



## **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 modelling ocean-glacier-interaction in the framework of project HB-10: **Feedbacks between ocean circulation in the Canadian Arctic Archipelago and projected glacier mass change.**

Glaciers in the Canadian Arctic store ice corresponding to about 110 mm sea-level equivalent, which is the greatest amount of glacier ice outside Greenland and Antarctica. Within the 21st century, the projected mass loss of the region is between 10% and 40%. The projected mass loss indicates a strong, and growing, net contribution to the freshwater budget of the Canadian Arctic Archipelago. Additionally to influencing the regional circulation within the archipelago, this net freshwater input may impact the global scale ocean circulation after being exported to the sites of deep water formation in the Labrador Sea. 36 % of the total area covered by ice in the Canadian Arctic drain into tidewater glaciers. The heat transport of the local ocean circulation towards these glaciers is one controlling factor for frontal ablation of the glaciers. This closes a potential feedback loop between the oceanic circulation on the shelf and glacier dynamics. This project will couple an existing ocean model to an existing glacier model and perform coupled experiments to investigate the strength and relevance of this feedback.

We are searching for an enthusiastic and committed researcher with interest and experience in numerical modelling of ocean and glaciers. The PhD student will be part of the Climate Lab at the Institute of Geography and MARUM, working under the supervision of Prof. Ben Marzeion. A research stay is envisaged at the University of Alberta.

### **Requirements:**

- MSc or equivalent qualification in geosciences, environmental sciences, climate physics or related fields
- Knowledge of oceanography and/or glaciology
- Experience with numerical models of the Earth system
- Applicants should be proficient in English, have excellent skills in scientific writing, 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 position must be filled by 1<sup>st</sup> October 2019. Salary corresponds to 2/3 TV-L E13.

Applicants should submit under the reference number **A108/19 (HB-10/3)** 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@marum.de](mailto:arctrain@marum.de). The call is open until the position is filled. The review of applications will commence on May 24<sup>th</sup> 2019.

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.

For further information, please contact **Prof. Dr. Ben Marzeion** ([ben.marzeion@uni-bremen.de](mailto:ben.marzeion@uni-bremen.de)).