

## Agenda con link ai contributi

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### 15 Aprile 2026 — Sessioni parallele

#### 09:30-11:10 — Sessione I

Quantum sensing and metrology I — Chair: Rossana Dell'Anna		Quantum communication and cryptography I — Chair: Maja Colautti		Quantum algorithms and simulations I — Chair: Francesco Martini		Open problems in quantum science I — Chair: Giuseppe Falci		Innovation in Quantum Education — Chair: Elisabetta Paladino	
ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO
09:30-09:50	<b>An integrated platform for the SiC-based Quantum Technologies from sensing to simulation</b> Antonino La Magna	09:30-09:50	<b>A Fully Integrated Silicon Quantum Frequency Processor for Biphoton State Manipulation</b> Matteo Galli	09:30-09:50	<b>Interaction-Induced Topology in Parametrically Driven Resonator Chains</b> Valentina Brosco	09:30-09:50	<b>Towards light-activated entangling gates based on molecular spin qubits</b> Roberta Sessoli	09:30-09:50	<b>Outreach Experiences in Quantum Science through Creative Approaches</b> Fabio Chiarello
09:50-10:10	<b>Breaking the Linearity Barrier: The bi-SQUIPT from Concept to Quantum-Ready Device</b> Francesco Giazotto	09:50-10:10	<b>Single-photon emitters and bandgap tailoring in dilute nitride nanowires</b> Marta De Luca	09:50-10:10	<b>Graph Similarity With Bipartite Gaussian Boson Sampling in Time-Frequency Modes</b> Daniele Bajoni	09:50-10:10	<b>Andreev spin qubits based on magnetically doped two-dimensional topological insulators</b> Fabrizio Dolcini	09:50-10:10	<b>A Software Centred Full Stack Approach to Quantum Computing Training for Industry</b> Michela Nazzaro
10:10-10:25	<b>Advances Toward Scalable Superconducting Qubit Systems</b> Rodolfo Carobene	10:10-10:25	<b>Nonlocally controlling of skyrmion topologies with spin-skyrmion entangled states</b> Bereneice Sephton	10:10-10:25	<b>Adaptive Boson Sampling for quantum machine learning applications</b> Taira Giordani	10:10-10:25	<b>Superradiant Quantum Phase Transition in the Open Dicke Model</b> Gabriele Orlando	10:10-10:25	<b>Hands-on experiences for quantum physics dissemination and education: interactive tools for engagement and understanding</b> Maria Bondani
10:25-10:40	<b>Supercurrent modulation in InSb nanoflag-based Josephson junctions by scanning gate microscopy</b> Stefan Heun	10:25-10:40	<b>Design and Prototype of an Asynchronous Entanglement Distribution Protocol for Satellite Quantum Networks</b> Claudio Cicconetti	10:25-10:40	<b>Optimal distillation of photonic indistinguishability</b> Francesco Hoch	10:25-10:40	<b>Molecular spin qubits to test generalized Bell inequalities</b> Silvia Macedonio	10:25-10:40	<b>"QUANTUM": a public engagement initiative and beyond</b> Biagio Ambrosio
10:40-10:55	<b>High-Q Ta-based microwave resonators for quantum applications</b> Sergio Pagano	10:40-10:55	<b>A Quantum-Key-Distribution State Encoder in Thin Film Lithium Niobate for Free-Space Channels at 1550 nm</b> Lorenzo De Marinis	10:40-10:55	<b>Dissipative engineering of entangled mechanical states in a multimode optomechanical system with a squeezed reservoir</b> Stefano Zippilli	10:40-10:55	<b>Spin Currents and Charge-to-Spin Conversion in Rashba Systems: A Unified Scattering Approach</b> Alfonso Maiellaro	10:40-10:55	<b>Quantum Science and Technology for High Schools: a training school for secondary teachers</b> Alessandro Amabile
10:55-11:10	<b>From the development of high-kinetic-inductance devices to Doppler-induced frequency conversion of microwave wave packets</b> Felix Ahrens	10:55-11:10	<b>Ultrafast post-selection free time-bin entanglement on a thin film lithium niobate photonic chip</b> Daniele Bajoni	10:55-11:10	<b>Quantum-Emitter Dynamics near Dispersive Dielectrics in the Modified Langevin Noise Formalism</b> Carlo Forestiere	10:55-11:10	<b>Machine Learning-aided Optimal Control of a Noisy Qubit</b> Riccardo Cantone	10:55-11:10	<b>Beyond the Quantum Visible: Design Pathways Across Research, Art, and Scientific Communication</b> Carla Giusti

