



Jobbnorge-ID: 122118

Søknadsfrist: Avsluttet

Nettside:

Omfang:

Varighet:

Three PhD positions in Arctic Ocean Technology - “Arctic Ocean Technology and Law of the Sea Research (ATLAR)” hosted by UiT

Application deadline: 29. March 2016

Ref. 2016/1328

University of Tromsø - The Arctic University of Norway has three PhD positions vacant for applicants who wish to obtain the degree of Philosophiae Doctor (PhD). The appointment is for a period of four years.

Position number 3076 is attached to the Centre for Arctic Gas Hydrate, Environment and Climate (<http://cage.uit.no/>) at the Department of Geology, Faculty of Science and Technology. Position number 3146 is to the Centre for Integrated remote Sensing and Forecasting for Arctic Operation (<http://cirfa.uit.no/>) attached to the Department of Physics and Technology, Faculty of Science and Technology, and position number 3147 is attached to the Department of Arctic and Marine Biology, Faculty of Biosciences, Fisheries and Economics

The PhD positions are for a fixed term, with the objective of completion of research training to the level of a doctoral degree. Admission to a PhD programme is a prerequisite for employment, and the programme period starts on commencement of the position. The PhD Candidate shall participate in the faculty's organized research training, and the PhD project shall be completed during the period of employment. Information about [the application process for admission to the PhD programme, application form and regulations for the degree of Philosophiae Doctor \(PhD\)](#) is available at our website.

Further information about the positions and project details is available by contacting:

- Professor Jürgen Mienert by email jurgen.mienert@uit.no or telephone +47 776 44446
- Professor Torbjørn Eltoft by email torbjorn.eltoft@uit.no or telephone +47 776 45184
- Professor Jørgen Berge by email jorgen.berge@uit.no or telephone +47 776 46036

Arctic Ocean Technology and Law of the Sea Research (ATLAR)

This project aims to integrate innovative technologies such as remote sensing from satellites and ocean floor observatories, as well as develop solutions for future legal framework that will protect retrieval of data from integrated technologies. Our strong alliance of Arctic Ocean and Law of the Sea Research involves The K.G. Jebsen Centre for the Law of the Sea (JCLOS), The Centre for integrated remote sensing and forecasting for Arctic operations (CIRFA), The Centre for Arctic Gas Hydrate, Environment and Climate (CAGE) and the Department of Arctic and Marine Biology (AMB). Combined, these four groups from three faculties at UiT The Arctic University of Norway bring together a strong team of lawyers, marine researchers and physicists to develop scenarios and regulative actions for rapid anthropogenic driven climate change that impacts the Arctic Ocean environment and what the impacts mean to our future.

Rapid warming of the Arctic Ocean reduces the area covered by sea ice. This decrease in sea ice leads to an increase in potential areas for industrialization and shipping activity in the Arctic, possibly increasing the impact on the marine environment and ecosystems. High-resolution and long-term mapping and monitoring are necessary to distinguish human- from natural-driven impact. The gained knowledge may drive future sustainable management and decision-making in the High North. In the Arctic, environmental studies have typically been based on short-term measurements from single locations, which do not necessarily give representative inferences over larger areas. We aim to develop high-resolution space- and air-borne remote sensing systems, in combination with advanced marine technology that will allow for integrated long-term environmental monitoring. Such an approach provides an improved understanding of processes taking place on larger spatial scales. It will allow determining causal relations between local phenomena and processes of regional and global relevance. There will be four PhD positions connected to our project. All positions are for four years, and it is expected that all successful candidates participate actively in ATLAR. This announcement covers the three positions in Arctic Ocean Technology. The forth, on the topic “*Technology and Law of the Sea*” will be announced separately.

Position number 3076 - Affiliation and field of research

Arctic oceanography/ocean observatory technology: PhD position 3076 is in the field of Arctic oceanography/ocean observatory technology. The position interconnects the seafloor, ocean and atmosphere regarding two important questions: How large is the flux of methane from the seafloor to the atmosphere? What are the magnitudes and rates of changes occurring in the Arctic under increasing ocean temperature scenarios? Ocean observatories and modelling can contribute to answering these questions. The successful candidate holds a M.Sc. degree (or similar) in oceanography, ocean modelling and/or marine technology, with good cooperative skills and a desire to work in a cross-disciplinary team. The candidate will work with ocean observatories, autonomous underwater vehicles and shipboard and satellite measurements to determine the flux of methane from the seafloor to the atmosphere under different sea stage and sea ice conditions. The candidate must hold

experience from large acoustic and ocean-chemistry data analysis. The candidate needs to show ability to coordinate large and different data sets for modelling and future predictions. The position will be connected to the ongoing Centre of Excellence CAGE (www.cage.uit.no) and the project MOCA (<http://moca.nilu.no/>). The candidate will have advisors from both UiT and NILU, and must be able to work for short periods also in Oslo and Tromsø. The main working place will be at CAGE, Department of Geology at UiT.

Position number 3146 - Affiliation and field of research

Remote sensing: This PhD position is affiliated with the Department of Physics and Technology. The successful candidate will do research in the field of remote sensing, with emphasis on characterizing and monitoring sea ice conditions in the marginal ice zone. The work will involve analysis of multi-modal sensor data, which may include multi-spectral and/or hyper spectral optical data, new synthetic aperture radar (SAR) imaging products like quad polarization images and/or interferometric image pairs, and development of methodologies for fusing SAR and optical data sets. Candidates should have strong analytical skills, experience with data analysis and remote sensing, and good background in physics, mathematics, statistics and signal processing. The candidate must have interests in both theoretical and applicative aspects of data analysis, and interest in multi-disciplinary research. The position will be connected to CIRFA (cirfa.uit.no), and the working place will be at the centre's location, with supervisors from UiT.

