Alessandro Laneve

Curriculum Vitae al fine della pubblicazione

Education

October-December 2021 — **Visiting PhD student**, *Queen's University of Belfast*, Belfast, United Kingdom.
Local Supervisor: Mauro Paternostro

November 2019–Present — **PhD in Physics**, *University of Rome "La Sapienza"*, Rome.
Project Title: Diverse Applications of the Quantum Walk model in Quantum Information: a theoretical and experimental analysis in the optical framework
Thesis Supervisor: Paolo Mataloni
Field of research: Quantum Optics, Quantum Information

2017–2019 — **Master degree in Theoretical Physics**, *University of Rome "La Sapienza"*, Rome, Italy, *110/110 cum laude*.
Title: Theoretical and experimental analyisis of super-diffusive processes by Quantum Walk
Supervisor: Paolo Mataloni

2014–2017 — **Bachelor degree in Physics**, *University of Rome "La Sapienza"*, Rome,Italy, *110/110 cum laude*.
Title: Principio di Landauer e Informazione Quantistica
Supervisor: Fabio Sciarrino

Summer Schools

June 2021 — **11th Optoelectronics and Photonics Summer School NMP2021 NEUROMORPHIC PHOTONICS**, *Organized by University of Trento and the Institute for Cross-Disciplinary Physics and Complex Systems (IFISC) of the University of the Balearic Islands*, Monte Bondone -Trento, Italy.

Other courses

September 2021 — **Corso di Alta Formazione: La comunicazione della scienza (Science communication)**, *Organized by Department of Biology and Biotechnology of Sapienza University of Rome*, Rome, Italy.

Publications

2021 — **Enhancing nonclassical bosonic correlations in a quantum walk network through experimental control of disorder**,Laneve A.,Nosrati F., Geraldi A., Shadfar M. K., Pegoraro F., Mahdavipour K., Lo Franco R., Mataloni P., Phys. Rev. Research **3**, 033235

2021 **Readout of quantum information spreading using a disordered quantum walk**, Nosrati F., Laneve A., Shadfar M. K., Geraldi A., Mahdavipour K., Pegoraro F., Mataloni P., Lo Franco R., JOSA B, **38**(9), 2570-2578

2021 **Transient subdiffusion via disordered quantum walks**, Geraldi A., De S. Laneve A., Barkhofen S., Sperling J., Mataloni P., Silberhorn C., Physical Review Research **3** (2), 023052

2019 **Experimental investigation of superdiffusion via coherent disordered Quantum Walks**, Geraldi A., Laneve A., Bonavena L. D., Sansoni L., Ferraz J., Frataloc-chi A., Sciarrino F., Cuevas A., Mataloni P., Physical Review Letters **123**,140501

Preprint

2021 **Experimental multi-state quantum discrimination through a Quantum network**, Laneve A., Geraldi A., Hamiti F., Mataloni P., Caruso F.,arXiv preprint arXiv:2107.09968

Scientific Oral Communications

Nov 2021 **Experimental Enhancement of non-classicality in bosonic correlations through a disordered Quantum Walk**, *Quantum Information and Measurements VI, organized by OPTICA, formerly OSA (Virtual presentation)*

Nov 2020 **Experimental analysis of superdiffusive transition dynamics in a disordered photonic Quantum Walk**, *Quantum Technology International Conference - QTech 2020 in Barcelona, Spain (Virtual presentation)*

Sep 2020 **Manipulating non-classical correlations via inhomogeneous Quantum Walks**, *24th IMEKO TC4 International Symposium 22nd International Workshop on ADC and DAC Modelling and Testing (IMEKO TC-4 2020) in Palermo, Italy (Virtual Presentation)*

Scientific Poster Presentations

Jun 2021 **Quantum state discrimination via Quantum Network: a bulk-optics approach**, *11th Optoelectronics and Photonics Summer School NMP2021 NEUROMORPHIC PHOTONICS in Monte Bondone -Trento, Italy (Virtual presentation)*

Roma, 9/2/2022

F.to Alessandro Laneve