OeAW - Discovering the future

As a central non-university institution for science and research, the **Austrian Academy of Sciences - OeAW** has the task of **"promoting science in every respect"**. Founded in 1847 as a learned society, it now has over 760 members and around 1,800 employees dedicated to innovative basic research, interdisciplinary knowledge exchange and the dissemination of new insights. The OeAW initiates and maintains partnerships worldwide and represents Austria in international scientific organizations; it cooperates with numerous institutions in the scientific field in order to actively **shape the research landscape**.

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

Job ID: IGF52DOC225

We invite applications for two four-year PhD positions in the Digital Landscape group at the Institute for Interdisciplinary Mountain Research (IGF-OeAW) in Innsbruck.

The positions are part of an FWF-funded project carried out in close collaboration with University of Lausanne.
Preferred start date: as soon as possible. Remote work up to 40 % is possible.

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

(Part-time employee)

(Office & remote)

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.

- 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.

APPLY NOW

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

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