

Session Program

22-24 Oct 2025



Brookhaven Forum 2025: Launching the Second Century of Quantum Physics

Parallel Talks

Wednesday 22 October

14:00

Parallel Talks: LHC

Session | Location: Large Seminar Room | Convener: Elizabeth Brost

14:00–14:18 Underpinnings of CP Violation at the High-energy Frontier

Speaker
Shaouly Bar-Shalom

14:18–14:36 Learning from Higgs Decays at NLO in SMEFT

Speaker
Clara Lavinia Del Pio

14:36–14:54 Higgs Coupling Measurements with Polarized Diboson Processes

Speaker
Spencer Ellis

14:54–15:12 The Signals of the Doomsday

Speaker
Amartya Sengupta

15:12–15:30 High-Energy Colliders as Tests of the Born Rule

Speaker
Mira Varma

15:30

14:00

Parallel Talks: Neutrinos

Session | Location: Small Seminar Room | Convener: Jay Hyun Jo

14:00–14:18 Lepton Number Violating Neutrino Self-Interactions in Supernovae

Speaker
Anna Suliga

14:18–14:36
Neutrino Magnetic Moment, Charge Radius and Polarizability from MeV to GeV
Neutrino Interactions

Speaker
Sam Carey

14:36–14:54
Recent Single-Photon Searches in MicroBooNE to Explain the MiniBooNE Anomaly

Speaker
Karan Kumar

14:54–15:12 Status of the Short-Baseline Near Detector at Fermilab

Speaker
Lynn Tung

15:12-15:30

Searches for physics beyond the Standard Model with the Short-Baseline Near Detector

Speaker

Vu Chi Lan Nguyen

15:30

Thursday 23 October

13:40

Parallel Talks: LHC and Lattice

Session | **Location:** Small Seminar Room | **Convener:** Clara Lavinia Del Pio

13:40–13:58

Colliding light to measure tau g-2 and unveil quantum imprints of new physics

Speaker

Jesse Liu

13:58–14:16

Triggering on Long-Lived Particles in the Upgraded ATLAS Detector

Speaker

Anthony Maurel Carroll

14:16–14:34

Search and Prospects for Non-Resonant Higgs Boson Pair Production in the $b\bar{b} t\bar{t}$ Final State in the ATLAS Experiment

Speaker

Minori Fujimoto

14:34–14:52

Dark Higgs-strahlung at Belle II from displaced vertices and missing energy

Speaker

Francesca Acanfora

14:52–15:10

Synaptic Field Theory

Speaker

Jaeok Yi

15:10–15:28

Reducing Autocorrelation Times in HMC Simulation

Speaker

Shuhei Yamamoto

15:30

13:40

Parallel Talks: Lattice and DM

Session | **Location:** Large Seminar Room | **Convener:** Hongkai Liu

13:40–13:58

Lattice calculation of $K \rightarrow \pi\pi$ decay

Speaker

Masaaki Tomii

13:58–14:16

Light Dark Matter Search with NV Centers: Electron Spin, Nuclear Spin, and Comagnetometry

Speaker

So Chigusa

14:16–14:34

Spin-Dependent Scattering of Sub-GeV Dark Matter: Models and Constraints

Speaker

Pankaj Munbodh

14:34–14:52

Dark plasmas in the nonlinear regime: constraints from particle-in-cell simulations

Speaker

Pierce Giffin

14:52–15:10

Ultra-Strongly Self-Interacting Dark Matter: Cosmological Consequences and Observations

Speaker

M. Grant Roberts

15:30