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DEGLI STUDI
DI TORINO

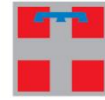


UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO



CITTA' DI TORINO

MEDAGLIA DEL
PRESIDENTE DELLA REPUBBLICA



REGIONE
PIEMONTE

Quantum 2023

From Foundations of Quantum Mechanics to Quantum
Information and Quantum Metrology & Sensing

(ad memoriam of Carlo Novero)

Conference Program



Sunday	Monday	Tuesday			Wednesday			Thursday	Friday		
	Opening 8:00 8:15	Session V 8:00 – 10:15			Session IX 8:00 – 10:10			Session XIII 8:00 10:15	Session XVII 8:00 - 10:15		
	Session I 8:15 10:15										
	Session II 10:45 12:45	Session VI 10:45 – 13:05			Session X 10:40 – 13:00			Session XIV 10:45 12:45	Session XVIII 10:45 - 13:05		
	Session III 13:50 15:50	Session VII 14:10 – 16:10			Session XI 14:05 – 16:20			Session XV 13:50 15:50	Session XIX 14:15 - 15:55		
	Session IV 16:20 19:00	VIII A 16:40 19:00	VIII B 16:40 19:00	VIII C 16:40 19:00	Round Table 16:50 18:00	XII B 16:50 19:00	XII C 16:50 19:00	Session XVI 16:20 18:00	XX A 16:25 18:40	XX B 16:25 18:40	XX C 16:25 18:40
Welcome Party 17:00					XII A 18:00 19:00			Poster Session & Best Poster award 18:00 19:45	Closing Remarks & Best Young Researcher Talk award 18:45 – 19:00		
									Beer Party 19:10 – 20:00		
								Social Dinner 20:15			

Color legend

	“Bacchus” bar, Piazza Vittorio Veneto 16A, 10123 Torino (TO)
	Main Hall “Tullio Regge”, via Pietro Giuria 1, 10125 Torino (TO), ground floor
	Hall “Franzineti” , via Pietro Giuria 1, 10125 Torino (TO), 3rd floor
	Hall “Avogadro”, via Pietro Giuria 1, 10125 Torino (TO), 3rd floor
	INRIM historical building, Corso Massimo d’Azeglio 42, 10125 Torino (TO)
	OGR Torino, Corso Castelfidardo 22, 10128 Torino (TO)

Sunday 10

17:00

Welcome Party (P.zza Vittorio Veneto 16a)

Monday 11**Session I - Chairperson: M. Genovese**

08:00-08:20	Registration	
08:20-08:40	Opening	
08:35-08:55	G.L. Giorgi	Quantum associative memory with a single driven-dissipative non-linear oscillator
08:55-09:15	F. Pepe	Innovative methods and tools for 3D correlation imaging with chaotic light
09:15-09:35	C. Toninelli	Single molecules in photonic quantum technologies
09:35-9:55	H. de Guise	Explicit n -particle harmonic oscillator states in symmetrized products of $SU(1,1)$ representations
9:55-10:15	C. Silberhorn	Quantum photonics with pulsed light and nonlinear integrated quantum optics

Coffee break**Session II – Chairperson: C. Silberhorn**

10:45-11:05	U.L. Andersen	Measurement-Induced Implementation of a Large Linear Network
11:05-11:25	T. Iwasaki	Diamond Quantum Emitters Based on Heavy Group-IV Elements
11:25-11:45	C. Bonato	Learning quantum systems: from fundamental physics to quantum sensing
11:45-12:05	A. White	Rise of the Machines: Making better photons by getting rid of experimentalists
12:05-12.25	T. Ohshima	Quantum Sensing in Silicon Carbide Devices using Locally Formed Silicon Vacancy
12:25-12:45	S. Savasta	Cavity and circuit QED in the Ultrastrong Coupling Regime

Lunch interval**Session III: MeTISQ - Chairperson: M. D'Angelo**

13:50-14:10	A. Botero	Large n behavior of the HOM interferometer with partially indistinguishable photons
14:10-14:30	YH. Kim	Noise-resistant quantum communications using hyper-entanglement
14:30-14:50	D. Calonico	QUID: the European Quantum Communication Infrastructure deployment in Italy
14:50-15:10	P. Villoresi	Optical communications from the neighbour stellar system
15.10-15.30	A. Meda	Phase stabilization for Twin-field QKD in a real-world network
15:30-15:50	J. Matthews	A Bi-CMOS electronic-photonic integrated homodyne detector for quantum technology

