

Session Program

Aug 8 - 13, 2022



The 39th International Symposium on Lattice Field Theory (Lattice 2022)

Hadron Spectroscopy and Interactions

Hörsaalzentrum Poppelsdorf, Alle Räume
Endenicher Allee 19 C, 52115 Bonn, Germany

Mon, August 8

2:00 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions I

Session | **Location:** CP1-HSZ, CP1-HSZ/0.010 (CP1-HSZ) - HS2 | **Convener:** William Detmold

2:00 – 2:20 PM **$\pi^+\pi^+K^+$ and $\pi^+K^+K^+$ interactions from the lattice**

Speaker

Stephen Sharpe

2:20 – 2:40 PM **Multihadron resonances in a finite volume**

Speaker

Maxim Mai

2:40 – 3:00 PM **Three particle resonance in lattice ϕ^4 theory**

Speaker

Marco Garofalo

3:00 – 3:20 PM

Relativistic invariance of the NREFT three-particle quantization condition

Speaker

Fabian Müller

3:20 – 3:40 PM

Two- and three-particle scattering in the (1+1)-dimensional O(3) non-linear sigma model

Speaker

Jorge Baeza-Ballesteros

3:40 – 4:00 PM **Towards the finite-volume spectrum of the Roper resonance**

Speaker

Daniel Severt

4:00 PM

4:30 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions II

Session | **Location:** CP1-HSZ, CP1-HSZ/0.010 (CP1-HSZ) - HS2 | **Convener:** Stephen Sharpe

4:30 – 4:50 PM **Finite volume pionless effective field theory for nuclear systems**

Speaker

William Detmold

4:50 – 5:10 PM **6144 Pions in a Box**

Speaker

Ryan Abbott

5:10 – 5:30 PM

Implementing the finite-volume scattering and decay formalism across all three-pion isospin channels

Speaker
Max Hansen

5:30 - 5:50 PM **The Lüscher scattering formalism on the t-channel cut**

Speaker
Mr Andre Baiao Raposo

5:50 - 6:10 PM **Formalism for studying $\gamma^* \gamma^* \rightarrow \pi\pi$ in a finite, Euclidean spacetime**

Speaker
Raul Briceno

6:10 - 6:30 PM **Finite volume corrections for form factors of two-nucleon systems**

Speaker
Felipe Ortega Gama

6:30 PM

Tue, August 9

2:00 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions III

Session | Location: CP1-HSZ, CP1-HSZ/0.010 (CP1-HSZ) - HS2 | Convener: Sara Collins

2:00 - 2:20 PM **Evidence for a doubly charm tetraquark in DD^* scattering**

Speaker

Padmanath Madanagopalan

2:20 - 2:40 PM **Doubly charm tetraquark and its quark mass dependence**

Speaker

Sasa Prelovsek

2:40 - 3:00 PM

Lattice study on a tetra-quark state T_{bb} in the HALQCD method

Speaker

Sinya Aoki

3:00 - 3:20 PM **D meson -- pion scattering on CLS 2+1 flavor ensembles**

Speaker

Daniel Mohler

3:20 - 3:40 PM **Charmonium-like states with $J^P=1^+$ and isospin 1**

Speaker

Mitja Sadl

3:40 - 4:00 PM

Optimized meson operators for charmonium spectroscopy and mixing with glueballs

Speaker

Mr Juan Andres Urrea Nino

4:00 PM

4:30 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions IV

Session | Location: CP1-HSZ, CP1-HSZ/0.010 (CP1-HSZ) - HS2 | Convener: Padmanath Madanagopalan

4:30 - 4:50 PM

A determination of the gradient flow scale on $N_f=2+1$ CLS ensembles

Speaker

Dr Sara Collins

4:50 - 5:10 PM

Benchmark Continuum Limit Results for Spectroscopy with Stabilized Wilson Fermions

Speaker

Giovanni Pederiva

5:10 - 5:30 PM

The static energy of a quark-antiquark pair from Laplacian eigenmodes

Speaker
Roman Höllwieser

5:30 - 5:50 PM

Lattice field theory results for hybrid static potentials at short quark-antiquark separations and their parametrization

