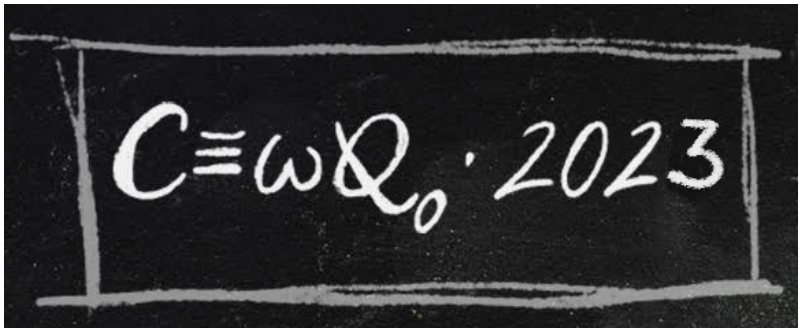

Conference Program

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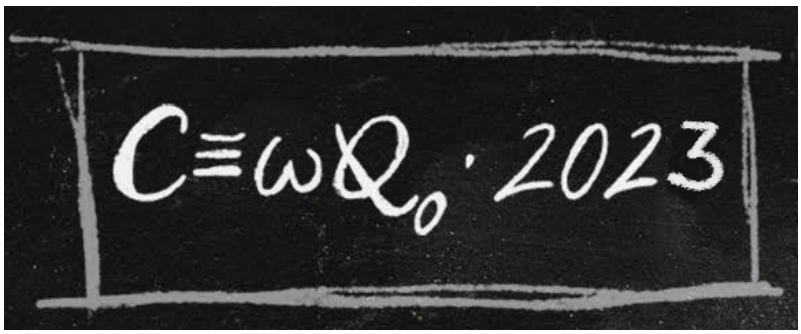
	Monday 03/07	Tuesday 04/07	Wednesday 05/07	Thursday 06/07	Friday 07/07
09:00	OPENING	Banaszek	Genovese	Ferrini	Villoresi
09:15	Englert				
09:30		Zavatta	Grangier	Korolkova	Sciarrino
09:45	Cerf				
10:00		Usenko	Sergienko	Marek	White
10:15	Dakic	Brydges	Mandarino	Griffet	Distante
10:30	COFFEE BREAK				
10:45					
11:00	Hillery	Paladino	Reid	Walschaers	Koch
11:15					
11:30	Bergou	Burgarth	Paternostro	Filip	Morigi
11:45					
12:00	Bondani	Tufarelli	Fabre	De Bievre	Park
12:15	Zicari	Zhou	Kołodyński	Hertz	Bellomo
12:30	Barchielli	Pepe	Di Candia	Sharapova	Fioretto
12:45	Clark	Khanahmadi	Karsa	Kowalewska-Kudłaszyk	Kilian
13:00 — 14:30	LUNCH				
14:30	Drummond	D'Auria	Wiseman	Meda	Bayat
14:45					
15:00	Meinecke	Liscidini	Mitchell	Debuisschert	Brask
15:15					
15:30	Gianani	Wang	Vitali	Traina	Innocenti
15:45	Prati	Słowik			
16:00	Rossi	Degiovanni	Amoros Binefa	Olivero	Kalman
16:15	COFFEE BREAK		Górecki	López	Sánchez Muñoz
16:30			Rubio Jiménez	Maccone	Hirsch
16:45	Zambrini	Allevi	Chesi		COFFEE BREAK
17:00			Marchese	POSTER SESSION 2 + BEER & SPRITZ	
17:15	Stobinska	Porzio	POSTER SESSION 1 + BEER & SPRITZ		CLOSING & FAREWELL
17:30					
17:45	Girolami	Cimini			
18:00	Loew	Ruo-Berchera			
18:15 — 20:30					

Invited (30')	Contributed (15')



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Monday, 3rd July 2023

8:30 Registration
9:00 Welcome

Chair: M. Paris

9:15	**Bert Englert** – *Centre for Quantum Technologies, NUS (Singapore)* Uncertainty relations revisited
9:45	**Nicolas Cerf** – *Université Libre de Bruxelles (Belgium)* Anomalous photon bunching
10:15	**Borivoje Dakic**– *University of Vienna (Austria)* Quantum verification with few copies

