

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. The Center for Advanced Systems Understanding (CASUS) is a German-Polish research center for data-intensive digital systems research. CASUS is looking for a

Postdoctoral Researcher (f/m/d) in Machine Learning and Surrogate Modeling for Geochemical Systems.

City: Görlitz; Starting date (earliest): 01/05/26; Duration: 3 years; Remuneration: TVöD Bund; Reference number: 2026/32; Closing date: 16/03/26

Tasks

- Identify existing machine learning approaches applicable for geochemical systems in a geological setting
- Implement, adapt, and apply machine learning approaches and mathematical surrogate models for modeling radionuclide migration in crystalline host rocks
- Perform uncertainty quantification of machine learning and surrogate models with respect to traceability, robustness and physicochemical correctness
- Cooperate with our project partners at HZDR, TU BA Freiberg and TU Darmstadt
- Present your scientific findings at academic venues and publish research in peer-reviewed journals

Requirements

- Ph.D. in the field of Physics, Chemistry, Computer Sciences or Applied Mathematics or related field
- Background in mathematical surrogate modeling and machine learning
- Experience or familiarity with large-scale computational simulations
- Prior exposure to collaborative software development and version control systems (Git)
- Motivation to work collaboratively in a team-oriented environment
- Proficiency in programming languages (Python, Julia, C/C++)
- Excellent communication skills in English

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-application-system: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=76987>

More information at <https://stellenticket.de/202068/TUB/>
Offer visible until 16/03/26

