

Colloquia

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Cambridge University, Cambridge, UK

Quantum optics of spins and photons

day

MAR 02, 2016 WED

location

EE01

time

15:40

ABSTRACT

Confined spins in solids, such as semiconductor quantum dots, are exemplary systems to generate high quality single photons and, in parallel, sustain a ground-state manifold correlated to these photons. This spin-photon correlation opens realistic routes for distributed quantum networks, offer insight into the fundamental properties of the studied material systems, and even allow fundamental concepts in quantum optics to be investigated. I will highlight recent research progress in semiconductor quantum dots and offer an overview of future directions.

Mete Atatüre received his Bachelor of Science degree in 1996 from Bilkent University Physics Department in Turkey. Then, he joined the Quantum Imaging Laboratory at Boston University for his PhD studies. From 2002 to 2007, he worked as a Postdoctoral Fellow in the Quantum Photonics Group at ETH Zurich. He joined the Cavendish Laboratory in June 2007 as a University Lecturer, was promoted to a Readership in 2011 and to a Professorship in 2015. Atomic, Mesoscopic and Optical Physics Research group. Current research efforts in his group include optical control of single and multiple quantum-dot spins, high-resolution spectroscopy of diamond-based emitters, solid-state cavity-QED and nanoplasmonics.

The Physics Colloquia are designed to address a non-specialist, broad audience and introduce topics of contemporary research through lectures by leading experts. We warmly invite all members of the student body, including undergraduates enrolled in any programme.

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