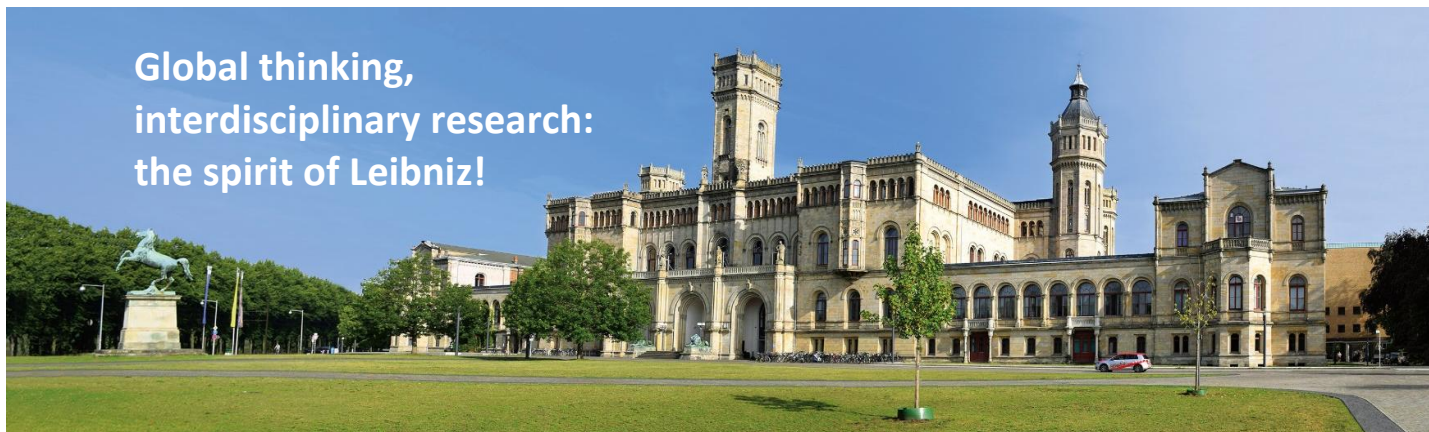


Global thinking,
interdisciplinary research:
the spirit of Leibniz!



The Institute of Earth System Sciences (IESW) welcomes applications for the following position starting at the earliest possible date:

Research Staff / PhD position in the field of petrology, geochemistry and deep learning (salary scale 13 TV-L, 75 %)

for a duration of 36 months. The starting date is in 2026 and can be negotiated.

Your role

The project "Decoding Magma Plumbing Systems in a Nascent Subduction Zone with Deep Learning (IODP Expedition 352)", supported by the German Science Foundation (DFG), focuses on the evolution of magmatic systems in a nascent subduction zone, using volcanic rocks from the Izu–Bonin–Mariana arc drilled during IODP Expedition 352. The rocks offer a rare natural example to study geological processes during subduction-zone initiation. A large number of core samples (fore-arc basalts and boninites) will be used to reconstruct the evolution of pressure–temperature–oxygen fugacity–water activity conditions in magma plumbing systems.

The PhD candidate will:

- Constrain crystallization conditions in magma reservoirs using thermobarometers.
- Apply thermodynamic models to predict crystallization sequences and mineral compositions.
- Use diffusion chronometry to derive time scales of magmatic processes from compositional zoning in minerals.
- Develop and apply Deep Learning (DL) approaches to automatically process large datasets of backscattered-electron (BSE) images.

Who are we looking for?

The successful candidate must hold a MSc degree (or equivalent) in Earth Sciences
In addition, we are looking for a candidate with

- A strong background in igneous petrology and geochemistry
- Experience with microanalytical methods (e.g. EPMA; LA-ICP-MS)
- Interest in, and ideally some experience with, quantitative data analysis (e.g. Python or similar) and/or image analysis

- Ability to work independently as well as in a team

Your application will include (in a single PDF file):

- Motivation letter (max. 2 pages)
- CV
- University transcripts / certificates with grades
- Short summary of the MSc thesis
- Names and contact information of 2 referees (or recommendation letters, if available)
- List of publications (if available)

Equal opportunities and diversity are core values at Leibniz University Hannover. Our goal is to tap into individual potential and open up possibilities. We therefore welcome applications from anyone interested in the position, irrespective of gender, nationality, ethnic origin, religion or ideology, disability, age, sexual orientation and identity.

We strive towards a balanced and diverse workforce and a reduction in underrepresentation in accordance with the Lower Saxony Equal Rights Act (*Niedersächsisches Gleichberechtigungsgesetz – NGG*). Preference will be given to equally-qualified candidates with disabilities.

Why join us?

The IESW provides access to modern analytical facilities (e.g. electron microprobe, LA-ICP-MS, infrared spectroscopy) and experimental facilities (IHPV, CSPV, 1 atm. furnaces). The project is interdisciplinary and will combine Machine Learning and petrology. The project is embedded in ongoing IODP -related research at the IESW.

With more than 5.000 employees, Leibniz University Hannover is one of the largest and most attractive employers in the Hannover region. We offer a vibrant interdisciplinary and international working environment, and promote personal and professional [development](#) ranging from subject-related skills to leadership and languages.

Additional information

For further information, please contact Dr Renat Almeev; (r.almeev@mineralogie.uni-hannover.de) or Prof. Francois Holtz (f.holtz@mineralogie.uni-hannover.de)

Please submit your application and supporting documents by March 01, 2026 to:

Dr Renat Almeev; Email: r.almeev@mineralogie.uni-hannover.de

Review of later applications will continue until the position is filled

Information on the collection of personal data according to article 13 GDPR can be found at:

<https://www.uni-hannover.de/en/datenschutzhinweis-bewerbungen/>