

Research Fellow in Quantum Networking **and** **Quantum Computation**

Department of Physics and Astronomy

University of Sussex - School of Mathematical and Physical Sciences

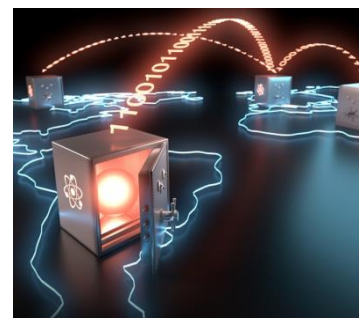
Fixed Term until 31st October 2021 with the possibility of an extension, full time

Salary range: starting at £33,199 and rising to £39,609 per annum

Expected start date: as soon as possible

Applications are invited for a full-time postdoctoral position in Quantum Networking and Quantum Computation at the University of Sussex. Applicants should have obtained a PhD in experimental quantum optics, laser- or atomic physics and be able to demonstrate working knowledge in this field. The appointment is within the framework of the UK 'Quantum Technology Hub Quantum Networked Quantum Information Technologies' and 'EPSRC Hub in Quantum Computing and Simulation'. The successful candidate will work in a team of three PhD students and Prof Matthias Keller.

The goal of the project is to combine two of the most successful techniques in quantum information processing: individually trapped ions and strong-coupling cavity-QED, and create a node module of a distributed quantum computer. The module comprises of a micro-structured linear rf-trap with regions for ion loading, quantum logic operations and an ion-photon interface. The required work includes organising the fabrication of the trap components based on an existing design, assembling the module and characterising its performance. Two of these modules will then be used to measure ion-photon entanglement and the entanglement between ions in two modules.



For further information, please contact Dr Matthias Keller

Phone: +44 (1273) 877673, email: M.K.Keller@sussex.ac.uk

Please include with your completed application form a CV, at least two references and a list of relevant publications.

The University of Sussex is committed to equality of opportunity.