

Job title: Research Associate (or Research Assistant), System Identification

Organizational Unit: Research

Grade: not relevant

Duty Station: Malmö, Sweden

Duration of contract: One-year fixed-term appointment, starting from 1st Oct 2025 or as agreed

1. Organizational setting

The World Maritime University (WMU) is a postgraduate and research university established in 1983 by the International Maritime Organization (IMO), a specialized agency of the United Nations. WMU offers M.Sc. and Ph.D. programmes, Postgraduate Diplomas, and Professional Development Courses (PDCs) with the highest standards in maritime and ocean education and training. WMU also has a highly respected research programme supported by specialized research groups across the maritime and ocean fields.

This position falls within the Research Unit at WMU's headquarters in Malmö, Sweden.

2. Main purpose

The incumbent will work for the research project "*SLGreen ShippingLab – Green Transition of the Blue Denmark by focusing on digitalization, decarbonation and safety*"¹, under the overall supervision of Associate Professor Dr. Gang Chen.

ShippingLab is a Danish national platform for development of technology and technical solutions for stakeholders in Blue Denmark, and the SLGreen project aims to increase energy efficiency and accelerate the green transition of the global maritime sector and develop the position of the Danish maritime industry as frontrunner for decarbonisation by promoting a digital transformation through a cohesive and multifaceted innovation action.

WMU is involved in Work Package 2 of this project, which focuses on the development of biofouling prediction models. The objective is to cover all major types of coatings and calibrated with operational data from more than 10,000 vessel years. The models are expected to increase overall hull efficiency by 1% corresponding to an annual CO₂ saving of 90,000 tonnes for the shipping companies participating in the project alone. WMU's specific task is to identify the suitable System Identification methods, and help to develop the first version of the model using the expert knowledge and the data provided by industry partners. The Research Associate is expected to contribute to this part of the research project. As a researcher, the incumbent is not expected to contribute to teaching activities at WMU.

¹ Intro to ShippingLab

<https://shippinglab.dk/the-danish-innovation-fund-invests-in-new-groundbreaking-shippinglab-project/>

3. Working relationships

Internal contacts – Incumbent liaises and interacts primarily with the SPM faculty members on a regular basis, as well as with support staff related to the project.

External contacts – Incumbent liaises with the Danish ShippingLab project partners, as well as scientific journals and publishing entities, as appropriate.

4. Duties, responsibilities

Responsibilities

The Research Associate is expected to be engaged in:

- research activities within the project, and related coordination with external partners;
- scholarship in the form of publications in peer-reviewed journals or book chapters;
- presentation of research findings at project conferences and meetings;
- mentoring of MSc students and supervision of research theses/dissertations in areas related to the project;

5. Minimum requirements – education, experience and language skills

Applicants should have strong mathematical model building skills for studying dynamic systems based on measured data. PhD degree in a research field related to System Identification is required for the Research Associate position; if the position is not filled, candidates with a relevant master degree will be considered at the Research Assistant level.

Applicants should also have

- Excellent communication skills
- Ability to work independently and as part of a professional research team
- Effective organizational skills to manage time and priorities in research as appropriate;
- Ability to act as point of contact for problems/enquiries from industry partners, peer researchers and also students;
- Ability to work in a multicultural environment and to demonstrate gender-sensitive and non-discriminatory behaviour and attitudes;

Language wise, the applicants should be fluent in spoken and written English.

No working experience is required, but detailed knowledge in ship propulsion resistance and/or biofouling growth would be an advantage.

This vacancy is open to male and female candidates. WMU seeks to increase the number of women at all levels and, therefore, qualified women are particularly encouraged to apply. WMU will make every effort to facilitate the employment of persons with disabilities.

Application

The position offers a monthly stipend of 34,000 SEK for Research Associate, and 20,000 SEK for Research Assistant, which is free of income tax in Sweden. Applicants must fill in the application form, which can be found at <https://www.wmu.se/about/careers>. Should send a letter of interest, a complete CV, and the contact information of two referees to hr@wmu.se

Deadline for Applications: 30th September 2025