



# NTNU

Kunnskap for en bedre verden

The Department of Electronic Systems has a vacancy for a

## Postdoctoral Fellowship in Machine Learning over Networks and Graphs: Impacting IoT and Health

Apply for this job

(<https://www.jobbnorge.no/jobseeker/#/application/apply/243035>)

See advertisement



## 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 can find more information about working at NTNU and the application process [here \(https://www.ntnu.edu/positions/job-application-process\)](https://www.ntnu.edu/positions/job-application-process).

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(Video unable to load from YouTube. Accept cookie and refresh page to watch video, or click [here \(https://youtu.be/Xt-yHCN5QS0\)](https://youtu.be/Xt-yHCN5QS0) to open video)

## About the job

The [Department of Electronic Systems \(https://www.ntnu.edu/ies\)](https://www.ntnu.edu/ies) has a vacancy for one postdoctoral researcher in statistical machine learning and signal processing. The postdoctoral fellowship position is a temporary position where the main goal is to qualify for work in senior academic positions. The successful candidate will be offered a two-year appointment. The position reports to the Head of the Department of Electronic Systems. The workplace will be Trondheim.

Are you a highly motivated researcher looking to join an innovative team of experts in signal processing and machine learning on networks or graphs? Do you have a passion for exploring new avenues of research with real-world applications in IoT or health? If so, we invite you to apply for our postdoctoral researcher position funded by the cutting-edge research project, Resource-aware IoT with Enhanced Intelligence and Security. As a member of our team, you'll have the opportunity to work on groundbreaking research topics such as graph signal processing for health applications, federated learning, privacy-preserving machine learning, and resource-efficient approaches to distributed data processing. You'll be part of a collaborative environment, working alongside accomplished researchers, and have access to state-of-the-art facilities and resources. Join us today and help us push the boundaries of machine learning research while making a tangible impact on the world.

## Duties of the position

As a member of the team, you will work alongside Prof. Stefan Werner on exciting research projects in artificial intelligence and machine learning with applications in emerging communication systems and health. In addition, you will have the chance to guide and mentor students while conducting independent research and publishing papers in top-tier peer-reviewed journals.

We are looking for candidates who are passionate about research and have a strong potential to build competence in the following areas:

1. Federated learning with applications in communications or health.
2. Privacy-preserving learning.
3. Graph signal processing and machine learning with applications in communications or health.
4. Physical-layer security for distributed data processing in emerging wireless systems.

As an independent and self-motivated researcher, you will be able to collaborate with scientists from international partner institutions and contribute to groundbreaking research in your expertise. So don't miss out on this exciting opportunity – apply now! The best-qualified candidates will be invited for an interview.

## Required selection criteria

We are seeking a highly motivated and independent candidate who is passionate about contributing to innovative research in their field of expertise. To be considered for the postdoctoral researcher position, applicants must meet the following criteria:

- Hold a Norwegian doctoral degree or a foreign doctoral degree recognized as equivalent to a Norwegian PhD.
- Have a professionally relevant background in Electrical Engineering, Computer Science, Applied Mathematics, or another relevant discipline.
- Have a Ph.D. thesis related to statistical machine learning, optimization, signal processing for wireless communications, applied mathematics, or graph signal processing with applications in IoT/wireless systems/health.
- Demonstrate substantial research experience documented with peer-reviewed scientific papers (at least one IEEE Transactions).

A good command of the English language (spoken and written) is also required. The candidate should have submitted the Ph.D. thesis for assessment by the application deadline.

The appointment is to be made in accordance with [Regulations on terms of employment for positions such as postdoctoral fellow, Ph.D Candidate, research assistant and specialist candidate. \(https://lovdata.no/dokument/SF/forskrift/2006-01-31-102\)](https://lovdata.no/dokument/SF/forskrift/2006-01-31-102)

## Preferred selection criteria

The preferred candidate has:

- A strong interest in learning and performing the tasks of a more senior academic position, i.e., supervising and developing publications with Ph.D. students.

- Excellent coding skills (MATLAB, Python).
- Excellent verbal and written communication in English.

## Personal characteristics

The successful candidates should be:

- Creative and innovative.
- Independent, persistent, and self-motivated in addressing technical problems.
- Flexible and reliable, with the ability to work efficiently independently and as part of a team.
- Committed with respect to deadlines.

## We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and inclusive work environment (<https://i.ntnu.no/wiki/-/wiki/Norsk/Inkluderende+arbeidsliv>) with dedicated colleagues
- favourable terms in the Norwegian Public Service Pension Fund (<https://www.spk.no/en/>).
- employee benefits (<https://innsida.ntnu.no/wiki/-/wiki/English/Benefits+and+discounts>).

## Salary and conditions

As a Postdoctoral Fellow (code 1352) you are normally paid from gross NOK 563 500 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The period of employment is two (2) years.

