeper



### Partnership Description

ENSTA Bretagne (<https://www.ensta-bretagne.fr/en>) is a French engineering school that graduates general engineers in Naval and Offshore Architecture (among other specializations). Research activities are carried out in collaboration with Institut de Recherche Dupuis de Lôme (CNRS UMR 6027, <https://irdl.fr/>). Since 2016, ENSTA Bretagne is one of the two academical partners of the project Windkeeper that is supported by ADEME (Agence de Développement et de la Maîtrise de l'Energie <https://www.ademe.fr/en>).

The project Windkeeper (<https://www.ademe.fr/windkeeper>) aims at designing and building a SWATH for maintenance of Offshore Wind Turbines. CNIM (<https://cnim.com/en>) is the industrial partner that designs and builds the SWATH.

In the frame of this project, ENSTA Bretagne is developing tools for the hull shape optimization. The recruited fellow will work on this thematics.

### Position Description

The position is offered to Doctors and possibly to Master's graduates (depending on his/her academical background). The objectives of the research work are:

1. audit the experimental data concerning SWATH,
2. validate the seakeeping codes that will be used for SWATH,
3. design a numerical tool connecting the geometry and the computation seakeeping softwares,
4. analyze the sensitivity of the hydrodynamical characteristics with geometrical parameters,
5. build a meta-model for SWATH hydrodynamic performances.

ENSTA Bretagne is looking for a highly motivated candidate eager to develop numerical tools in the field of hull ship optimization. The **essential required qualifications, skills and experience** are

- a strong background in mechanical or marine engineering, naval hydrodynamics and numerical analysis,
- an ability to write high level scientific reports and publications.

Applications from applicants holding an MSc or MEng in a relevant field with appropriate experience might be considered.

### **Supervision**

The post-doctoral fellow will be employed by ENSTA Bretagne. He/She will be supervised by:

- Pierre-Michel Guilcher : researcher specialist of Naval Architecture and CFD for Naval Hydrodynamic applications, (pierre-michel.guilcher@ensta-bretagne.fr)
- Matthieu Sacher : researcher specialist of optimization and meta-modelling for fluid-structure systems, (matthieu.sacher@ensta-bretagne.fr)

### **Practical Information**

- Expected starting date: September or October 2020
- Duration: 2 years contract
- Final date for applications: August 31, 2020.

Please send your CV and cover letter to the following email address:  
yves-marie.scolan@ensta-bretagne.fr