Jobbnorge ID: 296703
Deadline: 4/9/2026
Website: http://www.uis.no/
Scope: Fulltime
Duration: Fixed Term

PhD Fellowship in Physics/ Computer Science

Job description

The University of Stavanger invites applicants for a PhD Fellowship in Physics/Computer Science at the Faculty of Science and Technology, Department of Mathematics and Physics. The start date is flexible, but not later than September 2026.

The PhD Fellow will join the expanding UiS LISA Team (Laser Interferometer Space Antenna), which is expected to grow by approximately three new members over the coming year, including early-career scientists and software engineers. The team focuses on the following LISA deliverables agreed upon with the Norwegian Space Agency and ESA:

- **Deliverable 1:** Deployment and development of Norway's computational facility for the LISA ground segment
- **Deliverable 2:** Development and implementation of the LISA global-fit elements required for the analysis of the stochastic gravitational-wave background.

The team collaborates closely with other national LISA groups and forms part of the UiS theoretical and observational physics group (SPACT). In addition to LISA science, SPACT conducts research across a broad range of observational and theoretical topics, including early-Universe cosmology, particle physics, and astronomy.

By joining the UiS LISA Team, the hired PhD Fellow will interact closely with the entire team and focus primarily on either Deliverable 1 and / or Deliverable 2, depending on their aspirations, background, and skills.

The candidate working on **Deliverable 1** will focus on developing systems, services, and applications, while the candidate working on **Deliverable 2** will apply theoretical physics and statistical methods to LISA data analysis. The work will be carried out under the supervision of Assoc. Prof. Germano Nardini and Head Engineer Jayachander Surbiryala, in collaboration with partners in LISA.

This is a trainee position that will give promising researchers an opportunity for academic development through a PhD education leading to a doctoral degree.

The hired candidate will be admitted to the PhD program in Science and Technology. The education includes relevant courses amounting to about six months of study, a dissertation based on independent research, participation in national and international research environments, relevant academic communication, a trial lecture and public defence. Read more about the PhD education at UiS on our website.

The appointment is for three years with research duties exclusively.

A career plan will be prepared that specifies the competencies that the Research Fellow will acquire. Access to career guidance will be provided throughout the doctoral education.

Research topic

LISA is the forthcoming ESA-led mission designed to measure gravitational waves in the millihertz frequency band. These measurements will be performed through laser interferometry using three spacecraft flying in a triangular formation, separated by 2.5 million kilometers.

LISA is expected to detect thousands of binary systems, with component masses ranging from a fraction of a solar mass to several million solar masses. It is also anticipated to either observe or place upper limits on the gravitational-wave background produced during the first minute of the Universe.

In 2024, ESA finalized the LISA mission timeline and signed multilateral agreements with national space agencies. The launch is planned for 2035. Construction of the spacecraft and development of the ground segment began last year. The Norwegian Space Agency has committed to contribute to the ground segment, with UiS responsible for Deliverable 1 and Deliverable 2 as described in the job description section.

Deliverable 1concerns cluster architecture development, with emphasis on inter-cluster communication security, data management, and/or gravitational-wave software development. **Deliverable 2** focuses on theoretical physics and LISA data analysis, particularly the study of stochastic signals originating from cosmological sources and unresolved binary populations.

During their training, the PhD Fellow will conduct research relevant to one or both deliverables, depending on their aspirations, skills, and background. In doing so, the candidate will strengthen and/or acquire expertise in theoretical physics, gravitational-wave data analysis, and the use and developments of large-scale computational facilities.

In carrying out this research, the PhD Fellow will work closely with the UiS LISA Team. They will also frequently interact with collaborating LISA groups in other countries working on similar tasks. To support these collaborations, several research stays abroad are planned, with substantial funding already allocated for this purpose.

Cover letter

You are invited to submit a cover letter (maximum 2 pages) together with the other required documents. The letter should schematically include:

- **Master thesis topic** and a brief description of its original content (e.g., new results, new codes, innovative methodology).
- **Links to any public code repositories** containing software or tools that you have developed.
- **Preferred UiS LISA deliverable (1 and / or 2)** that you want to work on, including: the motivation for this choice; and an explanation of how your background and skills makes you well suited for the selected deliverable(s).

