

Job posting (Phy 05/2025)

The Leibniz Institute for Baltic Sea Research Warnemünde (IOW) has a temporary vacancy from September 01, 2025

PhD position in the Department of Physical Oceanography

for a period of 3 years and a percentage of 75% (30h/week). Remuneration is paid in accordance with the *Tarifvertrag für den öffentlichen Dienst der Länder* (TV-L, Federal States Public Sector Collective Agreement) salary scale at level 13.

Female applicants are given preference in the case of equal qualifications and suitability.

Who are we?

IOW is an independent marine research institute of the Leibniz Association, which is committed to equal opportunities, family friendliness and the compatibility of work and family life. Our research focuses on the coastal and marginal seas, in particular the Baltic Sea. The staff of the five sections Physical Oceanography and Instrumentation, Marine Chemistry, Biological Oceanography, Marine Geosciences, and Marine Observations works interdisciplinary within a joint research program.

What will be your tasks?

This position will be part of the international SkaMix Consortium with partners from Norway, Sweden, Denmark, The Netherlands and Germany with the aim to identify and quantify water mass transformation (WMT) processes in the Skagerrak, connecting the North Sea and the Baltic Sea. The Consortium members study these WMT processes by developing and applying WMT theories and numerical methods, carrying out and analysing field and remote sensing observations and conducting and analysing numerical model simulations. The PhD position is funded by the German Research Foundation (DFG).

This PhD project is dedicated to numerical modelling of WMT processes in the Skagerrak by applying Eulerian and Lagrangian analysis methods to quantify the mixing responsible for the WMT. The basic question is along which pathways water masses flow into the Skagerrak, and how they interact to generate new outflowing water masses. The Skagerrak is here just seen as an ideal natural laboratory for similar processes in other connecting waters of the world ocean. You will start from simulations of an existing model setup with the General Estuarine Transport Model (GETM) and implement quantitative Eulerian and Lagrangian methods to analyse WMT. You are encouraged to extend existing and develop new quantitative methods.

Within the consortium you will closely collaborate with colleagues at IOW and internationally. There will be the opportunity to participate in ship-based field campaigns and to visit partner institutes in Scandinavia.

What do we expect from you?

An very good or good MSc degree in Physical Oceanography, Meteorology, Physics, Mathematics or a related field is required. We also expect very good English language skills, good programming skills and the ability to work in a team. Preferable would be a sound background in geophysical fluid dynamics, experience in numerical ocean or atmospheric modelling, and experience with numerical data analysis. Good scientific presentation, writing, and communication skills are also an advantage.

What does IOW offer?

IOW offers you a varied workplace with flexible working models, for example the option of working from home or remotely. We provide an excellent research infrastructure with modern laboratory and office equipment, including access to our own research vessel. Warnemünde, a district of the university city of Rostock, is a lively seaside resort with a maritime flair and direct access to the long sandy beaches on the Baltic Sea coast.

How do we promote equal opportunities ?

Our job offers are aimed at all people regardless of their gender. Research benefits from a diverse working environment, which is why we have signed the Diversity Charter. IOW aims to specifically promote women in areas where they are underrepresented. For this purpose, the institute has given itself a [plan to promote equality](#) and has repeatedly been awarded the [Total E-Quality award](#) for its commitment. You can find an overview of our measures for equal opportunities and for improving the compatibility of work and family on our [website](#).

We give preference to applications from disabled persons with equal professional and personal suitability. Please mention the disability or equality in your letter of application and enclose a copy of the relevant certificates.

How to apply?

Please send us your application documents with cover letter, CV, copies of your certificates, description of relevant activities and experiences as well as references.

We look forward to receiving your application as a single PDF file, quoting the keyword: **Phy 05/2025 by June 27, 2025**

to:

bewerbung.physik@io-warnemuende.de

or

Leibniz Institute for Baltic Sea Research Warnemünde
Human Resources Department
Seestraße 15
18119 Rostock
Germany

The interviews are expected to take place on **July 15, 2025**.

Unfortunately, we cannot cover your application and travel costs.

For further information, please contact:

Hans Burchard (hans.burchard@io-warnemuende.de) or Manita Chouksey (manita.chouksey@io-warnemuende.de).

