



UNIVERSITETET I BERGEN

**University of
Bergen
Geophysical Institute**

Postdoctoral Research Fellow position within Atmospheric Sciences and Water Isotope Research

UiB - Knowledge that shapes society

Through robust and close interaction with the world around us - globally, nationally and locally - we shall be instrumental in building a society based on knowledge, skills and attitudes.

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Video: <https://www.youtube.com/watch?v=JRdMR-PhbBQ&t=4s>

Postdoctoral Research Fellow position

At the [Geophysical Institute](#), there is a vacancy for a position as a postdoctoral research fellow within atmospheric sciences and water isotope research with a focus on atmospheric processes in the lower atmosphere and water isotope observations from remote sensing, ground based observations, and airborne data collection.

The position is for a fixed term of 3 years and is associated with the H2020 project LEMON <https://lemon-dial-project.eu/>.

About the project/work tasks:

The central aim of the LEMON project is to develop a new LIDAR instrument, which enable profile measurements of the atmospheric water vapor isotopic composition through the troposphere with unprecedented spatial and temporal resolution (down to 150 m and 10 minutes) and with high accuracy. Based on innovative photonics components, LEMON will develop a cutting-edge Differential Absorption Lidar (DIAL) sensor concept that can either measure CO₂, CH₄ or water vapour stable isotopes in a rugged and compact architecture that matches mini-satellite missions size requirements. LEMON aims at providing a versatile, multi-species emitter technology and demonstrate its capability by Airborne Lidar demonstration. Moreover, water vapour isotopes have never been measured by LIDAR so far, i.e. with remote and range resolved capability measurement, which will allow a real breakthrough in terms of capability for measurements and process understanding of atmospheric and hydrological processes, validation of isotope-enabled models, and stable isotope data assimilation.

The work tasks

The Geophysical Institute, is a partner in the H2020 LEMON project and it will be the primary tasks of the successful applicant to provide the observational data to carry out the validation of the LIDAR instrument, and to develop a framework for using the novel LIDAR water vapor isotope retrievals to understand physical processes of the atmospheric hydrological cycle. The work tasks will encompass work on an airborne calibration device and the deployment of both ground-based and airborne measurement systems. The successful candidate for the postdoctoral position will coordinate the work with colleagues from 4 different countries and 8 partner institutions. This position offers an exciting possibility to work with a completely new type of observations of the atmospheric hydrological cycle and a unique combination of laboratory work, field work, data analysis, and research question development.

As a PostDoc at GFI, 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.

Qualifications and personal qualities:

- Applicants must hold a PhD degree within meteorology, climate dynamics, physics or other relevant disciplines, or have submitted their doctoral thesis for assessment, prior to the application deadline. It is a condition of employment that the PhD has been awarded
- Expertise in scientific scripting, programming and data analysis (e.g., Python, Matlab, R, C++, FORTRAN) is required
- Ability and interest in participating in field work is required
- Experience from field observations/campaigns and/or modelling focusing on turbulent exchange processes is an advantage
- Knowledge of stable water isotope and atmospheric hydrological processes is an advantage
- Applicants must be able to work independently and in a structured manner and have the ability to cooperate with others including co-supervision of PhD students and organization of teamwork.
- Applicants must have excellent skills in oral and written English

Personal and relational qualities will be emphasized. Research experience, ambitions and potential will also count when evaluating the candidates.

About the position of postdoctoral research fellow:

The postdoctoral position is a fixed term position with the primary objective of qualifying the appointee for work in top academic positions. If the appointee lacks teaching experience, or other relevant qualifications, the employment period may be increased to 3 years and 4 months.

Teaching and other duties will in such cases be added to the position. Individuals may not be hired for more than one fixed-term period as a postdoctoral research fellow at the same institution.

For postdoctoral research fellow positions associated with externally financed projects, the completion of the project proposal for the qualifying work, as well as a progress plan, will be developed in cooperation with the supervisor and head of department.

It is a requirement that the project is completed in the course of the period of employment.

We can offer:

- A good and professionally challenging working environment
- Salary at pay grade 60 (code 1352 / pay range 24, alternative 4) according to the state salary scale upon appointment. This constitutes a gross annual salary of NOK 532 300. Further promotions are made according to length of service. For particularly highly qualified applicants, a higher salary may be considered
- Enrolment in the Norwegian Public Service Pension Fund
- Good [welfare benefits](#)

Your application must include:

- A brief account (1 page) of the applicant's research interests and motivation for applying for the position. The application must address how the applicant fulfils the required qualifications and personal qualities
- A 2-page outline of the research questions, which you would like to address with the possibility to use the LEMON lidar to measure the atmospheric water vapor isotopic composition with high resolution up through the atmosphere
- The names and contact information for two referees. One of these should be the main advisor from the PhD programme
- CV
- Transcripts and diplomas and official confirmation that the doctoral thesis has been submitted
- Relevant certificates/references
- List of any works of a scientific nature (publication list)
- Up to three selected publications

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, Geophysical Institute, University of Bergen, Hans.Christian.Steen-Larsen@uib.no, +47 55 58 26 08 and Prof. Harald Sodemann, Geophysical Institute, University of Bergen, harald.sodemann@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. People with immigrant backgrounds and people with disabilities are encouraged to apply for the position.

We encourage women to apply. If multiple applicants have approximately equivalent qualifications, the rules pertaining to moderate gender quotas shall apply.

Upon the expiry of the closing date for applications, an evaluation committee will be appointed. As an applicant, you have a right of access to the committee's description of your formal and professional qualifications. If you wish to take advantage of this right of access, please contact the executive officer in charge after receiving information about the appointment of the evaluation committee.

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 our employment process can be found [here](#).

About The University of Bergen (UiB)

The University of Bergen is a renowned educational and research institution, organised into seven faculties and approximately 54 institutes and academic centres. Campus is located in the centre of Bergen with university areas at Nygårdshøyden, Haukeland, Marneholmen, Møllendalsveien and Årstad.

There are seven departments and several centres at Faculty of Mathematics and Natural Sciences. [Read more about the faculty and departments.](#)

Jobbnorge ID: 183549, Deadline: 17.03.2020, Customer reference: 2020/1750