#### 11:30-12:30 — Sessione II

Quantum sensing and metrology II — Chair: Antonino La Magna		Quantum communication and cryptography II — Chair: Marta De Luca		Quantum algorithms and simulations II — Chair: Valentina Brosco		Open problems in quantum science II — Chair: Fabrizio Dolcini	
ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO
11:30-11:45	<b>Quantum Fluorescent Gold and Superparamagnetic Iron Oxide Nanoparticles for Biomedical Sensing</b> Regina Maria Chiechio	11:30-11:45	<b>Electronic properties of single photon emitters in transition metal dichalcogenide micro-domes</b> Federico Tuzi	11:30-11:45	<b>How Dissipation Affects Diabatic Quantum Annealing Shortcuts</b> Gianluca Passarelli	11:30-11:45	<b>Thermally Transparent Multiplexing of Superconducting Signals to Transmon Qubits</b> Alessandro Paghi
11:45-12:00	<b>Fiber-coupled laser-written vapor cells for optical magnetometry</b> Yasin Taheri Mazinani	11:45-12:00	<b>Superconducting Nano/Microstrip Single-Photon Detectors for Quantum Applications</b> Martina Peluso	11:45-12:00	<b>Advancing Quantum State Preparation algorithms: from the variational SRBB-based ansatz to its exact version</b> Giacomo Belli	11:45-12:00	<b>Low-Loss Strip-Loaded SiN Waveguides on Engineered AlN for Quantum Photonic Applications</b> Francesco Martini
12:00-12:15	<b>Criticality as a Resource for quantum devices: Quantum Protection, Supersymmetry, and Quantum-Enhanced Sensing</b> Alessandro Coppo	12:00-12:15	<b>Channel capacity of small modular quantum networks in the ultrastrongly coupled regime</b> Salvatore Alex Cordovana	12:00-12:15	<b>Local ergotropy across dissipation-driven quantum phase transitions in open Rabi models</b> Grazia Di Bello	12:00-12:15	<b>Reflectionless modes in hyperfine levels of molecular spins coupled to a superconducting resonator</b> Samuel Napoli
12:15-12:30	<b>Certifying ergotropy under partial information</b> Donato Farina	12:15-12:30	<b>Squeezing generation in a flux-tunable Josephson Traveling-Wave Parametric Amplifier</b> Isita Chatterjee	12:15-12:30	<b>Nonadiabatic Self-Healing of Trotter Errors in Digitized Counterdiabatic Dynamics</b> Mara Vizuso	12:15-12:30	<b>Intensity noise power spectral density of terahertz harmonic frequency combs side modes</b> Alessandra Di Gaspare