During the first three months of the employment period, the project proposal and progress plan will be developed in cooperation with your supervisors and completed for the final plan for the PhD-project.

Qualification requirements

We are looking for applicants with a strong academic background who have completed, a five-year master degree within computer science (Deliverable 1) or physics (Deliverable 2), preferably acquired recently; or who possess corresponding qualifications that could provide a basis for successfully completing a doctorate in the deliverables described above.

To be eligible for admission to the doctoral programmes at the University of Stavanger both the grade for your master's thesis and the weighted average grade of your master's degree must individually be equivalent to or better than a B grade. If you finish your education (masters degree) in the spring of 2026 you are also welcome to apply.

Applicants with an education from an institution with a different grade scale than A-F, and/or with other types of credits than sp/ECTS, must attach a confirmed conversion scale that shows how the grades can be compared with the Norwegian A-F scale and a Diploma Supplement or similar that explains the scope of the subjects that are included in the education. You can use these conversion scales to calculate your points for admission.

Proven experience relevant to **Deliverable 1** or **Deliverable 2** will be considered a significant advantage.

The following skills will also be highly valued:

- a strong background in theoretical physics and/or astronomy.
- advanced knowledge of software engineering and architecture (including microservices, API design, and distributed systems).
- experience in gravitational-wave data analysis.
- experience in the development and use of large-scale computational facilities, including the operation, optimization, and monitoring of servers.
- proficiency in designing, implementing, and maintaining Infrastructure as Code (IaC) (e.g., Terraform, Ansible, or CloudFormation).
- expertise in CI/CD pipeline orchestration (e.g., GitHub Actions, GitLab CI, or Jenkins).
- familiarity with container technologies (e.g., Docker and Kubernetes).

Emphasis is also placed on your:

- motivation and potential for research within the field
- professional and personal skills for completing the doctoral degree within the timeframe
- ability to work independently and in a team, be innovative and creative
- ability to work structured and handle a heavy workload
- having a good command of both oral and written English

Requirements for competence in English

A good proficiency in English is required for anyone attending the PhD program. International applicants must document this with a valid test certificate from one of the following tests:

- TOEFL - Test of English as a Foreign Language, Internet-Based Test (IBT). Minimum result: 90
- IELTS - International English Language Testing Service. Minimum result: 6.5
- Certificate in Advanced English (CAE) or Certificate of Proficiency in English (CPE) from the University of Cambridge
- PTE Academic - Pearson Test of English Academic. Minimum result: 62

The following applicants are exempt from the above requirements:

- Applicants with one year of completed university studies in Australia, Canada, Ireland, New Zealand, United Kingdom, USA
- Applicants with a completed master's degrees taught in English in a EU/EEA country
- Applicants who are exempt based on HK-dir's GSU list

We offer

- a PhD education in a large, exciting and societally important organisation
- an ambitious work community which is developing rapidly. We strive to include employees at all levels in strategic decisions and promote an informal atmosphere with a flat organisational structure.
- free Norwegian language courses if you do not have proficiency in Norwegian, Swedish, or Danish at level A2 at the time of employment.
- access to Lifekeys, a digital service for the preservation of personal mental health and well-being
- salary in accordance with the State Salary Scale, l.pl 17.515, code 1017, NOK 550 800 gross per year with salary development according to seniority in the position. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.
- automatic membership in the Norwegian Public Service Pension Fund, which provides favourable insurance- and retirement benefits
- favourable membership terms at a gym and at the SIS sports club at campus

- employment with an Inclusive Workplace organisation which is committed to reducing sick leave, increasing the proportion of employees with reduced working capacity, and increasing the number of professionally active seniors
- "Hjem-jobb-hjem" discounted public transport to and from work
- as an employee in Norway, you will have access to an optimal health service, as well as good pensions, generous maternity/paternity leave, and a competitive salary. Nursery places are guaranteed and reasonably priced
- relocation programme

Diversity

Diversity is a resource in the working and learning environment at UiS. When we have different backgrounds and experiences, we can approach challenges from multiple perspectives and find better solutions. At UiS, we are committed to showing respect for each other's differences and accommodating employees with disabilities. We take into consideration your needs and your situation in various life phases.

If you find this position interesting, we encourage you to apply, regardless of gender, disability, cultural background, or whether you have been out of the workforce for a period.