Coffee break**Session IV - Chairperson: L. Vaidman**

16:20-16:40	A. Datta	Quantum light spectroscopy of complex quantum systems
16:40-17:00	D. Home	Probing the Macrolimit of Quantum Mechanics: Mass-independent test of quantumness of a massive object

17:00-17:20	A. Avella	Single-pair measurement of the Bell parameter
17:20-17:40	L. Maccone	Geometric Event-Based Relativistic Quantum Mechanics
17:40-18:00	C. Curceanu	Testing Quantum Mechanics Underground: Collapse models and Pauli Exclusion Principle
18:00-18:20	I. Gianani	Continuous-time Quantum Walk recognition through machine learning
18:20-18.40	J. Croca	Experiments to Enquire on the Nature of the Quantum waves

Tuesday 12		
Session V - Chairperson: J. Howell		
8:00-8:15	Arrival of participants	
08:15-08:35	M.S. Najafabadi	Squeezing light by self induced transparency
08:35-08:55	A. Delgado	Optimal estimation of quantum states and unitary transformations
08:55-09:15	I. Walmsley	Light in quantum simulation and neural networks
09:15-09:35	A. Lvovsky	Optical neural networks for computation and quantum-limited superresolved imaging
09:35-9:55	Z. Hradil	Uncertainty relations, simultaneous measurement, and phase-space representation for angle and angular momentum
9:55-10:15	A. Isar	Entropy production and quantum correlations of two coupled bosonic modes in a thermal environment
Coffee break (sponsored by MPD)		
Session VI: Pathos – Chairperson: F. Piacentini		
10:45-11:05	G. Kurizki	Nonlinear Filtering of Quantum Noise for Sensing and Work
11:05-11:25	L. Frydman	Improved polarization transfers schemes in biomolecular and solid state NMR based on repeated projective measurements
11:25-11:45	D. Suter	Electronic and nuclear spins in wide-bandgap semiconductors: interactions and coherent control
11:45-12:05	N. Bar-Gill	Simulation, control and sensing in open quantum systems
12:05-12.25	L. Vaidman	When photons are lying about where they have been
12:25-12:45	J. Howell	Doppler Gyroscopes: Frequency vs Phase Estimation
12:45-13:05	F. Caruso	Machine-learning-based quantum sensing and biomedical image analysis via real quantum technologies
Lunch interval		
Session VII: Equo - Chairperson: M. Barbieri		
14:10-14:30	P. Kok	Large baseline optical imaging assisted by single photons and linear quantum optics
14:30-14:50	T. Giordani	Hybrid Photonics Platform for Quantum Information Processing
14:50-15:10	S. Bose	Quantum Nature of Gravity through a Table-Top Experiment
15:10-15:30	E. Karimi	Recent Developments in Structured Quantum Waves
15:30-15:50	C. Marletto	Temporal witnesses of non-classicality and conservation laws
15:50-16:10	G. Adesso	Gaussian QKD: Fundamental limitations
Coffee break		
Parallel Session VIII A - Chairperson: M. Bellini		
16:40-17:00	O. Kwon	Probing the foundations of quantum space-time with interferometers: A research program using quantum metrology
17:00-17:15	A. Ejlli	Probing the quantum nature of spacetime and beyond: The QUEST experiment uses two quantum-enhanced co-located interferometers for investigating space-time fluctuation and other fundamental physics research
17:15-17:30	E. Losero	Testing quantum gravity by exploiting quantum metrology
17:30-17:45	D.E. Bruschi	Gravitational redshift induces quantum interference
17:45-18:00	M. Barbieri	The energetics of quantum gates
18:00-18:15	T. Matsushita	Effects of system-meter entanglement in post-selected

