Session Program

May 29, 2023 to June 1, 2023

Quantum Information in Spain ICE-8

Session 4.2

Santiago de Compostela

Mon, May 29

11:20 AM

Session 4.2

Session | **Location:** Aula Magna, Facultad de Matemáticas, USC | **Convener:** Chair: Marcos Curty

11:20 – 11:40 AM **KeySight**

Speakers
Benjamín García, Miguel Ángel Fernández

11:40 AM – 12:00 PM

Fast single-photon detectors and real-time key distillation enable high secret-key-rate quantum key distribution systems

Speaker
Dr Fadri Gruenenfelder

Location
Aula Magna, Facultad de Matemáticas, USC

12:00 – 12:20 PM

Distributing circuits over heterogeneous, modular quantum computing network architectures

Speaker
Pablo Andres-Martinez

Location
Aula Magna, Facultad de Matemáticas, USC

12:20 – 12:40 PM **Topologically robust network nonlocality**

Speaker
Tamás Kriváchy

Location
Aula Magna, Facultad de Matemáticas, USC

12:40 – 1:00 PM

Guaranteeing non-classicality in experimental quantum networks without assuming quantum mechanics

Speaker
Alejandro Pozas-Kerstjens

Location
Aula Magna, Facultad de Matemáticas, USC

1:00 PM

Tue, May 30

11:20 AM

Session 4.2

Session | **Location:** Aula Magna, Facultad de Matemáticas, USC | **Convener:** Chair: David Zueco

11:20 – 11:40 AM

Quantum Computing at FUJITSU

Speaker
Juan Antonio García Carrasco

11:40 AM – 12:00 PM

Using high-dimensional entanglement for closing the detection loophole in Bell experiments

Speaker
Adán Cabello

12:00 – 12:20 PM

Number-phase uncertainty relations and bipartite entanglement detection in spin ensembles

Speaker
Geza Toth

12:20 – 12:40 PM

Quantum supremacy in mechanical tasks: projectiles, rockets and quantum backflow

Speaker
Mr David Trillo

12:40 – 1:00 PM

Optimal control of dissipation and work fluctuations for rapidly driven systems

Speaker
Alberto Rolandi

1:00 PM

Wed, May 31

11:20 AM

Session 4.2

Session | **Location:** Aula Magna, Facultad de Matemáticas, USC | **Convener:** Chair: Andres Gomez Tato

11:20 – 11:40 AM **EVIDEN-ATOS**

Speaker
José Camacho

11:40 AM – 12:00 PM **Variational Waveguide-QED Simulators**

Speaker
Cristian Tabares López

12:00 PM

Thu, June 1

11:20 AM

Session 4.2

Session | **Location:** Aula Magna, Facultad de Matemáticas, USC | **Convener:** Chair: Alba Cervera Lierta

11:20 – 11:40 AM

Tackling thermalization dynamics through decoherent tensor networks

Speaker
Carlos Ramos Marimón

11:40 AM – 12:00 PM

Exact solution for quantum strong long-range models using a generalized Hubbard–Stratonovich transformation from cavity QED

Speaker
Juan Román-Roche

12:00 – 12:20 PM

Encodings of binary variables for efficient use in a quantum computer

Speaker
Márcio Taddei

12:20 – 12:40 PM

Quantum circuits for quantum walks with position-dependent coin operator

Speaker
Armando Perez

12:40 – 1:00 PM

Parallelizing quantum algorithms with classical communication.

Speaker
Constantino Rodriguez Ramos

1:00 PM