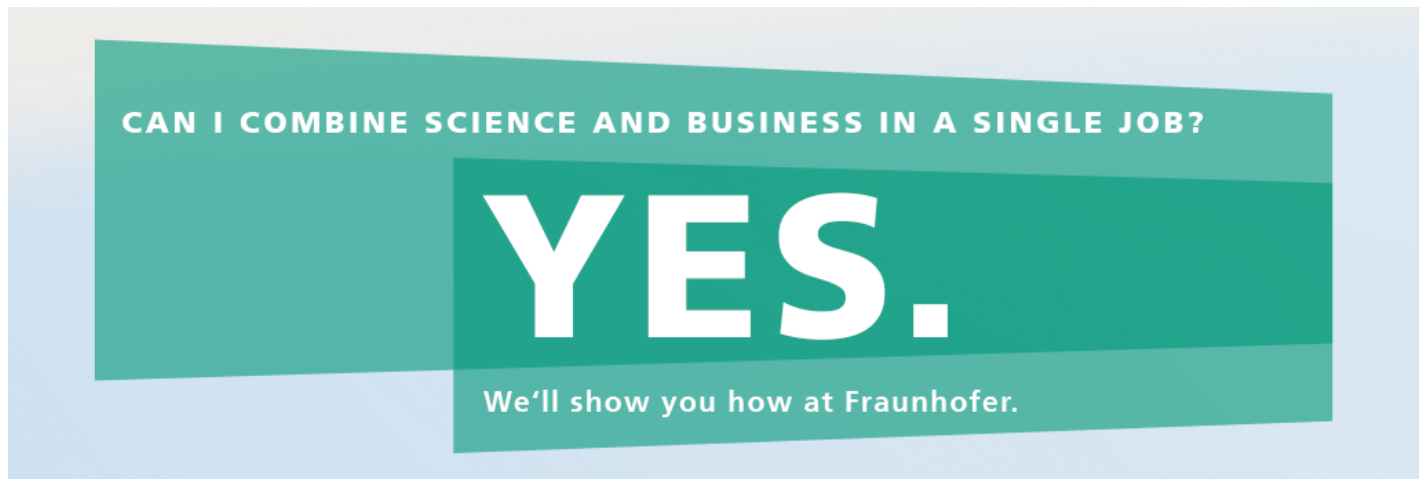


Stellenbezeichnung: Student Assistant / Intern/ Thesis Student Photonic Quantum Technology (IOF-2022-38)



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Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment. As a result, the work undertaken by our researchers and developers has a significant impact on people's lives. We are creative. We shape technology. We design products. We improve methods and techniques. We open up new vistas.

The Fraunhofer Institute for Applied Optics and Precision Engineering in Jena conducts applied optics research on behalf of industry and as part of publicly funded research projects. The range of services includes system solutions, starting with new design concepts, through technology development, manufacturing and measurement methods to the construction of demonstrators and pilot series for applications. Fraunhofer IOF is also pioneering applied quantum technology, providing innovative solutions to science and industry wherever quantum optical phenomena may lead to revolutionary applications.

For the Department of Emerging Technologies of the Fraunhofer Institute for Applied Optics and Precision Engineering (IOF), we are seeking highly motivated research students to join the »Quantum Communication Technologies« group. Research in the group focuses on applied quantum technologies - from methods for generating and manipulating quantum states of light, to system-level applications in quantum communication and remote sensing. Our goal is to transfer quantum technologies from the laboratory to applications in fiber networks and long-distance satellite links.

What you will do

We are seeking an APPLIED RESEARCH STUDENT with interest in experimental physics, optical communications, or quantum science to support our team in a research project related to:

- Development of a software package for quantum key distribution post-processing, including error correction (i.e. Cascade or LDPC) and privacy amplification
- Optimization of algorithms for efficient and secure key generation at communicating parties

What you bring to the table

- Student in computer science, physics or related with focus on data structures, processing, or information theory
- Outstanding performance in studies
- Programming experience (C/C++ or preferably Python)
- Excellent written and oral communication skills in English language
- Ideally, knowledge in error correction algorithms and secure communications
- Applicants should be motivated to work on research projects related to quantum technology, experimental quantum optics, or quantum communication for at least 3 months.

What you can expect

- Opportunity to work in **challenging** R&D projects
- Collegial, **open-minded and friendly** community
- **Flexible hours** that allow you to balance studies and on-site experience
- Extensive professional support from **scientific mentors**

Remuneration according to the general work agreements for employing assistant staff.

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity. Severely disabled persons are given preference in the event of equal suitability.

Interested? Apply online now. We look forward to getting to know you!

Requisition Number: 25242

Application Deadline: 04/22/2022

