

PhD student in Hydrology with a focus on Flow and Transport in Fractured Rocks

Uppsala University, Department of Earth Sciences

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Are you interested in working on cutting-edge research in hydrogeology, with the support of competent and friendly colleagues in an international environment? Are you looking for an employer that invests in sustainable employeeship and offers safe, 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

The successful candidate will join the research program Air, Water and Landscape Sciences (LUVAL) (<https://www.uu.se/en/department/earth-sciences/research/air-water-and-landscape-science>).

Duties

The PhD project will focus on uncertainty quantification in modelling flow and solute transport in fractured rocks. The work will include numerical modelling of flow and transport, analysis of uncertainties in model predictions, and development of efficient methods for evaluating their implications for geological repository safety. The methods will be demonstrated using conditions representative of a Swedish geological repository site, with the aim of improving the robustness and transparency of long-term safety assessments for radioactive waste disposal.

Requirements

To meet the entry requirements for doctoral studies, you must

- hold a Master's (second-cycle) degree in hydrogeology, hydrology, rock mechanics, geophysics, geotechnical engineering, water engineering, applied mathematics, physics, computer science, or another relevant field,
- 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.

In addition to meeting the entry requirements above, you must:

have a solid foundation in mathematics and physics, as well as experience in numerical modelling or

scientific programming.

Additional qualifications

Knowledge of subsurface flow and transport, fractured media, uncertainty quantification, statistical methods, or machine learning is considered a merit.

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

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 1 October 2026, UFV-PA 2026/2478.

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.

Type of employment	Temporary position
Contract type	Full time
First day of employment	2027-02-01 eller enligt överenskommelse
Salary	fixed salary
Number of positions	1
Full-time equivalent	100
City	Uppsala
County	Uppsala län
Country	Sweden
Reference number	UFV-PA 2026/2478
Contact	Qinghua Lei, qinghua.lei@geo.uu.se
Published	2026-08-20
Last application date	2026-10-01
Link to ad	http://uu.varbi.com/what:job/jobID:960428/