

Quantum Science Across the Atlantic

Harvard and MIT Meet the Italian Quantum Alliance

Quantum technologies are rapidly evolving from proof-of-concept demonstrations toward systems that promise real-world impact in computation, simulation, sensing, and communication. However, the transition to utility requires overcoming challenges in scalability, reproducibility, and error management.

This workshop marks the first event of its kind connecting the Boston academic ecosystem — with Harvard and MIT at its core — and the newly established Italian Quantum Alliance. Organized as a closing event of the International Year of Quantum and as the kickoff of the Italian Quantum Alliance, the workshop aims to create a lasting bridge between these two communities.

By convening diverse expertise from Boston, Italy, and Europe, the workshop seeks to define common themes and open problems that will guide the community in advancing the frontier of scalable quantum technologies and accelerating their transition to utility.

The program is structured around four core pillars:

Quantum Computing

Progress in architectures, control, and error correction as the foundation for fault-tolerant devices.

Quantum Simulation

Exploiting programmable quantum platforms to explore complex many-body physics and material models with verified fidelity.

Quantum Communication

Advancing secure communication protocols and quantum networks.

Quantum Sensing and Metrology

Advancing quantum-enhanced measurement techniques and their deployment in practical settings.

Hosted by the University of Padova

Date	Location
Dec 1 (AM)	Palazzo del Bo
Dec 1 (PM)	Palazzo San Bonifacio
Dec 2	Palazzo San Bonifacio



[Register](#)

Organizers

Simone Montangero	University of Padova
Giulia Semeghini	Harvard University
Tommaso Macrì	QuEra

Speakers

Hannes Bernien University of Innsbruck & IQOQI
Davide Calonico INRIM
Federico Capasso Harvard University
Paola Cappellaro Massachusetts Institute of Technology
Soonwon Choi Massachusetts Institute of Technology
Francesca Ferlaino University of Innsbruck & IQOQI
Mikhail Lukin Harvard University
Hannes Pichler University of Innsbruck & IQOQI

Giacomo Roati LENS
Fabio Sciarrino Sapienza Università di Roma
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