3 Invited and Contributed Talks and Posters

List of Invited Talks

1. GASTIASORO, MARIA (DIPC & Ikerbasque, Donostia)
   Pairing mediated by soft ferroelectric modes in polar metals

2. GRASS, TOBIAS (DIPC & Ikerbasque, Donostia)
   Quantum simulation of Hubbard models

3. LOUNIS, BRAHMIN (Université de Bordeaux)
   Tailoring the degree of entanglement of two coherently coupled quantum emitters

4. NOVOA, DAVID (UPV/EHU & Ikerbasque, Bilbao)
   Mastering light quanta with synchronous molecular motion

5. SANZ, MIKEL (BCAM, UPV/EHU, & Ikerbasque, Bilbao)
   Digital-Analog Quantum Computation

6. WISE, JONATHAN (Université de Bordeaux)
   Nonclassical mechanical states in nonlinear quantum optomechanics

List of Contributed Talks

1. ALAÑA, AITOR (UPV/EHU, Bilbao)
   Controlling a quantum phase transition manipulating the Modulation Instability

2. CATALANO, SARA (CFM, Donostia)
   Josephson Junctions with hybrid EuS/Al interfaces: a preliminary study

3. LORENTE, NICOLAS (CFM, Donostia)
   Many-body localization and time crystalline phases in a NISQ experiment

4. MANZANO, MARC (SandboxAQ, USA)
   What's quantum-resistant cryptography and why does it matter?

5. METRAUD, NATHAN (UPV/EHU, Bilbao)
   Quadratic Fermionic Hamiltonians

6. ORÚS, ROMAN (DIPC, Ikerbasque & Multiverse, Donostia)
   Simulating IBM's Eagle Kicked Ising Experiment with Quantum-Inspired Tensor Networks

7. VAQUERO, NONIA (DIPC, Donostia)
   Physically Motivated Improvements in Variational Quantum Eigensolvers

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List of Posters

1. ALCAINE, JESÚS MATIAS (UPV/EHU and BCAM, Bilbao)
   Symmetry-protected gates on superconducting circuits

2. ASEGUINOLAZA AGUIRRECHE, UNAI (Mondragon Unibertsitatea)
   Error estimation in current noisy quantum computers

3. BERCIOUX, DARIO (DIPC & Ikerbasque, Donostia)
   Topological properties of a non-Hermitian quasi-one-dimensional chain with a flat band

4. BISWAS, SOURAV (DIPC, Donostia)
   Two-channel Kondo problem in coupled interacting helical liquids

5. CALDEVILLA ASENJO, DAVID (CFM, Donostia)
   Characterization of planar Al-based Josephson Junctions proximitized by a ferromagnetic insulator

6. CAPELA, MATHEUS (UPV/EHU, Bilbao)
   Hybrid classical-quantum algorithms with finite number of measurement outcomes

7. CARRERAS, ABEL (Multiverse, Donostia)
   Addressing Statistical Noise in Classical Optimizers for Variational Quantum Eigensolvers

8. COBOS JIMÉNEZ, JESÚS (UPV/EHU, Bilbao)
   Noise-aware variational eigensolvers: a dissipative route for lattice gauge theories

9. DASTBASTEH, REZA (Tecnun, Donostia)
   Infinite Class of Robust Degenerate Quantum Error-Correcting Codes

10. D'EMIDIO, JONATHAN (DIPC, Donostia)
    Lee-Yang zeros at O(3) and deconfined quantum critical points

11. EDALATMANESH, SHAYAN (DIPC, Donostia)
    Topological one-dimensional nanomaterials

12. ETXEZARRETA MARTINEZ, JOSU (Tecnun, Donostia)
    Superadditivity effects of quantum capacity decrease with the dimension for qudit depolarizing channels

13. GARCIA DE ANDOIN, MIKEL (UPV/EHU, Bilbao)
Hybrid Quantum-Classical Search Space Reduction Heuristic for Optimization

14. GONZÁLEZ CONDE, JAVIER (UPV/EHU, Bilbao & QuantumMads)
Efficient quantum amplitude encoding of polynomial functions

15. GONZÁLEZ RAYA, TASIO (UPV/EHU, Bilbao)
Tavis-Cummings model in gas-filled hollow-core fibres for frequency up-conversion

16. IBARRONDO, RUBEN (UPV/EHU, Bilbao)
Quantum Genetic Algorithm

17. LAFUENTE-BARTOLOME, JON (UPV/EHU, Bilbao)
Ab-initio **theory of polarons at all couplings**

18. LEUMER, NICO (DIPC, Donostia)
Finite size quantization of mid-gap Majorana states of Rashba-nanowires

19. LIGTHART, RIAN (Utrecht University)
Towards topological edge states with artificial electronic lattices: Cs on InAs(111)A

20. MENA, ARTURO (UPV/EHU, Bilbao)
Preservation of biphoton quantum coherence in frequency up-conversion using gas-filled hollow-core fibres

21. MIER, CRISTINA (Tecnalia, Donostia)
Quantum Simulations of Graphene

22. NAVARRO, JAVIER (BCAM, Bilbao)
Classical and Quantum Bhattacharyya Bounds

23. NGUYEN, MINH (DIPC, Donostia)
Valley-polarized edge modes in sliding bilayer graphene

24. OLIVA DEL MORAL, JAVIER (Tecnun, Donostia)
Asymmetric Generalized Amplitude Damping Channel

25. PATRA, SIDDHARTHA (DIPC, Donostia)
Simulating IBM's quantum Ising experiment with PEPS:127, 433, 1121 and infinitely-many qubits

26. PELLICER GURIDI, RUBEN (CFM, Donostia)
Hardware for scalable magnetic field sensing with Nitrogen Vacancy centers: from high spacial resolution with single centers to high sensitivity with centers in bulk

27. RAHMAN, SHAH JEE (CFM, Donostia)
Quantum enhanced gyroscopes with optically levitated microparticles

28. REICHERT, MAXIMILIAN (UPV/EHU, Bilbao)
Heisenberg-limited Quantum Lidar for Joint Range and Velocity Estimation

29. RODRÍGUEZ, PABLO JESUS (UPV/EHU, Bilbao)
Enhancing Lloyd-Mohseni-Rebentrost algorithm with quantum cloning

30. VERÍSSIMO, LUAN (DIPC, Donostia)
Dissipative Symmetry-Protected Topological Order