



**Quantum Valley  
Lower Saxony**



**Leibniz  
Universität  
Hannover**

The „Quantum Valley Lower Saxony“ (QVLS-Q1) research consortium, a collaboration between TU Braunschweig, Leibniz University Hannover and Physikalisch-Technische Bundesanstalt (PTB), aims at realizing a 50-qubit quantum computer based on trapped ions.

The consortium invites applications for the position of a

## **Research Assistant (m/f/d) in Quantum Technologies focusing on open system quantum simulation (Salary Scale 13 TV-L, 75 %)**

at the earliest possible date. The position is limited to 3 years with a possibility of extension. The location is Hannover.

The control of quantum states of trapped ions is one of the most advances approached on the way towards error tolerant programmable quantum computers. Based on chip technology for ion traps in combination with microwave control, a 50-Qubit-System will be built in QVLS-Q1. Expert teams will focus on all aspects from chip design and fabrication with integrated optics and electronics to electronic circuit design, laser technology and software design for various applications.

We are part of an excellent research environment with access to the unique infrastructure of the whole consortium. The team is working in an excellent national and international network and is participating – besides QVSL-Q1 – in important large collaborative projects including the Excellence Cluster „QuantumFrontiers“.

### **Responsibilities and duties**

- Development of gate synthesis methods for the digital quantum simulation of open quantum systems
- Identification of suitable problems for demonstrating a quantum advantage
- Benchmarking of quantum simulators using classical simulation methods

### **Employment conditions**

- Scientific university degree (M.Sc. or equivalent) in Physics
- Expert knowledge in one or more of the above-mentioned research areas
- High level of personal motivation, responsibility and continuous learning abilities
- Pronounced communication and team building capabilities
- Openness to work in a diverse, international working environment
- Very good knowledge of the English (and possibly German) language
- Willingness to perform research in partner labs at various locations when necessary

The university aims to promote equality between women and men. For this purpose, the university strives to reduce under-representation in areas where a certain gender is under-represented. Women are under-represented in the salary scale of the advertised position. Therefore, qualified women are encouraged to apply. Moreover, we welcome applications from qualified men. Preference will be given to equally-qualified applicants with disabilities.



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For further information, please contact  
PD Dr. H. Weimer (phone: +49 511 762-17344, Email: [hweimer@itp.uni-hannover.de](mailto:hweimer@itp.uni-hannover.de)).  
Additional information on QVLS-Q1 can be found on the website: <https://www.qvls.de/en/>

Please submit your application with supporting documents by June 24th, 2021 quoting the  
reference number **T4.3b** to:

**Gottfried Wilhelm Leibniz Universität Hannover**

QVLS-Q1, Dr. Bernd Jungbauer

Callinstr. 36

30167 Hannover

or by email to: [jobs@qvls.de](mailto:jobs@qvls.de)

<http://www.uni-hannover.de/jobs>

Information on the collection of personal data according to article 13 GDPR can be found at  
<https://www.uni-hannover.de/en/datenschutzhinweis-bewerbungen/>.