

MARINE CFD and SOFTWARE DEVELOPER

Full Time Position

Reference : **C&H_JOB_19_09_CFD**
Publication Date : 2019-12-12
Activities : CFD – Hydrodynamics - R&D – Yacht, appendages and propulsion design
Education Level : Master or PhD
Duration : Full Time Job
Seniority : more than 4 years of experience in the field
Start date : March 2020
Location : Valencia, Spain
Answer to : **jobs@caponnetto-hueber.com**

1. Caponnetto-Hueber Presentation

Background:

Caponnetto-Hueber is a leader in naval architecture solutions, innovative concepts and fluid dynamics services in the maritime world focusing on the racing, sailing, flying and mega- yachts.

Caponnetto-Hueber main topics of expertise are hydrodynamics, aerodynamics, shapes optimization and numerical simulations (CFD i.e. Computational Fluid Dynamics).

Caponnetto-Hueber has been involved with America's Cup for more than 2 decades and has won it several times.

Services:

Caponnetto-Hueber provides innovative services in fluid dynamics, using high-end methodologies and tools for naval architects, yacht designers, shipyards and ship owners to improve design, performances and efficiency, to lower consumptions and emissions.

- Innovative Concepts
- Design
- Naval Architecture
- Foiling Yachts
- Computational Fluid Dynamics (CFD)
- Hydrodynamics
- Aerodynamics

Main current projects:

- Innovative concepts and solutions
- Flying electric boat design and flight control
- Mega-yachts hydrodynamics and CFD
- Propellers design and hydrodynamics
- Racing and cruising sailing yachts hydrodynamics and CFD
- America's Cup (36th AC)
- R&D

The company 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.

The design office is located within the Marina of Valencia, Spain.

2. Collaborator Profile

Profile:

- CFD Engineer and Developer with a Master or a PhD in one of the following fields:
 - o Computational Fluid Dynamics
 - o Mathematics and numerical simulations
 - o Computer / Data Science
 - o Hydrodynamics / Aerodynamics

Experience:

- More than 4 years of experience:
 - o using and developing CFD RANS software, ideally for marine applications
 - o developing and writing codes and software
- It is not compulsory to have experience in the field of naval architecture nor marine applications, but it would be an important PLUS.

Job Description:

- You will develop advanced CFD models (Panel codes, RANS, LES, ...), develop the methodologies and workflow, automatize the processes, test, validate and deploy them (**CFD Development**).
- You will use your technical, analytical and coding skills to develop or improve in-house codes, software and platforms. You will be in charge of the building, improving the software, the codes, the scripts, the macros, the utilities and maintain them (versioning, quality, documentation) (**Software Development**).
- You will lead the group development in terms of programming and software development (**Coordination**).
- You will support the CFD engineers in their production and development and eventually the clients using the company codes and platforms (**Support**)

Job Description (Secondary):

- You will prepare and run CFD cases, analyze the results and write comprehensive reports (**CFD**).

Technical Requirements ("MUST"):

- Deep knowledge of Fluid Dynamics
- Proficient with Star-CCM+ or with Open-Foam, ideally for naval applications.
- Proficient in software development and eventually web applications
- Proficient in programming and automatization using Python, Java and shell scripting

Technical Skills Appreciated ("PLUS"):

- HPC expertise
- IT expertise
- Git management expertise
- Web Dev and JavaScript
- Graphics and Data visualization
- Database and Data Manipulation Language expertise
- Knowledge of CAD and parametrization of geometries
- Knowledge of structure and especially fluid structure interactions
- Machine learning and artificial intelligence applied to CFD methods

Other Requirements ("MUST"):

- English is compulsory as it is the working language at the office.
- **Rigorous, hard-worker, to maintain the quality standard of the group.**
- Autonomous and responsible to be fully in charge of your own projects.
- Curious, passionate, eager to learn and to push your knowledge.
- Humble 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.

Contact us at **jobs@caponnetto-hueber.com** using the offer reference in the title and include your CV and **references in English are mandatory**.