Jobbnorge ID: 310358
Deadline: 16.11.2026
Website: http://www.ntnu.no
Scope: Fulltime
Duration: Temporary

The Department of Design has a vacancy for a

PhD Candidate in Human-AI Teaming for Maritime Operations

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 with headquarters in Trondheim.

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

You will find more information about working at NTNU and the application process here.

Video: https://www.youtube.com/watch?v=_KHQjc4ndas&t=41s

About the position

At the Department of Design at NTNU we educate designers with an understanding of technology and society; researches the interaction between people, technology, society and nature; and design innovative, human-centred and aesthetic products, systems and services.

The position is based in Trondheim and will be affiliated with Shore Control Lab, a design and human factors research environment focusing on human-centred design of emerging technologies for safety-critical operational contexts.

Are you motivated to take a step towards a doctorate and open up exciting career opportunities? As a PhD Candidate at NTNU, you will work to achieve your PhD, and at the same time gain valuable research experience that qualifies you for a career in higher education and research, both in and outside academia.

You will produce tangible, interactive designs that support human-AI teaming in the maritime domain. The project will contribute to research within human-computer interaction and human factors on topics including:

- human-AI teaming in safety-critical work
- AI transparency and explainability in operational decision-making
- interaction design for AI-enabled maritime systems
- evaluation of human performance, situation awareness, workload, trust, and safety-related outcomes as part of assurance

Key methods will include human-centred design, iterative prototyping, user testing, and a mix of qualitative and quantitative methods. The PhD project is expected to develop and evaluate concepts that help onboard and remote operators collaborate effectively with AI, knowing when to rely on, question, or override AI recommendations.

Your immediate leader will be the Head of Department.

About the Norwegian Maritime AI Centre (MAI)

This position is connected to the Norwegian Maritime AI Centre (MAI), a new national hub for research, innovation, and education in artificial intelligence for the maritime domain. MAI brings together universities, research institutions, industry, and public authorities to make the maritime sector smarter, safer, and more sustainable through world-class AI research and applications. MAI's mission is to accelerate the operationalization of AI across maritime value chains - spanning navigation, logistics, maintenance, training, and energy management - ensuring safety, transparency, and trust.

Duties of the position

- Conduct research on interaction design and evaluation for human-AI teaming in maritime operations
- Plan and execute iterative prototyping cycles with concepts, prototypes, and evaluations
- Perform empirical studies using mixed methods (e.g., interviews, observations, usability testing, experiments, simulation-based evaluation)
- Publish results in relevant venues and contribute to cross-disciplinary MAI activities
- Participate in collaboration with MAI partners and real-world use cases

Be prepared for changes to your work duties after employment.

Required selection criteria

- You must meet the requirements for admission to the faculty's Doctoral Programme in Design, see Section 6-1 of the PhD regulations for more information.
- Master's degree (or equivalent) in industrial design, design, HCI, human factors, interaction design, cognitive psychology, or another relevant field
- Strong academic record and motivation for doctoral research
- Documented competence in English (written and spoken)

The appointment is to be made in accordance with NTNUs guidelines for recruitment positions for general criteria for the position.

Preferred selection criteria

- Strong prototyping competence and ability to iterate quickly based on user feedback
- Experience designing explanations/visualisations for complex data, models, or uncertainty
- Experience with evaluation of decision-support systems in safety-critical domains
- Familiarity with maritime operations or other safety-critical domains
- Good oral and written presentation skills in English

Personal characteristics

To complete a doctoral degree (PhD), it is important that you are able to:

- Work independently
- Work in a structured way, set goals and make plans to achieve them
- Present and discuss your research with other professionals
- Get involved and contribute constructively with feedback
- Work constructively under pressure or in the face of adversity
- Show curiosity and a strong motivation for the subject
- Analyze data, assess different perspectives and draw well-founded conclusions
- Be flexible and open to adjusting the plan for the project as needed

Emphasis will be placed on personal qualities.

We offer

Evaluate and remove/add what is relevant for the position.

- An exciting job with an important mission in society
- Developing tasks in a strong and international professional environment
- Career guidance and follow-up during the PhD period
- Open and inclusive working environment with committed colleagues
- Working capital that can be used to implement the project
- Mentor programme as a new employee at NTNU
- Favorable terms as a member of the Norwegian Public Service Pension Fund (SPK)
- Free Norwegian language training at a basic level (A2)

As a PhD Candidate at NTNU, you will have access to employee benefits.

Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and that makes use of the potential of the population's collective skills. Our vision is Knowledge for a better world and our values are creative, critical, constructive and respectful. We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals.

We strive to attract employees with different skills, life experiences and perspectives to contribute to even better problem solving of our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

At NTNU we want to increase the proportion of women in scientific positions. We have a number of measures to promote equality.

Salary and conditions

In the position of PhD Candidate, code 1017, your gross salary will normally be NOK 580 000,-per annum depending on qualifications and seniority. A 2% statutory contribution to the State Pension Fund is deducted from the salary.

The employment period is 3 years for the doctoral work.

For employment as a PhD Candidate, it is a prerequisite that you gain admission to the PhD programme in Design within three months of your employment contract start date, and that you participate in an organized doctoral programme through out the period of employment.

The position is conditional on external funding.

As an employee at NTNU, it is important that you keep yourself up to date with academic and organizational changes and adapt to them.

For the necessary professional and social interaction, it is a prerequisite that you are physically present and available to the institution on a daily basis.

The appointment is carried out in accordance with the principles of the State Employees Act, and Export control (legislation that regulates the export of knowledge, technology and services). Candidates who, after assessment of the application and attachments, are considered to bein conflict with the criteria in the latter act, will not be able to be employed.

About the application

The attachments (including a description of your scientific work) must accompany the application as these documents form the basis of the application assessment. The documents must be in Norwegian/a Scandinavian language or English.

Please note: the application will only be assessed on the basis of the information we have received by the application deadline. Therefore, make sure that your application clearly shows how your skills and experience meet the criteria described above. The application and all attachments must be sent electronically via Jobbnorge.no. If you are invited to an interview, you must bring certified copies of certificates and diplomas upon request.

The application must include:

- Transcripts and diplomas for Bachelor's and Master's degrees
- CV
- Copy of Master's thesis. If you have recently submitted your Master's thesis, you can attach a draft of the thesis. Documentation of a completed Master's degree must be presented before taking up the position.
- Project outline containing proposals for an overall description of research questions, theoretical perspectives, methodological design for the project and progress plan (maximum 1500 words/4 pages)
- Short letter of motivation (400 words/1 page)
- Possibly publications etc. other relevant research work
- Possibly certificates
- Names and contact information of three relevant referees

If all, or parts, of your education has been taken abroad, we also ask you to attach documentation of the scope and quality of your entire education, both Bachelor's and Master's education, in addition to other higher education. If your institution uses “diploma supplement” (normal for most European institutions), you must attach this. A description of the documentation required can also be found here. If you already have a statement from Norwegian Directorate for Higher Education and Skills (HK-dir), please attach this as well.

Joint work will be considered. If it is difficult to identify your contribution to joint work, you must attach a brief description of your participation.

When assessing the best qualified, we emphasize necessary qualifications such as education, experience and personal suitability. Motivation for the position, ambitions, and potential for research will also count when assessing the candidates.

NTNU recognizes a wide range of academic contributions and has committed itself to The San Francisco Declaration on Research Assessment and CoARA (responsible assessment of research and recognition of a greater breadth of academic contributions in accordance with NTNU's social mission).

General information

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you wish to be exempt 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 exemption is not granted.

If you think this position looks interesting and in line with your qualifications, you are welcome to apply.

If you have any questions about the position, please contact Professor Ole Andreas Alsos, telephone +47 91544825, email oleanda@ntnu.no.

If you have any questions about the recruitment process, please contact HR advisor Natalia Swahn, e-mail: natalia.swahn@ntnu.no.

Application deadline: 16.11.2026

For practical information about working at NTNU, please visit this webpage.

The city of Trondheim is a modern European city with a rich cultural scene. Trondheim is the tech 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.

NTNU - knowledge for a better world

NTNU - knowledge for a better world

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

Department of Design

We are located in both Trondheim (industrial design) and Gjøvik (graphic design and web technology). Both groups have expertise in interaction design and share research interests in health and welfare technology. The design environment links many technology communities at NTNU, and nationally the Department has extensive collaboration with Norwegian industrial companies. The Department of Design is one of four departments in the Faculty of Architecture and Design.

Additional information

Place of service:

Høgskoleringen 1 7491 Trondheim (Trondheim Municipality)