Technische Universität Berlin

Research Assistant - salary grade E 13 TV-L Berliner Hochschulen

part-time employment may be possible; under the reserve that funds are granted

Faculty IV - Electrical Engineering and Computer Science, Institute of Software Engineering and Theoretical Computer Science / Security in Telecommunications
Reference number: IV-368/25 (starting at 01/10/25 / until 30/09/28 / closing date for applications 26/09/25)

Your responsibility:

As part of a research project in the field of quantum computing, novel techniques and quantum algorithms are to be developed and analyzed for classical and cryptographic optimization problems. The focus is on investigating lattice problems and specific SAT instances, particularly with regard to structural properties that can be exploited by quantum: algorithms. Approaches such as the Quantum Fourier Transform and Decoded Quantum Interferometry will be employed to identify potential quantum advantages. Additionally, the (quantum query) compiexity of the algorithms will be assessed for various parameterized classes of instances. The project also aims to explore the practical implications of the findings for real-world application scenarios.

Your profile:

- Successfully completed academic degree (Master, Diplom, or equivalent) in Computer Science, Computer Engineering, Electrical Engineering, or a related field
- Outstanding initial academic achievements (e.g., publications)
- Good knowledge of German and/or English required; willingness to acquire the respective missing language skills
- Enthusiasm for cutting-edge research, creativity, and ability to work in a team desirable
- Advanced knowledge in the areas of quantum algorithms, lattice-based cryptography, and/or parameterized complexity desirable

How to apply:

Please send your written application, quoting the **reference number**, with the usual application documents by e-mail (one PDF file, max. 5 MB) to: **secretary@sect.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

Zertifikat seit 2008
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