UNIVERSITETET I OSLO

Jobbnorge-ID: 244796
Søknadsfrist: 24.05.2023
Nettside: http://www.uio.no/
Omfang: Heltid
Varighet: Åremål

PhD Research Fellow in Experimental Nuclear Physics

Job description
Position as PhD Research Fellow in Experimental Nuclear 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. Starting date no later than October 1, 2023.

The fellowship period is 3 years. A fourth year may be considered with a workload of 25 % that normally consists of teaching. This is dependent upon the qualification of the applicant and the current needs of the department.

Video MN
Knowledge development in a changing world - Science and technology towards 2030

Video: https://www.youtube.com/watch?v=t4wvWQEhDEs

More about the position
The research of the Nuclear Physics group is focused on the study of atomic nuclei under extreme conditions, e.g. nuclei at high excitation energy at the transition from quantum order to chaos, exotic nuclei with an unusual ratio of protons and neutrons, and nuclear reactions in astrophysical environments. To obtain experimental information under such conditions is crucial in order to constrain and improve theoretical nuclear structure models, and to understand how elements heavier than iron are formed in explosive stellar environments.

The current project aims at studying nuclear level densities and photon strength functions. These are fundamental properties of the nucleus and can also be used as input into for example the nuclear reaction code TALYS to calculate neutron capture cross sections.

This project also aims at further developing the Oslo method to study the spin dependence of the nuclear level density. The experiments will be run at the Oslo Cyclotron Laboratory using the OSCAR array of 30 large volume LaBr detectors and complementary experiments will be run abroad at for example iThemba LABS or MSU.

This research will be part of a larger international research collaboration and also be a part of the Norwegian Nuclear Research Centre.

Qualification requirements
The Faculty of Mathematics and Natural Sciences has a strategic ambition 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 specialization in experimental nuclear physics
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system
- A scientific profile relevant for the nuclear structure research program as outlined above
- A solid background in scientific computing, including proficiency in Python programming

In addition, several qualifications are considered strongly desirable and will be used in the ranking of the candidates. In the order of importance, these are:

- Experience with particle and gamma-detectors
- Experience with data analysis techniques relevant for level density and photon strength function studies, like the "Oslo method".
- Knowledge of nuclear structure models from Master-level courses,
- Experience with using nuclear reaction codes like TALYS.
- Familiarity with data analysis tools such as ROOT.

Candidates without a Master's degree have until 15 August, 2023 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 educa-tional system
- Fluent oral and written communication skills in English
- English requirements for applicants from outside of EU/ EEA countries and exemptions from the requirements:

  https://www.mn.uio.no/english/research/phd/regulations/regulations.html#toc8

Personal skills:

- Good communication skills
- Ability to work in an international research environment
- Ability to work independently

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

The fellowship requires admission to the PhD programme at the Faculty of Mathematics and Natural Sciences. The application to the PhD programme 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/

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We offer

- Salary NOK 501 200 - 544 400 per annum depending on qualifications and seniority as PhD Research Fellow (position code 1017)
- Attractive welfare benefits and a generous pension agreement
- Vibrant international academic environment
- Career development programmes
- Oslo's family-friendly surroundings with their rich opportunities for culture and outdoor activities

How to apply

The application must include:

- Cover letter - statement of motivation and research interests
- CV (summarizing education, positions and academic work - scientific publications)
- Copies of the original Bachelor and Master's degree diploma and transcripts of records
- Documentation of English proficiency if applicable
- 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.

Interviews will be part of the hiring process.

The research area for the position may include technologies referred to in the Ministry's export control regulations and all candidates will be evaluated in accordance with these regulations.

Formal regulations

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

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.

UiO has an agreement for all employees, aiming to secure rights to research results a.o.

Inclusion and diversity are a strength. The University of Oslo has a personnel policy objective of achieving a balanced gender composition. Furthermore, we want employees with diverse professional expertise, life experience and perspectives.

If there are qualified applicants with disabilities, employment gaps or immigrant background, we will invite at least one applicant from each of these categories to an interview.

Contact information

Professor Sunniva Siem, e-mail: sunniva.siem@fys.uio.no

For questions regarding Jobbnorge, please contact HR Adviser Elin Thoresen, 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.

Tilleggsinformasjon

Arbeidssted:

Problemveien 7 0313 Oslo (Oslo Kommune)