### 16 Aprile 2026 — Sessioni parallele

#### 09:30-11:10 — Sessione III

Quantum sensing and metrology III — Chair: Francesco Giazotto		Quantum communication and cryptography III — Chair: Matteo Galli		Quantum algorithms and simulations III — Chair: Sergio Pezzini		Tools and services for technological innovation — Chair: Francesco Saverio Cataliotti	
ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO
09:30-09:50	<b>Radio frequency to optical transducer based on a soft-clamped membrane</b> Francesco Marzioni	09:30-09:50	<b>Fabrication of strain-free InGaAs/InAlAs quantum dots as C-band single photon emitters</b> Stefano Sanguinetti	09:30-09:50	<b>Hybrid Quantum Reservoir Computing: Memory and Entanglement for Classification and Forecasting</b> Francesco Plastina	09:30-09:50	<b>Toward Fault-Tolerant Quantum Computing: Ecosystem-Driven Progress and Near-Term Quantum Advantage</b> Luca Crippa
09:50-10:10	<b>Ion implantation for engineering and integration of diamond color centers</b> Rossana Dell'Anna	09:50-10:10	<b>Enhanced Control of Molecular Quantum Emitters for Quantum Photonic Technologies</b> Maja Colautti	09:50-10:10	<b>The Qibo Ecosystem: Integrating Advanced QML with Real-Time Hardware Control</b> Stefano Carrazza	09:50-10:10	<b>Integrated photonic technologies for manipulation and detection of quantum states of light</b> Francesco Ceccarelli
10:10-10:25	<b>Uses of whispering gallery "supermodes" in a dual sapphire crystal architecture</b> Antonio Cassinese	10:10-10:25	<b>Random Power: a platform of True Random Bit Generators based on quantum tunnelling</b> Massimo Caccia	10:10-10:25	<b>Boson Sampling as a Quantum Feature Map: Hybrid Classification and Fock-Space Separability Analysis</b> Giovanni Massafra	10:10-10:25	<b>TCSPC Setup with SiPM Readout for Volatile Organic Compound Identification</b> Jacopo Dalmasson
10:25-10:40	<b>Multiparameter quantum-enhanced phase sensing with squeezed light</b> Valeria Cimini	10:25-10:40	<b>Monolithic integration of Source-Device-Independent QRNG with 35 Gbit/s Generation Rate</b> Peter Seigo Kincaid	10:25-10:40	<b>Tensor Networks for quantum circuits and non-Markovian quantum optical systems</b> Giuseppe Magnifico	10:25-10:40	<b>Leveraging cloud-native infrastructure for dynamic and flexible quantum-classical ML/Ops</b> Angelo Impedovo
10:40-10:55	<b>Quantum optimal precision by resolving inner-variable two-photon correlations</b> Danilo Triggiani	10:40-10:55	<b>Tailoring photonic correlations with structured light</b> Carlo Schiano	10:40-10:55	<b>Quantum Fourier Transform as a probabilistic spectral estimator for Earth Observation applications</b> Vincenzo Schiano Di Cola	10:40-10:55	<b>Phaseonium-driven quantum thermodynamics: controllable reservoirs and efficiency enhancement</b> Federico Amato
10:55-11:10	<b>Circuit-QED experiments for Quantum Sensing with Molecular Spins</b> Marco Affronte	10:55-11:10	<b>Physical Modeling for Satellite-Based Quantum Networks</b> Alessandro Caraceni	10:55-11:10	<b>QUMETA: Quantum image classification based on Matrix-product and treE tensor architectures with Triplet Autoencoder</b> Vito Nicola Losavio	10:55-11:10	<b>Giant Berry-phase-Driven X-Ray Beam Translations in Strain-Engineered Semiconductor Crystals</b> Marco Felici

#### 11:30-12:30 — Sessione IV

Quantum sensing and metrology IV — Chair: Luigi Giannelli		Quantum communication and cryptography IV — Chair: Emanuele Distante		Quantum algorithms and simulations IV — Chair: Stefano Carrazza		Open problems in quantum science III — Chair: Roberta Sessoli	
ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO
11:30-11:45	<b>Integration and experimental validation of a SPAD array in an NLOS imaging setup</b> Riccardo Romanelli	11:30-11:45	<b>Geometric-Phase Engineered Spin-Orbit Photonic Gates for High-Dimensional Quantum Information Processing</b> Bruno Piccirillo	11:30-11:45	<b>Towards trapped ions coupled to a running-wave optical cavity</b> Naoto Mizukami	11:30-11:45	<b>Testing the quantum vs classical nature of gravity measuring diffusion</b> Sandro Donadi
11:45-12:00	<b>Broadband photodetection in CVD graphene enabled by solid-state doping with <math>\alpha</math>-RuCl<sub>3</sub></b> Antonio Rossi	11:45-12:00	<b>Quantum light emission from growth-tunable GaAsxP1-x quantum dots in wurtzite GaP nanowires</b> Paolo De Vincenzi	11:45-12:00	<b>AQUA-QUANT: Hybrid Neutral-Atom Quantum Optimization and Deep Learning for Marine Habitat Protection</b> Davide Paparella	11:45-12:00	<b>Can gravity mediate the transmission of quantum information?</b> Andrea Mari
12:00-12:15	<b>Multiphoton detection of THz frequency light with a bilayer Graphene-Based optical platform</b> Leonardo Viti	12:00-12:15	<b>Light-Ion-Induced Telecom Quantum Emitters in Si-Based Heterostructures</b> Fabio Pezzoli	12:00-12:15	<b>Quantum-Enhanced Emotion Recognition and Decision-Making for Social Robotics</b> Giuseppe Palestra	12:00-12:15	<b>Supercurrent from the imaginary part of the Andreev levels in non-Hermitian Josephson junctions</b> Roberto Capeccelatro
12:15-12:30	<b>Fundamental precision bounds for noisy quantum metrology: purification-based methods and their applications</b> Francesco Albarelli	12:15-12:30	<b>Dynamical entanglement percolation with spatially correlated disorder</b> Lorenzo Cirigliano	12:15-12:30	<b>Implementation of the Quantum Fourier Transform on a molecular qudit with full refocusing and state tomography</b> Marcos Rubín Osanz	12:15-12:30	<b>Quantum systems in (cryogenic) cavities</b> Giuliano Chiriacò

