



About UNIS

UNIS is the world's northernmost educational institution, located in Longyearbyen. UNIS has technical and scientific equipment, laboratories and infrastructure well suited for teaching and research in Arctic natural science and technology for sea, land and atmosphere.

The disciplines include Arctic Biology, - Geophysics, - Geology and - Technology. All courses are taught in English, and about half of the staff and students are from abroad. UNIS is a state-owned corporation. The administrative language is Norwegian.

Ph.D. Student position in meteorological processes related to renewable energy

General

The department of Arctic Technology at UNIS, together with the Norwegian University of Science and Technology (NTNU), seeks a Ph.D. student for a full-time four-year position in meteorological processes related to renewable energy. The Department of Arctic Technology currently has 2 Professors, 1 Associate Professor, 2 Ph.D. students and 13 Adjunct Professors. The department conducts education and research in ice mechanics, offshore engineering, loads and structures, geotechnics, environmental technology and toxicology, arctic safety and renewable energy solutions. The department provides 16 courses at Bachelor, Master and Ph.D. level.

Description of the vacant position

Renewable energy is a new prioritised theme in Svalbard and globally due to the goal to reduce the current dependency on fossil fuels. Several Svalbard companies are shifting to more environmentally friendly alternatives, including wind and solar energy. Construction of these systems in the Arctic poses unique logistical and technical challenges due to the extreme Arctic environment, which includes snow, ice and permafrost, but also the isolation and remoteness. Of particular importance are the distinct meteorological conditions in a cold climate and how they affect the energy potential and installations. The understanding of these processes is much poorer than at lower latitudes; for example, the influence of the strong stable atmospheric boundary layer, influence of terrain induced phenomena, and icing processes.

To support the move from fossil fuels to renewables the Department of Arctic Technology together with NTNU, is now seeking a Ph.D. student to focus on meteorological processes important for renewable energy, in particular connected to wind and solar energy. The Ph.D. student will be involved in ongoing and new projects around Longyearbyen and other locations in Svalbard and will work together with local partner organisations, some of whom are investigating business opportunities within green energy in other Arctic regions. Further, through NTNU the Ph.D. student will be involved in other international collaboration with industry and institutions outside Svalbard.

Observational data of meteorological parameters from masts and towers, as well as radiation measurements are to be used in the Ph.D. project and the studies may also include numerical modelling, reanalysis of data and machine learning.

Qualifications and personal qualities

Applicants must have a strong academic background and hold a M.Sc. in, Meteorology, Environmental/Energy engineering, Applied mathematics, Applied physics, Mechanics, Structural engineering (dynamics), or a related subject directly relevant. Candidates in the finalization phase of their master thesis work may be considered if they can document that they are particularly suitable for this position. Knowledge of renewable energy meteorology as well as boundary layer meteorology in cold climates is an advantage as well as general knowledge of renewable hybrid energy systems. Experience of field work, especially in cold climates, and working with observational and numerical model data, is an advantage. Additionally, scientific writing including authorship of scientific publications is beneficial.

Applicants must be able to work independently, in a structured manner, and demonstrate good collaborative skills. The applicant must be proficient in both written and spoken English and, due to local Norwegian company cooperation partners, it is considered a major strength if the candidate is fluent in a Scandinavian language to enable efficient collaboration. The successful candidate will be subject to a security control.

Motivation and personal suitability will be emphasized. To allow assessment of this, a statement of personal and scientific interest in taking a Ph.D. degree, including an outline of a Ph.D. project idea, must be included in the application.

Employment conditions

The total duration of the PhD position is 4 years, of which 25% comprises teaching duties at UNIS, including supervision of M.Sc. students.

All salaries are set in accordance with the Norwegian government's University salary scale. Ph.D. candidates start in salary steps 54, which is a gross salary of NOK 481.800,-. As a resident in Svalbard an annual allowance of NOK 34.560,- (Svalbardtillegg) will be added to the salary. A Social Security contribution of 2%, to the Norwegian Public Service Pension Fund, will be deducted from the salary. Income tax on Svalbard is 8%, plus 8.2% toward National Insurance coverage.

About the research training

The candidate must satisfy the enrolment requirements for the doctoral degree program at NTNU. The Ph.D. position's main objective is to qualify for work in research positions. The qualification requirement is that you have completed a master's degree or second degree (equivalent to 120 credits) with a strong academic background and a grade of B or better in terms of [NTNU's grading scale](#). If you do not have letter grades from previous studies, you must have an equally good academic foundation. Applicants who are unable to meet these criteria may be considered only if they can document that they are particularly suitable candidates for education leading to a Ph.D. degree. A plan for the implementation of the research training must be approved by the faculty. The candidate is expected to complete relevant courses as part of the formal Ph.D. training.

Application

Inquiries about this position may be directed to Prof. Anna Sjöblom (UNIS), email: annac@unis.no, or Prof. Knut Høyland (NTNU/UNIS), email: knut.hoyland@ntnu.no

The application, submitted electronically in www.jobbnorge.no, must include:

- Cover letter
- Project proposal/Research proposal (1-2 pages) describing:
 - why you are interested in the project
 - why and how you wish to complete the project, including research questions, research methods and hypothesized results
 - what makes you suitable for the project
- CV (including a complete overview of education, professional training and professional work)
- Name and contact information for two or more referees
- Your language skills
- Transcripts and diplomas showing completion of the bachelor's and master's degrees, or official confirmation that the master's thesis has been submitted
- Relevant certificates/academic references
- A list of any works of a scientific nature (publication list)
- Any peer review publications in your name
- A copy of the master thesis

The application and appendices with certified translations into English or a Scandinavian language must be uploaded in Jobbnorge.

You can request to have your application kept from public access cf. the open files act § 25. The request must be explained. UNIS will determine if the application will be kept from public access or not, based on the explanation and the regulations from the open files act. If the application will not be accepted, the candidate will be contacted.

Selection and appointment

A committee appointed by the Director of UNIS will evaluate the qualifications of the applicants, and invite the highest ranked person(s) for an interview. The appointment will be made by the Director of UNIS based on the recommendation from the committee.

Longyearbyen

Longyearbyen is located in Svalbard, in the midst of a varied and beautiful Arctic nature with good opportunities for outdoor activities. Longyearbyen is a modern town with approx. 2200 inhabitants and has a good service offering including kindergartens, swimming / sports hall and a varied association, sports and cultural life.

Jobbnorge-ID: 204913, Søknadsfrist: 1. juni 2021