10:30 Coffee break

Chair: B. Vacchini

11:00	**Mark Hillery** – *Hunter College, City University of New York (United States)* Broadcasting a restricted set of states in a quantum network
11:30	**Janos Bergou** – *Hunter College, City University of New York (United States)* Average concurrence and entanglement swapping
12:00	**Maria Bondani**– *CNR-Institute for photonics and nanotechnologies (Italy)* (Quantum) optics experiments to teach quantum physics in secondary schools
12:15	**Giorgio Zicari –** *Queen's University Belfast (United Kingdom)* On the role of initial coherence and correlations in the phase-space entropy production rate
12:30	**Alberto Barchielli** – *INFN Milano (Italy)* Quasifree Markovian dynamics for quantum-classical hybrid systems
12:45	**Lewis Clark** – *Centre of New Technologies, University of Warsaw (Poland)* Exploiting non-linear effects in optomechanical sensors with continuous photon-counting

13:00 Lunch

Chair: N. Cerf

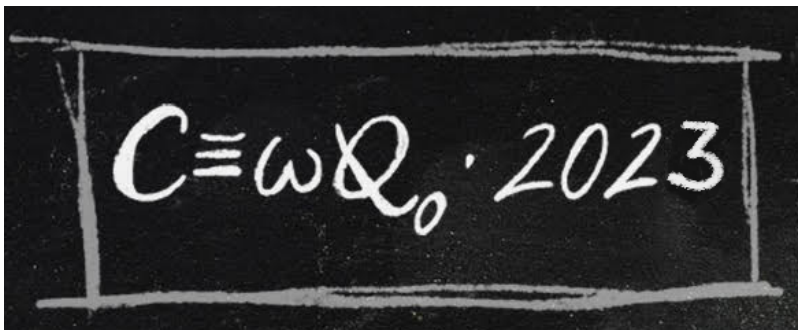
14:30	**Peter Drummond** – *Swinburne Universiy of Technology (Australia)* Validating quantum computers: are they correct?
15:00	**Jasmin Meinecke** – *LMU Munich (Germany)* Quantum Simulations in Integrated Waveguide Arrays
15:30	**Ilaria Gianani** – *Università degli Studi Roma Tre (Italy)* Continuous-time Quantum Walk recognition through machine learning
15:45	**Enrico Prati** – *Università di Milano (Italy)* Erbium-Doped Nanodiode Integrated in a Silicon Photonic Waveguide for Room Temperature Few Photon Emission at 1550 nm
16:00	**Matteo Rossi** – *Algorithmiq Ltd (Finland)* Self-consistent tomography based on semidefinite programming for quantum device characterization

16:15 Coffee break

Chair: A. Smirne

16:45	**Roberta Zambrini** – *IFISC (UIB-CSIC) (Spain)* Monitoring time series processing
17:15	**Magdalena Stobinska** – *University of Warsaw (Poland)* Extremely robust topologically-protected edge states
17:45	**Davide Girolami** – *Politecnico di Torino (Italy)* Quantitative bounds to propagation of quantum correlations in many-body systems
18:00	**Robert Loew** – *University of Stuttgart (Germany)* Nonlinear optics with hot atomic vapours

Invited (30')	Contributed (15')



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Tuesday, 4th July 2023

Chair: S. Olivares

9:00	**Konrad Banaszek** – *University of Warsaw (Poland)* Towards quantum-limited operation of optical communication systems
9:30	**Alessandro Zavatta** – *National Institute of Optics, CNR-INO (Italy)* Quantum Communications with Squeezed States
10:00	**Vladyslav Usenko** – *Palacký University (Czech Republic)* Multiplexed continuous-variable quantum communication with a linear cross talk
10:15	**Tiff Brydges** – *University of Geneva (Switzerland)* Integrated Photonics for Quantum Repeater Networks

