



Technische Universität Berlin



Research Assistant - salary grade E13 TV-L Berliner Hochschulen - 1st qualification phase (for doctorate)

part-time employment may be possible

Faculty II - Mathematics and Natural Sciences, Institute of Physics and Astronomy - Research Group Photonic Quantum Communication Systems

Reference number: II-430/25 (starting at the earliest possible / limited for 5 years / closing date for applications 17/10/25)

About us:

The research of the group "Photonic Quantum Systems" focuses on the fundamental principles of quantum information. By leveraging modern quantum optical methods-particularly integrated photonic circuits on silicon and silicon dioxide optical chips-we explore key phenomena such as multiphoton interference and entanglement between quantum systems. These findings we apply in areas such as quantum simulation and quantum communication. Integrated photonic circuits, in particular, pave the way for the development of compact and practical quantum devices.

Your responsibility:

We are seeking a motivated and talented research assistant to contribute to the following tasks:

- Designing and developing integrated photonic circuits for conducting quantum optical experiments
- Publishing research results in national and international conferences as well as in peer-reviewed scientific journals
- Assisting in teaching activities, including student lab courses

Your profile:

- A completed scientific university degree (Diploma, Masters, or equivalent) in physics or a related field
- Strong foundational knowledge in optics and quantum mechanics
- The ability to teach in German and/or in English is required; willingness to acquire the respective missing language skills
- Experience in measuring physical properties and analyzing experimental data
- Proficiency in at least one common programming language (e.g., Python, C++, Julia, or similar)
- Ability to work both independently and collaboratively within a team is desirable
- Strong skills in abstraction, modeling, and creative problem-solving are desirable
- Experience with optical setups is an advantage
- Familiarity with simulating optical asystems and/or integrated waveguide systems is an advantage
- Prior experience in writing scientific publications is an advantage

How to apply:

Please send your application, **quoting the reference number**, with the usual documents (in a single PDF file, max. 5 MB) by email to Prof. Dr. Jasmin Meinecke (at jasmin.meinecke@tu-berlin.de).

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guaranty for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung/.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities. Applications from people of all nationalities and with a migration background are very welcome.

The vacancy is also available on the internet at:
<https://www.jobs.tu-berlin.de>

