Paderborn University is a high-performance and internationally oriented university with approximately 18,000 students. Within interdisciplinary teams, we undertake forward-looking research, design innovative teaching concepts and actively transfer knowledge into society. As an important research and cooperation partner, the university also shapes regional development strategies. We offer our more than 2,600 employees in research, teaching, technology and administration a lively, family-friendly, equal opportunity environment, a lean management structure and diverse opportunities.

Join us to invent the future!

With the Institute for **Photonic Quantum Systems (PhoQS)**, the Paderborn University aims to establish an international research center in the field of photonic quantum technologies. The goal is to develop new technologies for photon-based quantum applications as well as new theoretical and experimental concepts and research approaches. The ultimate focus is on the understanding and control of photonic quantum simulators and quantum computers.

In the Faculty of Computer Science, Electrical Engineering and Mathematics, the Institute of Computer Science – **Department "Codes and Cryptography"** – within this scope, we invite applications for the following fixed-term position (100% of the regular working time), which will start at the earliest opportunity:

Research Assistant (f/m/d)
(salary is according to E13 TV-L)

The position is embedded in the project "Photonic Quantum Computing (PhoQC)" of the "Ministerium für Kultur und Wissenschaft" of the state of Northrhine-Westfalia (MKW NRW).

It is a full-time qualification position to support a PhD-project. The initial contract is for three years but limited to the duration of the PhD-project. An extension to finish the PhD is possible in accordance with the rules of the WissZeitVG.

Your duties and responsibilites:
- Complexity theoretic analysis of Boson-Sampling-like experiments
- Development of quantum algorithms applying Boson Sampling to solve practical tasks
- Development and analysis of theoretical frameworks for universal quantum computing based on quantum photonics
- Teaching on the order of 4 teaching hours (SWS) per week

Hiring requirement:
- scientific Master degree in computer science, mathematics or physics

It is expected for the successful candidate to have an established academic profile and previous experience in at least one of the following areas:

- Quantum algorithms
- Quantum complexity theory
- Theoretical quantum photonics

Since Paderborn University seeks to increase the number of female scientists, applications of women are especially welcome. In case of equal qualification and scientific achievements, they will receive preferential treatment according to the North Rhine-Westphalian Equal Opportunities Policy (LGG), unless there are cogent reasons to give preference to another applicant. Part-time employment is possible. Likewise, applications of disabled people with appropriate qualification are explicitly requested. This also applies to people with equal status according to the German social law SGB IX.

Please send your application including a CV using the **Ref. No. 5979** to: bloemer@upb.de.

Information regarding the processing of your person data can be located at: https://www.uni-paderborn.de/en/zv/personaldatenschutz.

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