CAPONNETTO HUEBER

NAVAL ARCHITECT - HYDRODYNAMICS & CFD

Reference : CH_JOB_26_01_NA_CFD
Publication Date: 2026-01-16
Contract : Full-time, on-site
Location : Valencia, Spain
Start Date : Q1 2026
Experience Level: 5+ years
Education : MSc or PhD
Apply to : jobs@caponnetto-hueber.com

ABOUT CAPONNETTO HUEBER

Caponnetto Hueber (CH) is a leading engineering and innovation firm specializing in high-performance hydrodynamics, foiling technologies, and smart maritime systems. Acting as both a scientific laboratory and an engineering consultancy, CH delivers advanced engineering services and performance-driven design solutions for yachts, ships, and autonomous vehicles, from concept development to prototype validation.

Based in the Marina of Valencia, Spain, CH combines a rigorous scientific approach with state-of-the-art CFD, optimization, and simulation tools. The company supports clients across the nautical and maritime sectors with advanced expertise in naval architecture, propulsion systems, energy efficiency, fluid dynamics and performance prediction, with a strong focus on innovation, performance, efficiency, and sustainability.

CH has participated in the last six consecutive America's Cup campaigns, contributing to victories in 2010 and 2013, and collaborates with top-tier shipyards, design offices, and marine innovators worldwide. Its work spans from high-performance foiling yachts to wind-assisted ships, and from racing sailing yachts to autonomous marine vehicles, shaping the future of marine design through innovation and applied research.

Main Services:

- Hydrodynamics and Computational Fluid Dynamics (CFD)
- Naval architecture, including hull, appendage, and hydrofoil design
- Naval engineering, prototyping and testing
- Propulsion, energy-saving devices and energy-harvesting systems design and optimization
- Simulation and Performance Predictions for sailing yachts, wind assisted ships, motor yachts and autonomous marine vehicles

Main R&D activities:

- High-efficiency hydrodynamic concepts for yachts, ships, and USVs (including hydrofoils)
- Wind Propulsion Technologies: performance and emissions prediction methods and tools
- AI-assisted design, simulation and performance prediction tools
- Smart and autonomous vessel systems

Caponnetto Hueber is expanding and looking to integrate motivated, committed professionals eager to work in a competitive, high-tech, and impactful international environment.

CAPONNETTO
HUEBER

THE ROLE

Description:

We are looking for a **Naval Architect specialized in Hydrodynamics & CFD** to join our technical team and contribute to the development, design and engineering of advanced yacht, foiling, and innovative marine projects.

The role combines hands-on hydrodynamic design and CFD work with the coordination of selected projects. You will contribute to the design of hulls, appendages, and, where applicable, hydrofoils and/or propellers, and to the execution and validation of supporting CFD studies, while acting as the technical point of contact between the Technical Director, the engineering team, and clients.

Depending on experience, this on-site position may progressively evolve toward broader responsibilities in technical coordination and project leadership.

Key Responsibilities:

- Design and optimize hulls, appendages, hydrofoils, and propulsion systems
- Perform, review, and interpret CFD simulations to support design decisions and performance assessments
- Coordinate and technically review hydrodynamics and CFD studies, ensuring quality, consistency, and relevance
- Contribute to the improvement of in-house CFD workflows, tools, and methodologies
- Collaborate closely with Technical Director, Principal Naval Architects, CFD and engineering teams
- Act as a technical interface with clients, following studies, discussing results, and supporting decision-making
- Attend sea trials and on-the-water testing to validate predictions, analyse performance, and fine-tune hulls, appendages, and vessel configurations in close collaboration with clients

CANDIDATE PROFILE

Background:

- **Naval Architect specialized in Hydrodynamics and CFD**, with experience in yacht design, holding an MSc or PhD in Naval Architecture, Marine Engineering, or a related field.

Experience:

- **Minimum 5 years of professional experience in hydrodynamics design, CFD and naval architecture**
- Proven experience in the design and analysis of hulls and appendages (hydrofoils and propellers are a plus)
- Proven ability to use CFD to analyse, validate, and optimize design
- Experience with sea trials, on-the-water testing, or experimental validation, including interaction with clients and use of test results to refine designs, is a strong advantage
- Experience coordinating studies or mentoring junior engineers is a strong advantage

Technical Requirements:

- Strong expertise in naval architecture, hydrodynamics, and performance prediction
- Proven experience in hull and/or appendage design, including stability calculations
- Proficiency with CAD tools, such as Rhinoceros or other 3D parametric CAD software

- Proficiency with CFD tools such as Star-CCM+, OpenFOAM, or equivalent
- Ability to critically interpret CFD results and translate findings into actionable design improvements

Additional Valuable Skills:

- Advanced proficiency in Star-CCM+, including complex and unsteady simulations
- Experience with sea trials preparation, instrumentation, testing procedures, and correlation of experimental results with numerical predictions
- Experience with foiling yachts, hydrofoil design, and related analysis tools (e.g. XFOIL)
- Experience with design automation, scripting, and optimization workflows
- Experience with optimization and design exploration tools such as HEEDS, ModeFRONTIER, Dakota, or equivalent
- Experience with high-performance computing (HPC) environments, including cluster management and administration
- Knowledge of Finite Element Analysis (FEA), Fluid–Structure Interaction (FSI) and co-simulations

Other Requirements:

- Fluent English (working language)
- Italian, French or Spanish fluency is a plus
- EU residency or valid EU work permit (Visa sponsorship may be considered for exceptional candidates)
- Willingness to relocate to Valencia, Spain
- Proactive, organized, rigorous, autonomous, and flexible
- Open-minded with the ability to adapt and innovate
- Passion for technology, yachts, the ocean, and water-based activities

CH values candidates who want to make a meaningful impact in the maritime and nautical sectors by contributing to high-performance, innovative, and increasingly sustainable marine solutions.

HOW TO APPLY

If you would like to be part of an international team aiming to lead innovation, technology development, and the transformation of the nautical and maritime industries toward more efficient, cleaner, and more sustainable solutions, please contact us at **jobs@caponnetto-hueber.com** using the offer reference in the email subject and include your **CV and references in English**.