



UNIS is a state-owned limited company with five of Norway's universities represented on the board. UNIS is located in a modern working environment in Longyearbyen, Svalbard, and is well equipped with both technical and scientific equipment and laboratories. The institution has an infrastructure for both marine and terrestrial field research in Svalbard.

PhD research fellowship in Quaternary Geology at the University Centre in Svalbard (UNIS)

The Department of Arctic Geology at UNIS is seeking applicants for a full-time, 4 year position as a PhD fellow in Quaternary Geology. Currently the department constitutes 4 professors, 5 associate professors, 5 PhD students, 9 Adjunct positions and 1 technical/administrative staff. The department conducts research and education in Arctic marine and terrestrial geology, and currently provides 24 courses at bachelor, master and PhD levels. The department focuses on six main areas, all with an emphasis on High Arctic systems: marine geology, Quaternary geology, permafrost and periglacial geomorphology, glaciology, sedimentology, and structural geology. Additional information about the department can be found at www.unis.no.

Description of the vacant position

The PhD project will focus on investigating signatures of rapid collapse and retreat of the Svalbard-Barents Sea Ice Sheet (SBIS) back on to the Svalbard Archipelago during the Last Glacial Termination (~18-11 ka BP). The project will combine detailed marine sedimentological analysis of offshore glacial and glacialine sequences on the Svalbard continental shelf with an integrated geomorphic and sedimentological investigation of linked terrestrial and marine records back on to the Svalbard archipelago.

Primary project goals are to:

- map and date ice margin patterns from the continental shelf back on to the Svalbard archipelago across the early deglacial interval of Termination I.
- identify and characterize the extent, timing, and style of former deglacial ice shelves and ice tongues based on marine and terrestrial landforms and sediments.
- develop an integrated reconstruction of ice margin behaviour during the early deglacial period to help elucidate the role of sea-level, oceanography, sea-ice, climate, and internal dynamics on retreat dynamics.

The offshore component will be centred on palaeoceanographic and sediment facies mapping using detailed lithostratigraphic analyses of sediment cores supplemented by the biostratigraphic investigation of microfossil (foraminifera) assemblages to characterize subglacial and glacialine depositional environments. The goal is the determination of former floating ice margins (ice shelves). Existing core materials will be made available to the successful candidate to permit the immediate commencement of this work. Core analysis will be supplemented by the utilization of the Earthlab National Research Infrastructure in Bergen, permitting advanced three-dimensional CT imaging and other methods crucial for detailed facies identification and mapping.

The terrestrial and nearshore component will investigate the geomorphology of ice sheet retreat across Svalbard, combining both terrestrial and marine mapping in an integrated land systems approach. The identification of former ice margins and ice flow dynamics, and the recognition of former ice shelf grounding lines, calving margins, and lateral moraines previously under-reported in the literature will form the main focus of this component of the project. Terrestrial fieldwork will seek to provide detail on landform assemblage relationships and former sea-levels, testing and finessing of remotely mapped land system interpretations, and the collection of materials for geochronological assay.

The PhD will be based at the Department of Arctic Geology (UNIS). The candidate will be admitted to a PhD program at a Norwegian university following their successful application to UNIS. Associate Professor Mark Furze and Professor Riko Noormets (UNIS) will be the main supervisors.

Qualifications and personal qualities:

- Applicants must hold a master's degree or the equivalent in a relevant field, such as Quaternary geology, physical geography, or similar, and must have submitted his/her master's thesis for assessment prior to the application deadline. It is a condition of employment that the master's degree has been awarded.
- The ideal candidate will have experience in terrestrial and marine Quaternary field mapping, geomorphology, and sedimentology/stratigraphy.
- Experience in ship-based multibeam and sub-bottom seismic surveying and with geographical information systems (GIS) is an advantage.
- Knowledge of marine micropalaeontology is also preferable.
- Previous experience of fieldwork in remote, arctic, or alpine environments is highly desirable.
- Authorship or co-authorship of scientific publications is an advantage.
- Applicants must be able to work independently and in a structured manner, and demonstrate good collaborative skills.
- Applicants must be proficient in both written and oral English.

The PhD involves both terrestrial and marine-based field work on and around Svalbard in both summer and winter, which can be physically very demanding. A suitable level of physical fitness is expected.

Motivation and personal suitability will be emphasized. To allow assessment of this, a statement of personal and scientific interest in taking a PhD degree within the announced topic must be included in the application.

Employment conditions

The total duration of the PhD position is 4 years, of which 25% comprises teaching duties. The employment potentially includes some supervision duties of Master and/or Bachelor students.

All salaries are set in accordance with the Norwegian government's University salary scale. PhD fellow research fellows start at a gross salary of NOK 449 000 annually. As a Svalbard resident an annual allowance of NOK 34 560 (Svalbardtillegg) will be added to the salary. A Social Security contribution of 2 per cent, 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. UNIS offers a membership in the Norwegian Public Pension Fund.

About the research training

The candidate must satisfy the enrolment requirements for the doctoral degree programme at a Norwegian university. A final plan for the implementation of the research training must be approved by the faculty of the Norwegian university within three months after starting in the position.

Selection and appointment

A committee appointed by the Managing 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.

Application

Inquiries about this position may be directed to:

Assoc. Prof. Mark Furze, email: mark.furze@unis.no or

Prof. Riko Noormets, email: riko.noormets@unis.no

Head of Department of Arctic Geology, Prof. Hanne Hvidtfeldt Christiansen, email: hanne.christiansen@unis.no

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

- Letter of motivation
- CV (including a complete overview of education, professional training and professional work)
- Name and contact information for two or more referees
- 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/references
- A list of any works of a scientific nature (publication list)
- Any peer review publications in your name

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

Deadline for application is March 15th 2019.

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.

