

Braunschweig, 12. Dezember 2020

JOB OFFER Nr. 20-QVLS-6.1A

Braunschweig University of Technology, with its 18.500 students and about 3.700 employees, is the largest University of Technology in northern Germany. We stand for a strategic and performance-oriented thinking and acting, for relevant research, motivated teaching and a successful transfer of knowledge and technology into industry and society. We are consequently advocating family friendliness and equal opportunities. Our campus is located in one of the most research-oriented regions of Europe.

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

In the frame of this project, the Institute of Science Education Research is looking for talents worldwide, who want to join our team:

Postdoc (m/f/d) in Quantum Technologies focussing on Quantum Education (Team 6.1)

The position is part time (80 %) and temporary (2.5 years) with a possibility of extension. The location is Braunschweig. Remuneration will be in line with the current German collective pay agreement up to TV-L E14, depending on personal qualification and task assignments.

The control of quantum states of trapped ions is one of the most advances approached on the way towards error tolerant programmable quantum computers. Base on chip technology for ion traps in combination with microwave control, a 50-Qubit-System will be build in QVLS-Q1. Expert teams will focus on all aspects from chip design and fabrication with itnegrated 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 various other large collaborative projects, including the Excellence Cluster „QuantumFrontiers“.

Tasks and assignments:

In Quantum Education, the focus is on developing quantum technologies courses for new target groups, such as engineering students or industry workforce. Tasks include:

- Support in the coordination of Quantum Education activities within QVLS.
- Conceptual and didactical support in the development and evaluation of new study programs in Quantum Technologies
- Establish and maintain national and European networks for cooperation with various stakeholders (including industry) in the field of Quantum Education

- Inquire the needs of industry in Quantum Technologies and incorporate them into study programs
- Develop suitable formats for training offers
- Own research and development in the field of Quantum Education

Required profile:

- Master and very good PhD in physics, physics education, or another discipline relevant to the field.
- Very good knowledge of quantum physics and/or a field of quantum technology
- Willingness to get familiar with empirical research and evaluation methods
- Knowledge of engineering sciences is welcome
- 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 preferably also German) language

For further informationen please contact:

Prof. Dr. Rainer Müller, E-Mail: rainer.mueller@tu-braunschweig.de

www.qvls.de

TU Braunschweig offers flexible part-time models whenever possible for supporting family-friendliness. Disabled persons are preferred in case of equal suitability. Written evidence has to be presented in the application. Applications from applicants of all nationalities are welcome. TU Braunschweig aims to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from women are particularly welcome in this case.

Personal data will be stored for the purpose of carrying out the application procedure. Application costs cannot be reimbursed. Please understand that applications that are not considered can only be returned against a self-addressed and stamped envelope. By submitting your application, you agree that your application may be forwarded internally to parallel advertising procedures in the consortium.

Are you interested? In this case we are looking forward to your application. Please send your application via email (lena@tu-braunschweig.de) as a single PDF document. In case this is not possible, a written application may be sent to: Prof. Dr. Rainer Müller, Physikdidaktik, TU Braunschweig, Bienroder Weg 82, 38106 Braunschweig).

Reference Number 20-QVLS-6.1A

Application deadline: **18th April 2021**

Prof. Dr. Rainer Müller