	Monday 23 May
8:45 h	**Welcome**
9:00 h (40+10)	**Fedor Jelezko** **Diamond spin qubits for quantum technologies**
9:50 h (25+5)	**Roberta Zambrini** **Reservoir computing with qubit networks**
10:20 h (25+5)	**Carlos Vega** **Topological light-matter interfaces with large topological invariants**
10:50 h	**Coffee break**
11:30 h (25+5)	**María Hita-Pérez** **Coupling 3-Josephson junctions flux qubits for Adiabatic Quantum Computation**
12:00 h (25+5)	**Borivoje Dakic** **Quantum verification with few copies**
12:30 h (25+5)	**Joaquín Berrocal** **A 7-Tesla Penning-Trap System for Precision Quantum Measurements**
13:00 h	**Lunch**
15:00 h (40+10)	**Jianshu Cao** **Symmetry in non-equilibrium quantum processes**
15:50 h (25+5)	**Máté Farkas** **Bell nonlocality is not sufficient for the security of standard device-independent quantum key distribution protocols**
16:20 h (25+5)	**Álvaro Gómez León** **Topological Traveling-Wave Parametric Amplification**
16:50 h	**Pause**
17:20 h (25+5)	**Mohammad Mehboudi** **Fundamental limits in Bayesian thermometry and attainability via adaptive strategies**
17:50 h (25+5)	**Tulja Varun Kondra** **Entanglement catalysis for quantum states and noisy channels**

	Tuesday 24 May
9:00 h (40+10)	**Yelena Guryanova** **Ideal Projective Measurement Have Infinite Resource Costs and Imply Corrections to Existing Relations**
9:50 h (25+5)	**Carlos Munuera Javaloy** **Dynamical decoupling techniques and complex systems**
10:20 h (25+5)	**Sebastián Roca** **Mapping quantum algorithms into molecular spin qudits**
10:50 h	**Coffee break**
11:30 h (25+5)	**María García Díaz** **A coherence-theoretic analysis of quantum neural networks**
12:00 h (25+5)	**Marco Fanizza** **Fundamental limits for quantum communication: designing degradable extensions**
12:30 h (25+5)	**Javier Rivera-Dean** **Strong laser field physics and its potential for quantum technology applications**
13:00 h	**Lunch**
15:00 h (40+10)	**Daniel Alonso** **Tba**
15:50 h (6+2)	**Giulio Gasbarri** **Sequential Test on an Optomechanical Systems under Homodyne detection** **Carlos Munuera Javaloy** **High-Fidelity Nanoscale NMR Spectroscopy at Large Fields** **Pablo Díez-Valle** **QAOA pseudo-Boltzmann states** **Alex Pozas-Kerstjens** **Quantum-inspired solutions to machine learning privacy leaks** **Jacopo Surace** **State retrieval beyond Bayes' retrodiction and reverse processes** **Victoria Wright** **Entanglement is necessary for Kochen-Specker contextuality in multiqubit systems** **Sergi Terradas Briansó** **Ultrastrong waveguide QED with giant emitters**
16:50 h	**Pause**
17:20 h (6+2)	**Carlo Marconi** **Robustness of non-locality in many-body open quantum systems** **Maria Balanzó-Juandó** **Positive maps from the Walled Brauer Algebra** **Sabine Wollmann** **Optimal fidelity estimation of quantum states on a silicon photonic chip** **Gabriel Pereira Alves** **Any pair of incompatible rank-one projective measurements is optimal for some non-trivial Bell inequality** **Jeongrak Son** **Measurement strategies for the Otto engine mediated quantum battery charging** **Javier Gonzalez-Conde** **Quantum algorithms for approximate function loading** **Carlos A. Gonzalez** **Strong magnon-spin coupling via magnonic vortex quantum cavities**

