

## **Job announcement for a PhD position (Phy-3/2017)**

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 paleoclimate modeling for the Baltic Sea region. The project announced here should start as soon as possible in summer 2017. Remuneration is paid in accordance with the TV-L salary scale at level EG 13 (75%) 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, Marine Chemistry, Biological Oceanography and Marine Geology) cooperate within the framework of a joint research program.

### **Job description**

The Baltic Sea suffers today from eutrophication and from dead bottom zones with anoxic conditions in the sediments due to (1) excessive nutrient loads from land, (2) limited water exchange with the world ocean and (3) possible other drivers like global warming. However, the occurrence of dead bottom zones is not only a phenomenon of modern times but has been observed before, for instance, during the Medieval Climate Anomaly and during the Holocene Climatic Optimum. Hence, past climate variations may have affected the occurrence and spreading of dead bottom zones but the drivers are still unknown. In this PhD project a historical reconstruction of the physical and biogeochemical conditions in the Baltic Sea with the help of regional climate models will be performed. The reconstruction will cover approximately the past 10 000 years and will include the analysis of model results for the atmosphere, ocean, land surface and marine biogeochemistry.

The candidate will work with these objectives and will perform the necessary model simulations and analyses of model results and observational and proxy data independently. The PhD student will be responsible for the presentation of research results at workshops and conferences. The necessary extensive background knowledge has to be acquired from literature studies. The job requires a high degree of autonomy and responsibility. The candidate will be part

of a larger team. 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 to very 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, but they are not a requirement.

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-3/2017** until **15. June 2017** to

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

or

Leibniz Institute for Baltic Sea Research Warnemünde  
Dept. Human Resources  
Seestraße 15  
D-18119 Rostock  
Germany

The limitation in employment is in accordance with §2 Abs.1 WissZeitVG, and only applicants without PhD can be considered.

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 IOW promotes equal opportunities and has been awarded the Total Equality Certificate (TEQ) in 2013 and 2016. Applications of female candidates are expressly encouraged and will be treated preferably in case of equal qualifications and suitability. 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 and travel costs cannot be reimbursed unfortunately.

For further information please contact:

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or visit our website: [www.io-warnemuende.de](http://www.io-warnemuende.de).