		quantum measurements
18:15-18:30	L. Markovich	Coherent Pauli Summation Method for Observable Estimation with Single Qubit Quantum Memory
18:30-18:45	D. Pastorello	Constructing neural networks combining small quantum modules
Parallel Session VIII B - Chairperson: J. Forneris		
16:40-16:55	M. Petrov	High PDMR contrast and photovoltaic effect in diamond
16:55-17:10	V. Usenko	Anti-squeezing noise in continuous-variable quantum key distribution
17:10-17:25	C. Sabín	Gaussian and nongaussian entanglement with microwave photons and superconducting qubits
17:25-17:40	V.G. Lucivero	Squeezed-light enhancement of optical magnetometry at optimal number density
17:40-17:55	V. Pugliese	Structural and optical properties of Magnesium-Vacancy color centers in diamond
17:55-18:10	K. Łukanowski	Upper Bounds on Key Rates in Device-Independent Quantum Key Distribution Based on Convex-Combination Attacks
18:10-18:25	G. Andrini	Investigation of quantum emitters based on self-interstitial defects in silicon upon non-stationary thermal processing
18:25-18:40	E. Corte	Photoluminescence study of Tin-Vacancy centers in diamond upon thermal processing and surface chemical functionalization
Parallel Session VIII C: QUID - Chairperson: M. Mondin		
16:40-16:55	A. Allevi	Super-thermal light for applications to Imaging and Quantum Communication
16:55-17:10	F. Belliardo	Application of Machine Learning to Experimental Design in Quantum Mechanics
17:10-17:25	E. Redolfi	SPAD characterization for the implementation security of quantum communication
17:25-17:40	T. Mihaescu	Steering witnesses for unknown Gaussian quantum states
17:40-17:55	S. Wilksen	Gate-based protocol simulations for quantum repeaters using quantum-dot molecules in switchable electric fields
17:55-18:10	R. Nagy	Scalable Quantum Memory Nodes using Nuclear Spins in Silicon Carbide
18:10-18:25	B. Kanseri	Partially coherent entangled qubits for applications in quantum communication and imaging
18:25-18:40	M.Yu. Saygin	Quantum optical neural networks with programmable nonlinearities

Wednesday 13		
Session IX - Chairperson: I. Ruo Berchera		
8:00-8:15	Arrival of participants	
08:15-08:35	J. Perina	Two-beam light with simultaneous anti-correlations in photon-number fluctuations and sub-Poissonian statistics, photon-number distributions with checkered patterns
08:35-08:55	A. Zavatta	Quantum Communications with squeezed light
08:55-09:15	P. Horodecki	Quantum correlations and security against postquantum adversary
09:15-09:35	A. Gatti	Enhancing upconversion with space-time entanglement: from twin photons to twin-beams
09:35-9:55	S. Olivares	Hybrid near-optimum binary receiver with realistic photon-number-resolving detectors
9:55-10:10	M. Chipaux	Quantum sensing of individual cells metabolism with internalized nanodiamonds
Coffee break (sponsored by Optoprim)		
Session X: QADET - Chairperson: P. Olivero		
10:40-11:00	C. Becher	Limitations on the indistinguishability of photons from color centers in diamond
11:00-11:20	P. Maletinsky	Nanoscale quantum sensing with solid state spins
11:20-11:40	M. Nesladek	Electrical Readout of NV diamond spin qubits: charge state transitions and qubit gates at room temperature
11:40-12:00	F. Reinhard	Electric readout of solid state spins by cavity-QED
12:00-12.20	E. Moreva	Measuring the intracellular temperature in neurons by nanodiamonds during action potential propagation
12:20-12:40	J. Meijer	Room-temperature Mobile Quantum Computer based on NV Centers
12:40-13:00	A. Huck	Quantum sensing of bio-magnetic fields using defect centres in diamond
Session XI: Qu-Test – Chairperson: C. Becher		
14:05-14:20	I. Kominis	Quantum Sensing in Biology
14:20-14:40	R. Ramponi	Laser and Ion Beam Writing of Diamond Quantum Technologies
14:40-15:00	M. Mitchell	How well does quantum mechanics allow us to know the magnetic field?
15:00-15:20	A. Sergienko	Directionally-unbiased linear optics enables efficient sensors and quantum network routing
15:20-15:40	S. Takeuchi	Ultra-broadband Quantum Infrared Spectroscopy
15:40-16:00	D. Dasari	Solid-state spin defects as minimal Quantum Refrigerators
16:00-16:20	B. Vacchini	Memory and correlations in the dynamics of open quantum systems
Coffee Break		
Round Table on “Single Photon Dictionary” (NIST & EMN-Q) - Chairperson: S. Polyakov		
16:50-17:10	J.C. Bienfang	Dictionary of Single-Photon Terms to Support the Emerging Quantum Industry
17:10-18:00		Discussion panel: J. Bienfang, I.P. Degiovanni, A. Gamouras, A. Giudice, M. Gramegna, A. Migdall
Parallel Session XII A: POLight - Chairperson: A. Avella		

