

Hier
entsteht
Zukunft!



UNIVERSITÄT
DES
SAARLANDES

Foto: Uwe Bollhäuser

Saarland University is a campus university that is internationally recognized for its strong research programmes. Fostering young academic talent and creating ideal conditions for teaching and research are a core part of the university's mission. As part of the University of the Greater Region, Saarland University enables students and staff to share and exchange knowledge and ideas between disciplines, between universities and across borders. With over 17,000 national and international students, studying more than a hundred different academic disciplines, Saarland University is a diverse and dynamic learning environment. Saarland University is officially recognized as one of Germany's family-friendly higher-education institutions and with a combined workforce of more than 4,000 it is one of the largest employers in the region.

The Quantum Information and Matter Group led by Prof. Peter P. Orth in the Department of Physics is inviting applications for the following position commencing 01 April 2026. An earlier (or later) starting date is also possible.

Academic research assistant (m/f/x)

Reference number W2730, salary in accordance with the German TV-L salary scale¹, pay grade: E13 TV- L, duration of employment: initial appointment is for 3 years with a possible extension by another year, volume of employment: 75 % of standard working time.

Workplace/Department:

Department of Physics, Faculty of Natural Sciences

Job requirements and responsibilities:

We are seeking a highly motivated student with a Master's Degree in Physics, Quantum Engineering, Quantum Information Science (or related fields) to join the Quantum Information and Matter Group headed by Prof. Peter P. Orth. Our group is part of the recently established Quantum Technology Center (QuTe) at Saarland University—a dynamic, interdisciplinary research hub uniting expertise in computer science, mathematics, engineering, chemistry, and physics. Through our close partnership with the Helmholtz Forschungszentrum Jülich, we offer unique opportunities for joint projects, networking, and access to cutting-edge HPC and quantum computing resources. The successful candidate will conduct research at the interface of quantum information science and physics. Specific research directions include: Quantum algorithms for simulating quantum field theories, interacting many-body systems, and combinatorial optimization. The implementation and end-to-end resource cost estimations of these algorithms on current and near-term early fault-tolerant quantum hardware. Development and application of quantum error mitigation and quantum error correction techniques. Join us to shape the future of quantum!

¹ TV-L = collective agreement on remuneration of public sector employees in the German *Länder*

The pay grade assigned to an employee depends on their professional qualifications and the number of years of service. Each pay grade is further subdivided into levels. Entry-level employees with no previous experience will initially be assigned a level 1 rating. After one year at level 1 of the E10 pay grade, an employee will move up to level 2. After a further two years, the employee will move to level 3, etc.

Your academic qualifications:

- Completed university studies in Physics, Quantum Engineering, Quantum Information Science (or a related field) (Master's degree)
- Language skills (according to GER): German -C2 or English -C2

The successful candidate will also be expected to have:

- Successfully completed coursework in quantum information science, condensed matter physics, or materials science
- Initial research experience in one or more of these fields
- Preferably strong analytical and/or numerical skills for studying quantum many-body systems, field theories, combinatorial optimization, or quantum error correction
- Excellent verbal and written communication skills in English or German
- Collaborative mindset and willingness to work closely with other team members

Why join us:

- Work on cutting-edge problems at the intersection of quantum information and condensed matter physics
- Join a collaborative and dynamic research group within an interdisciplinary environment
- Access modern computational resources and benefit from a strong academic network
- Contribute to research that addresses fundamental questions and emerging quantum technologies

What we can offer:

- A flexible work schedule allowing you to balance work and family, among other things the possibility of teleworking
- Secure and future-oriented employment with attractive conditions
- A broad range of further education and professional development programmes (for example language courses)
- An occupational health management model with numerous attractive options, such as our university sports programme
- Supplementary pension scheme (RZVK)
- Discounted tickets on local public transport services ('Job-Ticket Plus' of the saarVV)

We look forward to receiving your **meaningful online application** (in a PDF file) by **03.11.2025** to **peter.orth@uni-saarland.de**. Please include the reference number **W2730** in the subject line of the e-mail.

If you have any **questions**, please contact us for assistance. Your contact:

Prof. Dr. Peter P. Orth

Quantum Information and Matter Group

Department of Physics

Phone: +49 (0)681/302-4960

Pay grade classification is based on the particular details of the position held and the extent to which the applicant meets the requirements of the pay grade within the TV-L salary scale. Part-time employment is generally possible.

If you have obtained a foreign university degree, a proof of the equivalence of this degree with a German degree by the Zentralstelle für ausländisches Bildungswesen (ZAB) is needed before hiring. If necessary, please apply for this in time. You can find more information at <https://www.kmk.org/zeugnisbewertung>.

Unfortunately, neither costs for attending an interview at Saarland University nor costs for any certificate evaluation by the ZAB can be reimbursed in principle.

We welcome applications regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, and sexual orientation and identity. In accordance with its policy of increasing the proportion of women, the University actively encourages applications from women. Applications from severely disabled persons will be given preferential consideration in the event of equal suitability.

When you submit a job application to Saarland University you will be transmitting personal data. [Please refer to our privacy notice for information on how we collect and process personal data in accordance with Art. 13 of the Datenschutz-Grundverordnung](#). By submitting your application you confirm that you have taken note of the information in the Saarland University privacy notice.