

Workshop “Trends in Quantum Simulation of Gauge Fields and Topological Phases”

Location: Palazzo Monte di Pietà (via Arco Valaresso/Piazza Duomo)

Monday June 16th

13:30 – 14:00	Registration
14:00 – 14:45	Morais Smith: “Topology and Interactions at dimension 1.58”
14:45 – 15:30	Zache: “Observation of string breaking on a (2+1)D Rydberg quantum simulator”
15:30 – 16:00	Maffi: “Vortex Dynamics in Strongly Interacting Superfluid”
16:00 – 16:30	Coffee break
16:30 – 17:15	Magnifico: “Tensor Network methods for Gauge Field Theories”
17:15 – 17:45	Tirrito: “Entanglement and magic in U(1) lattice gauge theory”
17:45 – 18:15	Lerose: “Analog quantum simulation of continuum (1+1)D gauge-QFT with quasi-1D synthetic quantum magnets”
--	
20:00 – 22:00	Social Dinner @ Restaurant “Dante alle Piazze”

Tuesday June 17th

09:00 – 09:45	Goldman: “Correlated topological matter: news and views from quantum simulation”
09:45 – 10:30	Dalmonte: “Graviton excitations in Fractional quantum Hall synthetic matter”
10:30 – 11:00	Coffee break
11:00 – 11:30	Bacciconi: “Local vs Nonlocal Dynamics in Cavity-Coupled Rydberg Atom Arrays”
11:30 – 12:00	Nardin: “Nonlinear dynamics at the fractional quantum Hall edge”
12:00 – 14:00	Lunch
14:00 – 14:30	Zerba: “Emergent Fracton Hydrodynamics of Ultracold Atoms in Partially Filled Landau Levels”
14:30 – 15:15	Celi: “Scalable quantum simulation/computation of Abelian and non-Abelian

	gauge theories beyond 1D with finite resources"
15:15 - 15:45	Xu: "Tensor-Network Study of the Roughening Transition in (2+ 1) D lattice gauge theories"
16:00 - 16:30	Coffee break
16:30 - 18:30	Poster Session
--	
20:00 - 22:00	Dinner @ Restaurant "Antico Brolo"

Wednesday June 18th

09:00 - 09:45	Tarruell: "Probing supersolidity through excitations in a spin-orbit-coupled Bose-Einstein condensate"
09:45 - 10:30	Salerno: "Topology of light polarization vortices in nanophotonic crystals"
10:30 - 11:00	Coffee break
11:00 - 11:30	Notarnicola: "Dynamics across quantum phase transitions in Rydberg atom arrays"
11:30 - 12:00	Burrello: "Poor man's Majorana modes in interacting hybrid superconductor-semiconductor devices"
12:00 - 12:15	Closing remarks
12:15 - 14:00	Lunch