



UNIVERSITETET  
I OSLO

**Jobbnorge ID:** 274615  
**Deadline:** 3/14/2025  
**Website:** <http://www.uio.no/>  
**Scope:** Fulltime  
**Duration:** Temporary

## PhD Research Fellow in Supervisory Control for the Power Grid of a Telescope

### About the position

Position as PhD Research Fellow is available at the Department of Technology Systems (ITS) as a part of the European ATLAST2 Project.

The project is a concept for a next generation 50-meter class single-dish astronomical observatory operating at sub-millimeter and millimeter wavelengths, run as a facility telescope by an international partnership and powered by renewable energy.

The fellowship period is 3 years.

A fourth year may be considered with a workload of 25 % that may consist of teaching, supervision duties, and/or research assistance. This is dependent upon the qualification of the applicant and the current needs of the department.

Starting date is no later than October 1, 2025

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

### Jobb description

The person hired in the position will work on theoretical control and optimization methods for a grid island powered by renewable energy, supporting both the ATLAST telescope and the nearby community of San Pedro de Atacama.

The PhD candidate will be responsible for delivering the engineering plans of the grid island, alongside theoretical algorithms for its operation. This unique opportunity allows the PhD student to take control theory for grid operation from low TRLs to very high TRLs.

The core activity of the ATLAST2 shall support Researchers, PhD candidates and Postdocs. They work in close contact with the research and user partners of ATLAST2, and with other partners at ITS on the general topics of renewable energy systems.

The PhD candidate will work on a team at ITS comprising two other positions funded by ATLAST2, alongside Assoc. Profs. Mathias Hudoba de Badyn and Marianne Zeyringer, as well as Prof. Sabrina Sartori.

### 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.

#### Required qualifications

- Master's degree or equivalent in cybernetics, intelligent systems, automation, or related fields
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system

Candidates without a master's degree have **until 30 June 2025** to complete the final exam.

- Preference will be given to candidates with a multi-disciplinary background consisting of both control theory (or related fields) and economics (or related fields)
- Applicants must have experience in one or more of the topics
  - Model-predictive control
  - Numerical optimization
  - Econometrics
  - Virtual power plants
  - Power systems and/or power electronics
  - Machine learning
  - Renewable energy systems
  - Advanced statistics
- Fluent oral and written communication skills in English
- All candidates and projects will have to undergo a check versus national export, sanctions and security regulations. Candidates may be excluded based on these checks. Primary checkpoints are the Export Control regulation, the Sanctions regulation, and the National security regulation.

## Grade requirements

- 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

## Language requirements

- Fluent oral and written communication skills in English

English requirements for applicants from outside of EU/EEA/EFTA countries and exemptions from the requirements:

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

## In assessing the applications, special emphasis will be placed on:

- The applicant's estimated academic and personal ability to complete the project within the time frame
- Good collaboration skills and an ability to join interdisciplinary academic communities

The purpose of the fellowship is research training leading to the successful completion of a PhD degree. For more information see:

[Doctoral degree: PhD at the Faculty of Mathematics and Natural Sciences - The Faculty of Mathematics and Natural Sciences](#)

## Personal skills

- Ability to take initiative and come up with new ideas to solve theoretical and practical problems
- Ability to work independently as well as in a team
- Good personal communication skills

## We offer

- Salary NOK 536 200 - 575 400 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

## Inclusive worklife and diversity at UiO

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.

We hope that you will apply for the position.

More information about gender equality initiatives at UiO can be found [here](#).

## How to apply

Your application should 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, transcripts of records
- Documentation of English proficiency
- 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)

Application with attachments must be submitted via our recruitment system Jobbnorge, click "Apply for the position".

When applying for the position, we ask you to retrieve your education results from [Vitnemålsportalen.no](#). If your education results are not available through Vitnemålsportalen, we ask you to upload copies of your transcripts or grades. **Please note that all documentation must be in English or a Scandinavian language.**

## General information

The best qualified candidates will be invited for interviews.

Applicant lists can be published in accordance with [Norwegian Freedom of Information Act](#) § 25. When you apply for a position with us, your name will appear on the public applicant list. It is possible to request to be excluded from this list. You must justify why you want an exemption from publication and we will then decide whether we can grant your request. If we can't, you will hear from us.

Please refer to [Regulations for the Act on universities and colleges chapter 3](#) (Norwegian), [Guidelines concerning appointment to post doctoral and research posts at UiO](#) (Norwegian) and [Regulations for the degree of Philosophiae Doctor \(PhD\) at the University of Oslo](#).

The University of Oslo has a [transfer agreement](#) with all employees that is intended to secure the rights to all research results etc.

## Contact Information

For further information, please contact:

Associate Professor Mathias Hudoba de Badyn, e-mail: [mathias.hudoba@its.uio.no](mailto:mathias.hudoba@its.uio.no)

For questions regarding recruitment system Jobbnorge, please contact:

HR advisor Olga Holmlund, e-mail: [olga.holmlund@mn.uio.no](mailto:olga.holmlund@mn.uio.no)

## 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 University of Oslo (UiO) is expanding the activity at Campus Kjeller to strengthen our education, research, and innovation in technology for a sustainable future. UiO is a well-ranked research university where the Department of Technology Systems at Kjeller (ITS) is focused on applied research in sustainable energy, autonomous systems, space, and security. At Kjeller, ITS is co-located with the Norwegian Defense Research Establishment (FFI) and the Institute for Energy Technology (IFE), which both offer rich opportunities for collaboration. ITS also has a range of interdisciplinary research collaborations that include the UiO Blindern Campus and Oslo Science City, as well as many other national and international institutions and industries..

ITS offers several master level programmes, alone and jointly with other departments: Renewable energy systems, Cybernetics and autonomous systems, Robotics and intelligent systems, and Information security.

ITS also hosts the Centre for Space Sensors and Systems (CENSSS), which incorporates operation of an instrument on the NASA Perseverance rover on Mars. A new master program in Space systems is in the planning stage. The department currently has 9 permanent scientific staff, approximately 35 adjunct staff from the research institutes at Kjeller and from industry, as well as about 20 PhD candidates.

This position is part of an ongoing expansion of the UiO activity at Campus Kjeller. Campus Kjeller is located 20 km northeast of Oslo, between the city center and Oslo Airport. It is a 20 minutes commute with public transportation from Oslo city center to the campus.

## Additional information

### Place of service:

Gunnar Randers vei 19 2007 Kjeller (Lillestrøm Municipality)