

Research technician on complex fluid dynamics for offshore renewable energy

Job Offer

Topics:

The Basque Center for Applied Mathematics is hiring a Research Technician for a position in the renewable energy sector, in the CFD Modelling and Simulation group. The initial duration is of two years. This project has been funded by the Basque Government grants (Ikerlan Program) for hiring unemployed young people to carry out research projects in Basque companies.

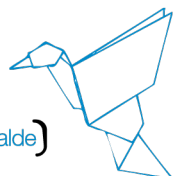
This project investigates the fluid mechanics associated with offshore renewable energy structures, with a particular emphasis on offshore wind turbines. While aerodynamic performance of the turbine blades is well studied, this project will focus on the interactions between the turbine platform and the surrounding fluid environment. Special attention is given to the hydrodynamic effects on the platform supports and their interaction with seabed sediments, including the forces transmitted through mooring chains or foundations anchored to the seafloor. Understanding these fluid-structure-sediment interactions is critical for optimizing structural stability, durability, and long-term performance of offshore wind energy installations.

The task to be carried out will be:

- Simulate fluid-structure interactions for offshore wind turbine platforms, accounting for complex hydrodynamics and sediment behavior.
- Model sediment rheology and assess its impact on the stability of mooring chains and platform pillars. Implement advanced granular and sediment models in OpenFOAM RheoTool to perform high-fidelity CFD simulations that capture the coupled effects of fluid flow and seabed interactions on structural performance.

The starting date is as soon as possible, before November 30, 2025, and the initial duration of the contract will be for two years. The fellow will enter BCAM under the supervision of Dr. Marco Ellero.

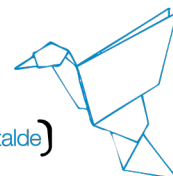
If you are a young graduate passionate about renewable energy sector and eager to embark on a research career at



	BCAM, this opportunity is for you. Apply now and become part of our dedicated team at BCAM.
PI in charge:	Dr. Marco Ellero
Salary and conditions:	The gross annual salary of the Fellowship will be 20.258€- 28.505€
Contract and offer:	2 years
Deadline:	10/11/2025 14:00 CET
How to apply:	Applications must be submitted on-line at: https://www.lanbide.euskadi.eus/inicio/

Scientific Profile Requested	
Requirements:	<ul style="list-style-type: none"> Promising young researchers Applicants must have their Bachelor's or Master degree preferable in Mathematics, Engineering: Mechanical, chemical, civil and/or naval. or related fields. PhD level is required for this position.
Skills and track-record:	<ul style="list-style-type: none"> Good interpersonal skills. Knowledge of fluid mechanics, CFD, finite volume, OpenFOAM, parallel computing, HPC. Knowledge and experience in suspension fluid mechanics, continuous modelling of granular media, non-Newtonian fluids, and smoothed particle hydrodynamics will be considered an asset. Fluency in spoken and written English

Application and Selection Process	
Formal Requirements:	<p>The selected candidate must have applied before the application deadline online at the Lanbide webpage with code "162025012048":</p> <p>https://web.lanbide.eus/apps/OF_DETALLE_OFERTA_TR_ABAJO?LG=C&ML=OFEMEN1&MS=Eaaa&IDRG=162025012048&CTRG=1</p>



Application:	Registration with Lanbide as a job seeker is required: https://www.lanbide.euskadi.eus/inicio/ •
Evaluation:	Based on the provided application documents of each candidate, the evaluation committee will evaluate qualitatively: the adaption of the previous training and career to the profile offered, the recommendation letters, the main results achieved (papers, proceedings, etc.), the statement of past and proposed future research and other merits; taking in account the alignment of these items to the topic offered.

Incorporation:	<i>As soon as possible, by 30 November 2025 at the latest</i>
----------------	---

Lanbide[®] EUSKAL ENPLEGU ZERBITZU PUBLIKOA
SERVICIO PÚBLICO VASCO DE EMPLEO