### 17 Aprile 2026 — Sessioni parallele

#### 09:30-11:10 — Sessione V

Quantum sensing and metrology V — Chair: Francesco Marzioni		Quantum communication and cryptography V — Chair: Stefano Sanguinetti		Quantum algorithms and simulations V — Chair: Francesco Plastina		Open problems in quantum science IV — Chair: Fabrizio Dolcini	
ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO	ORARIO	CONTRIBUTO
09:30-09:50	<b>Machine Learning assisted Quantum Sensing: Noise Classification and Plaquette Phase Detection</b> Luigi Giannelli	09:30-09:50	<b>Quantum network nodes and quantum repeaters: from experiments to technology</b> Emanuele Distante	09:30-09:50	<b>A Hardware-Aware Approach to Quantum Computing in superconducting NISQ Processors</b> Halima Giovanna Ahmad	09:30-09:50	<b>Non-Markovian dynamics of Quantum Processors in Solid-State Quantum Environments</b> Giuseppe Falci
09:50-10:05	<b>Efficient Estimation of Multiple Temperatures via a Collisional Model</b> Sagnik Chakraborty	09:50-10:05	<b>Assisting Discrete-Modulation CV-QKD with Soft-Decoding Strategy in Reverse Reconciliation</b> Emanuele Parente	09:50-10:05	<b>Emergent collective behaviours in twisted graphene devices</b> Sergio Pezzini	09:50-10:05	<b>Open quantum system approach to ring laser gyroscopes including correlations</b> Francesco Giovannetti
10:05-10:20	<b>Collective Bogoliubov Excitations and Topology-Enhanced Response in Superconducting Qubit Networks</b> Valentina Di Meo	10:05-10:20	<b>Fabrication and characterization of high quality Quantum Dots by Droplet Epitaxy for entangled photon emission on (111)A vicinal surfaces</b> Sergio Bietti	10:05-10:20	<b>Long-Range Coupling of Silicon Flip-Flop Qubits: Interplay Between Electric Dipole-Dipole and Metal Floating-Gate Interactions</b> Marco De Michielis	10:05-10:20	<b>FFLO transition and non-Fermi-liquid in the 2D spin-imbalanced Fermi gas at zero temperature</b> Leonardo Pisani
10:20-10:35	<b>Quantum phase transitions in interacting-qubit quantum Rabi models</b> Roberto Grimauudo	10:20-10:35	<b>A hybrid glass-crystal integrated quantum memory</b> Lorenzo Perruccio	10:20-10:35	<b>Electronic-photonic integrated quantum simulator platform: from algorithms to hardware control</b> Yong Kwon	10:20-10:35	<b>Static and Dynamical properties of environment-induced topological phase transitions</b> Fabrizio Pavan
10:35-10:50	<b>Critical Quantum Sensing</b> Simone Felicetti	10:35-10:50	<b>Optical study of radiation damage in epitaxial germanium thin films</b> Stefano Achilli	10:35-10:50	<b>Direct observation of flat bands in near-magic-angle twisted bilayer CVD graphene</b> Silven Forti	10:35-10:50	<b>Generation of noise-induced Fano coherence in a V-type atomic system interacting with incoherent radiation</b> Ludovica Donati
10:50-11:05	<b>Use of Topological Insulators as wide-band photodetectors</b> Fabio De Matteis	10:50-11:05	<b>Towards deterministic photon sources in the short wavelength infrared</b> Riccardo Nardin	10:50-11:05	<b>QuEST - Quantum Enhancement for Smart Transport</b> Alfredo Massa	10:50-11:05	<b>Operator delocalization in disordered spin chains via Pauli-basis expansion</b> Angelo Russomanno