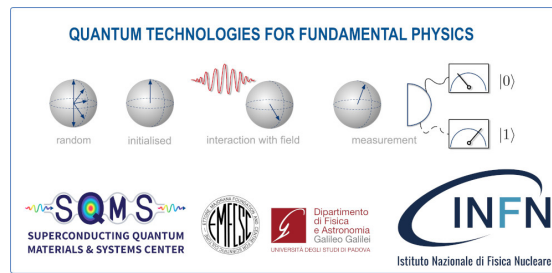


Quantum Technologies for Fundamental Physics



ID contributo: 68

Tipo: non specificato

Hybrid Photonics Platform for Quantum Information Processing

mercoledì 6 settembre 2023 12:20 (25 minuti)

The development of optical quantum technologies allows for quantum-enhanced metrology, secure quantum communication, and quantum computing and simulation in highly increased dimensions. Maturing quantum photonics requires efficient generation and detection of single photons, as well as their scalable manipulation. We merge highly efficient multi-photon sources and integrated waveguide components. In particular, we interface these scalable platforms, demonstrating high-rate multi-photon interference with a quantum dot based multi-photon source and a reconfigurable photonic chip on glass. We will then review applications of this platform to quantum computing and quantum metrology.

Relatore: SCIARRINO, FABIO (Dipartimento di fisica)

Classifica Sessioni: Quantum Computation and Simulation