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Post Title: Research Fellow in Trapped Ion Quantum Computing

School/department: Mathematical and Physical Sciences/Physics and Astronomy

Hours: Full-time or part-time hours considered up to a maximum of 1.0 FTE

Requests for flexible working options will be considered (subject to business need).

Contract: Fixed term initially 12 months, with the possibility of extension

Reference: 20367

Salary: starting at £37,099 to £44,263 per annum pro rata if part-time. According to track record and experience

Placed on: 09 October 2023

Closing date: 08 December 2023. Applications must be received by midnight of the closing date.

Expected Interview date: to be confirmed.

Expected start date: As soon as possible

This role was previously closing on the 9th of October 2023

Applications are invited for the position of a Research Fellow in Trapped Ion Quantum Computing in the [Ion Quantum Technology Group](#) in the [Sussex Centre for Quantum Technologies](#) at the University of Sussex. The position is part of the UK National Quantum Technologies programme and is concerned with the development of utility scale quantum computers capable of solving disruptive societal and industry challenges.

Trapped ions are one of the most mature implementations to deliver practical quantum technologies. We have developed a unique approach for trapped-ion quantum computing that enables scaling to a large number of qubits. The approach couples scalable global microwave based quantum gate technology with fully integrated quantum computing microchip modules that can be linked together using fast electric field links.

This position is part of a larger effort to develop and operate quantum computing solutions which scale to significantly larger system sizes. We currently operate 5 quantum computer prototypes in our lab and the position will focus on one or multiple of these experimental setups directed towards the implementation of quantum error correction, ion transport and quantum gate execution, raising gate fidelities, operation of multi-module quantum computing prototypes and the development of quantum computing microchips.

Some of the typical tasks for this position include operation of ion trap experiments, high power microwave setups, laser systems, optical setups and ultra-high vacuum setups as well as carrying out quantum information science experiments, quantum error correction, perform simulations of quantum systems, quantum control and other relevant theory and supervise undergraduate and postgraduate students.

The successful applicant should have an experimental PhD in a field related to our research area such as atomic physics, optical physics or quantum physics along with a good publication record. The salary offered will be appropriate to the qualifications, standing and experience of the successful candidate.

You can find out more about the group at: <http://www.sussex.ac.uk/physics/iqt/>

Please include with your completed application form a CV, cover letter, the contact details of three referees and a list of relevant publications.

Please contact Prof Winfried Hensinger (w.k.hensinger@sussex.ac.uk) for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.

Please note that this position may be subject to [ATAS clearance](#) if you require visa sponsorship.

For full details and how to apply see our [vacancies page](#)

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

Please note: The University requires that work undertaken for the University is performed from the UK.