Quantum Technologies within INFN: status and perspectives

Report of Abstracts

https://agenda.infn.it/e/21070

Abstract ID : **52**

The PACE-IN project

Content

Photon-Atom Cooperative Effects at Interfaces

Functional devices for quantum information processing and communication must make use of appropriate matter-light interfaces. Their key role in bringing quantum devices towards practical applications is essential. Hence, building the conceptual and technological base for such interfaces will pave the way for the scalable quantum computation and quantum Internet.
The overall objective of this project is to meet the critical challenge of studying, implementing and optimizing ground-breaking, dynamically-controlled interfaces between matter and light, for the successful implementation of scalable quantum technologies in combination with long distance quantum communication.

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Track Classification: Succesful initiatives within INFN

Contribution Type: Invited talk ”succesful initiative within INFN”

Status: SUBMITTED

Submitted by **FACCHI, Paolo** on **Thursday 09 January 2020**