



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 marine environmental science/biogeochemical modelling in the framework of project HB-09: ***Effect of oceanic change in the subarctic realm on pelagic carbonate production and sedimentation.***

Next to the ongoing warming and sea-ice loss, the Arctic Ocean and its marginal seas are acidifying. At the same time, warming and sea-ice loss lead to increasing productivity of marine calcifiers. It remains unknown how these changes will collude to determine the production, deposition and preservation of pelagic carbonate in the subarctic sedimentary environment, affecting both the character of the seafloor environments and the future of the Arctic marine carbon cycle. This project will combine new and existing data from plankton tows sediment traps and sediment sequences to parametrise planktonic foraminifera carbonate flux in subarctic and arctic environments and develop a model of carbonate delivery and preservation on the sea floor. The model will be tested against records of carbon and carbonate content changes in sediment sequences, and applied to future scenarios of Arctic change.

We are searching for an enthusiastic and committed researcher with interest in biological oceanography and biogeochemistry and affinity to quantitative methods and modelling approaches. The PhD student will be part of the Micropaleontology and Earth System Modelling groups at MARUM, University of Bremen, working under the supervision of Prof. Michal Kucera and Prof. Michael Schulz. A research stay is envisaged at the Université du Québec à Montréal or at the McGill University.

Requirements:

- MSc or equivalent qualification in geosciences, biology, environmental sciences, oceanography, environmental physics or related fields
- Knowledge of biological oceanography and marine biogeochemistry including the carbon cycle
- Experience with statistical methods and modelling approaches
- Prior experience with marine plankton is advantageous
- 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 1st October 2019. Salary corresponds to 2/3 TV-L E13.

Applicants should submit under the reference number **A108/19 (HB-09/3)** 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. The call is open until the position is filled. The review of applications will commence on May 24th 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. Michal Kucera** (mkucera@marum.de).