	Wednesday 25 May
9:00 h (40+10)	**Valentina Parigi** **Continuous Variable quantum complex networks**
9:50 h (25+5)	**Cristian Tabares** **Photon-mediated interactions between spin 1 atoms**
10:20 h (25+5)	**Luca Tagliacozzo** **1D Abelian gauge theories with MPS**
10:50 h	**Coffee break**
11:30 h (25+5)	**Angela Capel** **Exponential decay of mutual information for Gibbs states of local Hamiltonians**
12:00 h (25+5)	**Francisco Domínguez** **Quantum-enhanced sensing experiments with $^{40}Ca^{+}$ ions in a linear Paul trap**
12:30 h (25+5)	**Erik Torrontegui** **Towards the development of perceptron-based quantum neural networks**
13:00 h	**Lunch**
15:00 h (40+10)	**Christopher Bäuerle** **Surface acoustic waves as testbed for flying electron qubits**
15:50 h (25+5)	**Hilario Espinós Martínez** **Optimal quantum control of coupling-tunable transmon qubits**
16:20 h (25+5)	**Giacomo Guarnieri** **Thermodynamics of precision in quantum non-equilibrium steady states**
16:50 h	**Pause**
17:20 h	**Poster session (list of contributions in the last page)**

	Thursday 26 May
9:00 h (40+10)	**Ernesto F. Galvão** **Measuring relational information between quantum states, and applications**
9:50 h (25+5)	**Manuel Gessner** **Revealing the Einstein-Podolsky-Rosen paradox with tools from metrology**
10:20 h (25+5)	**Julio de Vicente** **Asymptotic survival of genuine multipartite entanglement in noisy quantum networks depends on the topology**
10:50 h	**Coffee break**
11:30 h (25+5)	**Ana Martín** **Digital-Analog Quantum Computation and Simulation**
12:00 h (25+5)	**José C. Abadillo-Uriel** **Achieving strong spin-photon coupling with a semiconductor hole qubit**
12:30 h (25+5)	**Archak Purkayastha** **Periodically refreshed quantum thermal machines**
13:00 h	**Lunch**
15:00 h (40+10)	**Gloria Platero** **AC-Driven Quantum Dot Arrays for Quantum State Transfer and Quantum Simulation**
15:50 h (25+5)	**Luciano Pereira** **Complete device QND measurement tomography and applications to IBM-Q**
16:20 h (25+5)	**Guillem Müller Rigat** **Inferring non-linear Bell's inequalities tailored to arbitrary spin-*j* ensembles**
16:50 h	**Pause**
17:20 h (25+5)	**Miguel Gallego** **Macroscopically nonlocal quantum correlations**
19:00 h	**Visit to Albaicín and Conference Dinner**

	Friday 28 May
9:00 h (40+10)	**Carmen G. Almudever** **Full-stack quantum computing systems in the NISQ era: optimization and codesign**
9:50 h (25+5)	**Javier Cerrillo** **The Third Level: NV-centers, Andreev Spin Qubits and Trapped Ions**
10:20 h (25+5)	**Tamás Kriváchy** **Constructive neural network models for studying Bell-nonlocality and entanglement**
10:50 h	**Coffee break**
11:30 h (25+5)	**Alberto Rolandi** **Finite-time Landauer principle at strong coupling**
12:00 h (25+5)	**Federico Centrone** **Quantum electronic voting without election authority**
12:30 h	**Concluding remarks**
13:00 h	**Lunch**
15:00 h	**Visit to the Ion traps and Lasers Laboratory**

