

Jobbnorge ID: 280020
Deadline: 6/22/2025
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Temporary

The Department of Structural Engineering has a vacancy for a

Phd-candidate in characterization and optimization of concrete with low-CO2 binders

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://youtu.be/Xt-yHCN5QS0>

About the position

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

We have a vacancy for a PhD-candidate at the Department of Structural Engineering which has about 120 employees, half of them PhD Students and about 17 Postdocs and researchers.

The current position will be affiliated with the Concrete group which is a team of scientists dedicated to the study of all aspects of concrete. The Concrete group conducts research on concrete from material to structural level based on theoretical, numerical and experimental investigations. The Concrete group is involved in several national and international research projects, it has a close collaboration with the industry, and it has extended laboratory facilities with a rich history.

The candidate is expected to conduct research within the field "Concrete in the hardening phase", with the ambition to advance sustainable construction through research on the proper use of new binders and recycled aggregates in concrete. The overall focus of the project will be sustainable construction and crack-free concrete structures, and the planned research includes both property development (behaviour) of early age concrete, as well as the investigation and further development of calculation methods in order to assess the corresponding structural behaviour. The latter is also related to concrete design in the SLS (serviceability limit state). By thoroughly characterizing property development and conducting corresponding analyses, the cracking sensitivity of concrete can be controlled, thereby ensuring watertight and durable structures in demanding environments. The current PhD position involves both theoretical, numerical and experimental research, where the latter requires a keen interest in experimental and practical engineering research work.

The project receives additional funding from Heidelberg Materials and the Norwegian Public Roads Administration (Statens Vegvesen).

The candidate's main supervisor will be Associate professor Anja Klausen, while Professors Terje Kanstad and Klaartje De Weerd will act as co-supervisors.

Duties of the position

- Complete the doctoral education until obtaining a doctorate
- To undertake the necessary courses as part of the PhD program
- Perform research and report progress on a regular basis in agreement with the supervisor(s)
- Experimental and theoretical research according to the project plan and the project objectives
- Complete the necessary course/training to work in the laboratory
- Laboratory work
- Communication and dissemination of research results under supervision

Be prepared for changes to your work duties after employment.

Required selection criteria

- You must have a master's degree in civil engineering, within structural analysis and design and/or concrete materials or equivalent.
- Your education must correspond to a five-year Norwegian degree program, where 120 credits have been obtained at master's level.
- You must have a strong academic background from your previous studies and have an average grade from your Master's degree study, or equivalent education, which is equal to B or better compared to [NTNU's grading scale](#). If you do not have letter grades from previous studies, you must have an equally good academic foundation. If you have a weaker grade background, you may be considered if you can document that you are particularly suitable for a PhD education.
- Applicants must meet the criteria for admission to [NTNU's PhD program](#).
- You must meet the requirements for admission to the [faculty's Doctoral Programme](#)
- You must have excellent written and oral English language skills.

PLEASE NOTE: For detailed information about what the application must contain, see paragraph "About the application".

NTNU offers support and facilitation for employees who wish to take Norwegian language courses during their employment, up to [level A2](#)

The appointment is to be made in accordance with [Regulations for the Universities and Colleges Act \(university and colleges regulations\)](#) and [Regulations for the degrees philosophiae doctor \(ph.d.\) and philosophiae doctor \(ph.d.\) in artistic development work at the Norwegian University of Science and Technology \(NTNU\)](#) for general criteria for the position.

Preferred selection criteria

- Proven skills/track record in the relevant areas of research, or work experience from the industry
- Keen interest in both theoretical and experimental studies, including practical engineering research work in the laboratory
- Knowledge of programming/software, e.g. MATLAB, Python, FEA software, LabView, etc.
- Good oral and written presentation skills in Norwegian or another Scandinavian language

Personal characteristics

To complete a doctoral degree (PhD), it is important that:

- You are ambitious and motivated for research work in this field
- You are well-organized and able to plan and conduct laboratory activities
- You are a team worker that can cooperate in interdisciplinary team
- You have good communication and dissemination skills
- You have good analytical and critical thinking skills
- You have a genuine interest in research and willingness to learn

Emphasis will be placed on personal qualities.

We offer

- An exciting job with an important [mission](#) in society
- Developing tasks in a strong and international professional environment
- 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](#)
- As a public employee, you have favourable benefits as a member of the [Norwegian Public Service Pension Fund \(SPK\)](#).

You will be employed as a PhD Candidate at NTNU and will have access to [employee benefits and discounts](#).

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 536 200,- 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 employment as a PhD Candidate, it is a prerequisite that you gain admission to the PhD programme in [Engineering](#) within three months of your employment contract start date, and that you participate in an organized doctoral programme throughout the period of employment.

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 academic 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 be in 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
- Short letter of motivation and research interest/area (400 words/1 page)
- Academic works - published or unpublished - that you would like to be considered in the assessment
- Names and contact information of three relevant references

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 works 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 Associate Professor Anja Klausen, email: anja.klausen@ntnu.no.

If you have any questions about the recruitment process, please contact HR Consultant June Hovde, e-mail: june.b.hovde@ntnu.no.

Application deadline: 22.06.2025

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

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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 Structural Engineering

We teach mechanical engineering, engineering and ICT, and civil and environmental engineering. The Department conducts internationally leading research and participates in several large national research projects. [The Department of Structural Engineering](#) is one of eight departments in [the Faculty of Engineering](#).

Additional information

Place of service:

Høgskoleringen 1 7491 Trondheim (Trondheim Municipality)