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

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
Job Website	https://oeawnr.onlyfy.jobs/job/96dsy6wo
Apply Online Here	https://oeawnr.onlyfy.jobs/job/96dsy6wo
Apply By Email	
Job Description	

Project Overview:

The GeoTransformer Project 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, multi-variable 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 AI 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
	Innrain 25, 3. OG, 6020 Innsbruck, Austria
	Innsbruck, Tyrol
	Austria

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