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**UNIVERSITÀ
DI TRENTO**
Dipartimento di
Fisica



ECT*
EUROPEAN CENTRE
FOR THEORETICAL STUDIES
IN NUCLEAR PHYSICS AND RELATED AREAS

QUANTUM ERROR CORRECTION & MITIGATION WORKSHOP

16-18 OCTOBER 2023

Aula Grande, Fondazione Bruno Kessler
via Santa Croce, 77 - Trento

While quantum hardware is seeing a dramatic progress, it is currently still plagued by errors, posing a major hindrance to scaling quantum computers to industry-relevant applications and opening a major thrust of current research and development. As the field of quantum computing rapidly advances, the realization of fault-tolerant and reliable quantum computations becomes paramount.

This workshop aims to bring together a diverse audience consisting of theorists, experimentalists, and engineers working towards fault-resilience in quantum devices and to provide a platform for participants to exchange ideas, share insights, and present cutting-edge research on various aspects of quantum error correction and mitigation. The treated topics include among other error-mitigation strategies, classical and quantum error correcting codes, novel quantum algorithms, and device technologies.

INVITED SPEAKERS

Dr. **Tom O'Brien**

Senior Research Scientist, Google Quantum AI

Dr. **Valentin Kasper**

Senior Research Scientist and Consultant, KRC S.L.

Dr. **Ivano Tavernelli**

Global leader for advanced algorithms for quantum simulations, IBM Research Europe

Prof. **Paolo Rech**

Assistant Professor, University of Trento

Dr. **Michele Grossi**

Senior Fellow Quantum Computing Scientist, CERN

Dr. **Nathan Shammah**

Chief Technology Officer, Unitary Fund

Organizing Committee

Prof. **Philipp Hauke**

Prof. **Francesco Pederiva**

Dr. **Alessandro Roggero**

Prof. **Enrico Blanzieri**

For further information

<https://www.unitn.it/quantum-error>

Contacts

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In collaboration with



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