

PhD Student Position - Spatial AI/ML & Stochastic Simulation in Innsbruck (F/M/X) Austrian Academy of Sciences

Direct Link: https://www.AcademicKeys.com/r?job=261597

Downloaded On: Oct. 30, 2025 6:09pm Posted Aug. 25, 2025, set to expire Dec. 23, 2025

Job Title PhD Student Position - Spatial AI/ML & Stochastic

Simulation in Innsbruck (F/M/X)

Department Institute For Interdisciplinary Mountain Research

https://www.oeaw.ac.at/en/igf/home

Institution Austrian Academy of Sciences

Innsbruck, Tyrol, Austria

Date Posted Aug. 25, 2025

Application Deadline Sep. 2, 2025

Position Start Date Available Immediately

Job Categories Graduate Student

Academic Field(s) Statistics & Actuarial Science

Mathematics/Applied Mathematics Geology/Geosciences - General Computer/Information Sciences

Sciences - General

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Job Description



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Project Overview:

The <u>GeoTransformer Project</u> adapts the transformer neural-network architecture that powers modern language models to spatial data, letting us learn complex patterns in geology, climate and other earth-system variables. By going beyond kriging and multiple-point methods, the project will deliver faster, uncertainty-aware simulations that cope with non-stationary, multi-variable datasets—opening new possibilities for environmental science, resource management and related fields.

Your Tasks

- Develop innovative approaches for spatial data encoding, continuous output representation, multivariable simulation and Retrieval-Augmented Generation.
- Design, prototype, and benchmark advanced transformer architectures tailored to complex spatial and multi-variable data.
- Create training protocols for non-stationary data and strategies for continuous outputs (e.g., raw values, Fourier components, Gaussian Mixture Model).
- Actively collaborate with international partners in an open, curiosity-driven research environment.

Your Profile

We know no single candidate will tick every box; if the topic excites you, convince us how your background fits.

- Master's degree (or equivalent) in computer science, machine learning, statistics, applied mathematics, geoscience, or a closely related field.
- Strong programming skills and proficiency in TensorFlow or PyTorch.
- Excellent analytical thinking, problem-solving, and communication skills.
- Open-minded, creative, and comfortable with interdisciplinary work.

Our Offer

 Engaging research environment: A dynamic, interdisciplinary team that values scientific freedom and curiosity.



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- State-of-the-art tools: Full licence to Al assistants (e.g., ChatGPT) and modern HPC/GPU resources.
- Work-life balance: Up to 40 % remote work, flexible scheduling, and family-friendly policies.
- Innsbruck location: Live and work in a vibrant alpine city famous for its mountain landscape and lively academic scene.
- Salary: Annual gross salary € 39 208.82 (according to the OeAW salary scheme).

Your application should include:

- Motivation letter (max. 2 pages)
- CV
- Master's grade transcript & short thesis summary
- Code sample or GitHub link

Deadline 2nd of September 2025.

EEO/AA Policy

The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. Individuals from underrepresented groups are particularly encouraged to apply.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Mathieu Gravey

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Innsbruck, Tyrol

Austria



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Contact E-mail mathieu.gravey@oeaw.ac.at