

PhD scholarship in Integrated Quantum Photonics University of Strathclyde, Glasgow, UK

Title: “Quantum properties of integrated frequency combs for applications in computing, communications and sensing”

Supervisors: Dr Lucia Caspani and Dr Michael Strain – **Start date:** From 1st October 2021 – **Duration:** 3.5 years

Keywords: Photonics, Quantum Optics, Quantum Technologies, Entanglement, Integrated Optics.

We are looking for a talented and enthusiastic candidate for a fully funded PhD scholarship at the Institute of Photonics (www.photonics.ac.uk), University of Strathclyde, Glasgow, UK.

Description: This project aims at building a novel source of highly entangled photonic states in integrated platforms (on-chip). By harnessing the quantum properties of integrated frequency combs, the student will develop a novel quantum light source for applications in metrology, communication and sensing. The project will encompass a combination of nonlinear and quantum optics, as well as integrated photonics.

The PhD student will work on the design and characterisation of integrated structures, optical systems, nonlinear frequency conversion, generation and characterisation of quantum states (e.g., entangled photons), and software coding. They will have access to state-of-the-art optical laboratories, laser sources and photon detectors. Research findings will be published in high-impact journals with the opportunity to present at international conferences.

How to apply and eligibility: To apply, please send a CV and a brief personal statement to lucia.caspani@strath.ac.uk.

To enter our PhD programme, applicants require an upper-second or first class BSc Honours degree, or a Master qualification of equal or higher standard, in Physics, Engineering or a related discipline (or equivalent international degree). Full funding, covering fees and stipend (~15,000£/year), is primarily available for UK nationals only. International students should get in touch to discuss possible further scholarship opportunities.

For further information please contact Dr Caspani (lucia.caspani@strath.ac.uk) or visit the Institute of Photonics webpage (www.photonics.ac.uk).

