

Session Program

26 July 2026 to 1 August 2026



The 43rd International Symposium on Lattice Field Theory (Lattice 2026)

Quantum computing and quantum information

University of Maryland, College Park
Adele H. Stamp Student Union 3972 Campus Dr College Park, MD 20742, United States

Monday 27 July

14:00

Quantum computing and quantum information

Session | **Location:** Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | **Convener:** Jesse Stryker

14:00–14:20

Some Aspects of Quantum Simulations for Bosons and D-brane Scattering

Speaker

Emanuele Mendicelli

14:20–14:40

Observation of quantum-field-theory dynamics on a spin-phonon quantum computer

Speaker

Vinay Vikramaditya

14:40–15:00

Simulating lattice gauge theories on hybrid qubit-qumode quantum platforms

Speaker

Tommaso Rainaldi

15:00–15:20

Measurement-based simulation of lattice gauge theory dynamics with adaptive quantum circuits on a trapped-ion processor

Speaker

Takuya Okuda

15:20–15:40

Real Time GEVP on Quantum Hardware

Speaker

Valery Simonyan

15:40

16:10

Quantum computing and quantum information

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16:10–16:30

Simulating Lattice Gauge Theories with Virtual Rishons

Speaker

David Rogerson

16:30–16:50

Quantum Simulations of Lattice QCD in the Representation Basis

Speaker

Luis Hidalgo

16:50–17:10

Quantum Simulation of Gluon Spin-Orbit Correlations in Single- and Multi-Gluon Systems

Speaker

Juan Antonio Gil Fraile

17:30

Tuesday 28 July

14:00

Quantum computing and quantum information

Session | **Location:** Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | **Convener:** Raghav G. Jha

14:00–14:20

Lattice Field theories with Tensor Networks

Speaker

Adwait Naravane

14:20–14:40

Gauge-invariant PEPS for pure Z_2 gauge theory and its entanglement

Speaker

Etsuko Itou

14:40–15:00

Wavelet Matrix Product States for Quantum Fields

Speaker

Molly Kaplan

15:00–15:20

Analyzing the entanglement property of Clifford-circuits augmented MPS

Speaker

Akira Matsumoto

15:20–15:40

Fermionic relativistic continuous matrix product states: musings on the Schwinger model

Speaker

Sophie Mutzel

15:40

16:10

Quantum computing and quantum information

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16:10–16:30

QFT Thermodynamics from Entanglement Entropy

Speaker

Aatu Rajala

16:30–16:50

Probing magic and entanglement in 1+1-dimensional $SU(2)$ lattice gauge theory

Speaker

Dr Raghav G. Jha

16:50–17:10

Encoding Entropy and Spatial Entanglement in Hamiltonian Lattice Gauge Theory

Speaker

Navya Gupta

17:10–17:30

SOCS: Spins on Curved Surfaces

17:30

Speaker

Abhishek Samlodia

Wednesday 29 July

09:00

Quantum computing and quantum information

Session | **Location:** Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | **Convener:** Sophie Mutzel

09:00–09:20

Quantum State Initialization: Approximating Hamiltonian Eigenstates by One- and Two-Qubit Gates

Speaker

Yao Ting Su

09:20–09:40

Counterdiabatic quantum optimization for gauge theories

Speaker

Ethan Laval

09:40–10:00

CaRBM: A Fixed-Depth Quantum Algorithm with Partial Correction for Thermal State Preparation

Speaker

Omar Alsheikh

10:00–10:20

Dissipative State Preparation for Lattice Gauge Theories

Speaker

Hersh Kumar

10:20–10:40

Quantum data learning of phase transitions

Speaker

Tanmoy Bhattacharya

10:40

11:10

Quantum computing and quantum information

Session | **Location:** Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | **Convener:** Tanmoy Bhattacharya

11:10–11:30

Preparation and detection of quasiparticles for quantum simulations of scattering

Speaker

Mattia Morgavi

11:30–11:50

Quantum Complexity in Simulations of Scattering in the XZ Heisenberg Model

Speaker

Michael Hite

11:50–12:10

Finite-Volume Errors on Real-Time Estimators for Scattering Observables

Speaker

Ivan Mauricio Burbano Aldana

12:10–12:30

Toward quantum computation of hadronic tensors

12:30

Speaker

Chung-Chun Hsieh

Thursday 30 July

14:00

Quantum computing and quantum information

Session | **Location:** Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | **Convener:** Molly Kaplan

14:00–14:20

Fuzzy regularization of Hamiltonian $\mathcal{CP}^N$ models

Speaker

Andrea Bulgarelli

14:20–14:40

Towards the Mass Shift and Discrete Chiral Symmetry in the Lattice QED Hamiltonian

Speaker

Shoto Aoki

14:40–15:00

Tensor-Network Study of Confining Flux Tubes and Effective Strings in (2+1)D Compact U(1) Gauge Theory

Speaker

Alessio Negro

15:00–15:20

Obtaining continuum physics from dynamical simulations of Hamiltonian lattice gauge theories

Speaker

Christopher Kane

15:20–15:40

Confinement and String Breaking in the Compact Abelian Higgs Model

Speaker

Blake Senseman

15:40

16:10

Quantum computing and quantum information

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16:10–16:30

Simulating (3+1)D SU(2) Hamiltonian lattice gauge theory with a topological θ -term

Speaker

Lena Funcke

16:30–16:50

A Path to Quantum Simulations of (3+1)D U(1) Gauge Theory with a Topological θ -Term

Speaker

Emil Otis Rosanowski

16:50–17:10

Quantum Simulations of Topological Phases: (2+1)D Lattice QED with Wilson Fermions

Speaker

Sriram Bharadwaj

17:10–17:30

Finite Size Scaling of Probability Distributions

Speaker

Zane Ozzello

17:30

Friday 31 July

14:00

Quantum computing and quantum information

Session | Location: Adele H. Stamp Student Union, Margaret Brent A, 3972 Campus Dr, College Park, MD 20742 | Convener: Natalie Klco

14:00–14:20	Trapped-ion quantum simulation of (1+1)D SU(2) lattice gauge theory via loop-string-hadron formulation Speaker Jesse Stryker
14:20–14:40	Arbitrary-Distance Quantum Error Correction with Gauss's Law for Lattice Gauge Theories Speaker Neel Modi
14:40–15:00	Tightening energy-based boson truncation bound using Monte Carlo-assisted methods Speaker Jinghong Yang
15:00–15:20	Reducing circuit depth for $SU(3)$ lattice gauge theory with permutation-symmetric $SU(N)$ Clebsch-Gordan coefficients Speaker Jason Elhaderi
15:20–15:40	Large-N Phase Structure of q-Deformed Yang-Mills Theory in 2+1 Dimensions Speaker Hiromasa Watanabe

15:40