10:30 Coffee break

Chair: F. Albarelli

11:00	**Elisabetta Paladino** – *Università di Catania (Italy)* Adiabatic quantum operations in systems of ultrastrongly coupled matter and radiation
11:30	**Daniel Burgarth** – *Friedrich-Alexander Universität (Germany)* Taming the Rotating Wave Approximation
12:00	**Tommaso Tufarelli** – *University of Nottingham (United Kingdom)* Enhancement of light-matter interaction for a single emitter
12:15	**Ling Zhou** – *Dalian University of Technology (China)* Some quantum processes in hybrid cavity magnonics system
12:30	**Francesco Pepe** – *Università di Bari (Italy)* Finite-size and multimerization effects in an array of emitters coupled to a waveguide
12:45	**Maryam Khanahmadi** – *Chalmers University of Technology (Sweden)* The Multimode Character of Quantum States Released from a Superconducting Cavity

13:00 Lunch

Chair: A. Allevi

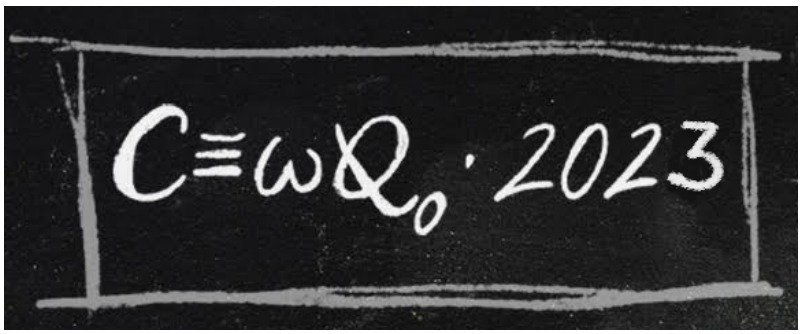
14:30	**Virginia D'Auria** – *Université Côte d'Azur (France)* Quantum Photonics for applied quantum communication technologies
15:00	**Marco Liscidini** – *University of Pavia (Italy)* Generation of high-dimensional states in photonic integrated platforms
15:30	**Zhihai Wang** – *Northeast Normal University (China)* Supercorrelated Radiance in Nonlinear Photonic Waveguides
15:45	**Karolina Słowik**– *Nicolaus Copernicus University (Poland)* Interfacing quantum optics with material science: Optics of graphene nanoflakes with adatoms
16:00	**Ivo Pietro Degiovanni** – *INRIM (Italy)* Noise diagnostics by repeated quantum measurements

16:15 Coffee break

Chair: J. Meinecke

16:45	**Alessia Allevi** – *University of Insubria (Italy)* Mesoscopic states of light for the implementation of novel underwater quantum communication protocols
17:15	**Alberto Porzio** – *INFN Napoli, Università Università di Cassino e del Lazio Meridionale (Italy)* GINGERINO a quantum gyroscope
17:45	**Valeria Cimini** – *Sapienza Università di Roma (Italy)* Deep reinforcement learning for quantum sensing
18:00	**Ivano Ruo-Berchera** – *INRIM (Italy)* Quantum-Enhanced Pattern Recognition

Invited (30')	Contributed (15')



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Wednesday, 5th July 2023

Chair: C. Koch

9:00	**Marco Genovese** – *INRIM (Italy)* Single photon pair measurement of the Bell parameter
9:30	**Philippe Grangier** – *CNRS / Institut d'Optique (France)* Contextual inferences, nonlocality, and the incompleteness of quantum mechanics
10:00	**Alexander Sergienko** – *Boston University (United States)* Higher-Dimensional Hong-Ou-Mandel Effect with Linear-Optical Grover Multiports
10:15	**Antonio Mandarino** – *ICTQT, University of Gdansk (Poland)* Bell-Nonclassicality of a single photon

10:30 Coffee break

Chair: R. Filip

11:00	**Margaret Reid** – *Swinburne University of Technology (Australia)* Macroscopic realism, Bell inequalities and hidden causal loops: a model for measurement based on the Q function
11:30	**Mauro Paternostro** – *Queen's University Belfast (United Kingdom)* Quantum neuromorphic approach for efficient sensing of gravity-induced entanglement
12:00	**Nicolas Fabre** – *Telecom Paris (France)* Time-frequency Quantum metrology
12:15	**Jan Kołodyński** – *University of Warsaw (Poland)* Enhancing quantum sensors by exploiting the non-Hermitian description of their dynamics
12:30	**Roberto Di Candia** – *Aalto University (Finland)* Quantum Illumination with a Hetero-Homodyne Receiver and Sequential Detection
12:45	**Athena Karsa** – *Korea Research Institute of Standards and Science (Korea)* Optimal quantum metrology for two-photon absorption

