



UNIVERSITETET I BERGEN

**University of
Bergen**
Department of
Physics and
Technology

Jobbnorge ID: 267917

Deadline: 11/3/2024

Website: <https://www.uib.no/om/84775/ledige-stillinger-ved-uib>

Scope: Fulltime

Duration: Fixed Term

PhD Research Fellow in reservoir physics

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=oYaThmlq6Kg>

PhD Research Fellow in reservoir physics for studying microbial risks during subsurface hydrogen storage

There is a vacancy for a PhD Research Fellow in Reservoir Physics at the [Department of Physics and Technology](#). The position is for a fixed-term period of 3 years with the possibility of a 4th year with career-promoting work (e.g. teaching duties at the Department). The position is subject to financing from the University of Bergen.

About the project/work tasks:

Hydrogen is emerging as a crucial low-carbon energy carrier and the need for large-scale underground hydrogen storage (UHS) in geological formations is expected to play an important role for balancing the energy supply and demand. However, subsurface microorganisms can use the stored hydrogen gas as an electron donor, causing operational risks, gas loss, reduced gas quality, induced corrosion, and detrimental changes to reservoir properties. Hence, large-scale UHS deployment in porous reservoirs requires comprehensive and fundamental understanding of how and to what extent microbial processes affect storage sites, and the interplay between microbial, geochemical, and flow dynamics.

The PhD Research Fellow will be involved in the EU-funded project HyDRA - Diagnostic Tools and Risk Protocols to Accelerate Underground Hydrogen Storage. This project aims to perform research on and characterize microbial interactions in various European storage sites to assess potential risks during UHS. The HyDRA consortium has 9 international research partners and over 10 energy companies as partners. The PhD candidate will work in an interdisciplinary research team, focusing on using multiscale experimental methods to study microbial activity and biogeochemical reactions under dynamic hydrogen flow. The PhD student will collaborate with top-ranked international universities in the consortium and have opportunities for research exchanges. The PhD student will also collaborate on a regular basis with industry partners in the HyDRA project and take active part in a broad professional network in applied research.

Qualifications and personal qualities:

- Applicants must hold a master's degree or equivalent education in reservoir physics, chemical engineering, geoscience, applied petroleum technology, or a related field. Master students can apply provided they complete their final master exam before 31.12.2024. It is a condition of employment that the master's degree has been awarded.
- Laboratory experience from porous media related to physics and/or chemistry is a requirement.
- Knowledge of flow and transport processes in porous media is a requirement.
- Experience from one or more of the following fields is an advantage: geochemistry, microfluidics, subsurface microbiology, carbon storage or hydrogen storage.
- Hands-on experience from image processing using Python, MATLAB or machine/deep learning is 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 University of Bergen is subjected to the regulation for export control system. The regulation will be applied in the processing of the applications.

About the PhD position:

About the PhD Research Fellow

The fellowship will be for a period of 3 years, with the possibility for a 4th year, consisting of 25 % career-promoting work (e.g. teaching responsibilities at the department) distributed over the employment period. The 4th year is contingent on the qualifications of the candidate and the teaching needs of the department and will be decided by the head of department upon appointment.

The employment period may be reduced if you have previously been employed in a qualifying post (e.g. research fellow, research assistant).

About the research training

As a PhD Research Fellow, you must participate in an approved educational programme for a PhD degree within a period of 3 years. The deadline for applying for admission to the PhD programme at The Faculty of Mathematics and Natural Sciences is 2 months after you start your position or after the start of the research project that will lead to the PhD degree. 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 stimulating working environment
- salary as PhD research fellow (code 1017) is based on the state salary scale. This constitutes a gross annual salary of NOK 540 500 (equivalent to pay grade 55). Further increases in salary are made according to length of service in the position.
- enrolment in the Norwegian Public Service Pension Fund
- good [welfare benefits](#)

Your application must include:

- a brief account of the applicant's research interests and motivation for applying for the position
- the names and contact information for two referees. 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 you have not yet completed your master's degree, please submit a statement from your institution confirming the expected date of award of your master's degree. Your master's degree must be documented with transcripts and/or diploma, alternatively a confirmation from your institution on completed degree and your grade, by 31.12.2024.)
- relevant certificates/references
- approved documentation of proficiency in English (if required, cf. [English language requirements for PhD admission](#))
- a list of any works of a scientific nature (publication list)
- your MSc thesis (or a two-page description if it is not yet submitted), and any publications in your name you wish to be considered. If the thesis is not written in a Scandinavian language, or one of the major European languages (English, French, Spanish, Dutch or German), a 2-page English summary must be provided.

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. Na Liu, Department of Physics and Technology, e-mail: Na.Liu@uib.no or Prof. Martin Fernø, Department of Physics and Technology, e-mail: Martin.Ferno@uib.no.

For HR related questions contact HR adviser Thea Thingnes, thea.thingnes@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.

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

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 successful applicant must comply with the guidelines that apply to the position at all times.

We encourage applicants with disabilities, immigrant backgrounds, or gaps in their CV to apply. By indicating such circumstances in your application, you may receive favourable consideration. We ensure that at least one qualified applicant from each of these groups is invited for an interview as part of our commitment to inclusivity and equal opportunity. For further information about the recruitment process, click [here](#).

Life as a PhD candidate at UiB

Marion Claireaux tells about life and work as a PhD candidate at UiB.

Video: <https://www.youtube.com/watch?v=nrt6VxMeJ4&index=2&list=PLf8ZIYfAO0qjhROTj6SthDbSScg0ISO6G>

About 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, Marineholmen, Møllendalsveien and Årstad.

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

Additional information

Place of service:

Christiesgt. 18 5020 Bergen (Bergen Municipality)