

## PhD Scholarship in Photonics

**Project title:** C-Track - Quantum-enhanced atmospheric sensor for airborne hazard identification and tracking

**Research directors:** Matteo Clerici & Martin Lavery

**Keywords:** Quantum optics, sensing, metrology, spectroscopy, Terahertz waves

We are looking for a talented and passion-driven candidate to fulfil a 4-years PhD Scholarship at the University of Glasgow. The ideal candidate is a Physics or Engineering graduate, with 2:1 or higher (or equivalent) degree. The PhD student will work in co-supervision between the UNO (Ultrafast Nonlinear Optics) group, led by Dr Clerici, and the Structured Photonics Research Group, led by Dr Martin Lavery. The student will have access to state-of-the-art research infrastructures and will enjoy the active student life of the Glasgow West End.

**Research.** The research project will focus on the development of a remote sensing technology based on time-resolved electric field detection and enhanced by using quantum metrology techniques. By using structured illumination, the remote spectrometer shall deliver information on the atmospheric properties at the detection target. This project is co-funded by the Defence Science and Technology Laboratory of the United Kingdom and may lead to a close collaboration with their personnel.



**Benefits.** The Scholarship covers the student fees for European and UK citizens and provides a stipend at the UKRI/EPSRC rate (<https://www.ukri.org/skills/funding-for-research-training/>) for **four** years. Also, the PhD student will have a budget for conference and consumables to carry out their research activities.



**Application.** To apply, please send your CV and a brief personal statement to [matteo.clerici@glasgow.ac.uk](mailto:matteo.clerici@glasgow.ac.uk). After a pre-selection, successful applicants will be interviewed (either in person or via conference call)

**Start date:** The Scholarship is available from October 1<sup>st</sup>, 2019 (the earlier the better). We encourage you to get in contact with us as soon as possible.

This is an exciting opportunity to develop complementary skills in optics, photonics, lidar technologies and their applications. For further information visit the staff pages of Dr Lavery and Dr Clerici of the University of Glasgow (<https://www.gla.ac.uk/schools/engineering/staff/>) and [www.mclerici.com](http://www.mclerici.com).

Do not hesitate to contact us. We are happy to discuss over the email or phone your questions.

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