## **Session Program**

17-21 Jul 2023



# **SUSY 2023**

# SUSY: Phenomenology and Experiment

University of Southampton Highfield Campus, Building 100, Highfield Campus Website: https://www.southampton.ac.uk/student-life/campuses/highfield

# **Monday 17 July**

16:00

### **SUSY: Phenomenology and Experiment**

**Session** | **Location:** B100/1001

16:00-16:20 Searches for strongly-interacting supersymmetric particles

Speaker

Julien Maurer

16:20-16:40 Dark Sector Showers in the Lund Jet Plane

Speaker

Christiane Scherb

16:40-17:00

Redefining Performance: New Techniques for ATLAS Jet & MET Calibration

Speaker

Michael Holzbock

17:00-17:20 Improving ATLAS Hadronic Object Performance with ML/AI Algorithms

Speaker

Tobias Fitschen

17:20 17:40

#### **SUSY: Phenomenology and Experiment**

**Session** | **Location**: B100/1001

17:40-18:00 Searches for Supersymmetry with heavy object tagging

Speaker

Giovanna Salvi

18:00-18:20

NNLL-fast 2.0: Updated Predictions for Squark and Gluino Production at the LHC with  $\gamma = 13.6$  TeV

Speaker

Dr Christoph Borschensky

18:20-18:40 Combinations of SUSY searches

Speaker

Alexander Khanov

18:40-19:00

## **Tuesday 18 July**

16:00

#### **SUSY: Phenomenology and Experiment**

**Session** | **Location:** B100/1001

16:00-16:20

Searches for electroweak production of SUSY particles with the CMS experiment

Pablo Matorras-Cuevas

16:20-16:40

Applying Machine Learning Techniques to Searches for Lepton-Partner Pair-Production at Intermediate Mass Gap at the Large Hadron Collider

**Speaker** 

Jason Kumar

16:40-17:00

Muon and electron (g - 2) anomalies with non-holomorphic interactions in MSSM

**Speaker** 

**Utpal Chattopadhyay** 

17:00-17:20 LHC constraints on SUSY with a light gravitino

Speaker

Dr Tomas Gonzalo

17:20

17:40

#### SUSY: Phenomenology and Experiment

**Session** | **Location**: B100/1001

17:40-18:00

Minimal Nambu-Goldstone-Higgs model in supersymmetric SU(5) revisited

Shihwen Hor

18:00-18:20

Constraining the electroweakino sector of the MSSM through the combination of orthogonal LHC searches

Speaker

Timothee PASCAL

18:20-18:40 FlexibleSUSY Developments

Speaker

Peter Athron

18:40-19:00 Search for R-parity violating supersymmetry

Speaker

Evelyn Jean Thomson

## Wednesday 19 July

16:00

#### SUSY: Phenomenology and Experiment

**Session** | **Location:** B100/1001

16:00-16:20

Search for new physics with long-lived and unconventional signatures in CMS

Christina Wenlu Wang

16:20-16:40

Searches for BSM physics using challenging and long-lived signatures with the ATLAS detector

Speaker

Sebastian Olivares

16:40-17:00 Precise Estimate of Chargino Decay

Speaker

Yuhei NAKAYAMA

17:00-17:20

A new picture for scalar boson superpartners, with reduced cross-sections and modified experimental signatures

Speaker

Prof. Roland Allen

17:20 17:40

### SUSY: Phenomenology and Experiment

**Session** | **Location**: B100/1001

17:40-18:00 Searches for Dark Matter with the ATLAS Experiment at the LHC

Speaker

Danijela Bogavac

18:00-18:20 Dark Matter Direct Detection and Collider Search Complementarity

**Speakers** 

Dr Ipsita Saha, Manimala Chakraborti, Sven Heinemeyer

18:20-18:40 Revisiting the slepton coannihilation model with light higgsino

Speaker

Atsuya Niki

18:40-19:00

Automated Choice for the Best Renormalization Scheme in the Chargino/ **Neutralino Sector** 

**Speakers** 

Federico Ignacio Von Der Pahlen, Sven Heinemeyer

# Friday 21 July

14:00

	SUSY: Phenomenology and Experiment Session   Location: B100/1001	
14:00-14:20  Speaker Toshi Sumida	Searches for GMSB with higgsino next-to-lightest SUSY particles	
14:20-14:40  Speaker  Samuel Louis Be	Searches for compressed SUSY scenarios with the CMS experiment	
14:40-15:00 Speaker KAIRUI ZHANG	Prospects of Heavy Higgs scalar in the natural SUSY at LHC upgrades	
15:00-15:20  Speaker Shuhui Huang	Searches for weakly-interacting SUSY particles	
15:20-15:40	•	
15:40-16:00	•	