

## Session Program

18-24 Aug 2024



## XVth Quark Confinement and the Hadron Spectrum

### *Strongly-Coupled Theories and Dark Matter*

Cairns, Queensland, Australia  
Cairns Convention Centre

# Monday 19 August

14:00

## Strongly-Coupled Theories and Dark Matter: G1a (Parallel G)

Session | Location: M6 | Convener: Domenec Espriu Climent

14:00–14:30 **Probe Strongly Coupled Dark Sector via Gravitational Wave**

**Speaker**  
ZHIWEI WANG

14:30–15:00 **Predictions for neutron star mergers from the gauge/gravity duality**

**Speaker**  
Matti Jarvinen

15:00–15:30

**Scattering Amplitudes, strong coupling scales and the gauge-gravity double copy in extra dimensions**

**Speaker**  
Dipan Sengupta

15:30

## Tuesday 20 August

16:00

### Strongly-Coupled Theories and Dark Matter: G2b (Parallel G)

Session | Location: M4 | Convener: Irene Bolognino

16:00–16:20

**Anisotropic pressure and novel first-order phase transition in SU(3) Yang-Mills theory on  $\mathbb{T}^2 \times \mathbb{R}^2$**

**Speaker**

Daisuke Fujii

16:20–16:40

**Accommodating scalar resonances in the HEFT**

**Speaker**

Domenec Espriu Climent

16:40–17:00

**Optical calibration of SABRE-South veto photomultiplier tubes**

**Speaker**

Kamiel Janssens

17:00–17:30

**Generalized Beth-Uhlenbeck approach to the thermodynamics of quark-hadron matter**

**Speaker**

David Blaschke

17:30

## Wednesday 21 August

14:00

### Strongly-Coupled Theories and Dark Matter: G3a (Parallel G)

Session | Location: M6 | Convener: Prof. Anthony Williams

14:00–14:30 **Quarks to Cosmos: Particles and Plasma in Cosmological Evolution**

**Speaker**

Johann Rafelski

14:30–15:00 **QCD data-driven holographic modeling**

**Speaker**

Koji Hashimoto

15:00–15:30 **Instantons processes at colliders**

**Speaker**

VALENTIN,V KHOZE

15:30–16:00

**Basis Light-Front Quantization: Advancing a First Principles Approach for Hadrons**

**Speaker**

Chandan Mondal

16:00

## Thursday 22 August

11:00

### Strongly-Coupled Theories and Dark Matter: G4a (Parallel G)

Session | Location: M3 | Convener: ZHIWEI WANG

11:00–11:20 **Properties of deuteron on the light front**

**Speaker**

Satvir Kaur

11:20–11:40

**Extending Global Fits of 4D Composite Higgs Models with Partially Composite Leptons**

**Speaker**

Kenn Shern Goh

11:40–12:00

**Neutron star structure in QMC with hyperons and high-density repulsion**

12:00–12:30

**Interacting p-form gauge theories: New developments**

**Speaker**

Sergei Kuzenko

12:30–13:00

**Dark photon in parity-violating electron scatterings**

**Speaker**

Xuangong Wang

13:00

14:00

### Strongly-Coupled Theories and Dark Matter: G4b (Parallel G)

Session | Location: M6 | Convener: VALENTIN, V KHOZE

14:00–14:30 **Polyakov loop, random matrix, and color confinement**

**Speaker**

Masanori Hanada

14:30–15:00

**Conformality, confinement and chiral symmetry breaking**

**Speaker**

Jan M. Pawłowski

15:00–15:30

**Dark pion DM: WIMP vs. SIMP**

**Speaker**

Prof. Pyungwon Ko

15:30