### **Session Program**

19-21 May 2025



# Phenomenology 2025 Symposium

## Cosmology

University of Pittsburgh

## Monday 19 May

Cosmology Session   Loca	y: CMB, Inflation, Dark Energy ation: David Lawrence Hall 107, University of Pittsburgh
16:30-16:45	Inflation from Purgatory
<b>Speaker</b> Scott Watson	
16:45-17:00	Dynamical Dark Energy, Dual Spacetime, and DESI
<b>Speaker</b> Sunhaeng Hur	
17:00-17:15	
Breaking Fr Portal	ee from the Swampland of Impossible Universes through the DESI
<b>Speaker</b> Luis Anchordoo	ui
17:15-17:30	Small-scale cosmology with DESI Lyman-alpha forest
<b>Speaker</b> Mr Naim Karaca	ayli
17:30-17:45	Large-Scale Correlated Magnetic Fields from Primordial Seeds
<b>Speaker</b> Mr Sayan Manc	lal
17:45-18:00	
Background	h and the Hubble Constant: Correlations in the Cosmic Microwave
<b>Speaker</b> Praniti Singh	
18:00-18:15	Alleviating the Hubble Tension Through Black Hole Superradiance
<b>Speaker</b> Iain Bisset	
18:15-18:30	The One-loop Scalar Chemical Potential at the Cosmological Collid
Speaker	

## Tuesday 20 May

14:00-14:15	Stasis from a single Annihilating particle species
Speaker	
Jonah Barber No	t Supplied
14:15-14:30	PBH formation via junction conditions
Speaker	
Mudit Rai	
14:30-14:45	
Growth Thro Epoch	ough Stasis: The Evolution of Matter Perturbations During a Stasis
Speaker	
Prof. Brooks Tho	mas
14:45-15:00	
Dark matter annihilation	, gravitational waves, and primordial black holes from domain-wall
Speaker	
Jonah Hyman	
15:00-15:15	
Observing L	ate Cosmological Phase Transitions with Scalar Perturbations
Speaker	
Daven Wei Ren	Но
15:15-15:30	Primordial Black Holes from First-Order Phase Transition in the xSM
Speaker	
AJAY Kaladharar	
15:30-15:45	New Sensitivity to Dark Photons from the 21-cm Power Spectrum
Speaker	
Ethan Baker	
15:45-16:00	Shining a Light on (Non-)Minimal Dark Sectors With 21-cm Cosmolo
Speaker	
Federico Cima	
Cosmology Session   Loca	: DM, BBN, Leptogenesis tion: David Lawrence Hall 104, University of Pittsburgh
16:30-16:45	Cosmology and New Physics with Big-Bang Nucleosynthesis
Speaker	

#### 16:45-17:00 BBN Constraint on Heavy Neutrino Production and Decay

#### Speaker

Yu-Ming Chen

#### 17:00-17:15

Cosmological constraints on majoron dark matter in vanilla leptogenesis

Speaker

Swapnil Dutta

#### 17:15-17:30

Nambu-Goldstone boson phenomenology in Domain-Wall Standard Model

**Speaker** PUJA DAS

#### 17:30-17:45 Free streaming of warm wave dark matter

#### Speaker

Moira venegas villa

#### 17:45-18:00

#### Possible imprints of non-thermal leptogenesis on the CMB observables

#### Speaker

Dibyendu Nanda

#### 18:00-18:15 CMB constraints on non-minimally coupled ultralight dark matter

#### Speaker

Dr Subhajit Ghosh

#### 18:15-18:30

Analytic formulation of Leptogenesis with neutrino oscillation data employing the general parametrization for neutrino mass matrix

#### Speaker

Digesh Raut

18:30