18:00-18:15	L. Vannucci	Two-color excitation for highly efficient and indistinguishable single-photon sources
18:15-18:30	J.-Å. Larsson	Quantum computing and hidden variables
18:30-18:45	G. Ortolano	Quantum enhanced non-interferometric phase imaging
Parallel Session XII B - Chairperson: P. Traina		
16:50-17:05	P. Sharapova	Nonlinear interferometers pumped by a Laguerre-Gauss beam
17:05-17:20	S. Sasmal	Robust self-testing of multiple copies of maximally entangled state and mutually unbiased basis in d-dimensional Hilbert space
17:20-17:35	D. Ferraro	Fast charging of Dicke Quantum Batteries
17:35-17:50	M. Genoni	Daemonic ergotropy in continuously-monitored open quantum batteries
17:50-18:05	G. Park	Experimental demonstration of multiphoton quantum correlation beyond the linear optics limit
18:05-18:20	M. Rosati	Fundamental precision limits of optical fluorescence microscopy
18:20-18:35	V. Sultanov	Electric-field tunable source of photon pairs
18:35-18:50	A. Mikos-Nuszkiewicz	Coherent beam combination of beams of light in the single photon regime
Parallel Session XII C - Chairperson: S. Olivares		
16:50-17:05	J. Czartowski	Iso-entangled Bases: Uncharted Territory in Quantum Entanglement
17:05-17:20	I. Arkhipov	Emergent non-Hermitian lattice phenomena in the field moments space of zero-dimensional bosonic systems
17:20-17:35	C. Matrella	Complete Complementarity Relations for quantum correlations in neutrino oscillations
17:35-17:50	R. Saez-Blazquez	Can we observe non-perturbative vacuum shifts in cavity QED?
17:50-18:05	S. Kanno	Indirect detection of gravitons through quantum entanglement
18:05-18:20	E. Rebufello	Extracting (anomalous) weak values by detecting a single photon
18:20-18:35	S. Munshi	Self-testing of an unbounded number of mutually commuting local observables
18:35-18:50	C. Versmold	Observing Bohmian Trajectories in a Double Slit Experiment

Thursday 14		
Session XIII – Chairperson: L. Maccone		
08:00-08:15	Arrival of participants	
08:15-08:35	L. Memarzadeh	Role of system parameters on the stationary space of an open XX-spin chain
08:35-08:55	F. De Martini	Gravitational wave detection by fiber optics Mach-Zehnder interferometry
08:55-09:15	M. Bondani	Full Quantum Tomography of Silicon Photomultiplier Detectors: Accounting for Imperfections
09:15-09:35	L. Petruzzello	Minimal length, generalized dispersion relations, and modified spin couplings: windows to Planck-scale physics
09:35-9:55	M. Chekhova	Quantum state reconstruction with a parametric amplifier
9:55-10:15	L.L. Sanchez-Soto	Harnessing Indefinite Causal Order for Measuring Impossible Parameters
Coffee break (sponsored by Crisel Instruments)		
Session XIV - Chairperson: M. Chekhova		
10:45-11:05	C. Macchiavello	Hypergraph states and quantum neural networks
11:05-11:25	S. Pascazio	Entanglement by dissipation and multimerization in waveguide QED
11:25-11:45	H.T. Elze	Deterministic ontology, cellular automata, and quantum mechanics of qubits
11:45-12:05	T. Pittman	Storage of Entangled Photons in Distant Broadband Loop-Based Quantum Memories
12:05-12.25	M.G.A. Paris	Chiral quantum walks and applications
12:25-12:45	P. Zanardi	Operational Quantum Mereology and Minimal Scrambling
Lunch interval		
Session XV - Chairperson: I.P. Degiovanni		
13:50-14:10	J. Bergou	Broadcasting single-qubit and multi-qubit-entangled states: authentication, cryptography, and distributed quantum computation
14:10-14:30	G.M. Palma	Quantum reservoir Computing with photonic platforms
14:30-14:50	B.G. Englert	Uncertainty relations revisited
14:50-15:10	E. Cohen	Weak and strong measurements of the weak value in noisy scenarios
15:10-15:30	R. Filip	Quantum non-Gaussian coherences
15:30-15:50	V. Vedral	Can a superposition of more than 137 electrons be detected through local tomography?
Coffee break		
Session XVI – Chairperson: B.G. Englert		
16:20-16:40	T. Debuisschert	Rabi oscillations in an ensemble of NV centers in diamond for the characterization of radio-frequency antennas
16:40-17:00	S. Polyakov	Blended Quantum and Classical Networks
17:00-17:20	E. Salvadori	Magnetic atoms and molecules as potential qubit candidates, a chemist's perspective
17:20-17:40	T. Gehring	Digital continuous-variable quantum technology for

		quantum information protocols
17:40-18:00	F. Daneshgaran	System Optimization of a Free-Space Optical Link for Continuous Variable QKD in Presence of Pointing Jitter
18:00-19:35	Poster Session (beer party) (INRIM)	
19:35-19:45	Best poster award ceremony sponsored by EPL (Chair: B. Vacchini)	
20:15	Social Dinner	

