UNIVERSITÄT GREIFSWALD
Wissen lockt. Seit 1456

Job vacancy

Research Assistant - Institute of Physics 25/B33

University of Greifswald, 22 December 2025 | deadline: 22 February 2026

At the University of Greifswald's **Institute of Physics, MR Physics Research Group**, in the Faculty of Mathematics and Natural Sciences, there is a job vacancy expected to be available **for 01 April 2026**, subject to the approval of funds, for a part-time (75%)

Research Assistant

in the field of **4D Flow MRI sequence development**. The fixed-term contract ends on 31 March 2029. Payment will be made according to pay group 13 *TV-L Wissenschaft*.

The MR Physics Research Group at the University of Greifswald, led by Prof. Dr. Schnell, conducts research using state-of-the-art cardiovascular and neurovascular MRI techniques. Since December 2022, the group has access to a cutting-edge 3-Tesla research MRI system with two exclusive measurement days per week. In addition, several clinical MRI systems from the Department of Diagnostic Radiology are available for application-oriented studies. The chair is closely integrated into the master's degree course Medical Physics, providing an interdisciplinary, research-oriented environment with excellent opportunities for professional development and qualification.

The project is part of a research consortium funded by the EU and the state of Mecklenburg-Vorpommern. The advertised position aims to develop new, efficient 4D flow MRI sequences for the investigation of aneurysms, employing advanced approaches such as radial trajectories and "dual-VENC" flow encoding. In addition to conventional sequence programming, neural networks will be used to accelerate measurements.

The developed sequence prototypes will first be validated in patient-specific 3D-printed aneurysm models and compared with "gold standard" data and measurements obtained via pressure catheters and Doppler ultrasound. Subsequently, the optimised prototype will be applied in clinical studies involving patients with intracranial aneurysms. The goal is to establish the new sequence across multiple institutions (University Hospital Greifswald and University Hospital Rostock) and on different platforms (Siemens and GE).

The project work will be conducted in close collaboration with the University Hospitals of Greifswald and Rostock, the Institute for Applied Computer Science (IACS) of the University of Applied Sciences Stralsund, and the MRI Flow Lab at the University of Rostock, providing an excellent environment for independent research and further professional development.

Job description:

- Development of advanced MRI sequence prototypes (4D flow with radial trajectories) for aneurysm flow measurements.
- Design and implementation of a "virtual Dual-VENC" sequence using neural networks to accelerate imaging.
- Validation of sequences in patient-specific, 3D-printed aneurysm models to ensure accuracy and reliability.
- Deployment and optimisation of sequences across multiple clinical MRI scanners.

- Scientific dissemination through publications in high-impact journals.

Job requirements:

- Completed master's degree in physics, computer science, medical informatics, mechanical or electrical engineering, medical engineering, or a related field by the time employment starts
- Ability to communicate in English, both written and spoken
- Ability to work in a team, a high degree of self-organisation, and the ability to communicate with physicians, physicists, and engineers

Desirable:

- Strong expertise in object-oriented programming with C++, Python, or MATLAB
- Knowledge of MRI or MRI sequence programming, as well as medical imaging
- Experience in imaging data processing, visualisation, and programming for developing sequence prototypes across different platforms

This advertisement is directed at all persons, irrespective of gender. Severely disabled applicants with the same qualifications will be considered with preference.

In accordance with § 68(3) PersVG M-V, the Staff Council will only be involved in staff matters of the academic or artistic staff on request.

Please only submit copies of the original documents with your application, as the originals cannot be returned. Unfortunately, the application costs (e.g. travel expenses for interviews) will not be reimbursed by the state of Mecklenburg-Vorpommern.

Please note that by submitting your application, you provide your consent pursuant to data protection law for our processing of your application data. Further information about the legal bases and the use of your data can be found here.

Applications comprising all usual documents (curriculum vitae (CV), copies of certificates, where appropriate a publication list, short description of previous projects or bachelor's and master's dissertations, reference letters from 2-3 reference contacts) must be sent with reference to the job advertisement number **25/B33** by **22 February 2026**, preferably **via email** (one PDF file), to:

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