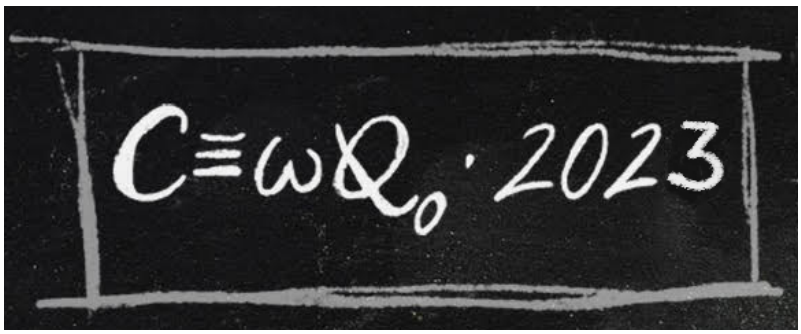
13:00 Lunch

Chair: M. Genoni

14:30	**Howard Wiseman** – *Griffith University (Australia)* Can super-radiant lasers achieve the Heisenberg limit for laser coherence?
15:00	**Morgan Mitchell** – *ICFO (Spain)* Number-unconstrained quantum sensing and quantum limits in field sensing
15:30	**David Vitali** – *University of Camerino (Italy)* Quantum receivers for microwave quantum illumination
16:00	**Julia Amoros Binefa** – *University of Warsaw (Poland)* Quantum atomic sensors operated in real time
16:15	**Wojciech Górecki** – *INFN Pavia / University of Pavia (Italy)* Using adaptiveness and causal superpositions against noise in quantum metrology
16:30	**Jesús Rubio Jiménez** – *University of Surrey (United Kingd)* Quantum scale metrology: highly precise measurements beyond phase estimation
16:45	**Giovanni Chesi** – *INFN Pavia (Italy)* Global multiphase quantum estimation
17:00	**Marta Maria Marchese** – *Universität Siegen (Germany)* Large Baseline Optical Imaging Assisted by Single Photons and Linear Quantum Optics

17:15 **Poster session 1** (suggested poster size: A1, 594 x 841 mm)

Invited (30')	Contributed (15')



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Thursday, 6th July 2023

Chair: TBA

9:00	**Giulia Ferrini** – *Chalmers University of Technology (Sweden)* The vacuum provides quantum advantage to otherwise simulatable architectures
9:30	**Natalia Korolkova** – *University of St. Andrews (United Kingdom)* Coherent Diffusive Photonics: Quantum engineering by nonlocal loss
10:00	**Petr Marek** – *Palacký University (Czech Republic)* Nonlinear squeezing as a non-Gaussian resource for quantum technologies
10:15	**Célia Griffet** – *Université libre de Bruxelles (Belgium)* Accessing continuous-variable entanglement witnesses with multimode spin observables

10:30 Coffee break

Chair: N. Korolkova

11:00	**Mattia Walschaers** – *Laboratoire Kastler Brossel, CNRS (France)* Non-Gaussian resources for photonic quantum technologies
11:30	**Radim Filip** – *Palacký University (Czech Republic)* Quantum Non-Gaussian Light and Mechanics
12:00	**Stephan De Bievre** – *Université Lille (France)* Assessing nonclassicality through the interferometric measurement of the quadrature coherence scale
12:15	**Annaelle Hertz** – *National Research Council of Canada (Canada)* Nonclassicality and quantum non-Gaussianity of photon-added/subtracted multi-mode Gaussian states
12:30	**Polina Sharapova** – *Paderborn University (Germany)* Optomechanical SU(1,1) interferometer
12:45	**Anna Kowalewska-Kudłaszyk** – *A. Mickiewicz University (Poland)* Optical and hybrid opto-mechanical blockades