The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants (<https://lovdata.no/dokument/NL/lov/2017-06-16-67>), 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.

After the appointment you must assume that there may be changes in the area of work.

It is a prerequisite you can be present at and accessible to the institution on a daily basis.

## About the application

The application and supporting documentation to be used as the basis for the assessment must be in English.

Publications and other scientific work must follow the application. Please note that applications are only evaluated based on the information available on the application deadline. Therefore, you should ensure that your application shows clearly how your skills and experience meet the criteria set out above.

If you, for any reason, 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:

- Application letter describing your motivation, relevant experience, skills, and qualifications.
- CV, certificates, and diplomas.
- Transcripts and diplomas for bachelor's-, master's- and PhD degrees. If you have not yet completed your Ph.D, you must provide confirmation on your estimated date for the doctoral dissertation, or that your PhD thesis has been submitted.
- A copy of the doctoral thesis. If you are close to submitting, or have recently submitted your thesis, you can attach a draft of the thesis. Documentation of a completed doctoral degree must be presented before taking up the position.
- Complete list of publications.

- Academic works - published or unpublished - that you would like to be considered in the assessment (maximum ten publications).
- Research plan for the position (top 2 pages).
- Name and contact information of three 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. Description of the documentation required can be found [here](https://www.ntnu.edu/positions/documentation-requirements-of-academic-credentials) (<https://www.ntnu.edu/positions/documentation-requirements-of-academic-credentials>). If you already have a statement from NOKUT, please attach this as well.

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

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal and interpersonal qualities. Motivation, ambitions, and potential will also count in the assessment of the candidates.

NTNU is committed to following evaluation criteria for research quality according to [The San Francisco Declaration on Research Assessment - DORA](https://www.ascb.org/wp-content/uploads/2017/07/sfdora.pdf). (<https://www.ascb.org/wp-content/uploads/2017/07/sfdora.pdf>)

## General information

[Working at NTNU](https://www.ntnu.edu/positions/working-at-ntnu) (<https://www.ntnu.edu/positions/working-at-ntnu>).

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](https://www.ntnu.edu/genderequality) (<https://www.ntnu.edu/genderequality>).

**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](https://lovdata.no/dokument/NL/lov/2006-05-19-16/KAPITTEL_3#%C2%A725) ([https://lovdata.no/dokument/NL/lov/2006-05-19-16/KAPITTEL\\_3#%C2%A725](https://lovdata.no/dokument/NL/lov/2006-05-19-16/KAPITTEL_3#%C2%A725)). You will be notified if the reservation is not accepted.

If you have any questions about the position, please get in touch with Professor Stefan Werner: email [stefan.werner@ntnu.no](mailto:stefan.werner@ntnu.no) (<mailto:stefan.werner@ntnu.no>). If you have any questions about the recruitment process, please contact Lars Arne Hassel e-mail: [lars.arne.hassel@ntnu.no](mailto:lars.arne.hassel@ntnu.no) (<mailto:lars.arne.hassel@ntnu.no>).

Please submit your application electronically via [jobb norge.no](https://jobb norge.no) with your CV, diplomas, and certificates. Applications submitted elsewhere will not be considered. A diploma Supplement is required to attach for European Master Diplomas outside Norway. In addition, Chinese applicants must provide confirmation of Master Diploma from [China Credentials Verification \(CHSI\)](https://www.chsi.com.cn/en/) (<https://www.chsi.com.cn/en/>).

If you are invited for an interview, you must include certified copies of transcripts and reference letters. Please refer to application number 2022/6679 when applying.

**Application deadline: 03.05.23**



## NTNU

### 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 Electronic Systems

The digitalization of Norway is impossible without electronic systems. We are Norway's leading academic environment in this field, and contribute with our expertise in areas ranging from nanoelectronics, phototonics, signal processing, radio technology and acoustics to satellite technology and autonomous systems. Knowledge of electronic systems is also vital for addressing important challenges in transport, energy, the environment, and health. [The Department of Electronic Systems](https://www.ntnu.edu/ies) (<https://www.ntnu.edu/ies>) is one of seven departments in the [Faculty of Information Technology and Electrical Engineering](https://www.ntnu.edu/ie/). (<https://www.ntnu.edu/ie/>)

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#### Deadline

3rd May 2023

#### Employer

NTNU - Norwegian University of Science and Technology (<http://www.ntnu.no>)

#### Municipality

Trondheim

### Scope

Fulltime

### Duration

Temporary

### Place of service

Campus Gløshaugen

[Vacant positions - NTNU - Norwegian University of Science and Technology \(https://www.jobbnorge.no/search/en?OrderBy=Published&Period=All&employer=688\)](https://www.jobbnorge.no/search/en?OrderBy=Published&Period=All&employer=688)

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