

GGI SUMMER SCHOOL ON **Quantum Simulation of Field Theories**

PROGRAM:

Mon

1030 Valter Bonvicini, Stefania de Curtis: **Welcome and introduction to the school**

1045 Davide Venturelli: **The Quantum Computing landscape**

1400 Hank Lamm and Dorota Grabowska: **Field Theory 1**

1545 Giacomo de Palma and Sohaib Alam: **Quantum Algorithms 1**

1715 **Q&A Session with all the day's speakers**

Tue

0930 Giacomo de Palma and Sohaib Alam: **Quantum Algorithms 2**

1115 Leonardo Banchi and Peter Orth: **Quantum Variational Methods 1**

1400 **Student presentations** (chairman Davide Venturelli)

1545 Norm Tubman: **Lab 1: Quantum Computing**

1710 **Q&A Session with all the day's speakers**

Wed

0930 Leonardo Banchi and Peter Orth: **Quantum Variational Methods 2**

1115 Hank Lamm and Dorota Grabowska: **Field Theory 2**

1400 Pietro Silvi: **Numerical Simulations**

1545 Anna Grassellino, Alex Romanenko, Silvia Zorzetti: **SQMS Intro & quantum devices and co-design**

1715 **Q&A Session with all the day's speakers and visit to Galileo's house**

Thu

0930 Nathan Shammah, Andrea Mari: **Quantum Error Mitigation 1**

1115 Ryan LaRose: **Error Correction and Error Mitigation 2**

1400 Paolo Perinotti: **Advanced topics in Quantum Simulations**

1545 Nathan Shammah, Andrea Mari: Lab 2: **Error Mitigation Techniques**

1715 **Q&A Session with all the day's speakers**

Fri (Research Topics)

0930 Andrea Delgado: **Quantum Machine Learning**

1115 Silvia Zorzetti: **Closing Remarks**

Lorenzo Maccone: **Quantum Foundations, time and Field theory**