International Research Training Group ArcTrain: Processes and impacts of climate change in the North Atlantic Ocean and the Canadian Arctic

The DFG-funded International Research Training Group ArcTrain, a collaborative project between the University of Bremen, the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, and a consortium of eight Canadian universities invites applications for a

PhD position

in the area of remote sensing and physics of sea ice in the framework of project HB-01: **Changes in Arctic sea ice dynamics observed by satellites and implications for the coupled climate system.**

Sea ice is an integral part of the Arctic climate system and shows a strong decrease in area and thickness during recent decades. In addition, sea ice speed and deformation is increasing. Causes for that can be based on changes of winds, ocean currents, or the sea ice itself, i.e., the internal ice stress. Within this project different satellite remote sensing datasets of sea ice drift and deformation will be analysed for changes in space and time (e.g., trend patterns). New, long time series of sea ice deformation will be constructed and interpreted in combination with atmospheric reanalysis and coupled ocean-sea ice models. Both higher resolution Synthetic Aperture Radar (SAR) and lower resolution passive microwave ice motion datasets will be analysed with the goal to provide better metrics to evaluate sea ice dynamics in models.

We are searching for an enthusiastic and committed researcher with interest in remote sensing and sea ice physics. The PhD student will be part of the Remote Sensing of Sea Ice group at the Institute of Environmental Physics, University of Bremen, working under the supervision of Dr. Gunnar Spreen. A research stay is envisaged at the Université du Québec à Montréal.

Requirements:

- M.Sc. or equivalent degree in physics, oceanography, meteorology, remote sensing, or related fields
- Skills in scientific computer programming (e.g., Python, IDL, Matlab or similar)
- Prior experience in the fields remote sensing, sea ice physics, and climate science is advantageous
- Applicants have to be fluent in spoken and written English and enjoy working in an international and interdisciplinary team.

The position is for a fixed term of 3 years. It is funded by the German Science Foundation (DFG). The earliest starting date is October 1st, 2016. Salary corresponds to 2/3 TV-L E13.

Applicants should submit under the reference number **A86/16 (HB-1/2)** their letter of motivation, a CV including copies of certificates, a publication list if applicable, and contact information of two referees. Documents should be submitted electronically as a PDF file (maximum size 2 MB) to ArcTrain coordinator, Gabriella Wehr (gwehr@marum.de). The call is open until the position is filled. The review of applications will commence on June 1st 2016.

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.

Further enquiries can be addressed to

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