Friday 15		
Session XVII - Chairperson: A. Bramati		
08:00-08:15	Arrival of participants	
08:15-08:35	D. Triggiani	Ultimate quantum sensitivity through inner-variable sampling two-photon interference
08:35-08:55	V. Karimipour	Capacity of two classes of covariant quantum channels
08:55-09:15	J. von Zanthier	Collective photon emission of correlated atoms in free space
09:15-09:35	A. Porzio	GINGERINO: a quantum gyroscope
09:35-9:55	S. Padua	Non-Contextuality Tests via Sequential Compatible Measurements in Qutrit States using Photonic Circuits
9:55-10:15	A. Pathak	Dynamics, measures and routing of the entangled states
Coffee break		
Session XVIII: SEQUME - Chairperson: J. von Zanthier		
10:45-11:05	M. Agio	Vector Magnetometry Based on Polarimetric Optically Detected Magnetic Resonance
11:05-11:25	M. Trupke	Sensing and communication with spin centres in crystals
11:25-11:45	A. Bramati	Towards a room-temperature integrated single photon source based on a single perovskite nanocrystal coupled to an optical nanofiber
11:45-12:05	P. Cigler	Chemical tools providing selectivity to diamond quantum nanosensors
12:05-12:25	J.P. Hadden	Nitride quantum photonics
12:25-12:45	J. Smith	Defect engineering for chip-scale quantum devices
12:45-13:05	G. Weihs	Coherent control of semiconductor quantum dots for quantum information applications
lunch		
Session XIX – Chairperson: V. Karimipour		
14:15-14:35	S. Slussarenko	Quantum channel correction via heralded amplification
14:35-14:55	A. Smerzi	Genuine Multipartite Nonlocality with Causal-Diagram
14:55-15:15	K. Zyczkowsky	Energy distance between pure quantum states
15:15-15:35	M. Peev	Multi-mode CV-QKD with Gaussian Modulation
15:35-15:55	V. Zwiller	t.b.a.
Coffee break		
Parallel Session XX A - Chairperson: M. Peev		
16:25-16:40	E. Nieto-Hernández	Fabrication of highly efficient Ge-V single photon emitters in diamond by means of ion implantation and HPHT processing
16:40-16:55	F. Besahraoui	Structural and luminescence properties of point intrinsic defects in Tin oxide thin films grown by ultrasonic spray pyrolysis method used in optoelectronic devices
16:55-17:10	B. Carmans	Novel methodology for Quantum State Tomography to asses high-fidelity NV diamond nuclear spin gates
17:10-17:25	S. Roncallo	Quantum algorithms for image compression
17:25-17:40	I. Burenkov	Verification of single-biomarker sensitivity of a quantum-measurement-enhanced flow cytometer
17:40-17:55	A. Rodriguez-Prieto	Quantum-enhanced precise sensors with a driven trapped particle
17:55-18:10	M. Iuliano	Progress on the Quantum Internet realization with NV-

