

## Session Program

18-20 Dec 2023



## PHOENIX-2023

### ***Parallel: DM + neutrino***

Indian Institute of Technology Hyderabad  
Kandi, Sangareddy District - 502284, Telangana, INDIA

## Tuesday 19 December

14:30

### Parallel: DM + neutrino: Day 2 Afternoon Session 1

**Session** | **Location:** IIT Hyderabad, Convention Center CC2 | **Convener:** Arindam Chatterjee

14:30-14:50

#### Coannihilation and scotogenic fermionic dark matter

##### Speaker

Anirban Karan

14:50-15:10

#### Quantum Spread Complexity in Neutrino Oscillations

##### Speaker

Dr Khushboo Dixit

15:10-15:30

#### Multi-Component Dark Matter: Identifying at Collider

##### Speaker

Dr Purusottam Ghosh

15:30-15:45

#### Constraining New Physics with Possible DM Signatures from the Study of Low Energy Processes

##### Speaker

Ms Lipika Kolay

15:45-16:00

#### Light Dirac neutrino portal dark matter with gauged B-L symmetry

##### Speaker

Nayan Das

16:00

16:30

### Parallel: DM + neutrino: Day 2 Afternoon Session 2

**Session** | **Location:** IIT Hyderabad, Convention Center CC2 | **Convener:** S Mitra

16:30-16:45

#### Phenomenology of an asymmetric Scotogenic model

##### Speaker

Noel Jobu

16:45-17:00

#### Exploring Sub-GeV Dark Matter Boosted by Diffuse Supernova Neutrino Background: Insights from XENONnT and LUX-ZEPLIN Experiments

##### Speaker

Mr Anirban Majumdar

17:00-17:15

#### Majorons Revisited: light dark matter as FIMP

##### Speaker

Soumen Kumar Manna

17:15-17:30

#### Phenomenology of Dirac Scotogenic Model

##### Speaker

Mr Sushant Yadav

17:30-17:45

#### The dynamics and detection possibility of a pseudo-FIMP dark matter

**Speaker**

Mr Dipankar Pradhan

17:45-18:00

**Classically Conformal U(1) (B-L) model: Lessons from the Collider and Cosmology**

**Speaker**

Saurabh Niyogi

18:00

## Wednesday 20 December

14:30

### Parallel: DM + neutrino: Day 3 Afternoon Session 1

**Session** | **Location:** IIT Hyderabad, Convention Center CC2 | **Convener:** Prof. Sukanta Dutta

14:30-14:45

#### Self-interacting dark matter and the GRB221009A event

##### Speaker

Vicky Singh Thounaojam

14:45-15:00

#### Singlet-doublet fermion dark matter with Dirac neutrino mass, $(g - 2)\mu$ and $\Delta N_{\text{eff}}$

##### Speaker

Sujit Kumar Sahoo

15:00-15:15

#### Constraining an extra dimensional $U(1)_{L\mu} - L_{\tau}$ model through electron-neutrino elastic scattering

##### Speaker

Mr Dibyendu Chakraborty

15:15-15:30

#### Realizing Electroweak Baryogenesis in connection to dark sector

##### Speaker

Dipendu Bhandari

15:30-15:45

#### Thermal correction to Dark matter annihilation processes at NLO

##### Speaker

Mr Prabhat Butola

15:45-16:00

#### Radiative Corrections to the Direct Detection of the Higgsino-like Neutralino Dark Matter: Spin-Independent Interactions

##### Speaker

Syed Adil Pasha

16:00

16:30

### Parallel: DM + neutrino: Day 3 Afternoon Session 2

**Session** | **Location:** IIT Hyderabad, Convention Center CC2 | **Convener:** Prof. Mamta Dahiya

16:30-16:45

#### Neutrino Mass Sum Rules from Modular $\mathcal{A}_4$ Symmetry

##### Speaker

Mr Ranjeet Kumar

16:45-17:00

#### Viability of Boosted Light Dark Matter in a Two-component Scenario

##### Speaker

Arindam Basu

17:00-17:15

#### Probing Dark Matter-Electron Interactions in the Cosmic Microwave Background Radiation

**Speaker**

Rahul Dhyani

17:15-17:30

**Exploring Axions through the Photon Ring of a Spherically Symmetric Black Hole**

**Speaker**

Pratick Sarkar

17:30