Posters list

1. **Giulio Gasbarri**
   Sequential Test on an Optomechanical Systems under Homodyne detection
2. **Carlos Munuera Javaloy**
   High-Fidelity Nanoscale NMR Spectroscopy at Large Fields
3. **Pablo Díez-Valle**
   QAOA pseudo-Boltzmann states
4. **Alex Pozas-Kerstjens**
   Quantum-inspired solutions to machine learning privacy leaks
5. **Jacopo Surace**
   State retrieval beyond Bayes' retrodiction and reverse processes
6. **Victoria Wright**
   Entanglement is necessary for Kochen-Specker contextuality in multiqubit systems
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   Ultrastrong waveguide QED with giant emitters
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    Optimal fidelity estimation of quantum states on a silicon photonic chip
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    Any pair of incompatible rank-one projective measurements is optimal for some non-trivial Bell inequality
12. **Jeongrak Son**
    Measurement strategies for the Otto engine mediated quantum battery charging
13. **Javier Gonzalez-Conde**
    Quantum algorithms for approximate function loading
14. **Carlos A. Gonzalez**
    Strong magnon-spin coupling via magnonic vortex quantum cavities
15. **Jeongrak Son**
    Catalysis in action via elementary thermal operation
16. **P. Alexander Bouvrie**
    Molecular interferometers: effects of Pauli principle on entangled-enhanced precision measurements
17. **Rafael Wagner**
    Inequalities Witnessing Coherence, Nonlocality and Contextuality
18. **Álvaro Tejero**
    Study of the definitions of heat and work in cavity QED
19. **Laetitia Paula Bettmann**
    Understanding the role of quantum measurements in thermodynamic uncertainty relations
20. **Nicolás Gigena**
    Quantum value for a family of I3322-like Bell functionals
21. **Ghofrane Bel Hadj Aissa**
    A single entanglement measure built using a geometric approach unifying several known entanglement measures
22. **Santiago Llorens**
    The Geometry of Composite Systems: Bloch-Ball Analog for Two Qubits
23. **Manfredi Scalici**
    Preserving quantum correlations and coherence with non-Markovianity
24. **Tulio Brito Brasil**
    University of Copenhagen – NBI
    Two-colour high-purity Einstein-Podolsky-Rosen photonic state
25. **Michael Kewming**
    Entropy Production at Zero Temperature
26. **Eleftherios Tselentis**
    Logically consistent causal structure

27. **Francisco Javier Cruz Hernández**
    Quantum Spread Spectrum for Transmission Security (TRANSEC) in Tactical Communications
28. **Matteo Scandi**
    Undecidability in resource theory: can you tell theories apart?
29. **Guillermo F. Peñas Fernández**
    Universal distributed quantum gates in microwave links
30. **Gonzalo Manzano**
    Non-Abelian Quantum Transport and Thermosqueezing Effects
31. **Rubén Ibarrondo**
    Quantum Genetic Algorithm
32. **Susane Calegari**
    Contextuality and memory cost of simulation of Majorana fermions
33. **Jebarathinam Chellasamy**
    Device-independent certification of maximal randomness from pure entangled two-qutrit states using non-projective measurements
34. **Adrià Labay Mora**
    Quantum associative memory with single driven-dissipative oscillator
35. **Walther Leonardo González Olaya**
    A graph state construction of S_n-invariant subspaces in the multipartite Schur-Weyl decomposition
36. **Filipa C.R. Peres**
    Circuit compilation and hybrid computation using Pauli-based computation
37. **Nicolas Fabre**
    Time-frequency as quantum continuous variables
38. **Gabriel Jaumà Gómez**
    Hardware-efficient entangled measurements for variational quantum algorithms
39. **Ander Tobalina**
    Keeping track of the concentrations in nanoscale samples with NV centers
40. **Julia Amoros Binefa**
    Noisy Atomic Magnetometry in Real-Time
41. **Andreu Anglés-Castillo**
    A quantum walk simulation of extra dimensions with warped geometry
42. **Álvaro Sáiz**
    Quantum simulation and machine learned analysis of the Agassi model
43. **Stefano Carignano**
    Entanglement scaling in long-time evolution of matrix product states for quantum chains
44. **Róbert Trényi**
    Multicopy metrology with many-particle quantum states
45. **Paolo Abiuso**
    Characterizing (Non-)Markovianity through Fisher Information
46. **Cristian Boghiu**
    Hidden nonlocality in broadcasting Bell scenarios
47. **Juan Zurita**
    Quantum transfer between arbitrary pairs of protected states in a topological ladder
48. **Giancarlo Gatti Alvarez**
    Random access codes via quantum contextual redundancy
49. **Juan Román-Roche**
    Matter in non-perturbative cavity QED
50. **David Rodríguez Rodríguez**
    Development of NbTiN superconducting resonators for quantum technologies