ICE-1: Información Cuántica en España

Workshop Program

Wednesday, June 25th

Salón de Grados, Facultad de Ciencias - Edificio A

Time	Speaker	Title
9h00	OPENING	
9h30	Robert Sewell	Entanglement of atomic spins beyond simple spin squeezing
10h00	Pau Farrera	Controlled rephasing of collective spin excitations in cold atom quantum memories for temporally multiplexed quantum repeaters
10h20	Giuseppe Vitagliano	Detecting multiparticle entanglement with spin squeezing inequalities
10h40	Fernando Falceto	Entanglement entropy in fermionic chains
11h15	COFFEE BREAK	
11h45	Diego Porras	Trapped ion spin-phonon chains: frustrated phases and applications in quantum metrology
12h15	Emilio Alba	Measuring topology in complex systems
12h35	Antonio Mezzacapo	Digital quantum simulation in superconducting circuits
12h55	Jordi Mur	Quantum Sensing with Trapped Ions
13h15	LUNCH	
16h00	Iñigo Egusquiza	Entanglement Classification and Matrix Product States
16h30	Fernando Galve	Discording Power of Quantum Evolutions
16h50	Jordi Tura	Detecting the nonlocality of many-body quantum states
17h10	Alexander Streltsov	General limits for entanglement distribution
17h30	COFFEE BREAK	
18h00	Alejandro Bermúdez	Spin-boson lattice models: Lieb-Robinson bounds, Ising phase transitions, and Luttinger liquids
18h30	Laura García Alvarez	Fermion-fermion scattering with superconducting circuits
18h50	Roberta Zambrini	Spectral origin of non-Markovianity in an exact finite harmonic model
19h15	POSTERS	

Thursday, June 26th

Aula Magna, Edificio Paraninfo

Time	Speaker	Title
9h00	Germán Sierra	Primes go Quantum
9h30	Javier Molina	Entanglement, tensor networks and black hole horizons
9h50	Martí Perarnau	Thermodynamics Cost of Creating Correlations
10h10	Diego Frustaglia	Classical microwaves as a universal model system for quantum contextuality
10h30	C. González-Guillén	Sampling quantum non-local correlations with high probability
10h50	Roberto di Candia	Embedding Quantum Simulators
11h15	COFFEE BREAK	
12h00	HONORIS CAUSA	
14h00	CONFERENCE LUNCH	
16h45	Eugenio Coronado	Design of molecular spin qubits based on polyoxometalates
17h15	Guillem Aromí	Dinuclear Molecules of Lanthanides as Prototypes of CNOT and SWAP Quantum Gates
17h35	A. Gaita-Ariño	A molecular approach to spin qubits: decoherence and organisation in Single-Ion-Magnets
18h00	COFFEE BREAK	
18h15	Emilio Santos Corchero	Mathematical and physical meaning of the Bell inequalities
18h45	Adán Cabello	John Bell and the right question
19h15	MEETING OF THE GEIC	
20h00	José Ignacio Latorre	OPEN SESSION

Friday, June 27th

Salón de Grados, Facultad de Ciencias - Edificio A

Time	Speaker	Title
9h00	Juan Ignacio Cirac	Bulk-boundary theories from a quantum information theory perspective
9h30	Fernando Quijandría	Quantum and classical simulations of emergent phenomena in one dimensional quantum field theories
9h50	Julen Pedernales	Efficient method to measure n-time correlation functions
10h10	Johannes Feist	Entanglement detection in coupled particle plasmons
10h30	David Elkouss	On the number of uses of the channel needed to find positive coherent information
10h50	Luis Martín-Moreno	Few Photon Photonics in One-Dimensional systems
11h20	COFFEE BREAK	
11h50	Oriol Romero-Isart	Superconducting Vortex Lattice for Ultracold Atoms
12h20	Mark Jenkins	Coupling superconducting circuits to single molecular magnets
12h40	Mikel Sanz	Quantum Biomimetics and the Cloning of Quantum Observables
13h00	Iván Fernández	Emulation of gravitational waves in curved spacetimes with entangled photon states
13h20	LUNCH	
16h00	Sergio Boixo	Experiments with the DWave prototype
16h30	Ariel Bendersky	Implications of computer science principles for quantum physics
17h00	CLOSING	
17h15	COFFEE BREAK	