Job description: Research Associate - Chair of Experimental Quantum Optics

We are looking for:

In Faculty IV - Faculty of Science and Technology, Physics / Experimental Quantum Optics, we are looking for a scientific employee to start as soon as possible as part of the BMBF- funded research project "Scalable quantum computer with high-frequency controlled stored ions" (MIQRO) under the following conditions:

- 75% = 29,87 hours
- Remuneration group TV-L13
- limited until 30.04.2025

About us:

At the Chair of Quantum Optics, we have developed a novel, groundbreaking method to control trapped ions with high-frequency radiation. Now we further develop this system together with the partners in the MIQRO project to prepare the ground for a scalable quantum computer. The research project is carried out in close cooperation with eleQtron GmbH. eleQtron is a spin-off of the chair with the aim of commercialising quantum computers based on the research work carried out at the chair.

Your tasks:

The focus of your research activities is the planning, implementation and evaluation of novel experiments on all aspects of quantum information processing with trapped atomic ions. This includes in particular the development and construction of an apparatus for the storage, spectroscopy and coherent control of ions. Your tasks also include the publication of scientific and technical results. You will also be expected to collaborate with external research partners and to assist in the acquisition of third-party funding.

Your profile:

- Completed university studies in physics (Master of Science) with a grade better than "good" (German scale).
- Sound knowledge of quantum mechanics
- Basic knowledge of quantum information processing
- Essential for successful participation in the above-mentioned project are a high levelof interest in the task at hand, exceptional commitment and initiative.
- Willingness to work in an interdisciplinary team from the fields of physics, computer science, mathematics and electrical engineering.
- We value knowledge in one or more of the following areas: Experimental quantum optics, laser spectroscopy and cooling, atomic physics, microwave technology, laser technology, optics, vacuum technology, control electronics or real-time control.
- Very good command of English

Our offer:

- Promotion of own scientific qualification according to the Act on Temporary Scientific Contracts (Wissenschaftszeitvertragsgesetz)
- Close collaboration with a technology-leading start-up and experience and networking in an emerging industry
- Field of activity with great creative potential
- An agile environment that encourages your enjoyment of numerous challenges of innovative research.

- We offer flexible working hours, dual career service, coaching/mentoring and a comprehensive staff development program.

We look forward to receiving your application.

Your contact person:

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