Speaker
Carolin Schlosser

5:50 - 6:10 PM

Antiheavy-antiheavy-light-light four-quark bound states

Speaker
Martin Pflaumer

6:10 - 6:30 PM

The continuum limit with various discretized fermion actions

Speaker
Dianjun Zhao

6:30 PM

Thu, August 11

9:00 AM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions V

Session | **Location:** CP1-HSZ, CP1-HSZ/1.002 (CP1-HSZ) - HS6 | **Convener:** Daniel Mohler

9:00 – 9:20 AM **The glueball spectrum with $N_f=4$ light fermions**

Speaker

Dr Andreas Athenodorou

9:20 – 9:40 AM

Lattice calculation of glueball masses using the renormalized energy-momentum tensor with gradient flow

Speaker

Keita Sakai

9:40 – 10:00 AM

Anisotropy from the Wilson flow in QED in 2+1 dimensions

Speaker

Simone Romiti

10:00 – 10:20 AM

Scale Setting for RBC-UKQCD 2+1 flavor Domain Wall Fermion Lattices

Speaker

Robert Mawhinney

10:20 – 10:40 AM

Setting the Scale Using Baryon Masses with Isospin-Breaking Corrections

Speaker

Alexander Segner

10:40 – 11:00 AM

Static Energy in (2+1+1)-Flavor Lattice QCD: Scale Setting and Charm Effects

Speaker

Johannes Heinrich Weber

11:00 AM

11:30 AM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions VI

Session | **Location:** CP1-HSZ, CP1-HSZ/0.010 (CP1-HSZ) - HS2 | **Convener:** Amy Nicholson

11:30 – 11:50 AM

Two-baryon variational spectroscopy

Speaker

Michael Wagman

11:50 AM – 12:10 PM

Hadronic observables from master-field simulations

Speaker

Dr Marco Cè

12:10 – 12:30 PM

Non-perturbative heavy quark action tuning using machine learning

Speaker
Renwick Hudspith

12:30 - 12:50 PM **Exploring distillation at the SU(3) flavour symmetric point**

Speaker
Fabian Joswig

12:50 PM

Fri, August 12

2:10 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions VII

Session | Location: CP1-HSZ, CP1-HSZ/1.004 (CP1-HSZ) - HS7 | Convener: Maxim Mai

2:10 – 2:30 PM

Resolving the NN controversy: a direct comparison of methods used for Luscher and the potential

Speaker

Amy Nicholson

2:30 – 2:50 PM

Investigating Unitarity Violation With Chiral Perturbation Theory

Speaker

Zachary Draper

2:50 – 3:10 PM

Long-range matrix elements with three-body intermediate states

Speaker

Andrew Jackura

3:10 – 3:30 PM

The long-distance behavior of the vector correlator from pi-pi scattering at the physical point.

Speaker

Srijit Paul

3:30 – 3:50 PM

Precise determination of decay rates for $J/\Psi \rightarrow \gamma \eta_c$, $J/\Psi \rightarrow \eta_c e^+ e^-$ and $\eta_c \rightarrow \gamma \gamma$

Speaker

Dr Brian Colquhoun

3:50 – 4:10 PM

Hadronic Parity Violation from Twisted Mass Lattice QCD

Speaker

Nikolas Schlage

4:10 PM

4:40 PM

Hadron Spectroscopy and Interactions: Hadron Spectroscopy and Interactions VIII

Session | Location: CP1-HSZ, CP1-HSZ/1.004 (CP1-HSZ) - HS7 | Convener: Max Hansen

4:40 – 5:00 PM

An update on QCD+QED simulations with C^* boundary conditions

Speaker

Jens Lücke

5:00 – 5:20 PM

The σ resonance as a bound, virtual bound and resonant state.

Speaker

Arkaitz Rodas

5:20 - 5:40 PM

The $I=1/2$ and $3/2$ K - π scattering length with domain wall fermions at physical pion mass with all-to-all propagators

Speaker

Rajnandini Mukherjee

5:40 - 6:00 PM

Towards $K\pi$ scattering with domain-wall fermions at the physical point using distillation

Speaker

Nelson Pitanga Lachini

6:40 PM