MARINE FLUID DYNAMICS ENGINEER /
CFD ENGINEER AND DEVELOPER

Full Time Position

Reference	**: CH_JOB_23_07_CFD**
Publication Date	: 2023-10-11
Education Level	: Master or PhD
Duration	: Full Time Job
Seniority	: more than **4 years** of experience in nautical or maritime industry
Start date	: December 2023 / January 2024
Location	: Valencia, Spain
Answer to	**: jobs@caponnetto-hueber.com**

Caponnetto Hueber is currently expanding its workforce and is willing to integrate motivated and hardworking professionals who want to work in a competitive, high-technological and international sector.

1. CAPONNETTO HUEBER PRESENTATION

Background:

Caponnetto Hueber (CH) is a consulting company and a scientific laboratory specialized in fluid dynamics, energy efficiency and R&D for the nautical and maritime industries. The company provides fluid dynamics services and develops innovative concepts and "efficient designs" for the maritime world.

Over the years, Caponnetto Hueber has become a reference in racing, foiling, and efficient yacht and vessel design.

By combining analysis and optimization, CH is able to provide disruptive low and 0-emission solutions aimed at decarbonizing the nautical and maritime industries. This service provided by our design laboratory is used both internally and for external clients. •

Caponnetto and Hueber have competed in the last five America's Cup editions and have won it in 2010 and 2013.

The design office is located within the Marina of Valencia, Spain, in a former America's Cup base.

Services:

Caponnetto Hueber offers innovative services in the field of fluid dynamics. Using high-end methodologies and tools, CH is able to improve design, performance and efficiency for naval architects, yacht designers and shipyards, and deliver lower fuel consumption and emissions design for ship owners.

Our services include:
- Computational Fluid Dynamics (CFD).
- Hydrodynamic and aerodynamic design.
- Efficient and foiling yacht concept development.
- Hulls, appendages and foils design.
- Low and 0-emission yachts and vessels.

CAPONNETTO HUEBER

2. COLLABORATOR PROFILE

Profile:
- **Fluid dynamics engineer, marine CFD engineer or naval architect specialized in Computational Fluids Dynamics** with a Master or a PhD.

Experience:
- More than 4 years of experience:
  - Working as a CFD engineer in the nautical, maritime or renewable industries, or as a researcher, in at least one of the following topics:
    - Hydrodynamics,
    - Ship and yacht design and optimization
    - Propeller hydrodynamics
    - Hydrofoil hydrodynamics
    - Wind turbines aerodynamics
    - Floating offshore wind turbines fluid dynamics
    - Wind Assisted Ship Propulsion fluid dynamics
  - Using Star-CCM+ RANS Code.
  - Developing and writing codes in python and java.

Job Description:
- You will prepare and run CFD cases, analyze the results and write comprehensive reports (**CFD Production**).
- You will develop CFD models, improve the methodologies and workflow, automatize the processes, test, validate and deploy (**CFD Development**).
- You will use your technical, analytical and coding skills to develop or improve in-house design and analysis codes (**Code Development**).
- You will work with our hydrodynamic designers to test and validate their design and develop your skills to support them during the optimization process. You will develop optimization codes and CFD workflow to automatize the optimization processes. (**Optimization**).
- You will work with our hydrodynamic and aerodynamic designers on conceptual and design projects and will develop your creativity and engineer skills to develop and validate new concepts and innovative solutions (**Design & Innovation**).

Technical Requirements ("MUST"):
- Deep knowledge of fluid dynamics.
- Deep knowledge of naval architecture and naval engineering.
- Proficient with Star-CCM+ for naval applications.
  - Calm water hydrodynamics.
  - External aerodynamics.
  - Dynamic hydrodynamics.
- Proficient in programming and automatization using Python, Java and Bash shell scripting.

Technical Skills Appreciated ("PLUS"):
- Experienced with CAD and parametrization of geometries.
- Previous experience using Star-CCM+ or another CFD code to carry:

- Seakeeping analyses.
- Manoeuvrability analyses.
- Propellers, wind and marine turbines analyses.
- FSI and co-simulation analyses.
- Thermal analyses.
- Vibration analyses.
- Experienced with optimization tools such as ModeFrontier, HEEDS or Dakota.
- Experienced with Fluid Structure Interaction and aeroelastic simulations.
- Experienced with numerical models, model fitting and data analysis.

Other Requirements ("MUST"):
- English is compulsory as it is the working language at the office.
- EU resident or in possession of an EU work permit.
- **Be able to relocate to Valencia, Spain.**
- **Rigorous, precise, hard-worker.**
- Autonomous and responsible to be fully in charge of your own projects.
- Curious, passionate, eager to learn and to push your knowledge.
- Humble, collaborative and able to work within an international team.
- Open-minded with the ability to adapt to innovate.
- Eager to apply hard sciences to the naval industry.

If you are willing to be part of an international group who aim to lead the innovation, the technology development and the transformation of the nautical and maritime industries towards more efficient, cleaner and more sustainable industries, please contact us at **jobs@caponnetto-hueber.com** using the offer reference in the tittle and include your **CV and references in English** (mandatory).