

## **Job announcement (PHY-06/2021)**

The Department Physical Oceanography and Instrumentation of the Leibniz Institute for Baltic Sea Research Warnemünde (IOW) is seeking a highly motivated

### **PhD candidate**

for a PhD project on regional climate analysis and modeling for the Baltic Sea region with a start as soon as possible. Remuneration is paid in accordance with the TV-L salary scale at level EG 13 monthly gross salary. The employment is temporary for 3 years (30 hrs/week).

The IOW is an independent institute of the Leibniz Association, engaged in system analysis of coastal and marginal seas, with special focus on the Baltic Sea. The scientists of the four departments (Physical Oceanography and Instrumentation, Marine Chemistry, Biological Oceanography and Marine Geology) cooperate within the framework of a joint research program.

### **Job description**

Due to the freshwater supply from the catchment area and the limited supply of saline water from the North Sea through the Danish straits, the Baltic Sea is a brackish sea with large differences in salinity and thus density in the vertical and horizontal dimensions. Due to these special physical properties, there are severe restrictions on the marine ecosystem. The deep basins are ventilated exclusively through sporadic saltwater inflows, so-called Major Baltic Inflows, which can significantly change the salt and oxygen content of the deep water in a relatively short time. Certain atmospheric conditions must be met for a saltwater inflow to occur.

In this doctoral thesis, the interaction of the different drivers and the variability of salt content, oxygen content, freshwater supply and saltwater influx are to be investigated on long time scales. For this purpose, existing historical observations and reconstructions, new paleoclimate model simulations, future

projections and model sensitivity experiments are to be carried out and evaluated.

The candidate will work with these objectives and will perform the necessary model calculations and analyses of model results and observational data independently. The extensive background knowledge has to be acquired from literature studies. The PhD student will be responsible for the presentation of research results at workshops and conferences. The job requires a high degree of autonomy and responsibility. The candidate will be part of a larger team of scientists at the Department of Physical Oceanography and Instrumentation at IOW. It is expected that the PhD thesis and graduation will be completed within 3 years.

### Qualification

The applicant must have a very good university degree in the discipline meteorology, oceanography, physics, mathematics or a related scientific discipline with pronounced physical-mathematical components. Good knowledge of English language, knowledge of scientific programming (e.g. in Fortran) and experience in the work under Linux / Unix and with graphical data analysis with programs such as R, Matlab, Python are required.

In addition, experiences in high performance computing, parallel programming, the statistical analysis of geophysical observations and model data and knowledge about the climate system and the physical and biogeochemical processes in the sea and in the atmosphere are desirable.

Applicants are kindly asked to send their complete applications (Cover letter, CV, copies of certificates, description of relevant expertise and professional activities, list of publications and at least two references) quoting the code **PHY-06/2021** until **15 October 2021** to

[bewerbung.physik@io-warnemuende.de](mailto:bewerbung.physik@io-warnemuende.de)

or

Leibniz Institute for Baltic Sea Research Warnemuende  
Dept. Human Resources  
Seestrasse 15  
18119 Rostock  
Germany

The interviews are expected to take place on 28 October 2021.

Applications of disabled persons with same professional and personal qualification will be treated preferentially. Please indicate a handicap in the cover letter and enclose the relevant certificate.

The job advertisement is aimed at all persons regardless of their gender. Applications of female candidates are expressly encouraged and will be treated preferably in case of equal qualifications and suitability.

The IOW promotes equal opportunities and has been awarded the Total Equality Certificate (TEQ) in 2013, 2016 and 2019. An overview of our measures to equal opportunities and to improve the compatibility of work and family can be found at <http://www.io-warnemuende.de/gleichstellung.html>. Our family office, equipped with computer workstation and toys, offers parents the opportunity to take children to the IOW for shorter time periods.

The Leibniz Institute for Baltic Sea Research offers a varied work in the immediate vicinity of the Baltic Sea. Interdisciplinary research topics on the Baltic Sea ecosystem, broad in-house expertise in physical, chemical and biological oceanography, and marine geology, state-of-the-art-laboratory equipment and infrastructure together with modern facilities provide an excellent framework for best research conditions.

Application costs cannot be reimbursed unfortunately.



For further information please contact:

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