University of Bergen
Geophysical Institute

UNIVERSITETET I BERGEN

PhD Research Fellow within cryospheric processes and ice core research

There is a vacancy for a PhD position at the Geophysical Institute, University of Bergen, and Bjerknes Centre for Climate Research, within cryospheric processes and ice core research as part of the funded ERC Starting Grant SNOWISO. The position is for a fixed-term period of 3 years.

About the project/work tasks
The PhD position is part of a five year funded European Research Council Starting Grant project with the title "*Signals from the Surface Snow: Post-Depositional Processes Controlling the Ice Core isotopic Fingerprint*" - SNOWISO. For the past 50 years, our use of ice core records as climate archives has relied on the fundamental assumption that the isotopic composition of precipitation deposited on the ice sheet surface determines the ice core water isotopic composition. Since the isotopic composition in precipitation is assumed to be governed by the state of the climate this has made ice core isotope records one of the most important proxies for reconstructing the past climate. New simultaneous measurements of snow and water vapor isotopes have shown that the surface snow exchanges with the atmospheric water vapor isotope signal, altering the deposited precipitation isotope signal. This severely questions the standard paradigm for interpreting the ice core proxy record and gives rise to the hypothesis that the isotope record from an ice core is determined by a combination of the atmospheric water vapor isotope signal, the precipitation isotope signal, and post-depositional processes.

The SNOWISO project will verify this new hypothesis by combining laboratory and field experiments with in-situ observations of snow and water vapor isotopes in Greenland and Antarctica and quantify and parameterize the snow-air isotope exchange and post-depositional processes. This will facilitate the use of the full suite of water isotopes to infer past changes in the climate system. By establishing how the water isotope signal is recorded in the snow, the SNOWISO project will build the foundation for future integration of isotope-enabled General Circulation Models with ice core records.

Qualifications and personal qualities:

- Applicants must hold a master's degree or the equivalent in physics, math, geophysics or environmental sciences, or must have submitted his/her master's thesis for assessment prior to the application deadline. Master students can apply provided they complete their final master exam before 01.04.2018. It is a condition of employment that the master's degree has been awarded.
- Experiences from studies in climate science, fieldwork, and at least one programming language are an advantage
- Applicants must be able to work independently and in a structured manner, and demonstrate good collaborative skills.
- Applicants must be proficient in both written and oral English.

Personal and relational qualities will be emphasized. Ambitions and potential will also count when evaluating the candidates.

Special requirements for the position
The applicants must be prepared to spend up to two consecutive months in the field, specifically on top of the Greenland and Antarctic Ice Sheets, working at times under cold conditions in small groups with limited connection to the outside and under what can be characterized as primitive conditions.

About the research training
As a PhD Candidate, you must participate in an approved educational programme for a PhD degree within a period of 3 years. A final plan for the implementation of the research training must be approved by the faculty within three months after you have commenced in the position. It is a condition that you satisfy the enrolment requirements for the PhD programme at the University of Bergen.

We can offer:

- A good and professionally challenging working environment
- Salary at pay grade 50 (Code 1017/Pay range 20, alternative 8) in the state salary scale. Further promotions are made according to qualifications and length of service in the position.
- Enrolment in the Norwegian Public Service Pension Fund
- A position in an inclusive workplace (IA enterprise)
- Good welfare benefits

Your application must include:

- A brief account of the your research interests and motivation for applying for the position. Any specific thoughts/ideas regarding the research project presented above or how the applicant envisions him/her as an excellent candidate for the position will be appreciated.
- The names and contact information for two references. One of these should be the main advisor for the master's thesis or equivalent thesis
- CV
- Transcripts and diplomas showing completion of the bachelor's and master's degrees. If lacking a master's diploma, a copy of master's thesis to be submitted and if available an official confirmation that the master's thesis has been submitted.
- Relevant certificates/references
- A list of any works of a scientific nature (publication list)
- Up to three peer-review publications with details on the work conducted by the applicant

The application and appendices with certified translations into English or a Scandinavian language must be uploaded at Jobbnorge.

General information

For further details about the position, please contact Dr. Hans Christian Steen-Larsen, University of Bergen, Hans.Christian.Steen-Larsen@uib.no

The state labour force shall reflect the diversity of Norwegian society to the greatest extent possible. Age and gender balance among employees is therefore a goal. It is also a goal to recruit people with immigrant backgrounds. People with immigrant backgrounds and people with disabilities are encouraged to apply for the position.

The University of Bergen applies the principle of public access to information when recruiting staff for academic positions. Information about applicants may be made public even if the applicant has asked not to be named on the list of persons who have applied. The applicant must be notified if the request to be omitted is not met.

The University of Bergen (UiB) is an internationally recognised research university with more than 14,000 students and close to 3,500 employees at six faculties. The university is located in the heart of Bergen. Our main contribution to society is excellent basic research and education across a wide range of disciplines.

Jobbnorge ID: 147452, Deadline: 02.03.2018, Customer reference: 2017/15090