PhD Research Fellowship in experimental porous media physics at PoreLab - Center of Excellence

Job description

A position as PhD Research fellow in experimental porous media physics is available at the Center of Excellence PoreLab at The Department of Physics. The position is for three years. Starting date, no later than 01.09.2019.

No one can be appointed for more than one PhD Research Fellowship period at the University of Oslo.

More about the position

The newly founded center PoreLab aims to describe the flow in porous media on scales ranging from micrometers to kilometers and for highly different media. The approach is based on a combination of theory, simulations and experiments. The successful candidate must have a strong background in experimental physics, but is expected to collaborate in a cross-disciplinary environment that includes chemists, geologists and engineers.

The theme of the PhD research is to study how hydrodynamic forces interact with the porous medium through which it flows and to understand the specific scaling properties of the observed fluid structures. The study will concern both deformable porous media, and non-deformable porous medium and how different forces both short range (e.g. capillary forces) and long range (e.g. viscous, gravitational) act in different flow regimes.

An important part of the project will be to employ a new 3D optical scanner technology developed in our laboratory. Further improvements and development of the optical scanner technology will be an important part of the work.

The student is mainly expected to work on experiments, but will also have the opportunity to perform simulation/theory in connection with the experiments. Advanced data and 3D image analysis methods will be employed to reveal the characteristics of the patterns and their evolution, and experimental results will be compared to analytical and numerical model predictions.

Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition of being a leading research faculty. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

Required qualifications:

- Master's degree or equivalent in experimental physics
- Understanding of and competence in statistical physics, optics, fluid dynamics and/or porous media physics.
- Fluent oral and written communication skills in English

Candidates without a Master's degree have until 30 June, 2019 to complete the final exam.

Grade requirements:

The norm is as follows:

- The average grade point for courses included in the Bachelor's degree must be C or better in the Norwegian educational system
- The average grade point for courses included in the Master's degree must be B or better in the Norwegian educational system
- The Master's thesis must have the grade B or better in the Norwegian educational system

http://www.mn.uio.no/english/research/phd/application/application.html

Other desired qualifications include:

- Experience with advanced 3D image analysis.

Personal skills

- Creative
- Strong ability to work problem-oriented and collaborate with others who use different methods.
- Enjoy interdisciplinary research and take keen interest in learning and working in teams.

We offer

- Salary NOK 449 400 - 505 800 per annum depending on qualifications and seniority as PhD Research Fellow (position code 1017)
- Vibrant international academic environment
- Attractive welfare benefits and a generous pension agreement
- Oslo's family-friendly surroundings with their rich opportunities for culture and outdoor activities

How to apply

The application must include:

- Cover letter including a description of scientific interests and the motivation for applying for the position (max. 2 pages)
- CV (summarizing education, positions and academic work - scientific publications)
- Copies of educational certificates, transcript of records and letters of recommendation
- Documentation of English proficiency if needed (please see admission criteria)
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the link "Apply for this job". Foreign applicants are advised to attach an explanation of their University's grading system. Please note that all documents should be in English (or a Scandinavian language).

Applicants will normally be called in for an interview.

Formal regulations

Please see the guidelines and regulations for appointments to Research Fellowships at the University of Oslo.

The fellowship requires admission to the PhD program at the Faculty of Mathematics and Natural Sciences. The application to the PhD program must be submitted to the department no later than two months after taking up the position. For more information see:

http://www.mn.uio.no/english/research/phd/

According to the Norwegian Freedom and Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

The appointment may be shortened/given a more limited scope within the framework of the applicable guidelines on account of any previous employment in academic positions.

The University of Oslo has an agreement for all employees, aiming to secure rights to research results etc.

In accordance with the University of Oslo's equal opportunities policy, we invite applications from all interested individuals regardless of gender or ethnicity. The University of Oslo has a goal of recruiting more women in academic positions. Women are encouraged to apply.

Contact information

Professor Knut Jørgen Måløy,Office phone: +47 22 85 65 24, e-mail k.j.maloy@fys.uio.no

For technical questions regarding the application system, please contact HR Adviser Elin Thoresen, +47 22 85 71 96, e-mail: elin.thoresen@mn.uio.no

About the University of Oslo

The University of Oslo is Norway's oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

PoreLab is a Norwegian Center of Excellence created in 2017 and situated at the Norwegian University of Science and Technology (NTNU) in Trondheim, and the University of Oslo (UiO). It focuses on the physics of porous media using experimental, theoretical and computational methods. It is led by five principal scientists from physics, chemistry and reservoir engineering.

Jobbnorge-ID: 170026, Søknadsfrist: Avsluttet