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The Department of Engineering Cybernetics (ITK) has a vacancy for

Researcher within optical remote sensing systems

This is NTNU

NTNU is a broad-based university with a technical-scientific profile and a focus in professional education. The university is located in three cities Trondheim, Gjøvik og Ålesund.

At NTNU, 9,000 employees and 43,000 students work to create knowledge for a better world.

You can find more information about working at NTNU and the application process [here](#).

Video: <https://www.youtube.com/watch?v=WWHgR5i1FHE>

About the Job

We have a vacancy for a full-time permanent position as researcher in the field of Optical Remote Sensing Systems at NTNU's Department of Engineering Cybernetics (ITK). Engineering cybernetics is about automatic control and monitoring of technical and natural systems. This field is at the front of the technological development, where research on remote sensing is rooted in the strategic areas of small satellites and autonomous systems at the Faculty for Information Technologies and Electrical Engineering at NTNU.

The primary workplace is at Gløshaugen campus in Trondheim. Some travelling must be expected in connection with field operations and testing.

Your immediate leader is Head of Department.

Duties of the position

The researcher will participate in various research projects related to remote sensing using small satellites and autonomous robotic systems. Particular focus is on hyperspectral imaging for ocean observation where NTNU's HYPSONO-1 and HYPSONO-2 satellites, the SeaBee national infrastructure, as well as several autonomous surface vessels and in-situ observation systems are key assets. Many of the projects will involve close collaboration within the department, students, other parts of NTNU, external research partners, industry and end users.

The position is interdisciplinary and involves collaboration with scientists in physics, chemistry, biology, ocean sciences, electronics, computer science and mathematics.

The main work tasks will be:

- Research and development related to hyperspectral imaging and data processing, ranging from instrument development/integration, to processing algorithms and software development.
- Applications of hyperspectral imaging to earth and ocean observation, mapping, surveillance and monitoring.
- Development, upgrading and operation of experimental research infrastructure at NTNU, in particular the SmallSat-lab (HYPSONO satellites) but also associated systems at the UAV-lab, SeaBee and AUR-lab.
- Field experiments involving small satellite operations, in-situ measurements and ground-truthing.
- Project management, planning, coordination, risk and quality management.
- Develop partnerships and applications for external funding.
- Co-supervision of master and doctoral students as part of research projects.
- Contributions to education in relevant courses
- Publication, dissemination and public outreach.
- Participate in administrative activities, such as hiring committees and educational and research boards, that are conducted at the Department of Engineering Cybernetics.

The position will also contribute to other tasks related to the department's ongoing research and education activities. The working area of the position can change in order to serve the department's needs.

Required selection criteria

- Doctoral degree in a relevant area such as cybernetics, remote sensing, signal/image processing.
- Expertize on optical remote sensing systems for earth and ocean observation.
- Expertize on hyperspectral imaging systems, including data processing algorithm development and implementation.
- The work environment is international and the candidate must have excellent communication skills in English, both orally and in writing.

New employees who do not speak a Scandinavian language by appointment is required, within three years, to demonstrate skills in Norwegian or another Scandinavian language equivalent to level three of the [course for Norwegian for speakers of other languages at the Department of Language and Literature at NTNU](#).

The research at NTNU in this field has civilian objectives. However, some of the equipment being used is subject to export regulations or other limitations such as ITAR (International Traffic in Arms Regulations), and the position requires that the applicant has permission to use such equipment. Applicants who are citizens of Norway, Australia, New Zealand, Japan, Sweden, or NATO countries will satisfy the requirements.

Preferred selection criteria

- Expertize on development and use of micro- or cube-satellites.
- Experience with field campaigns and use of optical remote sensing from several platforms such as Copernicus, small satellites, and drones, as well as in-situ observation systems for validation, calibration and ground-truthing.
- Experience with software development and embedded systems (onboard processing), including C/C++ programming.
- Experience or interest in writing research proposals.
- Experience with student supervision.
- Interdisciplinary mindset.
- Experience with project planning and coordination.
- Valid driver's license in Norway equivalent to class B.

