

Session Program

18-24 Aug 2024



XVth Quark Confinement and the Hadron Spectrum

Vacuum Structure and Confinement

Cairns, Queensland, Australia
Cairns Convention Centre

Monday 19 August

14:00

Vacuum Structure and Confinement: A1a (Parallel A)

Session | Location: M2 | Convener: Derek Leinweber

14:00–14:30 **The standard model and the lattice**

Speaker

Michael Creutz

14:30–15:00 **Fractional instantons, anomalies, and the gaugino condensate**

Speaker

Erich Poppitz

15:00–15:30 **Weyl Fermions on a Finite Lattice**

Speaker

Srimoyee Sen

15:30

16:00

Vacuum Structure and Confinement: A1b (Parallel A)

Session | Location: M2 | Convener: Ivan Horvath

16:00–16:20

Boundary states and non-Abelian Casimir effect in lattice Yang-Mills theory

Speaker

Alexey Tanashkin

16:20–16:40

Semiclassics for QCD vacuum structure via T^2 compactification

Speaker

Yui Hayashi

16:40–17:00

Confinement in Schwinger model at finite temperature and θ

Speaker

Dr Hiroki Ohata

17:00–17:30

Topological structures with twisted boundary conditions and adjoint mode filtering

Speaker

Georg Bergner

17:30–18:00

Understanding the temperature dependence of fractional topological charge objects

Speaker

Jackson Mickley

18:00

Tuesday 20 August

14:00

Vacuum Structure and Confinement: A2a (Parallel A)

Session | Location: M2 | Convener: Tamas G. Kovacs

14:00–14:30 **Centre vortex geometry at finite temperature**

Speaker

Derek Leinweber

14:30–15:00

Reassessing the flux tube formation via center-vortex ensembles in the lattice

Speaker

Luis E. Oxman

15:00–15:30

Centre vortices and gluon propagators in thermal lattice QCD with dynamical fermions

Speaker

Christopher Roland Allton

15:30

16:00

Vacuum Structure and Confinement: A2b (Parallel A)

Session | Location: M2 | Convener: Aleksey Cherman

16:00–16:20 **Color-magnetic correlation in SU(3) lattice QCD**

Speaker

Hideo Suganuma

16:20–16:40

Possible scenario of dynamical chiral symmetry breaking in the instanton liquid

Speaker

Yamato Suda

16:40–17:00

Further numerical evidences for the gauge-independent separation between Confinement and Higgs phases in lattice SU(2) gauge theory with a scalar field in the fundamental representation

Speaker

Akihiro Shibata

17:00–17:30

Does the Z boson have a lighter cousin, and other aspects of gauge Higgs theories

Speaker

Prof. Jeff Greensite

17:30

Thursday 22 August

14:00

Vacuum Structure and Confinement: A4b (Parallel A)

Session | Location: M2 | Convener: Luis E. Oxman

14:00–14:30 **Symmetries of large N QCD**

Speaker

Aleksey Cherman

14:30–15:00 **The QCD confining string and the world-sheet axion**

Speaker

Andreas Athenodorou

15:00–15:30

Phase diagram of QCD matter with magnetic field: domain-wall Skyrmion chain in chiral soliton lattice

Speaker

Kentaro Nishimura

15:30

16:00

Vacuum Structure and Confinement: A4c (Parallel A)

Session | Location: M2 | Convener: Srimoyee Sen

16:00–16:30 **Towards low-dimensionalization of four dimensional QCD**

Speaker

Kei Tohme

16:30–16:50 **Studying Effective String Theory using deep generative models.**

Speaker

Elia Cellini

16:50–17:10 **An Almost Complete Yang-Mills Calculation**

Speaker

Seth Grable

17:10–17:30

Restoration of residual gauge symmetries due to topological defects and color confinement in the Lorenz, Maximal Abelian and axial-like gauges

Speaker

Naoki Fukushima

17:30