

Job posting (PHY 06/2025)

The Leibniz Institute for Baltic Sea Research Warnemünde (IOW) has a temporary vacancy starting **01.01.2026** for a

Postdoctoral position in regional ocean climate modeling

in the Department of Physical Oceanography for the next 4 years (until 31.12.2029) and a percentage of 100% (40h/week), subject to the funding of the project.

Remuneration is paid in accordance with the Tarifvertrag für den öffentlichen Dienst der Länder (TV-L, Public Sector Collective Agreement on Länder) salary scale at level 13. The position can also be filled on a flexible part-time basis with at least 30h/week.

About the project

This position is embedded in the RIVIERADE project (IMPROVING MODELLING METHODS TO PRODUCE CLIMATE SERVICES FOR RESILIENT EUROPEAN SEAS AND COASTS IN A DECADAL TO MULTI-DECADAL HORIZON), an EU funded project with 9 partners from 7 European countries under the call HORIZON-CL6-2024-CLIMATE-01.

RIVIERADE aims to develop and implement a pre-operational and replicable multi-model framework and protocols to produce, downscale, assess and deliver state-of-the-art decadal predictions and multi-decadal projections of climate change and related impacts on marine ecosystems, covering the basin scale and the coastal areas, up to, and including, development and demonstration of climate services.

RIVIERADE will target three European Seas (Baltic, Black, Mediterranean), to produce data and information for ocean health, sustainable blue economy, and coastal climate risks, downstreaming the data flow from climate ensembles to coastal areas at different spatial resolutions and for selected areas, in a circular process based on users and stakeholders engagement, co-design and assessment of innovative climate services. The proposed methodology will employ high resolution regional Earth Systems, ocean, marine ecosystem, and impact models of different complexity and will include both traditional and new ocean modelling approaches with the final objective of delivering: (i) coordinated and harmonized multi-model datasets of high-resolution decadal and multi-decadal scenario simulations for the three European target seas, and (ii) demonstrators of climate services at European Sea basin, coastal and local scales.

The IOW will contribute to this interdisciplinary project by investigating both regional climate predictions and projections for the coupled physical-biogeochemical Baltic Sea system.

Who are we?

The IOW is an independent research institute of the Leibniz Association for which equal opportunities, family friendliness and work-life balance are very important. Our research focus is on the coastal and marginal seas, especially the Baltic Sea. The staff of the five sections Physical Oceanography, Marine Chemistry, Biological Oceanography, Marine Geosciences, and Marine Observations works interdisciplinary within a joint research program.

What will be your tasks?

The successful candidate will work closely with scientists, postdoctoral researchers, and doctoral students within the department, as well as external researchers, focusing on regional ocean climate predictions and projections.

The primary objective of this position is to apply an existing Earth System Model for the Baltic Sea region (IOW-ESM) in climate simulations. You will investigate the predictive capacity of the Earth system for decadal predictions of the Baltic Sea region and downscale existing global decadal predictions. The developed climate predictions will be comparatively assessed in respect to traditional climate projections. Based on the evaluation and on the unprecedented modelling undertaken, a set of recommendations will be documented on how to achieve better downscaled oceanic decadal predictions in the future.

Your primary responsibilities will include:

- Running an existing Earth System Model for the Baltic Sea region (IOW-ESM)
- Developing strategies for decadal predictions of the Baltic Sea climate
- Analysing the skill of decadal predictions
- Analysing large ensembles of multi-decadal scenario simulations
- Investigating natural climate variability in the Baltic Sea region
- Assessing the climate change impact on the three target seas' physics and biogeochemistry
- Reporting and publication in scientific peer-reviewed journals

What do we expect from you?

We seek a scientifically curious researcher who is passionate about understanding the marine climate and environment. You should hold a university degree (Master's/Diploma) and a PhD in meteorology, oceanography, or a related natural or geoscientific discipline with significant physical and mathematical components. It is essential that you have the ability to conduct independent scientific research within a

collaborative team environment and demonstrate enthusiasm for contributing to the innovative IOW research program (2024–2033), see <https://www.io-warnemuende.de/research-programme-2024-2033.html>. Your primary involvement will focus on Research Area 2 (Coastal seas in transition).

Required qualifications:

- Documented experience in applying numerical ocean climate models
- Experience using high-performance computing systems
- Familiarity with operating systems such as Linux/Unix and proficiency in shell scripting
- Strong programming skills, preferably in Fortran and Python
- Competency in visualizing and analyzing large-scale datasets using software tools like Python
- Proven track record of publishing high-quality articles in peer-reviewed journals
- Excellent command of written and spoken English
- Familiarity with European climate variability
- Familiarity with physical processes of semi-enclosed coastal seas such as the Baltic Sea
- Ability and willingness to actively engage in interdisciplinary and international collaborations

What does the IOW offer?

The IOW offers you a varied workplace in the immediate vicinity of the Baltic Sea with flexible working arrangements, e.g. the possibility of working from home or remotely, and qualification opportunities for the English/German language. A very good infrastructure with modern laboratory and office equipment, including our own research vessel, form the framework for the best working conditions.

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 ([plan for the equal opportunities committee at the IOW](#)) and has repeatedly been awarded the Total E-Quality award for its commitment ([website TOTAL E-QUALITY e. V.](#)) Female applicants are given preference in the case of equal qualifications and suitability, as the position belongs to a working group in which women are underrepresented. 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 certificate.

How to apply?

Please submit your complete application, including a cover letter describing your motivation and qualifications and a current CV highlighting relevant experience and publications. Combine all application documents into **a single PDF file** and send them to IOW **until August 31st, 2025**, quoting the keyword: **PHY 06/2025** 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 online (via Zoom) on **October 10th, 2025**.

Unfortunately, we cannot cover your application and travel costs.

For further information please contact:

Prof. Dr. Markus Meier, markus.meier@io-warnemuende.de or visit our website: www.io-warnemuende.de.