

Andrea Geraldi

Publications

- 2021 Laneve, A., Nosrati, F., **Geraldi, A.**, Mahdavi-pour, K., Pegoraro, F., Shadfar, M. K., Lo Franco, R., Mataloni, P., "Enhancing nonclassical bosonic correlations in a Quantum Walk network through experimental control of disorder", submitted.
- 2021 Nosrati, F., Laneve, A., Shadfar, M. K., **Geraldi, A.**, Mahdavi-pour, K., Pegoraro, F., Mataloni, P., Franco, R. L. (2020). "Quantum information spreading in a disordered quantum walk", submitted.
- 2021 **Geraldi, A.**, De, S., Laneve, A., Barkhofen, S., Sperling, J., Mataloni, P., Silberhorn, C., "Transient subdiffusion via disordered quantum walks", *Physical Review Research*, 3(2), 023052, (2021).
- 2019 **Geraldi, A.**, Laneve, A., Bonavena, L. D., Sansoni, L., Ferraz, J., Fratilocchi, A., Sciarrino, F., Cuevas, A., Mataloni, P., "Experimental investigation of superdiffusion via coherent disordered Quantum Walks", *Physical review letters*, 123(14), 140501, (2019).
- 2019 **Geraldi, A.**, Bonavena, L. D., Liorni, C., Mataloni, P., Cuevas, A., "A Novel Bulk-Optics Scheme for Quantum Walk with High Phase Stability"*Condensed Matter*, 4(1), 14 (2019).
- 2019 Ciampini, M. A., **Geraldi, A.**, Cimini, V., Macchiavello, C., Sipe, J. E., Liscidini, M., and Mataloni, P., "Stimulated emission tomography: beyond polarization" *Opt. Lett.* 44, 41-44 (2019).
- 2019 Cuevas, A., **Geraldi, A.**, Liorni, C., Bonavena, L. D., De Pasquale, A., Sciarrino, F., Giovannetti, V., Mataloni, P. "All-optical implementation of collision-based evolutions of open quantum systems" *Scientific reports*, 9(1), 3205 (2019).

Scientific Oral Communications

- September 2020 IMEKO TC-4 2020, Palermo, Italy.
Title: *Experimental investigation of anomalous diffusion via coherent disordered Quantum Walks*
- May 2019 Quantum 2019 - From Foundations of Quantum Mechanics to Quantum Information and Quantum Metrology Sensing, Turin, Italy.
Title: *Experimental Realization of an Innovative Phase-Stable Bulk-Optic Scheme for Quantum Walks*
- May 2018 CLEO-laser science to photonic application in San Jose', California, USA.
Title: *Stimulated emission tomography of Hyperentangled states*
- Feb 2018 6th International Symposium on Optics and its Applications (Optics 2018) in Trento, Italy.
Title: *Stimulated emission tomography of Hyperentangled states*

Scientific Poster Presentations

- September 2019 Causality in the quantum world: harnessing quantum effects in causal inference problems, Anacapri, Italy.
Title: *Experimental study of superdiffusive behaviour in all-optical Quantum Walks*
- June 2019 26th Central European Workshop on Quantum Optics, Paderborn, Germany.
Title: *Experimental realization of an innovative Phase-Stable Bulk-Optic scheme for Quantum Walks*
- May 2019 Quantum 2019 - From Foundations of Quantum Mechanics to Quantum Information and Quantum Metrology Sensing, Turin, Italy.
Title: *All-Optical Implementation of Collision Based Evolutions of Open Quantum Systems*
- April 2019 Quantum Information and Measurement (QIM) V: Quantum Technologies, OSA Technical Digest (Optical Society of America, 2019), Rome, Italy.
Title: *Experimental Realization of an Innovative Phase-Stable Bulk-Optic Scheme for Quantum Walks*