

At Helmut Schmidt University / University of the Federal Armed Forces Hamburg (HSU/UniBw H), Faculty of Mechanical and Civil Engineering, Chair of Hydromechanics (Univ.-Prof. Dr.-Ing. Ebigbo), a position is **available at the next possible date** for a

Research Assistant (m/f/d)

(salary group 13 TVöD [Collective agreement for the public service]; 39 hours per week)

for a limited period of 3 years.

The scientific work is part of the research project “Assessing underground hydrogen storage with natural gas using numerical simulations” funded by the German Research Foundation.

The research focus of the chair is flow and reactive transport in porous and fractured media. The advertised position focuses on the numerical simulation of two-phase flow of hydrogen-methane mixtures and brine in subsurface reservoirs and the effect of the specific characteristics of such flow on storage efficiency.

Responsibilities:

- Model development, further improvement of numerical methods and realistic simulations (partly on HPC systems) in the project's areas of activity
- Analysis and implementation of suitable equations of state and hysteretic constitutive relations with regard to two-phase flows in porous media
- Presentation of research results at national and international conferences and publication in specialist journals
- Possibility of further academic qualification (e.g. doctorate)
- Carrying out general administrative work as well as academic activities in academic self-administration

Qualification requirements:

- A completed university degree (Diplom [univ.] or Master) in civil/environmental engineering, geosciences, physics, mathematics, computer science, or another engineering/science field with a focus on fluid flow
- Good knowledge of two-phase flow in porous media
- Experience in numerical modelling of flow

Desirable requirements:

- Knowledge of foreign language in English with a proficiency level that corresponds at least to the language level B2 of the Common European Framework of Reference for Languages
- Proficiency in a programming language (e.g. Python, MatLab, or C++)
- Keen interest in academic work

Features of this position:

- Capital-forming benefits
- Annual bonus payment
- Company pension scheme
- Flexible working hours
- DeutschlandJobTicket with employer subsidy if the necessary requirements are met
- Possibility of claiming a childcare place in a daycare centre close to the campus if the necessary preconditions are met
- You will benefit from targeted personnel development and an extensive range of further training and education opportunities.
- Budget-friendly meals in the campus canteen with three meals a day
- You have the opportunity to participate in workplace health promotion offers (for more information, see: www.hsu-hh.de/bgm/).
- Free parking on the campus grounds
- Possibility of using the Bundeswehr's own car-sharing service (for more information, go to: www.bwcarsharing.de).

For questions related to scientific or technical aspects, please contact Univ.-Prof. Dr.-Ing. Ebigbo; Tel.: 040/6541-3958 or by e-mail: ebigbo@hsu-hh.de.

The employment is based on the TVöD in conjunction with the Wissenschaftszeitvertragsgesetz (German Act on Fixed-Term Scientific Contracts). In principle, the activities correspond to pay group 13 (E13). Classification up to pay group 13 of the TVöD shall be made in accordance with § 12 of the TVöD with regard to the activities to be performed on a more than temporary basis and the fulfilment of the personal or collective agreement requirements (job characteristics).

Part-time employment is possible.

The Federal Armed Forces promotes professional equality between women and men and therefore particularly welcomes applications from women.

In accordance with the Sozialgesetzbuch IX (Social Code Book IX) and the Disability Equality Act, we expressly welcome applications from severely disabled persons; the fulfilment of the requirements for the advertisement will be considered on an individual basis.

More information about the university and the professorship can be found at:

www.hsu-hh.de and www.hsu-hh.de/hmech.

Please send your application with the usual documents exclusively in electronic form (pdf file), quoting the reference number **BIW-1125**, by **24.11.2025** to:

personalabteilung@hsu-hh.de.

Note:

Information on data protection in the application process can be found on the website www.hsu-hh.de under the heading "Universität - Karriere - Datenschutzinformationen".

Applications without reference number will not be considered and will be deleted immediately for data protection reasons.

