

Quantum Technologies within INFN: status and perspectives



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Type: **Invited keynote talk**

Theoretical Foundations of Quantum Information

The talk is divided in three short sections:

- 1) A practical application: quantum tomography in x-ray medical apparata (project founded by CERN based on
- 2) A theoretical tool: the “quantum comb” (general method for optimisation of quantum circuits, algorithms, protocols, ...)
- 3) New foundations: “Information” as a paradigm for Quantum Theory and Quantum Field Theory.

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Session Classification: Session I

Track Classification: Keynote talks