ICFO

SEMINAR: Multi-qubit quantum network node based on trapped ions

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November 17, 2026
15:00 to 16:00
Seminar Room

The most advanced applications of quantum networks require the distribution of entanglement across nodes that are universal quantum processors. I will present our progress on developing a multi-qubit, telecom-interfaced quantum network node that consists of a string of trapped ions coupled to an optical cavity. The recent results achieved with this node include establishing ten mater-photon entangled pairs, generation of three partite entangled state of photons, and multi-second storage of quantum information. The node is a part of a prototype quantum network being built in Innsbruck that will span over metropolitan distances and beyond.

Hosted by: Prof. Dr. Hugues de Ridematten