

Session Program

7-12 Jul 2024

**Early Career Conference in Trapped Ions
(ECCTI) 2024**

Quantum Information & Computing

Viktor-Franz-Hess Haus, Hörsaal B (Technik)
Technikerstraße 25a, 6020 Innsbruck, Austria

Monday 8 July

11:00

Quantum Information & Computing

Session | **Location:** Viktor-Franz-Hess Haus, Hörsaal B (Technik), Technikerstraße 25a, 6020 Innsbruck, Austria | **Convener:** Matthias Dietl

11:00-11:18

Quantum Information Processing with Trapped Ion Qudits

Speaker

Peter Tirlor

11:18-11:36

Stimulated Raman 2-qubit logic gates in metastable trapped-ion qubits

Speaker

Sean Brudney

11:36-11:54

Snapshotting Quantum Dynamics at Multiple Time Points

Speaker

Pengfei Wang

11:54-12:12

Novel tweezer assisted sub-Doppler cooling of trapped $^{171}\text{Yb}^+$ ion crystal

Speaker

Bas Gerritsen

12:12-12:34

Scalable all-electronic quantum control of trapped-ion qubits

Speaker

Marius Weber

12:35

Wednesday 10 July

14:30

Quantum Information & Computing

Session | **Location:** Viktor-Franz-Hess Haus, Hörsaal B (Technik), Technikerstraße 25a, 6020 Innsbruck, Austria | **Convener:** Gabriel Araneda

14:30-14:52

Deterministic Quantum Gate Teleportation across a Trapped-Ion Quantum Network

Speaker

Dougal Main

14:53-15:15

Realization a phononic network with collective modes in trapped ion system

Speaker

Dr Wentao Chen

15:15-15:33

An ion trap quantum processor with integrated ion-photon interface

Speaker

Maoling Chu

15:33-15:55

Setting up a high performance quantum computing experiment with trapped Barium ions

Speaker

Lorenz Panzl

15:55-16:13

Quantum information processing with metastable states in trapped barium ions

Speaker

Andres Vazquez Brennan

16:15

Thursday 11 July

15:40

Quantum Information & Computing

Session | **Location:** Viktor-Franz-Hess Haus, Hörsaal B (Technik), Technikerstraße 25a, 6020 Innsbruck, Austria | **Convener:** Marco Valentini

15:40-15:58

Scaling of micro-fabricated Penning ion traps

Speaker

Kilian Hanke

15:58-16:16

Overcoming and harnessing non-commuting dynamics in trapped ions

Speaker

Donovan Webb

16:20

Friday 12 July

11:00

Quantum Information & Computing

Session | **Location:** Viktor-Franz-Hess Haus, Hörsaal B (Technik), Technikerstraße 25a, 6020 Innsbruck, Austria | **Convener:** Edgar Brucke

11:00-11:22

Demonstration of fault-tolerant Steane quantum error correction

Speaker

Dr Christian Marciniak

11:23-11:45

Cycle Error Reconstruction on a trapped ion quantum computer

Speaker

Robert Freund

11:45-12:07

Focusing of microwave-driven gate interactions using dynamical decoupling

Speaker

Molly Smith

12:08-12:30

Towards High-Fidelity Microwave Gates on Microfabricated Ion-Traps

Speaker

Petros Zantis

12:30