13:00 Lunch

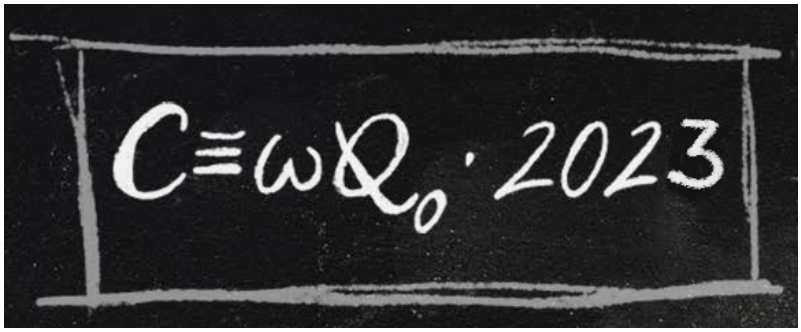
Chair: I. Degiovanni

Special session on experimental quantum metrology supported by the EUROPEAN METROLOGY NETWORK for QUANTUM TECHNOLOGIES

14:30	**Alice Meda** – *INRIM (Italy)* Phase stabilization for Twin-field QKD in a real-world network
15:00	**Thierry Debuisschert** – *Thales Research and Technology (France)* TBA
15:30	**Paolo Traina** – *INRIM (Italy)* Probing local temperature variations in neurons via Nanodiamond sensors
16:00	**Paolo Olivero** – *University of Torino (Italy)* Fabrication and characterization of MgV optical centers in diamond
16:15	**Marco López** – *Physikalisch-Technische Bundesanstalt (Germany)* Study on the detection efficiency of InGaAs single-photon avalanche diodes as a function of mean photon number and repetition rate
16:30	**Lorenzo Maccone** – *University of Pavia (Italy)* Quantum metrology of noisy spreading channels

17:00	**Poster session 2** (suggested poster size: A1, 594 x 841 mm)

Invited (30')	Contributed (15')



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Friday, 7th July 2023

Chair: A. Porzio

9:00	**Paolo Villoresi** – *Università di Padova (Italy)* Advancements on Quantum Communications in Space
9:30	**Fabio Sciarrino** – *Sapienza Università di Roma (Italy)* Hybrid Photonics Platform for Quantum Information Processing
10:00	**Andrew White** – *University of Queensland (Australia)* Rise of the Machines: Making better photons by getting rid of experimentalists
10:15	**Emanuele Distante** – *Max Planck Institute of Quantum Optics (Germany)* A quantum network link based of single-atom cavity QED modules

10:30 Coffee break

Chair: TBA

11:00	**Christiane Koch** – *Freie Universität Berlin (Germany)* Minimizing resources for quantum devices with control theory
11:30	**Giovanna Morigi** – *Saarland University (Germany)* Quantum dynamics of selforganization in many-body cavity quantum electrodynamics
12:00	**Kimin Park** – *Palacký University (Czech Republic)* Slowing quantum decoherence by hybrid processing
12:15	**Bruno Bellomo** – *Université de Franche-Comté (France)* Implementation of a continuous dynamical decoupling procedure to protect operations on qudits from noise
12:30	**Dario Fioretto** – *C2N, CNRS, Universite-Paris-Saclay (France)* High-rate entanglement between a semiconductor spin and indistinguishable photons
12:45	**Seibold Kilian** – *University of Konstanz (Germany)* Quantum dynamics of Dissipative Kerr solitons

13:00 Lunch

Chair: Matteo Paris

14:30	**Abolfazl Bayat** – *University of Electronic Science and Technology of China (China)* Near-term quantum simulators: from qubits to fermions
15:00	**Jonatan Bohr Brask** – *Technical University of Denmark (Denmark)* Bosonic autonomous entanglement engines with weak bath coupling are impossible
15:30	**Luca Innocenti** – *Universita degli studi di Palermo (Italy)* Shadow tomography on general measurements frames
16:00	**Orsolya Kalman** – *Wigner Research Centre for Physics (Hungary)* Applications of iterated nonlinear quantum protocols
16:15	**Carlos Sánchez Muñoz** – *Universidad Autónoma de Madrid (Spain)* Dissipative generation of high stationary entanglement between non-identical quantum emitters
16:30	**Jorge G. Hirsch** – *Instituto de Ciencias Nucleares, UNAM (Mexico)* Chaos, scarring and localization in a spin-boson system

16:45 Coffee break

17:15 Closing and farewell

Invited (30')	Contributed (15')