Session Program

7–11 Dec 2026



26th Australian Institute of Physics Congress and the Australian and New Zealand Conference on Optics and Photonics

AIP QST: Quantum LDPC codes & fault-tolerant architectures

The University of Sydney , Belinda Hutchinson Building
Abercrombie St & Codrington St NSW 2008

Monday 7 December

14:00

AIP QST: Quantum LDPC codes & fault-tolerant architectures

Session |
Location: The University of Sydney , Belinda Hutchinson Building, Abercrombie St & Codrington St NSW 2008

14:00–14:15

Vine Codes: Low-Overhead Quantum LDPC Codes on a Planar Square Grid

Speaker
Georgia Nixon

14:15–14:30

Generating Large-Distance LP-QLDPC Codes via Randomized Parameter Selection

Speaker
Menglong Fang

14:30–14:45

Explicit Instances of Quantum Tanner Codes

Speaker
Rebecca Radebold

14:45–15:00

Efficient Implementation of Quantum LDPC Codes on Hardware-Realistic Lattice Architectures

Speaker
Dr Sina Gholizadeh

15:00–15:15

A realistic simulation and application of Bivariate Bicycle codes in ion traps

Speaker
Anthony O'Rourke

15:15–15:30

Low-overhead fault-tolerant quantum computation by gauging logical operators

Speaker
Dominic Williamson

15:30