Nansen Environmental and Remote Sensing Center
Ocean Modelling (OM)

Jobbnorge ID: 281669
Deadline: 8/18/2025
Website: https://www.nersc.no/nb
Scope: Fulltime
Duration: Permanent

About us

The Nansen Center is a Norwegian environmental research institute established in Bergen in 1986. Our activities include research and development directed at physical and biological conditions in our nearby ocean areas, in the Arctic, as well as globally. Our primary focus is to understand and predict global climate changes, and we aim to pioneer climate and environmental research. Collaborating with other national and international research communities, our research contributes to addressing some of the significant societal challenges of our time.

Currently, the center employs around 70 people from more than 20 countries. We deliver top-level research and, at the same time, are committed to ensuring a healthy work-life balance for our employees. Furthermore, equality, inclusion, and diversity are core values in our organization.

Overskrift

Researcher position in Ocean Modelling

About the group
The group develops and applies ocean models for research and operational services related to physical and ecological conditions in the ocean. The main focus area is the North Atlantic and the Arctic, and the modeling system used by the group includes ocean physics, sea ice, and marine biogeochemistry. The system is used operationally to produce ocean forecasts, long reanalyses, and, in a research context, downscaled climate projections. The research aims to understand how ocean processes in the region interact with each other on both short and long time scales. The group's expertise includes the development and application of models, with a focus on the ocean, sea ice, and marine biogeochemistry.

About the position
The Ocean Modelling Group's resource needs are increasing, and we aim to strengthen our core expertise in physical ocean modelling. A full-time researcher position has therefore been established to contribute to the group's further development of the HYCOM ocean model. The work will focus particularly on improving the representation of physical processes in the model and optimizing it for high-performance computing systems, in addition to updates and analysis of the model in a realistic configuration.

The Nansen Center has developed TOPAZ (Towards an Operational Prediction system for the North Atlantic European coastal Zones), an ocean modelling system with data assimilation that is used operationally for forecasting and producing marine reanalyses for the North Atlantic and Arctic regions. The system is based on advanced modelling and data assimilation techniques and has enabled us to deliver ground-breaking results in marine environmental and climate forecasting. It is now part of the Copernicus Marine Service and is operated by the Nansen Center in collaboration with other European partners.

The modelling system is built around the HYCOM ocean model, which is coupled with the sea ice model CICE and a data assimilation system that uses the Ensemble Kalman Filter (EnKF). It is used both as an operational system and in various research projects. In the research projects, the focus is on model development, studying the impact of ocean observations on the modelling system, and regional model studies of physical and biogeochemical processes.

Qualifications
- PhD in oceanography, applied mathematics, or a related field
- At least 3 years of experience in ocean modelling and model development, as well as publication of own research in the field
- Experience with modern models (e.g., MOM6) and machine learning is an advantage
- Strong proficiency in Fortran and analysis tools such as MATLAB or Python
- Fluent in spoken and written English

Personal qualities

- Good collaboration skills and the ability to work effectively in an international collaboration project
- Structured and self-motivated
- Ability to take initiative and seeking new solutions to theoretical and practical problems

We can offer

- Opportunities to work in collaborative projects and build a professional network
- A professional, international, and supportive working environment
- Modern, high-standard office facilities
- Excellent pension schemes
- Flexible working hours agreement
- Salary based on qualifications

Questions about the position

For more information about the position, please contact Research Leader Annette Samuelsen: annette.samuelsen@nersc.no.

How to apply

Press the bottom "Apply for this job" on this page and your application will be sent electronically to us. Please include CV with contact info and two contact references. Please note that applicants can be assessed and contacted before the application deadline. Start date by agreement.

Additional information

Place of service:

Jahnebakken 3 5007 Bergen (Bergen Municipality)