PhD Research Fellowship in Condensed Matter Physics

Job description

A position as PhD Research Fellow in Condensed Matter Physics is available at the Department of Physics.

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

The PhD position is of 3 years duration. Starting date no later than 01.10.2020.

More about the position

This is a theoretical PhD project aimed at studying vortex dynamics and superfluid dynamics in two-dimensional Bose-Einstein condensates and their analogies in classical hydrodynamics. The focus will be on understanding collective properties of interacting vortices such as vortex clustering, and their effect on impurities suspended in a superfluid. We will explore analogies between quantum and classical turbulence with and without the presence of impurities. The newly developed theoretical tools, we aim to explore possible connections between vortex dynamics in superfluids and active turbulence of bacteria suspensions.

The PhD project involves:

Theoretical and computation studies of the Gross-Pitaevskii equation for superfluid dynamics in the presence of impurities
Theoretical and computation studies of the point vortex model

Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition is to be among Europe’s leading communities for research, education and innovation. 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.

- Master’s degree or equivalent in physics with a background within statistical physics, computational physics and theoretical condensed matter physics.
- Fluent oral and written communication skills in English. Please see English requirements for applicants from outside of EU/EEA countries
- Good social and collaboration skills and ability to work independently and in an interdisciplinary scientific environment

Candidates without a Master’s degree have until 30 June, 2020 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:

- Prior knowledge on Bose Einstein condensates and superfluids

The purpose of the fellowship is research training leading to the successful completion of a PhD degree.

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

We offer

- Salary NOK 479 600 - 523 200 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 the original Bachelor and Master’s degree diploma, transcripts 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)
- Applicants who are interested in teaching need to add to this application a description of their motivation for teaching.

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). Note that applications with missing documents will not be considered further.

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.

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

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

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Contact information

Luiza Angheluta, phone: +47 228 56783, email: luizaa@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.

The research at the Department of Physics covers a broad range of subfields within physics and technology: From space research to medical physics. A good proportion of the research is interdisciplinary, and conducted in close cooperation with collaborators in Norway and abroad. Education and teaching are other essential activities.

We offer a broad range of courses, and the Department is involved in several study programmes at bachelor’s and master’s level. Some of the best lecturers in Norway are amongst our employees, and we are proud of our prizewinning teaching and learning environment. The Department has 200 employees, of which 50 are permanent scientific positions. On a yearly basis 20 students complete their Ph.D. and 50 finish their M.Sc. degree.

Jobbnorge-ID: 185518, Søknadsfrist: 30. april 2020