Job announcement (PHY-12/2020)

The Department Physical Oceanography and Instrumentation of the Leibniz-Institute for Baltic Sea Research Warnemünde (IOW) is offering, subject to the availability of funding, a position (30 h/week) as

PhD Student
in Numerical Ocean Modelling

for 3 years, starting on 01 January 2021. Remuneration is paid in accordance with the TV-L salary scale at level EG 13 monthly gross salary.

IOW is an independent institute of the Leibniz Association, focusing on coastal marginal seas, especially the Baltic Sea. Our scientists collaborate within the framework of a joint research program inside four departments (Physical Oceanography, Marine Chemistry, Biological Oceanography and Marine Geology).

Job description

This position is part of the collaborative research center TRR181 “Energy Transfers in Atmosphere and Ocean” (https://www.trr-energytransfers.de/), funded by the German Research Foundation (DFG). In this project, several German universities and research institutes collaborate towards the development of the next generation of “energy consistent” climate models. Subproject M5 develops novel concepts for reducing spurious numerical mixing in ocean models and investigates its impacts on the energetic consistency of the models.

The PhD position announced here will focus especially on the impact of adaptive vertical meshes on the discretisation errors of internal pressure gradient schemes and the associated energy transformation. In addition a new method for the quantification of diapycnal mixing will be developed, based on the combination of theories for density variance decay and water mass transformation. Numerical simulations will be carried out with the ocean model GETM. The new model analyses will be developed in strong collaboration with project partners from the Alfred-Wegener-Institute in Bremerhaven.
**Qualification**

Applicants must have an MSc in Physical Oceanography, Physics, Meteorology, Applied Mathematics or a related natural, engineering, or geoscientific discipline with pronounced physical-mathematical components. We also expect the ability for pursuing scientific work independently, a strong interdisciplinary collaboration with our project partners and a genuine interest in presenting and publishing scientific results. Good English skills, both written and spoken, and the willingness for active participation in regular national project meetings are mandatory. Experience in Linux/Unix, programming skills in Fortran and experience in data analysis with Python or Matlab are desirable. Knowledge in geophysical fluid mechanics and ocean dynamics as well as experience in numerical modeling are advantageous.

Applicants are asked to send their complete applications (cover letter, CV, copies of certificates, description of relevant activities, publications) as a single PDF file, quoting the subject **Phy-12/2020**, until **20 November 2020** by email to: 

bewerbung.physik@io-warnemuende.de

or

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

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.

This job advertisement is aimed at all persons regardless of their gender. IOW promotes equal opportunities and was awarded the Total Equality Award (TEQ) regularly since 2013. An overview of our measures to equal opportunities and to improve the compatibility of work and family can be found at [https://www.io-warnemuende.de/equal-opportunity.html](https://www.io-warnemuende.de/equal-opportunity.html).

Applications of female candidates are particularly encouraged, and will be treated preferentially in case of equal qualifications and suitability, as the position to be filled belongs to a structural unit in which women are underrepresented.
IOW offers ideal research conditions with access to state-of-the-art technical infrastructure and excellent expertise in all marine disciplines. The institute is located in the immediate vicinity to the Baltic Sea in an attractive recreational area.

Application and travel costs cannot be reimbursed, unfortunately.

For further information, please contact Knut Klingbeil (knut.klingbeil@io-warnemuende.de) or visit our website at www.io-warnemuende.de.