



University of Bergen

Geophysical Institute

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.

PhD Research fellow in Climate Processes and Water Isotope Research

There is a vacancy for a PhD research fellow in the field of Climate Processes and Water Isotope Research at the [Geophysical Institute](#). The position is for a fixed-term period of 4 years, with 25% compulsory work (e.g. teaching duties).

About the project:

The water cycle is one of the key uncertainties in the climate system. Model representations of the water cycle benefit from improved constraints from observations. This project is part of a larger effort at the Geophysical Institute to benchmark weather prediction and climate models with the help of measurements of stable isotopes in different components of the global water cycle. The PhD position is related to the work performed in, among others, two ERC projects, creating a stimulating research environment in this field.

As a PhD, you will be part of the national research school on Changing Climates in the Coupled Earth System (CHESS), and you will also be affiliated with the Bjerknes Centre for Climate Research (BCCR). BCCR is the largest climate research centre in the Nordic countries and among the leading centres in Europe. The working environment is highly international with around 200 scientists from 37 countries.

Work tasks:

The successful PhD candidate will reevaluate the physical foundations of phase change processes of water isotopes with respect to theory, measurements, and model implementation. The PhD candidate will have access to state-of-the-art instrumentation that will be used in the laboratory and the field. The impact of improved descriptions and reduced uncertainty of stable isotopes regarding molecular-level processes during air-sea and air-snow interaction for interpretation of the climate system will be evaluated from numerical sensitivity experiments with advanced, isotope-enabled atmospheric models. Results will be assessed with regard to signals in climate proxy archives over the Greenland and Antarctic Ice Sheets, among others.

Specific tasks to target within this PhD include:

- Reevaluate theory of stable isotope fractionation during evaporation and sublimation
- Design suitable laboratory studies, including wind tunnel experiments
- Implement theoretical developments into numerical models
- Perform sensitivity experiments with relevance for climate proxy archives

Qualifications and personal qualities:

- Applicants must hold a master's degree or the equivalent in atmospheric science, climate sciences, meteorology, geophysics, mathematics, physics, or material science and engineering; or must have submitted his/her master's thesis for assessment prior to the application deadline. It is a condition of employment that the master's degree has been awarded.
- Experiences from laboratory work and fieldwork involving instrumentation are a clear advantage.
- Expertise in scientific scripting and programming and data analysis (e.g., Python, Matlab, R, C++, FORTRAN)
- Background in material physics, atmospheric sciences, climatology, glaciology, hydrology, or related disciplines
- Evidence of independent research and writing skills
- Applicants must be proficient in both written and oral English
- Applicants must be able to work independently and in a structured manner
- Ability to actively communicate and co-operate within a larger research team

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

Special requirements for the position:

The successful candidate must be prepared to work for extended periods in the field with rudimentary comfort and in harsh climatic 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 4 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 51 (Code 1017/Pay range 20, alternative 9) in the state salary scale. This constitutes a gross annual salary of NOK 449 400. Further promotions are made according to 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 applicant's 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 taking into account sought skills and experiences 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. Master thesis is encouraged to be submitted along with the application.
- relevant certificates/references
- a list of any works of a scientific nature (publication list)
- any publications in your name
- 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](#), or [Professor Harald Sodemann](#), Geophysical Institute, University of Bergen.

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.

Further information about the employment process can be found [here](#).

Jobbnorge ID: 157305, Deadline: 12.10.2018, Customer reference: 2018/10647