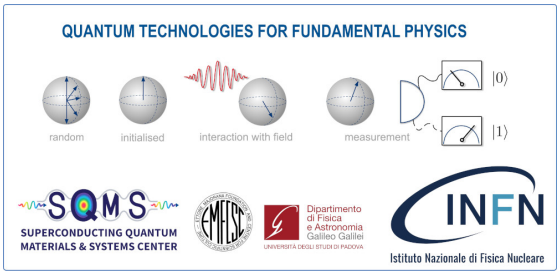

Contribution ID: **52** Type: **not specified**

Lithium Niobate Waveguides for quantum applications

Monday, 4 September 2023 15:40 (20 minutes)

Lithium niobate is a leading material for integrated optics for quantum and classical applications. Because of its nonlinearity, it supports the fabrication of electro-optical devices for quantum state generation and manipulation. Using this material platform, I will show our experimental results on the generation of squeezed vacuum state on chip, frequency conversion of single photons, and integration of multiple components on chip. The monolithic nature of these devices means that the correct phase can be stably realized in what would otherwise be an unstable interferometer, greatly simplifying the task of implementing sophisticated photonic quantum circuits.

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Session Classification: Quantum Networks and Testbeds