

Department of Physics

Research Assistant

£28,695 - £37,394 pa

Fixed Term Contract for 21 months



Applications are invited for one Postdoctoral Research Assistant in the area of theoretical quantum sensing and metrology, with particular emphasis on quantum-light spectroscopy of complex quantum systems. The position is based in the quantum information science group of Dr. Animesh Datta at the University of Warwick, UK.

The post is available for a fixed-term duration of 21 months, starting no later than May 01, 2021. The position may be extended depending on performance.

The post will develop theoretical schemes for quantum-enhanced sensing of multiple parameters individually or simultaneously. The schemes will be applied to complex quantum systems such as molecules embedded in natural or engineered environments. Particular emphasis is to be placed on the experimental feasibility of these schemes with regards to identifying the optimal quantum states of light as well as their measurement. The overall goal will be to propose quantum-enhanced spectroscopy schemes for complex quantum systems that may be implemented experimentally.

The Postdoctoral Research Associate (PDRA) will work with graduate students and other PDRA's in the quantum information science group of Dr. Animesh Datta.

Applicants should possess or be very close to obtaining a doctorate in theoretical physics or mathematics and have a strong background in quantum light-matter interactions, open quantum systems, quantum and classical estimation theory. Candidates are expected to demonstrate knowledge of areas of physics such as linear and nonlinear spectroscopy and familiarity with statistics.

The candidate must be capable of working within a broader research team, demonstrating strong written and verbal communication skills, and maintaining a current knowledge of the quantum-light spectroscopy literature.

The application should include a CV, list of publications, a statement of research interests, and the contact information of three referees. Shortlisted applicants will be expected to arrange for these three referees to send letters of recommendation before the interview date. Please note that it is the applicant's responsibility to ensure that the reference letters are received by that date. The post reference number should be quoted in all correspondence.

Informal inquiries can be made to [Dr. Animesh Datta](#). Further details about the research group can also be obtained at www.warwick.ac.uk/qinfo

Closing date: Shortly to be advertised officially.

Interview date: To be stated in official advertisement.