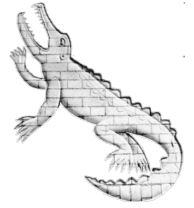




University of Cambridge

Cavendish Laboratory

Atomic, Mesoscopic and Optical Physics



Postdoctoral Research Fellowship

Quantum-optical networks with solid-state spins and photons

Confined and isolated spins carry great promise for quantum information science as quantum bits. Optically active spin defects in diamond, particularly the **silicon-vacancy (SiV)** centre, can provide not only the confinement, but also clean optical access to the individual spin states under study. As a partner of the Oxford-lead **EPSRC Networked Quantum Information Technologies (NQIT) Hub**, we aim to extend the quantum optical control from single confined spins to an elementary network, where entanglement is established through photonic interference. The research topics will include the realisation of efficient quantum relays and repeaters, the generation of photonic cluster states, and interfacing hybrid (atomic and solid-state) nodes. The applicants should have strong interest and experience in experimental quantum optics, optical spectroscopy, atomic physics and/or confined spin systems and quantum information science. In turn, you will enjoy being an active part of a dynamic research group in the University of Cambridge and an integrated member of the NQIT community.

How to apply: Applicants will be considered for **1st April 2015** starting date (or later). The fellowship is **fully funded** for 3 years, which will include a probationary period. Application deadline is **15th March 2015**. Employment requirements of the University of Cambridge and the Physics Department apply fully. Applications should be sent via email directly to **Mete Atatüre** (ma424@cam.ac.uk) and should include a full CV, a list of publications, the names and contact details of two referees, a brief summary of research experience, and a completed copy of the CHRIS/6 Cover Sheet available from:

<http://www.admin.cam.ac.uk/offices/hr/forms/chris6/>

For further information about the group please visit:

<http://www.amop/phy.cam.ac.uk/amop-ma>