		centers in diamond
18:10-18:25	L. De Santis	Optically coherent Tin-vacancy centers in diamond for efficient spin-photon interfaces
18.25-18.40	K. Katamadze	Breaking Rayleigh's curse for multi-parameter objects using BLESS technique
Parallel Session XX B - Chairperson: M. Blasone		
16:25-16:40	A. Ferreri	Quantum field heat engine powered by phonon-photon interactions
16:40-16:55	A. Migliore	Quantum correlation basis of a quantum optics parity effect and its implications for quantum metrology
16:55-17:10	K. Thapliyal	Experimental study of Engineered Multi-mode Quantum States Generated from a Twin Beam by Photon Subtraction
17:10-17:25	F. Ghafari	Activating nonlocality for Bell local states
17:25-17:40	Y. Shen	Detection of quantum signals free of classical noise via quantum correlation
17:40-17:55	A.K. Harrison	Realistic Time-Symmetric Quantum Theory Based on an Action Principle
17:55-18:10	G. Bertaina	Analysis of spin-squeezing generation in cavity-coupled atomic ensembles with continuous measurements
18:10-18:25	F. Sakuldee	Suppression of Displacement Noise and Recovery of Superresolution in Displacement Measurement
18.25-18.40	N.N. Bogolyubov	Fluorescence by a polar quantum system in a polychromatic field
Parallel Session XX C - Chairperson: L.L. Sanchez-Soto		
16:25-16:40	S. Virzi	Experimental quantum noise sensing via quantum Zeno and anti-Zeno effects
16:40-16:55	F. Scattarella	Deep Learning approach for denoising low-SNR correlation plenoptic images
16:55-17:10	D. Urrego	Quantum Differential Interference Contrast microscope (qDIC)
17:10-17:25	D.A. Kopylov	Multimode Structure of Parametric Down-Conversion Generated in Lossy Waveguides
17:25-17:40	G. Massaro	CPI at 10 volumetric frames per second
17:40-17:55	A. Finkler	Real-time frequency estimation of a qubit without single-shot-readout
17:55-18:10	B. Dioum	Temporal cavities as temporal mode filters for frequency combs
18:10-18:25	N. Götting	Exploring quantum mechanical advantage for reservoir computing
18.25-18.40	S.N. Balybin	Quantum Dot Interacting with Non-Classical Field in Nonlinear Kerr Media as a Resource for Repeatable Quantum Computations
Closing		
18:45-20:00	Closing Remarks (G. Brida), Best Young Researcher Talk award (M. Genovese) & Beer Party!	

Saturday 16th (Physics Faculty)

10.00-11.00	Visit of Turin University laboratories
08:30-12:00	Space for Informal meetings

POSTER SESSION

Posters exhibition is open during the whole duration of the Workshop

The official presentation is scheduled for Thursday 14th

1	G. Zanfardino	Chiral and flavor oscillations in a hyperentangled neutrino state
2	G. Cenedese	Quantum many-body scars detection using VQAs techniques
3	S. Cassina	Differential ghost imaging with speckled-speckle fields
4	A. Messina	Construction of Hermitian and Unitary Almost-Companion Matrices on Demand and their application to a qutrit
5	I. Burenkov	Can quantum networks be synchronized via the same fiber links?
6	F. Picariello	Beating Abbe's diffraction limit in microscopy via antibunching and structured illumination
7	G. Andrini	Study of non-stationary thermal processes for scalable fabrication of telecom emitters in silicon
8	E. Corte	Energy Dependency Optical Transitions in Lead implanted diamond after HPHT treatment
9	G. Zanelli	Temperature Sensitivity Enhancement of a Nitrogen-Vacancy-based sensor via Quantum Superposition
10	S. Virzì	Towards a facility for the efficient characterization of entangled states
11	E. Rebufello	Towards a standard procedure for the measurement of the multi-photon component in a CW telecom heralded single-photon source

12	E. Losero	Neuronal growth on high-aspect-ratio diamond nanopillar arrays for NV biosensing
13	C. Napoli	Quantum pattern recognition on quantum channel discrimination experimental sensing
14	V. Kornienko	Correlation-based target detection with spurious reflections
15	F. Huber	Quantum Walk Evolutions in Integrated Photonic Waveguides
17	A. Romanova	An improved quantum optical coherence tomography scheme based on the Michelson interferometer
18	A. Shmakova	Quantum temperature sensing based on NV centres in diamond
19	D. Meniailava	Photoluminescence study for detecting a prospective new energy state of an NV center
20	H. Garrone	Developments in fast and efficient aluminium TESs with anti-reflective coating
21	D. Moore	Nonlinear Squeezing in Quantum and Classical Mechanics
22	D. Giannella	Plenoptic imaging through position-momentum correlations
23	H. Shirzad	Toward Electron-beam based coherent controls of individual spin qubits
24	E. Cohen	Quantum sensing with $SU(1,1)$ interferometers
25	A. Dobre	Geometric versus entropic quantum correlations in Gaussian open systems
26	V. Eremeev	Quantum correlations protocols integrated in a hybrid optomechanical network
27	E. Nieto-Hernández	Fabrication of single-photon emitters in within aluminium nitride by via Al ion implantation and annealing
28	C. Stella	NV-based quantum sensors detect local temperature variations associated with changes in neuronal firing
29	F. Atzori	Entanglement-preserving nonlocality tests on single entangled pairs
30	A. Avella	Pseudo-density operators: from modelling chronology-violating regions to recovering quantum dynamics via temporal teleportation
31	M. Saygin	Mitigation of static imperfections in photonic quantum schemes by averaging
32	M. Notarnicola	Long-distance continuous-variable quantum key distribution with feasible physical noiseless linear amplifiers