

# ERC-funded PhD students with focus on Geomechanics and Geohazards (2 positions)

Uppsala University, Department of Earth Sciences

## ERC-funded PhD students in Geomechanics and Geohazards with focus on Catastrophic Failure (2 positions)

Are you interested in working on cutting-edge research within a European Research Council (ERC)-funded project, together with competent and friendly colleagues in an international research environment? Are you looking for an employer that invests in sustainable employeeship and offers safe and favourable working conditions? We welcome you to apply for a PhD position at Uppsala University.

**The Department of Earth Sciences** is Sweden's most comprehensive academic environment for research and education in geoscience. It offers a broad range of expertise that can contribute to solving important societal issues.

Earth is a dynamic and constantly changing planet. To understand how this planet works, our researchers seek answers in the field, through laboratory experiments and advanced models. Our research and education cover a wide range of disciplines, including rocks and minerals, weather and climate, the evolution of life, natural disasters, wind power and energy, environmental and water engineering, and sustainable development.

Our research combines natural sciences and technology with social sciences and is often interdisciplinary. More than 300 people from over 30 countries work at the department, both in Uppsala and at Campus Gotland.

Our six research divisions:

- Geophysics • Air, Water and Landscape Science • Mineralogy, Petrology and Tectonics
- Natural Resources and Sustainable Development • Palaeobiology • Wind Energy

For more information see: [www.uu.se/earthsciences](http://www.uu.se/earthsciences)

The successful candidate will join the research program Air, Water and Landscape Sciences (LUVAL).

The research will be conducted within an ERC Consolidator Grant project (FORECAST) at Uppsala University focused on advancing next-generation prediction science for geohazards through an interdisciplinary framework integrating geomechanics, geophysics, statistical physics, and computational modelling. The project addresses a wide range of natural hazards, including landslides, rockbursts, glacier instabilities, and volcanic eruptions, with the aim of improving our ability to diagnose and forecast catastrophic failure in complex geophysical systems. The PhD students will join a dynamic international research team and collaborate with leading researchers and international partners working on geohazard forecasting and risk mitigation. More information about the ERC project FORECAST can be found at: <https://cordis.europa.eu/project/id/101232311>.

### What we offer

- **Prestigious ERC Funding** – Join a well-funded ERC Consolidator Grant with a long-term research vision.
- **Frontier Research** – Work on next-generation prediction science for catastrophic natural hazards.
- **Interdisciplinary Environment** – Collaborate across geomechanics, geophysics, statistical physics, and data science.
- **International Network** – Engage with leading researchers and international partners.
- **Research Creativity** – Develop and explore your own ideas within a dynamic and supportive research team.

- **Career Development** – Receive mentorship in scientific publishing, grant writing, and academic career progression.
- **Research Training** – Gain advanced expertise in computational modelling, scientific programming, and geohazard forecasting.
- **Excellent Working Conditions** – Benefit from advanced research infrastructure, including high-performance computing resources, and enjoy the high quality of life offered by Uppsala University.

## Duties

The PhD projects will focus on developing physics-based modelling approaches for understanding, diagnosing, and forecasting progressive to catastrophic failure processes in geomaterials at site scale. Two PhD positions are available: one focusing on landslides and the other on rockbursts. The projects will combine theoretical modelling, statistical physics, numerical simulations, and monitoring data to investigate the mechanisms governing failure precursors, instability evolution, and predictability in geophysical systems.

## Requirements

To meet the entry requirements for doctoral studies, you must

- hold a Master's (second-cycle) degree in geomechanics, geophysics, engineering geology, geotechnical engineering, applied mathematics, physics, or a comparable field relevant to the project,
- have completed at least 240 credits in higher education, with at least 60 credits at Master's level including an independent project worth at least 15 credits, or
- have acquired substantially equivalent knowledge in some other way.

The successful candidate should have a solid base in mathematics, mechanics and physics as well as knowledge of computer simulations and scientific programming.

## Additional qualifications

Previous experience in numerical / mathematical modelling is a merit. Previous experience in scientific publishing is considered an advantage.

Rules governing PhD students are set out in the Higher Education Ordinance chapter 5, §§ 1-7 and in Uppsala University's rules and guidelines.

## About the employment

2 employees. The employment is a temporary position according to the Higher Education Ordinance chapter 5 § 7. Scope of employment 100 %. Starting date 1st February 2027 or as agreed. Placement: Uppsala

**For further information about the position, please contact:** Qinghua Lei (qinghua.lei@geo.uu.se)

The application should include a CV, copies of relevant exams, degrees and grades, MSc thesis and other relevant documents, including contact details of two referees.

In this recruitment we have replaced the cover letter with questions that you are asked to answer when making your application. The answers will be used as a part of the selection process.

**Please submit your application by 14 August 2026, UFV-PA 2026/1964.**

Are you considering moving to Sweden to work at Uppsala University? Find out more about what it's like to work and live in Sweden.

Uppsala University is a broad research university with a strong international position. The ultimate goal is to conduct education and research of the highest quality and relevance to make a difference in society. Our most important asset is all of our 7,600 employees and 53,000 students who, with curiosity and commitment, make Uppsala University one of Sweden's most exciting workplaces.

Read more about our benefits and what it is like to work at Uppsala University

<https://uu.se/om-uu/jobba-hos-oss/>

The position may be subject to security vetting. If security vetting is conducted, the applicant must pass the vetting process to be eligible for employment.

Please do not send offers of recruitment or advertising services.

Submit your application through Uppsala University's recruitment system.

<b>Type of employment</b>	Temporary position
<b>Contract type</b>	Full time
<b>First day of employment</b>	2027-02-01 or as agreed
<b>Salary</b>	fast lön
<b>Number of positions</b>	2
<b>Full-time equivalent</b>	100
<b>City</b>	Uppsala
<b>County</b>	Uppsala län
<b>Country</b>	Sweden
<b>Reference number</b>	UFV-PA 2026/1964
<b>Contact</b>	Qinghua Lei, 018-4710000, qinghua.lei@geo.uu.se
<b>Published</b>	2026-06-08
<b>Last application date</b>	2026-08-14
<b>Link to ad</b>	<a href="http://uu.varbi.com/what:job/jobID:943705/">http://uu.varbi.com/what:job/jobID:943705/</a>