

Helmholtz-Zentrum Dresden-Rossendorf e.V.



With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. At the Helmholtz Institute Freiberg for Resource Technology (HIF), innovative technologies for the circular economy are developed to explore, provide and use mineral and metal-bearing raw materials more efficiently and to recycle them in an environmentally friendly way. The Department of Modelling and Evaluation is looking for a Postdoc (f/m/d) Methods for Geochemical Exploration and Sampling Strategy.

Postdoc (f/m/d) Methods for Geochemical Exploration and Sampling Strategy

City: Freiberg; Starting date (earliest): 01/06/25; Duration: 20 months;
Remuneration: TVöD-Bund; Reference number: 2025/52; Closing date: 03/04/25

Working field

- Work in an interdisciplinary team to develop analytical and statistical/machine learning methods for surface geochemical exploration
- Preparation of multi-method exploration-campaigns for known deposits in Europe including the development of an adaptive strategy
 - Methods for dynamic sampling design that update sampling locations based on field observations and in-field measurements
 - Methods include mainly surficial geochemistry, e. g. soil and plant sampling, but also knowledge from drill core assets and geophysical exploration data
- Analysis of the efficiency of the sampling strategy based on simulated campaigns on sandbox ground truth models
- Establishment of a methodology for data fusion and integrated analysis of the data collected on the test sites, including code development and integrative analysis of the acquired data for geochemical, geological and methodological implications
- Participate in field work at exploration sites
- Presentation of results at project meetings, international conferences and in peer-reviewed journals
- Co-operation with project partners, colleagues in the institute and the Helmholtz center is very welcome

Requirements

- Completed PhD in the field of geosciences or comparable natural sciences
- Relevant professional experience in the specified area
- Knowledge of

- Economic geology
- Prospectivity modelling
- Mathematical and statistical methods for geosciences (e.g. geostatistics, compositional data)
- Geochemical exploration and/or chemical analysis or an interest in learning them
- Experience in portable analytical methods, applied statistics and/or (environmental/bio) geochemistry would be an advantage
- Structured and solution-oriented work style, analytical thinking
- Above-average commitment and interest to work interdisciplinary
- Enthusiasm for working as a team player in a group of motivated, interdisciplinary professionals
- Ability to travel and do field work in Europe
- Skills in a data science language such as R, Python or Julia
- Excellent communication skills in English, communication skills in Czech, German or Finnish would be an advantage

What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-applicationsystem: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=74408>

More information at <https://stellenticket.de/192523/LUH/>
Offer visible until 03/04/25

