



UNIVERSITETET  
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**Jobbnorge ID:** 239432  
**Deadline:** 2/28/2023  
**Website:** <http://www.uio.no/>  
**Scope:** Fulltime  
**Duration:** Temporary

## Postdoctoral Research Fellow in Experimental Fluid Mechanics: Water capture from fog nets

### Job description

Position as Postdoctoral Research Fellow in Experimental Fluid Mechanics available at the Mechanics division at the Department of Mathematics, University of Oslo.

Starting date no later than October 1, 2023.

The appointment is a fulltime position and is for a period of three years.

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

Access to fresh water is the foundation for life on Earth that poses severe restrictions and requirements for life in regions that contended with water scarcity, a problem that will increase in the future with the growing effects of climate change. Water scarcity is not longer a distant problem. In 2022 Europe has been hit by a severe drought impacting agriculture and energy production. A fog net is a low cost, efficient and simple technology for harvesting water from the atmosphere. The goal of this project is to develop a new understanding of the fundamental fluid mechanics on and through fog nets to devise new designs to optimize their water yield. The planned work is experimental, to be performed in our brand new lab facilities, and is also expected to involve theoretical models of the complex flow. Field work is planned together with a non-profit organization in Morocco to give ways to test the concepts developed in the projects and there will be opportunities to work with international collaborators.

The Postdoctoral Research Fellow will:

- Develop experiments on PIV flow measurements of the fog flow through the nets or investigate the capillary flow of droplets on the net
- Participate in planning and performing field work in Morocco
- Work in an interdisciplinary team with expertise in mechanics, physics and biophysics

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

The Faculty of Mathematics and Natural Sciences

Video: <https://www.youtube.com/watch?v=t4wvWQEHdEs>

### 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.

- Applicants must hold a degree equivalent to a Norwegian doctoral degree in mechanics, fluid mechanics, physics or applied mathematics. Doctoral dissertation must be submitted for evaluation by the closing date. Only applicants with an approved doctoral thesis and public defence are eligible for appointment.
- Fluent oral and written communication skills in English.
- Extended experience from experimental work in fundamental fluid mechanics.
- Good social and collaboration skills and ability to work independently and in an interdisciplinary scientific environment.
- A strong scientific record in fundamental studies in experimental fluid mechanics and/or physics.
- Be able to take the scientific lead and be self-driven to advance with their research project.

### We offer

- Salary NOK 544 400 - 626 300 per year depending on qualifications in position as Postdoctoral Research Fellowship (position code 1352)
- Attractive [welfare benefits](#) and a generous pension agreement
- Professionally stimulating working environment
- Vibrant international academic environment
- [Postdoctoral 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 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 educational certificates, transcript of records and letters of recommendation
- 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).

In assessing the applications, special emphasis will be placed on the documented, academic qualifications, as well as the candidates motivation and personal suitability. Interviews with the best qualified candidates will be arranged. It is expected that the successful candidate will be able to complete the project in the course of the period of employment.

## Formal regulations

Please see the [guidelines and regulations](#) for appointments to Postdoctoral fellowships at the University of Oslo.

No one can be appointed for more than one Postdoctoral Fellow period at the University of Oslo.

If an applicant has applied for and been granted funding for a fulltime research stay abroad while being employed as a Postdoctoral Research Fellow, the employment will be prolonged with the equivalent time as the research stay, but for no longer than of twelve months ( thus extending the employment to a maximum of four years).

According to the Norwegian Freedom of 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.

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

For further information please contact:

Professor Andreas Carlson, phone: +47 22 85 72 23, web: <https://acarlson-uio.github.io>, e-mail : [acarlson@math.uio.no](mailto:acarlson@math.uio.no)

For technical questions about the recruitment system, please contact HR-Officer Ole Rustad ([ole.rustad@mn.uio.no](mailto:ole.rustad@mn.uio.no), +47 22 85 13 87)

## 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 7500 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

**The Department of Mathematics** is part of the Faculty of Mathematics and Natural Sciences at the University of Oslo. The Department is engaged in teaching and research covering a wide spectrum of subjects within mathematics, mechanics and statistics. The research is on theory, methods and applications. The areas represented include: fluid mechanics, biomechanics, statistics and data science, computational mathematics, combinatorics, partial differential equations, stochastics and risk, algebra, geometry, topology, operator algebras, complex analysis and logic.

We have almost 50 persons in permanent academic positions and a large number of post docs and Ph.D. students. We also have an administrative and technical staff. The department represents a leading research environment in mathematical areas in Norway, and has a highly international profile.

## Additional information

### Place of service:

Moltke Moes vei 35 0851 Oslo (Oslo Municipality)