ERC-Funded Postdoctoral Positions in Geomechanics and Geohazards (2 positions)

Uppsala University, Department of Earth Sciences

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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 postdoctoral 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

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 data-driven modelling. The postdoctoral researchers will join a dynamic international research team and collaborate with leading researchers and international partners working on geohazard forecasting and risk mitigation. Read more about the ERC project FORECAST 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 Independence – Develop your own ideas within a dynamic and supportive research team.
- Career Development – Receive mentorship in publishing, grant writing, and academic career progression.
- Leadership Experience – Co-supervise MSc/PhD students and contribute to the development of the ERC programme.
- 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 postdoctoral projects will focus on developing physics-based modelling approaches for understanding, diagnosing, and forecasting progressive to catastrophic failure processes in geomaterials at site scale. 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. The postdoctoral researchers may have opportunities to co-supervise MSc/PhD students working on related topics and contribute to the broader development of the ERC research programme.

Requirements

Applicants must hold a PhD in geomechanics, geophysics, physics, mathematics or engineering, or a foreign degree deemed equivalent to a PhD in one of these fields. The degree needs to be obtained by the time of the decision of employment. Priority will be given to applicants who have completed their degree no more than three years before the deadline for applications. Due to special circumstances, the degree may have been obtained earlier. The three-year period can be extended due to circumstances such as sick leave, parental leave, duties in labour unions, etc.

Applicants must also demonstrate:

- A strong foundation in mechanics, mathematics, and physics relevant to modelling deformation and failure of geomaterials.
- Experience developing or implementing physics-based analytical and/or numerical models and using scientific programming to analyse results.
- Research experience relevant to failure or instability in geomaterials. Examples include fracture mechanics, rate-and-state friction, strain localisation, and bifurcation analysis.

Additional qualifications

We also strongly encourage the postdoctoral candidate to bring their own ideas, methods, and perspectives to the project—creativity, enthusiasm, and research acumen will be highly valued.

About the employment

Two positions. The employment is a temporary position of two years according to central collective agreement. Full time position. Starting date: 1st April 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 (with a full publication list), PhD degree certificate, PhD thesis, and other relevant documents, as well as the 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 4 January 2027, UFV-PA 2026/3602.

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 7,500 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.

Employee organizations: Saco-S - saco-s@uu.se, Seko - seko@uadm.uu.se, ST (OFR/S) - ofr@uu.se

Type of employment	Temporary position
Contract type	Full time
First day of employment	2027-04-01 or as agreed
Salary	Individuell lönesättning
Number of positions	2
Full-time equivalent	100
City	Uppsala
County	Uppsala län
Country	Sweden
Reference number	UFV-PA 2026/3602
Contact	Qinghua Lei, qinghua.lei@geo.uu.se
Published	2026-11-18
Last application date	2027-01-04
Link to ad	http://uu.varbi.com/what:job/jobID:991869/