

Professor

Ecole/Institution/Société:

Hamburg University of Technology, Germany / Hamburg

Discipline:

Mechanical Engineering

Type d'emploi::

Full-time

Date de publication:

2025-02-20

Personne à contacter:

If you wish to apply for this position, please specify that you saw it on AKATECH.tech

Full Professorship (W3) in the field of Ocean and Marine Hydrodynamics

The School of Mechanical Engineering seeks to appoint an outstanding individual who evinces enthusiasm for research, engineering and teaching with national and international experience. You wish to become part of TUHH's "Engineering to face climate change" initiative and to contribute to the maritime transition as a means of addressing climate change. Ships must become significantly more environmentally friendly by reducing their greenhouse gas (GHG) and acoustic emissions to air and sea. Equally important is the role of renewable energy sources, such as offshore wind and ocean energy.

This will require the design and construction of a substantial number of converter platforms in Germany in the coming decades. By taking this position, you will play a key role in this essential development through your work on research and education in highly complex ocean energy systems and green ships.

You are a scientifically proven individual (f/m/d) with a Master's degree and doctorate in a corresponding field. You have experience in leading a group, ideally in industry, as well as experience in interdisciplinary collaboration at both national and international levels. Additionally, you have already acquired experience in obtaining and delivering third-party funded projects. You have excellent scientific achievements in the following research specializations:

Hydrodynamic optimisation of modern energy systems for low-emission maritime operation

Development of coupled RANS-panel methods for maritime applications

Hybrid forecasting and validation approaches for determining the hydroacoustic emissions of ships

Experience in the following areas would also be advantageous:

- Development of methods for the assessment of wave and wind energy systems
- Development of methods to assess wind-assisted ship propulsion (WASP)
- Simulation of ship manoeuvres under rough sea conditions
- AI-based methods for simulating the behaviour of hydrodynamic systems
- Conducting model and full-scale experimental investigations

The successful applicant is expected to take over subject-specific mandatory lectures in English (and to be willing to teach in German in the future) in the BSc programs in Naval Architecture, Green

Technologies and General Engineering Science and in MSc programmes in Naval Architecture and Ocean Engineering, Ship and Offshore Technology, Renewable Energy, Theoretical Mechanical Engineering.

Furthermore, the applicant will be expected to develop these programs further with a focus on energy efficiency and climate friendliness. Therefore, the capacity to instruct students in the classroom and to apply didactic techniques will complement your academic profile, alongside a strong emphasis on research.

The professorship includes directing the Institute for Fluid Dynamics and Ship Theory at the Hamburg University of Technology (TUHH). The Institute has excellent connections with numerous renowned international research institutions, and the position holder will be expected to strengthen and expand these collaborations based on new green research activities.

Maritime technology is one of five core research fields at TUHH and this professorship represents one of the core research and teaching positions at the university. Since experimental data is key to advancing technologies and research, the successful applicant will be expected to operate and further develop the institute's two test facilities, a large low-speed wind tunnel and a towing tank.

The Hamburg University of Technology is an equal opportunity employer and particularly welcomes and encourages applications from women. Women are underrepresented among professors at the TUHH. They will therefore be given preferential consideration in the case of equivalent qualifications. Applications from disabled people with equivalent qualifications will also be given preference

To submit your application documents (including a motivation letter, CV, a list of publications, relevant certificates and a brief overview of current and future research activities and teaching experience) in German or English, please click on the 'Online Application' button below.

For questions, please contact the Vice President of Research, Prof. Dr.-Ing. Irina Smirnova, via email berufungen@tuhh.de.

Please note that the specification of professors' responsibilities is subject to review at regular intervals in accordance with Section 12 VII of the Hamburg Higher Education Act (Hamburger Hochschulgesetz (HmbHG)). The hiring requirements according to Section 15 HmbHG in combination with Section 14 IV HmbHG apply.

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