



UNIVERSITY  
OF COLOGNE



## Researcher (Postdoctoral) –

## Geophysical Modeling of Geothermal Systems (f/m/x)

### Institute of Geophysics and Meteorology

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

We invite applications for a position as a funded researcher within the EU project FindHeat “A Novel Exploration Toolkit for Finding Geothermal Heat Efficiently and Sustainably” ([www.findheat.eu](http://www.findheat.eu)).

The successful candidate will conduct research across multiple geothermal play types to characterise and quantify geophysical signatures linked to the primary geological and hydrological controls on geothermal resources. The focus will be on electromagnetic (EM) methods, potentially in combination with complementary geophysical techniques, to reduce subsurface uncertainty and de-risk exploration. The position is initially available for 18 months, with a possibility of extension.

#### YOUR TASKS

- » Building and constraining geophysical models (e.g. electrical conductivity, density) using quantitative constraints derived from structural geology and reservoir models
- » Developing and applying 3-D EM modelling workflows (forward and/or inverse) to reduce subsurface uncertainty and characterize geothermal systems
- » Integrating results and quantifying the value of the data in the scope of geothermal exploration
- » Publishing scientific results, supporting project deliverables, and presentations

#### YOUR PROFILE

- » Doctoral degree in geophysics/earth sciences (or related field) with experience in geothermal exploration
- » Demonstrated expertise in EM methods and practical experience with 3-D modelling (knowledge of structural and reservoir modelling is an advantage, along with prior experience with software such as RRM Imperial, DARTS, and CSMP++)
- » Programming skills in Python and/or C++, and familiarity with Git + VS Code workflows. Experience with 3-D visualization tools such as ParaView/VTK is an advantage
- » Good scientific communication skills in English

#### WE OFFER

- » An Interdisciplinary research project
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

The position is available from July 2026 on a full-time basis (39,83 hours per week) The position is to be filled for a fixed term. If the applicant meets the relevant wage requirements and has the appropriate personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications without a photo under: <https://jobportal.uni-koeln.de>. The reference number is Wiss2604-02. The application deadline is 15 May 2026.

For further inquiries, please contact PD Dr Alexander Grayver ([agrayver@uni-koeln.de](mailto:agrayver@uni-koeln.de)) and take a look at our [FAQs](#).



HR EXCELLENCE IN RESEARCH