Personal characteristics

Personal skills will be given large weight. It is important that the person being hired is

- Systematic: It is important that the person is systematic.
- Strategic: Can contribute to management and administrative work.
- Team player: Has good collaboration skills, an interdisciplinary mindset.
- Relationship builder: Will enjoy working with both employees and students.
- Flexible: It is also important that this person is flexible, can work efficiently in multiple projects at the same time.
- Initiator: shows willingness to take initiative and responsibility.
- Creative: Contributes with creative solutions in exciting research projects.

We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and [inclusive work environment](#) with dedicated colleagues
- favourable terms in the [Norwegian Public Service Pension Fund](#)
- [employee benefits](#)

Salary and conditions

The gross salary for the position of Researcher (Forsker kode 1009) is normally remunerated at gross from NOK 565 000 - 760 000 before tax per year, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants, and the acts relating to Control of the Export of Strategic Goods, Services and Technology. Candidates who by assessment of the application and attachment are seen to conflict with the criteria in the latter law will be prohibited from recruitment to NTNU.

The position is subject to external funding.

It is a prerequisite that you can be present at and accessible to the institution when required by the employer.

About the application

The application and supporting documentation must be in English.

Please note that your application will be considered based solely on information submitted by the application deadline. You must therefore ensure that your application clearly demonstrates how your skills and experience fulfil the criteria specified above. If, for any reason, you have taken a career break or have had an atypical career and wish to disclose this in your application, the selection committee will take this into account, recognizing that the quantity of your research may be reduced as a result.

The application must include:

- CV, certificates and diplomas
- Academic works - published or unpublished - that you would like to be considered in the assessment (up to 10 works)

- Names and contact information for three relevant referees

Joint work will also be considered. If it is difficult to identify your specific input to a joint project, you must include evidence of your contributions.

In the assessment of the best qualified applicant, we will emphasize education, experience and personal suitability as well as your motivation for the position.

NTNU is committed to following evaluation criteria for research quality according to [The San Francisco Declaration on Research Assessment - DORA](#). This means that we pay special attention to the quality and professional breadth of these works. We also consider experience from research management and participation in research projects. We place great emphasis on your scientific work from the last five years.

General information

NTNU believes that inclusion and diversity is a strength. We want our faculty and staff to reflect Norway's culturally diverse population and we continuously seek to hire the best minds. This enables NTNU to increase productivity and innovation, improve decision making processes, raise employee satisfaction, compete academically with global top-ranking institutions and carry out our social responsibilities within education and research. NTNU emphasizes accessibility and encourages qualified candidates to apply regardless of gender identity, ability status, periods of unemployment or ethnic and cultural background.

NTNU is working actively to increase the number of women employed in scientific positions and has a number of [resources to promote equality](#).

The city of Trondheim is a modern European city with a rich cultural scene. Trondheim is the innovation capital of Norway with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

As an employee at NTNU, you must at all times adhere to the changes that the development in the subject entails and the organizational changes that are adopted.

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you want to reserve yourself from entry on the public applicant list, this must be justified. Assessment will be made in accordance with [current legislation](#). You will be notified if the reservation is not accepted.

If you have any questions about the position, please contact Tor Arne Johansen, telephone +47 73590395, email: tor.arne.johansen@ntnu.no. If you have any questions about the recruitment process, please contact HR, e-mail: rekrutteringsteam@ie.ntnu.no.

If you think this looks interesting and in line with your qualifications, please submit your application electronically via jobb norge.no with your CV, diplomas and certificates attached. Applications submitted elsewhere will not be considered. Upon request, you must be able to obtain certified copies of your documentation.

NTNU - knowledge for a better world

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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Department of Engineering Cybernetics (ITK)

Engineering cybernetics is the study of automatic control and monitoring of dynamic systems. We develop the technologies of tomorrow through close cooperation with industry and academia, both in Norway and internationally. The Department contributes to the digitalization, automation and robotization of society. The [Department of Engineering Cybernetics](#) is one of seven departments in the [Faculty of Information Technology and Electrical Engineering](#).

Tilleggsinformasjon

Arbeidssted:

Gløshaugen Campus 7034 Trondheim (Trondheim Kommune)