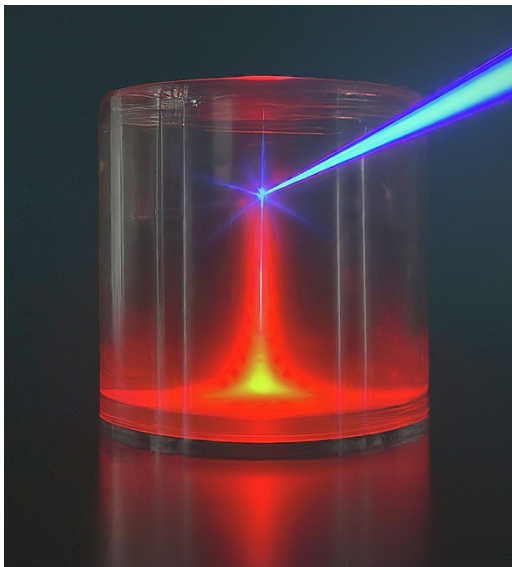




PhD in Rydberg Cavity Quantum Electrodynamics

Department of Physics & Astronomy

Supervisor: Jonathan Breeze (j.breeze@ucl.ac.uk)



Applications are invited for a 4-year PhD studentship in *Rydberg Cavity Quantum Electrodynamics*, funded by the Royal Society and supervised by Dr Jonathan Breeze in the Department of Physics & Astronomy, University College London.

Rydberg atoms, highly excited electronic states, offer exciting opportunities for exploring quantum light-matter interaction, quantum information processing and quantum sensing.

The focal point of this research project will be the integration of Rydberg atoms with optical and microwave cavities, enabling quantum state manipulation deep within the strong-coupling regime.

The goal is to realise novel quantum devices with applications ranging from quantum sensing, metrology, timekeeping to quantum computing and quantum simulation.

Candidates should possess a strong foundation in quantum mechanics, atomic physics and experimental techniques. Prior experience with lasers systems, microwave technology or quantum optics would be advantageous.

We welcome individuals with a passion for discovery and a drive to conduct ground-breaking research in a new, yet growing research group.

A tax-free stipend of £22,000 will be provided with home (UK) fees covered.

Please note that owing to funding restrictions beyond the supervisors' control, this PhD studentship is open to British citizens or EU citizens with UK (pre-)settled status only.

For more information, please contact Dr Jonathan Breeze (j.breeze@ucl.ac.uk) or visit breezelab.org

Application Deadline: 20th April 2024