

## The Department of Physics has a vacancy for a

## PhD position in statistical physics

### This is NTNU

At NTNU, creating knowledge for a better world is the vision that unites our 7 400 employees and 42 000 students.

We are looking for dedicated employees to join us.

Video: <https://www.youtube.com/watch?v=clgKd1SwGLI>

### About the position

We have a vacancy for a PhD position in statistical physics and fluid dynamics at PoreLab, Department of Physics, NTNU. The appointments have duration of 3 years with the possibility of until 1-year extension with 25% teaching duties in agreement with the department. The PhD student should start no later than September 2020.

The position is organized at the Department of Physics in close collaboration with the Center of Excellence PoreLab.

### Information about the Department of Physics

The department is currently in an expansion phase and incorporates a broad activity within physics with activities in solid state physics/material physics, soft/complex and biopolymer physics, medical physics, statistical physics, optics, atmospheric physics, university didactics and astroparticle physics. The department is also since 2017 the hosting institution of two national centers of excellence - Porelab and QuSpin. The department is responsible for the best recruiting physics study programmes in Norway, both within applied and fundamental physics. It also provides a large set of courses within physics for other study programmes at NTNU.

For more information about the department and its activities, see

<https://www.ntnu.edu/physics>

### Information about PoreLab

PoreLab is a Norwegian Center of Excellence under the auspices of the Research Council of Norway. It was created in 2017 and it is situated at the Norwegian University of Science and Technology (NTNU) in Trondheim, and the University of Oslo.

PoreLab is an interdisciplinary center with joint efforts in theory, computer simulations and experiments, both in fundamental and in more applied directions. The center works to advance the understanding of porous media by developing theories, principles, tools and methods to replace ad hoc approaches to porous media with a fundamental understanding of porous media with relevance in biology, chemistry, geology and geophysics based on fluid mechanics, non-equilibrium thermodynamics and statistical mechanics.

Further information about PoreLab can be found here: <https://porelab.no/>

The position reports to Professor Alex Hansen, PoreLab, department of Physics, NTNU, Phone: +47 73593649 ([alex.hansen@ntnu.no](mailto:alex.hansen@ntnu.no))

### Main duties and responsibilities

- The PhD position will be focused on using ideas from thermodynamics and statistical mechanics in developing a theory for immiscible two-phase flow in porous media.
- The work will be a mixture of theoretical and numerical approaches and in close collaboration with experimentalists.

### Required selection criteria

The PhD-position's main objective is to qualify for work in research positions. The qualification requirement is that you have completed a master's degree or second degree (equivalent to 120 credits) with a strong academic background in [subject area] or equivalent education with a grade of B or better in terms of [NTNU's grading scale](#). If you do not have letter grades from previous studies, you must have an equally good academic foundation. If you are unable to meet these criteria you may be considered only if you can document that you are particularly suitable for education leading to a PhD degree.

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The appointment is to be made in accordance with the regulations in force concerning [State Employees and Civil Servants and national guidelines for appointment as PhD, post doctor and research assistant](#).

## Preferred selection criteria

- The successful candidate should have a broad knowledge of all three aspects of physics: theoretical, computational and experimental
- The successful candidate should have in-depth knowledge of statistical physics, especially scaling properties.
- It is an advantage with hands-on experience in experimental physics.
- Good written and oral English language skills

## Personal characteristics

- The successful applicant is a highly competent, motivated and ambitious student.
- We are looking for a positive and balanced personality open to new proposals.
- We are looking for candidates who can think creatively and critically, and who can work independently and consistently on the research project.
- He/she should also enjoy interdisciplinary research
- He/she should take keen interest in learning and working in teams.
- In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal suitability.

## We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and [inclusive work environment](#) with dedicated colleagues
- favourable terms in the [Norwegian Public Service Pension Fund](#)
- employee benefits

## Salary and conditions

PhD candidates are remunerated in code 1017, and are normally remunerated at gross from NOK 479 600 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The period of employment is 3 years with the possibility of until 1-year extension with 25% teaching duties in agreement with the department.

Appointment to a PhD position requires admission to the PhD programme in Physics.

As a PhD candidate, you undertake to participate in an organized PhD programme during the employment period. A condition of appointment is that you are in fact qualified for admission to the PhD programme within three months.

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The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants, and the acts relating to Control of the Export of Strategic Goods, Services and Technology. Candidates who by assessment of the application and attachment are seen to conflict with the criteria in the latter law will be prohibited from recruitment to NTNU. After the appointment you must assume that there may be changes in the area of work.

It is a prerequisite you can be present at and accessible to the institution on a daily basis.

## About the application

A letter of motivation is expected.

Publications and other academic works that the applicant would like to be considered in the evaluation must accompany the application. Joint works will be considered. If it is difficult to identify the individual applicant's contribution to joint works, the applicant must include a brief description of his or her contribution.

Please submit your application electronically via [jobbnorge.no](http://jobbnorge.no) with your CV, diplomas and certificates. Applications submitted elsewhere will not be considered. Diploma Supplement is required to attach for European Master Diplomas outside Norway. Chinese applicants are required to provide confirmation of Master Diploma from China Credentials Verification (CHSI): <http://www.chsi.com.cn/en/>.

Applicants invited for interview must include certified copies of transcripts and reference letters. Please refer to the application number 31/20 when applying.

## General information

A good work environment is characterized by diversity. We encourage qualified candidates to apply, regardless of their gender, functional capacity or cultural background.

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**The city of Trondheim** is a modern European city with a rich cultural scene. Trondheim is the innovation capital of Norway with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

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NTNU is committed to following evaluation criteria for research quality according to [The San Francisco Declaration on Research Assessment - DORA](#).

As an employee at NTNU, you must at all times adhere to the changes that the development in the subject entails and the organizational changes that are adopted.

Information Act (Offentleglova), your name, age, position and municipality may be made public even if you have requested not to have your name entered on the list of applicants.

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**Application deadline: 17.03.2020**

## **NTNU - knowledge for a better world**

The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

### **The Faculty of Natural Sciences**

[The Faculty of Natural Sciences](#) is a key player in national and international research and education programmes in natural sciences and technology. Our research focuses on global challenges in the areas of energy, climate, the environment, food, water, health and welfare. The Faculty consists of eight departments as well as the Faculty Administration.

Jobbno ID: 184150, Deadline: 17.03.2020, Customer reference: 31/20