

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 paleoclimate modelling in the framework of project HB-04: *Impact of natural climate variability on Canadian Arctic glaciers during the Holocene*

There is very high confidence that almost all glaciers worldwide are shrinking, and on the global scale this trend has been attributed to anthropogenic forcing. However, attribution on the regional scale has been hampered by the natural variability of glacier mass, which can be large even on timescales of centuries and longer, and which is still poorly known. The Canadian Arctic harbours roughly 1/3 of the global ice mass outside of Greenland and Antarctica. Understanding the sensitivity of these glaciers and ice caps to changing climatic conditions is critical, as their shrinking has strong implications for the regional freshwater balance and sea-level rise. Using a global glacier model, the PhD student will examine the natural variability of Canadian Arctic glacier masses for the mid and late Holocene to put a perspective on the present-day signal. Forcing of the glacier model will be provided by available CMIP/PMIP climate model output as well as own Holocene climate simulations. To this end, the PhD student will perform experiments with the Community Earth System Model on a supercomputer platform and use the data from the global climate model to force the latest version of the Open Global Glacier Model. We are looking for a highly motivated, skilled individual, who has strong interest in numerical modeling and understanding the complex interplay between the various components of the high-latitude climate system. The successful candidate will be part of the Geosystem Modeling group at MARUM and the Faculty of Geosciences, University of Bremen, under the supervision of Dr. Matthias Prange, Prof. Michael Schulz and Prof. Ben Marzeion. A research stay is envisaged at the University of Calgary.

Requirements:

- Completed MSc or equivalent degree in meteorology (atmospheric sciences), physical oceanography, geosciences, glaciology, physics or related fields
- Experience in numerical modeling and scientific computation (e.g. Unix/Linux shell scripting, Fortran and/or Python, supercomputing environments)
- Experience with general circulation models is advantageous
- Applicants should be fluent in English, have excellent writing skills 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-4/2)** 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
Dr. Matthias Prange
MARUM, Universität Bremen
Leobener Straße
28359 Bremen
mprange@marum.de

