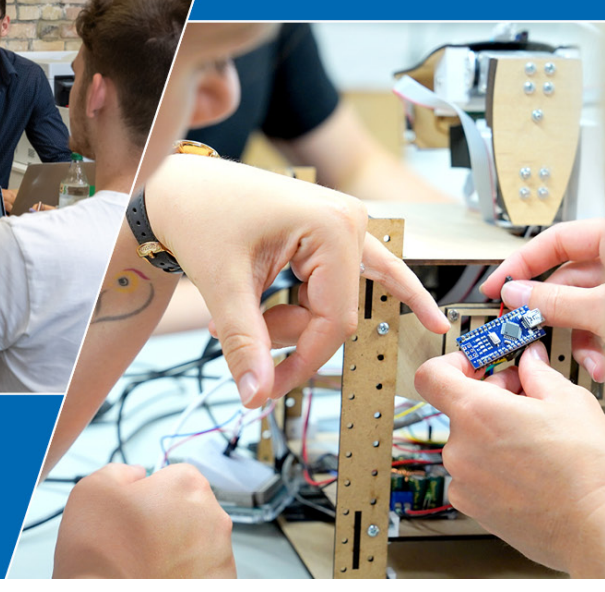




Technische Hochschule Wildau
Technical University of Applied Sciences

Shaping the future together for a society worth living in – that is the vision of TH Wildau! As a university of applied sciences, we want to accompany social transformations in a responsible and practice-oriented manner. We bring technology and management together, creating interdisciplinary spaces for innovative learning environments and creativity in research and teaching. In the Berlin/Brandenburg metropolitan region, our campus is known as a place of encounter, lifelong learning, and collaboration between different (professional) cultures. State-of-the-art equipment and 19th-century industrial architecture symbolize what is important to us both professionally and personally: we connect!

Technische Hochschule Wildau invites applications for a Research Associate (f/m/d) in Quantum Sensing within the Quantum Hardware Research Group of the Quantum Application Hub:

Research Associate (m/f/d) – Quantum Sensing / NV-Diamond Magnetometry

Reference number 2027_QUANTUM

The position offers the opportunity to pursue a PhD and is available from 1 April 2027 or as soon as possible thereafter. An increase to full-time employment may be possible, subject to the availability of funding. The position is fixed-term for four years, with a workload of 75 % of full-time employment.

Research Focus

The Quantum Application Hub conducts research into diamond-based magnetometry using nitrogen-vacancy (NV) centers. The successful candidate will develop and experimentally investigate magnetometer systems based on these defects.

The research focuses on optical excitation and detection of NV centers using optically detected magnetic resonance (ODMR), the development and optimization of suitable measurement techniques, and the characterization of sensor performance and achievable magnetic-field sensitivity.

Your Responsibilities

- Design, develop, and implement experimental setups for NV-center-based magnetometry
- Develop and investigate optical and microwave excitation and detection techniques
- Conduct theoretical modeling and system design of NV-center-based diamond magnetometers
- Perform and optimize continuous-wave ODMR (CW-ODMR) measurements
- Develop software for instrument control, measurement automation, data acquisition, and analysis
- Characterize and optimize sensor performance, particularly sensitivity, stability, and measurement accuracy
- Analyze and publish research results and present findings at national and international scientific conferences

Your Profile:

Required Qualifications

- A completed university degree (Master's or equivalent) in physics, photonics, applied physics, electrical engineering, or a related discipline
- Sound knowledge of at least one of the following: optics, laser physics, quantum optics, solid-state physics, or experimental measurement techniques
- Interest in experimental research and in designing and building complex laboratory setups
- Ability to work independently and systematically, combined with strong teamwork skills
- Good written and spoken English skills; knowledge of German is an advantage
- Motivation to pursue a doctoral degree

Desirable Qualifications

- Practical experience with optical laboratory setups or laser systems
- Knowledge of microwave engineering, magnetic resonance, or quantum sensing
- Experience with electronic instrumentation and measurement automation
- Programming skills, preferably in Python
- Some experience with NV centers in diamond and ODMR measurement techniques

What do we offer?

- An exciting and challenging research topic with the opportunity to pursue a PhD
- Independent research and development work with scope to shape experimental systems
- An interdisciplinary, supportive research environment with opportunities for professional and scientific development
- flexible working arrangements to improve the work-life balance (including flexible working hours, short core working hours, alternating teleworking and mobile working, working in the parent-child office)
- meaningful, interesting, and varied activities and opportunities to actively shape the university in a variety of ways
- a trusting work culture based on equality
- Membership in an innovative university community with a family atmosphere
- additional pension provision through the Federal and State Pension Institution (VBL) and capital-forming benefits
- 30 days of vacation plus additional days off on December 24 and 31
- very good accessibility by public transportation (campus directly at the Wildau S-Bahn station)
- sufficient free parking spaces for cars and bicycles
- a wide range of continuing education opportunities and English classes for employees
- Cafeteria on campus
- free use of the external company social counseling service provided by TELUS Health GmbH via the "Frag Elli" app
- various health and sports offerings, discounted membership at a gym with swimming pool



The freedom of independent work with ample scope for creativity and decision-making



Family-friendly, flexible working environment



Wide range of health and sports activities

Please note: application costs (including travel expenses) cannot be covered.

The Technische Hochschule Wildau - Technical University of Applied Sciences Wildau is seeking to increase the proportion of female employees and encourages suitably qualified women to apply. Applications from severely disabled persons will be given preferential consideration if they have the same qualifications and skills. We also encourage all interested parties and current employees at Technische Hochschule Wildau - Technical University of Applied Sciences Wildau to apply. Applicants (f/m/d) with children are welcome – our university is certified as a family-friendly university.

Informationen

Remuneration is based on pay grade E13 of the German collective agreement for the public service of the federal states (TV-L), subject to the applicant meeting the relevant requirements.

Contact for academic enquiries

Claus Villringer
Head of the Quantum Hardware Research Group Quantum Application Hub, TH Wildau

Questions about the application?

Application management
Anita Reichelt

Our campus is located right next to the S-Bahn station



TH Wildau in figures

- approximately 3,300 students from 60 different countries
- approximately 450 employees
- approximately 90 of whom are professors
- approximately €11 million in third-party funding

Feel free to visit us online in advance!

You can find more information about TH Wildau on the following pages: https://www.th-wildau.de/

We look forward to receiving your application!

Please apply using our **online application form**, quoting the above reference number, by January 17**, 2027.**

Technical University of Applied Sciences Wildau
Hochschulring 1
15745 Wildau

Visit us also :

Zertifikat seit 2009 audit familiengerechte hochschule

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