

## Session Program

18-24 Aug 2024



## XVIth 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 $\theta$

#### 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