



Postdoctoral Research Fellow in Sea Ice Satellite Remote Sensing

The position

The position is funded by the project "Sea Ice Deformation and Snow for an Arctic in Transition" (SIDRIFT) through Research Council of Norway. SIDRIFT will investigate the role of sea ice deformation and snow on ice in the changing Arctic climate. We will combine the historic and modern SAR data with high-resolution snow on sea ice models to estimate effects of the snow distribution on sea ice mass balance. The project is part of the international consortium of the Multidisciplinary drifting Observatory for the Study of Arctic Climate ([MOSAiC](#)) and will provide a multitude of collaborations.

The appointment is for a period of two years. If you receive a personal overseas research grant from NFR, it is possible to apply NFR for an extension of the fellowship period corresponding to the length of the stay abroad (minimum three months, maximum 12 months).

Affiliation

The position is affiliated with the Department of Physics and Technology and the research will be conducted in the Centre for Integrated Remote Sensing and Forecasting for Arctic Operations (CIRFA).

CIRFA does research on integrated remote sensing for Arctic operations by developing data analysis methods and technologies for reliably characterizing and monitoring the physical environment of the Arctic. The Centre also explores methods to efficiently assimilate the derived information into models to perform improved predictions of sea ice state, meteorological and oceanographic conditions. See more at <http://cirfa.uit.no/>

Role and responsibilities

You will adapt, integrate and validate a sea ice classification and drift products to distinguish between leads, deformed ice and level ice from SAR. The sea ice classification will be compared to sea ice draft observations of the [Norwegian Polar Institute in the Fram Strait](#). The work will be based on current achievements at similar methods developed at CIRFA, Nansen Environmental and Remote Sensing Center (NERSC) in Bergen and University of Bremen, Germany. In addition, you will have an opportunity to train and validate the algorithms with field data from MOSAiC and beyond.

Contacts

Further information about the position and UiT is available by contacting Dr. Polona Itkin or Dr. Malin Johansson:

Polona Itkin: email polona.itkin@uit.no ; phone 77623291 / 99396145

Malin Johansson: email malin.johansson@uit.no ; phone: 77620821

Qualifications

The position requires a Norwegian doctoral degree in Physics, Geosciences, Mathematics, Computer Sciences, Statistics or similar, or a corresponding foreign doctoral degree recognised as equivalent to a Norwegian doctoral degree

We are looking for a strongly motivated person, who has an excellent academic record and potential, with analytical and problem-solving skills.

The suitable candidate should have expertise in:

- remote sensing of sea ice;
- image processing and statistics;
- scientific programming (Matlab, Python, C or alike)
- peer-reviewed publishing in scientific journals

The following skills would also be advantageous:

- Previous experience with pattern recognition methodologies;
- Previous experience with machine learning and methods like e.g. neural networks, random forest;
- Willingness and ability to participate in short field work on Arctic sea ice;
- Willingness to participate in funding applications to extend own position;
- International experience.

Moreover, you must show a good command of English, both spoken and written.

We are seeking a candidate who is independent, flexible, creative, and committed to the job. During the assessment emphasis will be put on your potential for research, motivation and personal suitability for the position.

Application

Your application must include:

- Application and motivation letter (max 1 page)
- CV (max 2 pages)
- Description of your past research project and its relevance to the advertised position (max 1 page)
- Description of your academic production (track record) including highlights of three most important works for the advertised position (max 1 page)
- Diplomas and transcripts from completed degrees
- Three references, preferably including the PhD supervisor
- Academic works, up to ten. The doctoral thesis is regarded as one work.

Having a PhD degree is required before commencement in the position. If you are in the process of completing your PhD, you must document that you have submitted your PhD thesis by the application deadline and attach a statement from your supervisor concerning termination of your PhD studies.

Documentation has to be in English or a Scandinavian language. We only accept applications through Jobbnorge.

We offer

- Young interdisciplinary team with excellent national and international network
- Field work opportunities
- Participation in international workshops and conferences
- A good working environment
- Good welfare arrangements for employees
- Good arrangements for pension, insurance and loans in the Norwegian Public Service Pension Fund

Remuneration of PhD positions are in State salary code 1352. In addition to taxes, a further 2% is deducted for the Norwegian Public Service Pension Fund.

The working hours will be utilized for research, research-related activities and research administration.

More information for working and living in Norway can be found here: [Welcome to UiT!](#)

General

We make the appointment in accordance with the regulations in force concerning State Employees and Civil Servants, and guidelines at UiT. At our website, you will find more [information for applicants](#).

The objective of the appointment as a Postdoctoral Fellow is to qualify for work in senior academic positions, and no one may be appointed to more than one fixed term period at the same institution.

A good work environment is characterized by diversity. We encourage qualified candidates to apply, regardless of their gender, functional capacity or cultural background. UiT will emphasize making the necessary adaptations to the working conditions for employees with reduced functional ability.

According to the Norwegian Freedom and 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.

UiT The Arctic University of Norway

UiT - Developing the High North

[UiT](#) is a multi-campus research university in Norway and the northernmost university of the world. Our central location in the High North, our broad and diverse research and study portfolio, and our interdisciplinary qualities make us uniquely suited to meet the challenges of the future. At UiT you can explore global issues from a close-up perspective.

Credibility, academic freedom, closeness, creativity and commitment shall be hallmarks of the relationship between our employees, between our employees and our students and between UiT and our partners.

The Department of Physics and Technology

The Department of Physics and Technology consists of six research groups: (1) Complex systems modeling, (2) Earth Observation, (3) Energy and Climate, (4) Machine Learning, (5) Space Physics, and (6) Ultrasound, Microwaves and Optics. The department provides education at the Bachelor, Master, and PhD levels, and comprises 21 permanent scientific employees, and a technical/administrative staff of 12 persons.

Jobbnorge-ID: 170347, Søknadsfrist: Avsluttet