PhD Research Fellow in Fluid Mechanics

Job description

Position as PhD Research Fellow in Fluid Mechanics is available at Section for Mechanics, Department of Mathematics, University of Oslo (UiO).

The fellowship will be for a period of 3 years. Starting date no later than 01.11.2020.

The main goal is development of theory and model computations of the phenomenon of large underwater/internal waves in coastal water conditions, including where and how the waves are formed, how they break and produce vertical mixing.

The research involves three tasks. 1) Develop idealized models for underwater/internal waves, and conditions for their existence, generation and propagation. 2) Develop models that include breaking effects, flow separation effects and vertical transport. 3) Apply advanced ocean model(s), available at the Norwegian Meteorological Institute, to map suitable locations and conditions for internal wave formation along the Norwegian coast, and possibly correlate co-existence of internal waves and coral reef location.

The successful candidate will be part of a lively research environment within EcoPulse 2020-2023, a research project funded by the Research Council of Norway, where scientists from UiO, the Norwegian Meteorological Institute in Oslo, and the Institute of Marine Research in Bergen collaborate. The overall project theme is, how breaking underwater/internal waves enhance the marine biological production at coral reefs such as outside Vesteraalen, and otherwise along the coast. Models and satellite observations are combined with marine-biological measurements on The Lofoten-Vesteraalen Cabled Ocean Observatory (LoVe). He/she will be jointly supervised by Prof. John Grue (UiO) and Dr. Johannes Rohrs (Met.).

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.

- Applicants must hold an MSc degree in Mechanics, Applied Mathematics, Computational Mathematics with competences in fluid mechanics, Physical Oceanography, Meteorology, or Geoscience with competences in fluid mechanics.
- Fluent oral and written communication skills in English
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system.
- Candidates without a master's degree examination may be admitted, but appointment cannot be made until the requirement has been obtained and documented.
- The position requires a strong background and skills in one or several of these topics:
  - Computational fluid dynamics
  - Theoretical fluid mechanics modelling
  - Theoretical and computational oceanography

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
- English requirements for applicants from outside of EU/EEA countries [http://www.mn.uio.no/english/research/phd/application/application.html]

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.uio.no/english/research/phd/) and [http://www.mn.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)
- Attractive [welfare benefits](http://www.uio.no/english/research/phd/) 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
- Possibility to work in an interdisciplinary and diverse research team
How to apply

The application must include

- Cover letter including a description of scientific interests and the motivation for applying for the position
- CV (summarizing education, positions and academic work - scientific publications)
- Copies of educational certificates, transcript 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)

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).

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.

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

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.

The appointment may be shortened/given a more limited scope within the framework of the applicable guidelines on account of any previous employment in academic positions.

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

Contact information

Prof. John Grue, johng@math.uio.no or Dr. Johannes Rohrs, johannesro@met.no.

For questions regarding the recruitment system, please contact HR adviser Nina Holtan, nina.holtan@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.

Department of Mathematics is part of the Faculty of Mathematics and Natural Sciences. The Department is engaged in research covering a wide spectrum of subjects within mathematics, mechanics and statistics.

Jobbnorge-ID: 186538, Søknadsfrist: 15. juni 2020