Position number 3147 - Affiliation and field of research

Arctic marine biology/technology: The successful candidate holds a M.Sc. degree (or similar) in marine biology or technology, marine cybernetics or underwater technology, with good cooperative skills and a desire to work in a cross-disciplinary team. The candidate will work with autonomous underwater vehicles to characterise sea-ice fauna- and algal communities, and with remote sensing (satellites and/or drones) to characterise/quantify different ice types. The candidate must hold experience from data treatment and/or control engineering, and ability to coordinate large and different data sets. Experience from use of optical sensors from either remote sensing or water column mapping is a pre-requisite. Experience with MatLab (or similar) is an advantage. The position will be connected to the ongoing research project Arctic ABC (www.mare-incognitum.no). The candidate will have advisors from both UiT and NTNU, and must be able to work for extended periods in both Svalbard and Trondheim. The main working place will be in the Department for Arctic and Marine Biology at UiT (BFE).

Qualification and English language requirements

The successful applicants must fulfil the requirements for admission to the faculties' PhD programmes, cf. Regulation for the degree of Philosophiae Doctor (PhD) at UiT. Emphasis shall also be attached to personal suitability.

Foreign applicants must provide documentation that they have the required proficiency in English, i.e. English language skills that is equal to Norwegian Higher Education Entrance Qualification. This can be documented by:

- Certified English tests:
 - University of Cambridge exams: *Certificate in Advanced English* or *Certificate of Proficiency in English*
 - TOEFL-test with a score above 580 points, data based test 213 points or internet based test 85 points.
 - IELTS-test scores above 6.5 points
- Providing documentation that the Master's degree was completed with English as language of instruction and have written their Master's thesis in English.
- Other exceptions that are in accordance with NOKUTs guidelines for language requirement [The GSU-list](#) including that applicants from the EU/ EEA, which can document that they have had English as their first foreign language in primary/secondary school for at least 7 years.

Working conditions

The normal period of employment is four years. The nominal length of the PhD programme is three years. The fourth year is used for teaching or other duties for the university, cf. Guidelines for the research fellow's duties. The teaching duties are spread about equally over the four years.

The positions will especially be assigned teaching duties at the respective host departments.

A shorter period of appointment may be decided when the research fellow has already completed parts of his/her research training programme or when the appointment is based on a previous qualifying position (PhD Candidate, research assistant, or the like) in such a way that the total time used for research training amounts to three years.

Remuneration for the position of PhD Candidate is in accordance with the State salary scale code 1017. A compulsory contribution of 2 % to the Norwegian Public Service Pension Fund will be deducted.

Assessment

An expert committee will assess the applicants. During this assessment process, emphasis will be attached to the applicant's potential for research as shown by:

- Master's thesis or equivalent
- any other academic works, and

In addition, consideration may be given to work experience or other activities of significance for the implementation of the PhD studies, and to any teaching qualifications. This includes teaching education, teaching experience, experience from popularization, and experience/education from other types of dissemination. Information and material to be considered during the assessment must be submitted by the stipulated deadline.

The applicants who are assessed as the best qualified will be called to an interview. The interview shall among other things aim to clarify the applicant's personal suitability for the position.

Application

The **application** must be submitted electronically via the application form available on www.jobbnorge.no.

In addition, by the application deadline, the application shall contain:

- Letter of application
- CV (containing a complete overview of education, supervised professional training and professional work)
- Certified* copies of:
 - *diploma and transcript from your Bachelor's degree or equivalent*
 - *diploma and transcript from your Master's degree or equivalent*
 - *diploma supplement for completed degrees*
 - *documentation of English language proficiency*
- references
- List of works and description of these (see below). The list of works shall contain the following information:
 - author(s), the work's title
 - for articles: the journal's name and volume, the first and last page of the article, year of publication
 - for publications: publisher, printer, year of publication, number of pages

All photocopies of certificates, diplomas, transcript and reference letter must be stamped and certified by the photocopying or a public office.

All documentation that is to be evaluated must be certified and translated into English or a Scandinavian language.

Information and material to be considered during the assessment must be submitted by the stipulated deadline.

The works (published or unpublished), which the applicant wishes to be taken into consideration during the assessment process, **must be submitted**.

Applicants shall also refer to the *Utfyllende bestemmelser for tilsetning i stillinger som postdoktor, stipendiat (PhD) og vitenskapelig assistent (Research Assistant) positions at the UiT and to the Forskrift om ansettelsesvilkår for stillinger som postdoktor (Postdoctor), stipendiat (PhD), vitenskapelig assistent (Research Assistant) og spesialistkandidat (Resident)* [here](#).

Working environment

Questions concerning the organisation of the working environment, such as the physical state of the place of employment, health service, possibility for flexible working hours, part time, etc. as well as questions about the PhD programme may be directed to the telephone reference in this announcement.

UiT has HR policy objectives that emphasize diversity, and encourages all qualified applicants to apply regardless of their gender, functional ability and national or ethnic background.

UiT is an IW (Inclusive Workplace) enterprise, and will emphasize making the necessary adaptations to the working conditions for employees with reduced functional ability.

Personal data given in an application or CV will be processed in accordance with the Act relating to the processing of personal data (the Personal Data Act). In accordance with Section 25 subsection 2 of the Freedom of Information Act, the applicant may request not to be registered on the public list of applicants. However, the University may nevertheless decide that the name of the applicant will be made public. The applicant will receive advance notification in the event of such publication.

Tilleggsinformasjon

Arbeidssted: