

**Session Program**

**21-25 Jul 2025**

**PASCOS 2025**

***Particle Phenomenology***

Durham

# Monday 21 July

16:00

## Particle Phenomenology

Session | Location: CLC202

16:00–16:20

### Implications of Sagittarius A-star on the gamma-ray searches of Bino dark matter with muon g-2

**Speaker**

Utpal Chattopadhyay

16:20–16:40

### Multi-component Dark Matter in a simplified E6SSM model

**Speaker**

Shaaban Khalil

16:40–17:00

### Revised phenomenology of new physics particles in GeV mass range

**Speaker**

Maksym Ovchynnikov

17:00–17:20

### Capture of dark matter in neutron stars through ALP mediator lepton interactions

**Speaker**

Jaime Hoefken Zink

17:20–17:40

### One-loop Correction to the Higgs Mass

**Speaker**

Kang-Sin Choi

17:40–18:00

### Using Machine Learning to find new dark matter phenomenology in a scotogenic model

**Speaker**

Fernando Abreu Rocha de Souza

18:00

## Tuesday 22 July

16:00

### Particle Phenomenology

Session | Location: CLC202

16:00–16:20

#### Resonant di-Higgs as a probe of the NMSSM

##### Speaker

Harri Waltari

16:20–16:40

#### Perturbative aspects of the electroweak phase transitions in the cxSM

##### Speaker

Andrii Dashko

16:40–17:00

#### Importance of Loop Effects in Probing Lepton Number Violation

##### Speaker

Ana Martín Galán

17:00–17:20

#### Sea dynamics in the octupole moments of baryons

##### Speaker

Preeti Bhall

17:20–17:40

#### Explaining 95 (or so) GeV Anomalies in the 2-Higgs Doublet Model Type-I

##### Speaker

Akshat Khanna

17:40–18:00

#### Low-scale Leptogenesis in the vSMEFT

##### Speaker

Sascha Weber

18:00–18:20

#### Star shearing season: transient signals from black hole formation

##### Speaker

Arturo de Giorgi

18:20

# Thursday 24 July

16:00

## Particle Phenomenology

Session | Location: CLC202

16:00–16:20

### Flavour and cosmological probes of Dirac models

#### Speaker

Antonio Herrero Brocal

16:20–16:40

### Constraining Non-Perturbative Parameters in Inclusive $\Lambda b$ Decays

#### Speaker

Blazenka Melic

16:40–17:00

### Axion dark matter: late-Universe consequences of early-Universe physics

#### Speaker

Ciaran O'Hare

17:00–17:20

### Thermodynamics and Phase Structure of the SMEFT

#### Speaker

Maria Cristina Fiore

17:20–17:40

### Scotogenic mechanism from an extended $SU(2)_1 \times SU(2)_2 \times U(1)_Y$ electroweak symmetry

#### Speaker

Javier Perez-Soler

17:40–18:00

### Cosmic strings and domain walls of the QCD quark condensate with and without a hidden axion

#### Speaker

Anja Stuhlfauth

18:00–18:20

### The Fate of Magnetic Monopoles in the Early Universe

#### Speaker

Maximilian Bachmaier

18:20

## Friday 25 July

14:00

### Particle Phenomenology

**Session** | **Location:** CLC202

14:00–14:20

#### **Sterile neutrino dark matter production in lepton asymmetric universe and its observational implications**

**Speaker**

Kentaro Kasai

14:20–14:40

#### **Saving protons (and SUSY) with flavor symmetry**

**Speaker**

Akifumi Chitose

14:40–15:00

#### **Symmetric Architecture Design for LHC Phenomenology**

**Speaker**

Vishal Ngairangbam

15:00–15:20

#### **TBC**

**Speaker**

Miguel Crispim Romao

15:20–15:40

#### **Rediscovering the Standard Model with AI**

**Speaker**

Pellegrino Piantadosi

15:40–16:00

#### **Exploring the Complex 3HDM with Machine Learning**

**Speaker**

Pedro Nogueira de Figueiredo

16:00