



UiT The Arctic University of Norway with its main campus located in Tromsø is the northernmost university in the world. Its focus on climate and environment is clearly dictated by the geographical location at the edge of the Arctic. The main task of the Faculty of Science and Technology is to conduct research and teaching at high national and international level. Prioritized research areas include energy, climate, environment, maritime, marine, nano-, space-, and information technology; addressing both general topics and topics relevant for the High North.

PhD Candidate in Optical Remote Sensing for Water Quality Parameter Retrieval

The Department of Physics and Technology announces a vacant PhD Candidate position in the area of optical remote sensing for water quality parameter retrieval at UiT The Arctic University of Norway, Faculty of Science and Technology.

The position is available for commencement from 1st of January 2019 and the appointment is for a period of four years. The nominal length of the PhD program is three years. The fourth year is used for teaching or other duties for the department. The duties are normally distributed evenly over the four years.

The [Department of Physics and Technology](#) consists of five research groups: (1) Earth Observation, (2) Energy and Climate, (3) Machine Learning, (4) Space Physics, and (5) Ultrasound, Microwaves and Optics. The department provides education on the Bachelor, Master, and PhD levels, and comprises 21 permanent scientific positions and a technical/administrative staff of 12 persons.

This position is associated with the [Earth Observation group](#) and [Centre for Integrated Remote Sensing for Arctic Operations](#) at the Department of Physics and Technology. The group consists of four permanent academic staffs and several postdocs and PhDs.

The position is affiliated with the research project [The Nansen Legacy](#). The Nansen Legacy is the Norwegian Arctic research community's joint effort to establish a holistic understanding of a changing marine Arctic climate and ecosystem. The project will provide a scientific knowledge base needed for future sustainable resource management in the transitional Barents Sea and the adjacent Arctic Basin. It is a collaborative project between ten Norwegian research institutions, and will run from 2018-2023. Activities in the project will include international cooperation, and several cruises with the new, ice-going research vessel Kronprins Haakon.

Further information about the position, the project and UiT is available by contacting:

- Professor Camilla Brekke by email camilla.brekke@uit.no or telephone +47 77646297, or
- Professor Torbjørn Eltoft by email torbjorn.eltoft@uit.no or telephone +47 776 45184.

The position's field of research

The candidate shall investigate and develop algorithms for retrieval of geophysical and biochemical variables in the Barents Sea from multispectral (and hyper-spectral, if available) optical sensors. The candidate will be involved in collecting satellite data and coincident in-situ datasets, which include measurements of water quality parameters (such as chlorophyll-a, colored dissolved organic matter, and total suspended matter), and radiometric measurements of incoming irradiance and water leaving radiance. Some fieldwork can be expected. The work will include studies of various methods for retrieval of water quality parameters from optical remote sensing data, including machine learning techniques using Gaussian processes, neural networks, or support vector machines. The project will be conducted in close collaboration with marine biologists at the Faculty of Biosciences, Fisheries and Economics.

Qualification requirements and assessment

The position requires a Master's degree in physics, mathematics, statistics or machine learning. The suitable candidate is required to have course work in optical remote sensing and machine learning. It is desired that the candidate also has a strong background in signal and image processing, physics, and statistics. Some knowledge in remote sensing of Arctic waters and sea ice would be advantageous, and some experience with synthetic aperture radar would also be an asset.

We are looking for an interested, active and highly motivated candidate, who likes to explore new technologies and enjoys working in a collaboration with others. Good communication skills in English are therefore necessary and documented fluency in English is required.

To gain admission to the PhD programme, you must have a grade average of C or better. Further information about requirements for admission to PhD studies is available here: <https://uit.no/nt/phd>

The assessment will emphasize motivation and personal suitability for the position. You must be willing to engage in the ongoing development of your discipline and the university as a whole.

During this assessment process, emphasis will be put on your potential for research as shown by the Master's thesis and any other academic works. In addition, we may consider work experience or other activities of significance for the PhD studies.

Application

Your application must include:

- CV and application letter
- Diplomas and transcripts (diploma supplement)
- Documentation of English language [proficiency](#)
- References
- Master's thesis and any other academic works

You may present a description outlining the academic basis of the PhD project.

Qualification with a Master's degree is required before commencement in the position. If you are near completion of your Master's degree, you may still apply and submit a draft version of the thesis and a statement from your supervisor or institution indicating when the degree will be obtained. You must document completion of your degree before 15th of August 2018.

All documentation has to be in English or a Scandinavian language. Submit the application electronically through Jobbnorge.

We offer

- An interesting research project
- A good academic environment with dedicated colleagues
- Good career opportunities
- A large degree of independence in work
- Flexible working hours and a state collective pay agreement
- Pension scheme through the state pension fund

The UiT campus is located near the centre of Tromsø, a vibrant city located in Northern Norway with approximately 75 000 inhabitants. The location also offers ample opportunities for e.g., sighting aurora, hiking and skiing.

Terms of employment

Remuneration of PhD Candidate positions are in salary code 1017, and normally starts at salary grade 50 on the pay scale for Norwegian state employees corresponding to approx. 36 400 NOK/month in 2018. There is a 2 % deduction for contribution to the Norwegian Public Service Pension Fund. In addition, UiT pays 12 % directly to the Pension Fund on top of the salary.

You have to be qualified for and participate in our PhD study program. As many as possible should have the opportunity to undertake organized research training; thus, if you already hold a PhD or have equivalent competence, we will not appoint you to this position.

More information about moving to Norway: <http://uit.no/mobility>

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](#).

UiT The Arctic University of Norway has HR policy objectives that emphasize diversity, and encourages all qualified applicants to apply regardless of their age, gender, functional ability and national or ethnic background. The university is an IW (Inclusive Workplace) enterprise, and we will emphasize making the necessary adaptations to the working conditions for employees with reduced functional ability.

We process personal data given in an application or CV in accordance with the Personal Data Act. You may request to not be registered on the public list of applicants, but the University may decide that your name will be made public. You will receive advance notification in the event of such publication.

We look forward to receiving your application!

Jobbnorge ID: 153773, Deadline: Closed