PhD position (f/m/d) in the framework of the DFG funded Transregional Collaborative Research Centre TRR 181 “Energy Transfers in Atmosphere and Ocean”

MARUM - Zentrum für Marine Umweltwissenschaften

Entgelt- / Besoldungsgruppe E 13 - Teilzeit 66%
Kennziffer: A275/20
Bewerbungsfrist: 15.11.2020
Öffentliche Ausschreibung

The MARUM - Centre for Marine Environmental Sciences at the University of Bremen, is offering - under the condition of job release and under the condition of the grant by the funding party – a

PhD position (f/m/d)  
German federal pay scale E13 TV-L (66,66 %),

earliest starting date 1.1.2021, limited until 30.6.2024

in the framework of the DFG funded Transregional Collaborative Research Centre TRR 181 “Energy Transfers in Atmosphere and Ocean”, project W4: Gravity Wave Parameterization for the Ocean

Work content:

In ocean and atmosphere general circulation models, wave-induced mixing and drag cannot be resolved but have to be parameterized because of their relevance for the large-scale, resolved dynamics. An energetically consistent parameterization of these processes is provided by the IDEMIX (Internal Wave Dissipation, Energy and Mixing) model which links internal gravity wave energy sources and dissipation. Its basic version has been shown to be generally successful in ocean and atmosphere applications. In regions of strong forcing, however, deviations from observational estimates were found. To reduce these differences, subproject W4 aims to extend
the oceanic IDEMIX model and more processes that shape the global internal wave energy budget will be included. The aim of this PhD position is to a) increase the understanding of the spatiotemporal variability of the internal gravity wave field and its underlying causes mainly using LADCP/CTD as well as mooring data in dynamically different regions of the Atlantic to guide the future development of the IDEMIX model and b) to evaluate IDEMIX versions of different complexity with the observational results to identify the optimal balance between realistic results and computational expenses.

We are searching for a researcher with a keen interest in physical oceanography and its implications for theory and modelling. The PhD student will be part of the Physical Oceanography group at the University of Bremen, working under the supervision of Dr. Janna Köhler (Physical Oceanography, University of Bremen), Prof Dr. Dirk Olbers (Physical Oceanography, University of Bremen) and Dr. Friederike Pollmann (Center for Earth System Research and Sustainability, Universität Hamburg).

We offer a position in an interdisciplinary team at the Institute for Environmental Physics in the lively North German city of Bremen including the opportunity to participate in sea-going field work. The successful candidate will also be a member of the project’s research training group ENERGY which is distributed over 3 of the leading German oceanographic research locations and provides dedicated training courses as well as mentoring to support career development.

Requirements:

- M.Sc. degree or equivalent in physics, physical oceanography, meteorology, or related fields
- Skills in spectral analysis, and scientific computer programming (e.g. Python or Matlab)
- Solid background in fluid dynamics, esp. wave processes, and a strong interest in oceanography
- Experience in the analysis of large and heterogeneous data sets will be advantageous
- Applicants should be proficient in English, have excellent skills in scientific writing, and enjoy working in an international and interdisciplinary team

The University of Bremen has received a number of awards for its gender and diversity policies and is particularly aiming to increase the number of female researchers. Applications from female candidates, international applications and applications of academics with a migration background are explicitly welcome. Disabled persons with the same professional and personal qualifications will be given preference.

The time limitation is subject to the scientific qualification according to the Act of Academic Fixed-Term Contract, §2 (1) (WissZeitVG – Wissenschaftszeitvertragsgesetz). Therefore, candidates may only be considered if they dispose of the respective scope of qualification periods according to §2 (1) WissZeitVG.

For more information, please contact Dr. Janna Köhler (jannak@uni-bremen.de ).
Please send applications including standard documentation (CV, copies of diplomas, letter of motivation) and names of at least two references with reference to job advertisement number A275/20 until November 15, 2020 to

Universität Hamburg
TRR 181 Project Office
Lea Diederichsen
Center for Earth System Research and Sustainability
Bundesstr. 53
20146 Hamburg
Germany

or in electronic form as a single PDF file (not more than 8 MB) to: jobs.trr181.cen@uni-hamburg.de

The review of applications will commence on November 16, 2020.

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