

Postdoc position on speleothem seismic vulnerability from FEM modeling (1-2 years)

The research will be carried out in the framework of the project “Enhancing paleoseismological record through multi-methods cave deformation analysis tested in diverse Hellenides tectonic regimes” (project 2023/50/E/ST10/00432), financed through SONATA BIS from the Polish National Research Center (<https://www.ncn.gov.pl/>) under the management of Associate Professor Jacek Szczygiel. The project aims to advance the knowledge on speleothems' vulnerability as earthquake environmental effects and its usage in paleoseismology and potential seismic hazard assessment.

At the Institute of the Earth Sciences University of Silesia in Katowice, we seek a postdoc with knowledge and experience related to FEM to:

1. coordinate and obtain input data for the FEM analysis and perform FEM modeling of speleothems;
2. compare the results with previous studies and consequently also prepare the publication.

Background knowledge in seismology is desired but not essential. You will be working at the Institute of the Earth Sciences, University of Silesia, but 2-3 field trips to Greek caves are planned to collect lidar data and speleothems samples. The successful postdoc will work directly with Jacek Szczygiel, and a PhD student at the University of Silesia, as well as the research team from Greece and Austria. There is a possibility of partial remote work up to a predetermined limit. You are expected to publish your results in peer-reviewed academic journals.

Requirements:

As the ideal candidate, you have:

- Ph.D. in geology, geophysics, earth sciences, physics, engineering, or related fields.
- documented experience in modelling using the Finite Element Method or experience in the field of seismological and/or paleoseismological research,

Other desired skills:

- Working with lidar point cloud data;
- Mountaineering or caving skills are plus but not essential
- An open, critical, and interdisciplinary mindset.

Terms of employment:

application submission deadline: the **24th of April 2026** (11.59 p.m. CET), the selection process will be concluded by: the 23rd of June 2026

Position will be filled for a term of 1 year with the possibility to extend for 2 years. The salary will be 140 000 PLN/year.

For informal questions, please contact Jacek Szczygiel jacek.szczygiel@us.edu.pl

How to apply:

<https://skk.erecruiter.pl/Offer.aspx?oid=4597384&cfg=0596d66a80b044cea9e98c4a71799d37&fromSkk=1755093159973&ejold=467154&ejorld=193334&comId=20067605>