PhD Position in Structure-Preserving Methods for Variational Inequalities

LOCATION: SIMULA RESEARCH LABORATORY, OSLO, NORWAY

APPLICATION DEADLINE: March 8, 2026

We are pleased to announce a new **PhD Research Fellowship** in the [Department of Numerical Analysis and Scientific Computing](#) at [Simula Research Laboratory (Simula](#)) for a highly-motivated and self-driven PhD student with strong intellectual curiosity and interest in numerical methods for variational inequalities. The position is part of the newly funded FRIPRO project [The Latent Variable Proximal Point Method: A structure-preserving approach to constrained variational problems](#) funded by the Research Council of Norway (RCN) (2026-2029).

Simula is a leading Norwegian research institute known for its excellence in cutting-edge ICT with a strong track record of top evaluations, active international collaborations, and success in significant funding initiatives, including European and National RCN grants. Simula is committed to supporting talent through a variety of PhD and postdoctoral programs and provides valuable research infrastructure, such as the national HPC facility, eX3.

Job Description

We are looking for a PhD candidate to join our team to work on exciting new topics in the numerical analysis of constrained variational problems with pointwise inequality constraints such as elliptic and parabolic variational inequalities, nondivergence form nonlinear PDE, and select problems from PDE-constrained optimization. At Simula, the candidate will work in the research team led by Thomas M. Surowiec, which will include a postdoctoral fellow working on similar topics, two adjunct professors, and several international partners. The PhD candidate will also be expected to be enrolled in the PhD program at the [Department of Mathematics](#) at the [University of Oslo](#), a premier European research environment that combines a rich academic heritage with a forward-looking focus on innovation in pure and applied mathematics. A strong background in mathematics is essential.

The successful PhD candidate is expected to carry out research in the following general focus areas:

- Computational methods for evolutionary variational inequalities.
- Numerical analysis of evolutionary variational inequalities.
- Nonsmooth gradient flows and evolutionary Γ-convergence

Desired Skill Sets and Competencies criteria

We will consider candidates who have completed (or will have completed by June 2026) a Master's degree (or equivalent) in Mathematics, Applied Mathematics, Computational Science, or Physics with a strong theoretical component. The successful candidate will have a solid theoretical foundation in one or more of the topics: Optimization, Calculus of Variations, Numerical Analysis, or Scientific Computing. Proficiency in a high-level programming language (e.g., Python, Julia, C++) is essential.

The purpose of the fellowship is research training leading to the successful completion of a PhD degree. Please read the [PhD program information](#) and the [specific grade and language admission requirements](#).

Working at Simula
- Excellent opportunities for performing high-quality research, as part of a highly competent and motivated team of international researchers and engineers.
- A vibrant and inclusive international working environment (currently around 200 individuals from 35 countries).
- Generous support for travel and opportunities to build international networks, through established collaboration with industry, exchange programs and research visits with other universities, and funding to attend conferences.
- Modern office facilities located in downtown Oslo.
- A competitive salary. Starting salary from NOK 550 800.
- Numerous benefits: access to a company cabin, sponsored social events, generous equipment budgets (e.g., computer, phone and subscription), subsidized canteen meals, comprehensive travel/group life insurance policy, etc.
- Relocation assistance: accommodation, visas, complimentary Norwegian language courses, etc.
- Administrative research support: e.g., quality assurance process for grant proposals (including RCN and EU programs).
- Wellness and work-life balance. Our employees' health and well-being are a priority, and we encourage them to make use of our flexible work arrangements to help balance their work and home lives efficiently.

Application

Interested applicants are requested to submit the following:
- Curriculum vitae showing your educational background, work experience (in academic and/or industrial), a list of scientific publications and talks.
- Transcripts for both Bachelor and Master's degrees
- Cover letter outlining your motivation for applying, relevant experience and qualifications, research interests and how/why you are qualified for the position.
- Contact information of two references.

Please note that all documents may be in English or a Scandinavian language.

Application with attachments must be submitted via our recruitment system, click "Go to application form". Applications submitted by email will not be considered.

We strongly encourage applications from all qualified candidates and are committed to promoting diversity and gender balance in science. We particularly welcome applications from women, who are currently underrepresented in this research field. We believe diverse teams drive innovation and lead to better research outcomes.

Deadline: March 8, 2026

Short-listed candidates will be invited for an interview. Applications will be screened continuously and a decision will be made as soon as we find the right candidate.

Contact: Dr. [Thomas M. Surowiec](#), Chief Research Scientist

About Simula
Simula's main objective is to create knowledge about fundamental scientific challenges that are of genuine value for society. This is achieved through high quality research, education of graduate students, industry collaboration, technology transfer, and commercialization. Since 2001, scientific evaluations conducted by the Research Council of Norway have repeatedly placed Simula at the forefront of international research in ICT. The most recent in-depth evaluation was published in 2025, grading our full range of research as excellent, [ranking SIMULA the highest of all Norwegian research institutions](#) regarding impact and publication quality (p14. in [National EVALMIT report](#)).

Simula collaborates closely with leading universities in Norway and abroad, both in terms of research and education, and facilitates extended research stays abroad. Our Master's and PhD students conduct their research at Simula and attend courses and receive their degrees from university partners.

Norway is famous for its epic outdoor scenery, with wonderful fjords, gorgeous waterfalls and majestic mountain ranges. Moreover, Norway is a safe and peaceful country with a thriving economy, offering a high standard of living and all the benefits of a social-democratic welfare state, such as social security and universal public healthcare.

Learn more about Norway: [Official travel guide to Norway](#)

Simula: solving problems, making a difference.
Simula's mission is to solve important and fundamental problems of science and engineering, with the main goal of improving society. We do this by concentrating on [five select research areas](#) in ICT and performing excellent research, by developing our people, and by spinning out applicable results into profitable startups.

Learn more about: [working at Simula](#) and [careers at Simula](#)

Simula uses Semac´s background check in our recruitment process.

According to the Norwegian Freedom and Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

Employment for this position will be made according to the [act relating to Control of the export of strategic goods, Services and Technology](). Candidates who by assessment of the application and any attachments are considered to be in conflict with the export control regulations will not qualify for this position.