Postdoctoral Researcher (f/m/d)
Radar data analysis with application to mining waste

Project MINE-THE-GAP

Vienna University of Economics and Business (WU)
Institute for Ecological Economics

WU's Institute for Ecological Economics invites applications for a postdoctoral researcher within the ERC Consolidator Grant project **MINE-THE-GAP**. The project will develop the methodological foundation to enable global spatial-temporal information on mineral extraction, revealing where and when mining occurs, how much material is displaced, and what commodities and minerals are associated with individual mining operations. The project integrates data from various sources, including mining inventories, mining statistics, and satellite imagery, to develop scalable AI models for mapping mine-level indicators.

We are seeking a highly motivated postdoctoral researcher in radar data analysis to lead the development of AI-driven monitoring of global mining waste using multimodal satellite data. This is a unique opportunity to apply your skills to address a major global sustainability challenge while acquiring knowledge and leadership skills urgently sought across academia, governments, industry, and NGOs to drive the global sustainability transition. Are you a creative and highly motivated researcher eager to develop the next generation of global-scale environmental monitoring tools? Then come and join the MINE-THE-GAP team!

Your Responsibilities

You will lead research and development focusing on mining waste indicators. Key responsibilities include:

- Integrating terrain height data (e.g., from LIDAR and InSAR) into the project's AI-ready database
- Developing and training scalable AI models to map mining waste indicators
- Producing time-series data of mining excavations and waste deposits indicators
- Leading scientific publications and dissemination of results
- Co-supervising PhD students working on related tasks

Your Profile

- A completed PhD/doctorate in Remote Sensing, Earth Sciences, Geoinformation Sciences, Data Science, Geodesy, or a related field
- Expertise in radar satellite data analysis (e.g., InSAR) and 3D data processing (e.g., terrain modelling and digital elevation models)
- Excellent programming skills (preferably Python).
- A track record of publications in relevant international journals
- Excellent command of written and spoken English

Bonus qualifications

- Background in machine learning or deep learning is an advantage
- Skills with collaborative software development platforms (e.g., GitHub) and commitment to open-source principles
- Experience with cloud computing

What We Offer

- Being part of a cutting-edge ERC research program that will develop innovative solutions for global sustainability challenges

- Working within a dynamic, supportive, and interdisciplinary team of leading experts and collaborating with a wide international network of scholars

- Funding for conference travel, workshops, and publications

- Flexible working hours

- Six weeks of vacation/Extra vacation time

- Meaningful work in an open-minded, inclusive, and family-friendly environment

- Career development programs for postdoctoral researchers

- German language courses and other continuing education opportunities

- A modern campus with spectacular architecture in the heart of Vienna

- A wide range of benefits, from an in-house medical officer to athletic activities and a meal allowance to a variety of employee discounts

- Excellent accessibility by public transportation

Start date: As soon as possible
Fixed-term: 2 years, with the possibility of extension depending on funding availability and after a positive progress assessment
Part-time: 40 hours/week
Location: Vienna, Austria
Salary: The monthly gross salary amounts to € 4.932,90 (14 times per year). Compensation is in accordance with the Austrian collective agreement for university employees

Application Process

Please submit your application via email to **Dr. Victor Maus** at victor.maus@wu.ac.at. Your application must include the following documents in a single PDF file:

1. A letter of motivation (max 2 pages)

2. Curriculum Vitae (CV) including a list of publications (e.g., articles, data, and software)

3. Contact information for two academic or professional references

4. Copies of your PhD and Master's degree certificates

We encourage applicants of all genders, backgrounds, and identities!

Application deadline: The positions are open until suitable candidates are found.

We look forward to receiving your application!

November 30, 2025