

GEOMAR Helmholtz Centre for Ocean Research Kiel is a foundation under public law jointly financed by the Federal Republic of Germany (90%) and the State of Schleswig-Holstein (10%). It is one of the internationally leading institutions in the field of marine research.

Through our research and our commitment to the transfer of knowledge and technology, we contribute significantly to the preservation of the function and protection of the ocean for future generations.

The Marine Mineral Resources Group of the research division 4 – Dynamics of the Ocean Floor is offering a

Doctoral researcher (m/f/d) position in modeling submarine hydrothermal vent systems

starting on May 1st 2025. The position offers the possibility to attain a doctoral degree in natural sciences.

The position is related to the **Horizon Europe Marie Skłodowska-Curie Action (MSCA) – Doctoral Network FluxBEATS** (<https://www.fluxbeats.eu/>) that integrates geological observations, cutting-edge geochemical and biogeochemical analyses, data and modeling from modern volcanic systems along mid-ocean ridges and back-arc spreading centers with Cretaceous ophiolites and Precambrian magmatic suites and associated hydrothermal systems.

Job Description

The position (DC6 of the network) addresses the multi-scale permeability-temperature-heat flux tryptic quantification at deep-sea hydrothermal systems using a joint data analysis and numerical modeling approach.

Tasks include:

- Creation of baseline hydrothermal flow model for the instrumented hydrothermal sites on Mohns Ridge and south of the Azores (EMSO observatories)
- Identify the governing sub-surface processes that control mass and energy fluxes
- Process the EMSO data to identify responses to periodic forcings by tides and pulsed forcings by volcanic and tectonic events.
- Use analytical and numerical models to explain the observed responses.

Qualification and documents

- We are looking for an applicant with a master's degree in geosciences or a related field, proficient knowledge of English, and willingness and ability to travel to partner institutions (secondments) and network events.
- Previous relevant experience and/or familiarity with numerical modeling, marine data processing, and a background in marine geophysics or geology.
- Programming experience (preferentially Python and C++)
- **The following English-language documents using templates from the FluxBEATS website (<https://www.fluxbeats.eu/positions.html>) must be enclosed with applications:** 1) Application form; 2) Curriculum Vitae; 3) Eligibility and mobility declaration; 4) Motivation letter outlining applicants research experience, interests, motivation, and personal assessment of suitability for a given position; 5) Reference contact information.

Also desirable are

- knowledge of OpenFoam
- experience in seagoing marine research
- scientific publications

Applicants must not have resided or carried out their main activity (such as studies, work, or research) in Germany for more than 12 months in the 3 years immediately prior to the call deadline (see FluxBEATS templates).

At a workplace, directly on the Kiel Fjord with many leisure and recreational opportunities, we offer you:

- An exciting work environment with the opportunity to contribute to the development of sustainable solutions in science and society
- Work at an internationally leading center for marine research
- The possibility of mobile working and individual working time arrangements
- Support in arranging care duties
- Support services for professional and personal life situations
- 30 days of annual leave plus additional time off at Christmas Eve and New Year's Eve
- Company pension plan and capital-forming benefits

The position is available for a funding period of 36 months. The salary includes a living and mobility allowance and – if applicable – additional allowances for family, long-term leave or special needs in accordance with the MSCA guidelines (2023 call, European Commission Decision C(2022)7550). The position cannot be split. The fixed-term contract shall comply with Section 2 Paragraph 1 of The Act of Academic Fixed-Term Contract (German WissZeitVG).

GEOMAR Helmholtz Centre for Ocean Research Kiel seeks to increase the proportion of female scientists and explicitly encourages qualified female academics to apply. GEOMAR is an equal opportunity employer and encourages scientists with disabilities to apply. Qualified disabled applicants will receive preference in the application process.

Please send your application for this post **no later than 28st February 2025** under the following link:

[Online application](#)

As soon as the selection procedure has finished, all your application data will be removed according to data protection regulations.

If you have any questions about this position, please get in touch with bewerbung@geomar.de and refer to the keyword “FluxBEATS – DC6”. Or contact Prof. Dr. Lars Rüpke (lruepke@geomar.de) directly.

For further information on the MSCA DN FluxBEATS, the GEOMAR Helmholtz Centre for Ocean Research Kiel or the Helmholtz Association, please visit www.fluxbeats.eu, www.geomar.de or www.helmholtz.de.

GEOMAR is committed to an objective and non-discriminatory personnel selection. Our job advertisements address all people. We expressly renounce the submission of application photos.



The TOTAL E-QUALITY award is presented to GEOMAR for efforts in terms of human resource management aimed at providing equal opportunity.