If there are qualified applicants with disabilities, gaps in their CV, or immigrant backgrounds, we will invite at least one applicant from each of these groups for an interview. If you fall into any of these categories, feel free to indicate it when applying for the position. Learn more about the criteria for being considered an applicant in these specific groups here.

The university aims to recruit more women within the subject area. If several applicants are considered to have equal qualifications, female applicants will be given priority.

Application

To apply for this position please follow the link "Apply for this job". A short application letter, relevant education and work experience as well as language skills must be registered here.

The following documents must be uploaded as attachments to your application:

- cover letter, as specified above
- CV with a full summary of your education and experience
- certificates/diplomas and other documentation that you consider relevant
- Diploma Supplement or similar and a confirmed conversion scale if this is required
- documentation on competence in English if this is required
- publications or other relevant research work, such as bachelor and master theses. If the master thesis is not completed yet, please upload an abstract instead.

Applications are evaluated based on the information available in Jobbnorge at the application deadline. You should ensure that your application shows clearly how your skills and experience meet the criteria which are set out above and that you have attached the necessary documentation.

The documentation must be available in either a Scandinavian language or in English. If the total size of the attachments exceeds 100 MB, they must be compressed before upload.

Please note that information on applicants may be published even if the applicant has requested not to be included in the official list of applicants - see Section 25 of the Freedom of Information Act. If your request is not granted, you will be notified.

UiS only considers applications and attachments registered in Jobbnorge.

General information

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.

Employment as PhD Fellow is regulated in Regulations to the Universities and Colleges Act, chapter IV. Admission to the doctoral program is regulated in Regulations for the PhD degree at UiS.

Your qualifications for the position, based on documentation registered in Jobbnorge, will be assessed by an internal expert committee. Based on the committee's statement, relevant applicants will be invited to an interview before any recommendations are made. References will also be obtained for relevant candidates. More about the hiring process on our website.

The appointee will be based at the University of Stavanger.

It is a prerequisite that you have a residence which enables you to be present at, and available to the academic community during ordinary working hours.

The position has been announced in both Norwegian and English. In the case of differences of meaning between the texts, the English text takes precedence.

UiS - challenge the well-known and explore the unknown

The University of Stavanger (UiS) has about 12,000 students and 2,200 employees. The university has high ambitions. We strive to have an innovative and international profile, and be a driving force in knowledge development and in the process of societal change. Our common direction is driven by consideration for green and sustainable change and equitable social development, through new ways of managing natural resources and facilitating better cities and local communities. Energy, health and welfare, learning for life are our focus areas.

In constant collaboration and dialogue with our surroundings, regionally, nationally and internationally, we enjoy an open and creative climate for education, research, innovation, dissemination and museum activities. Academic life at the University of Stavanger is organised into six faculties comprising various departments/schools and National Research Centres, as well as the Museum of Archaeology. We are a member of the European Consortium of Innovative Universities. The university is located in the most attractive region in the country with more than 300,000 inhabitants. The Stavanger region has a dynamic labour market and exciting cultural and leisure activities.

Together with our staff and students we will challenge the well-known and explore the unknown.

The Faculty of Science and Technology The Faculty of Science and Technology offers degree programmes at the bachelor's, master's, and doctoral levels. The faculty has strong ties to both research institutions and industry. Nearly 40% of its budget is externally funded. Our students have close contact with the business sector, and many master's and doctoral theses are written in collaboration with industry. The faculty has established research collaborations with universities around the world and includes several academic environments that are internationally leading. The faculty has approximately 3,000 students and around 500 employees, distributed across the faculty administration and six departments: the Department of Electrical Engineering and Computer Science; the Department of Mechanical, Structural and Materials Engineering; the Department of Mathematics and Physics; the Department of Chemistry, Bioscience and Environmental Engineering; the Department of Energy and Petroleum Engineering; and the Department of Safety, Economics and Planning.

Department of Mathematics and Physics is part of the Faculty of Science and Technology and offers programmes in mathematics and physics, a five-year integrated master's degree, teacher education in science, and doctoral studies. The department has outstanding research environments within its disciplines and is internationally leading in, among other areas, subatomic physics and cosmology. The department is responsible for all basic teaching in mathematics, statistics, and physics within the faculty.

Additional information

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