

## **Session Program**

**6-9 Dec 2023**



# **10th International Conference on Gravitation and Cosmology: New Horizons and Singularities in Gravity (ICGC 2023)**

## ***Workshop on Astrophysical Relativity***

IIT Guwahati

Wednesday 6 December

14:15

Workshop on Astrophysical Relativity

Session | Location: IIT Guwahati | Conveners: Indranil Chattopadhyay, Arunava Mukherjee

14:15-14:45

AstroSat - Indian Space-based Multi-wavelength Observatory (Invited Talk)

Speaker

Anuj Nandi

14:45-15:00

Accreting Millisecond X-ray Pulsars: Probing Strong Field Gravity

Speaker

aru beri

15:00-15:15

Misaligned circum-single disks embedded in an AGN disk

Speaker

Bhupendra Mishra

15:15-15:30

Mass loss from relativistic magnetized accretion disc around rotating black holes

Speaker

Camelia Jana

15:30-15:45

Investigating the existence of gravitomagnetic monopole in M87\*

Speaker

Dr Chandrachur Chakraborty

15:45-16:00

Equation of states in the curved spacetime of compact stars and their effects on tidal deformability

Speaker

Golam Mortuza Hossain

16:00-16:15

Microlensing Black Hole Shadows

Speaker

HIMANSHU VERMA

16:15-16:30

High-soft to low-hard state transition in black hole X-ray binaries with GRMHD simulations

Speaker

Indu Kalpa Dihingia

16:30

## Thursday 7 December

14:30

### Workshop on Astrophysical Relativity

**Session** | **Location:** IIT Guwahati | **Conveners:** Arunava Mukherjee, Indranil Chattopadhyay

14:30-14:45

**Testing the equivalence principle with Blackhole image observations**

**Speaker**

JOSEPH P J

14:45-15:00

**The light bending phenomenon for a pulsar-black hole binary**

**Speaker**

Jyotijwal Debnath

15:00-15:15

**Universe at extreme energies through GZK neutrinos and photons**

**Speaker**

Mr Prantik Sarmah

15:15-15:30

**DEEP-TOV FOR CHARACTERIZING NEUTRON STARS**

**Speaker**

praveer tiwari

15:30-15:45

**Superradiant driven evolution of Active Galactic Nuclei**

**Speaker**

Priyanka Sarmah

15:45-16:00

**Black hole mimickers in light of the recently observed shadows of Sagittarius A\* and M87\***

**Speaker**

Dr Rajibul Shaikh

16:00

## Friday 8 December

14:15

### Workshop on Astrophysical Relativity

**Session** | **Location:** IIT Guwahati | **Conveners:** Indranil Chattopadhyay, Arunava Mukherjee

14:15–14:45

#### Astrophysical Implications of Gravitational Wave Observations (Invited Talk)

##### Speaker

Sourav Chatterjee

14:45–15:00

#### Probing the Accretion/Ejection Geometry of X-ray Binaries Using Spectro-Polarimetry Study

##### Speaker

Samir Mandal

15:00–15:15

#### Oscillating shocks in the transonic, viscous, variable $\Gamma$ accretion flows around black holes

##### Speaker

Sanjit Debnath

15:15–15:30

#### Imprints of spin on the solution and emission spectrum of accretion flows around black holes

##### Speaker

Shilpa Sarkar

15:30–15:45

#### Shadow of regular black hole in scalar-tensor-vector gravity theory

##### Speaker

subhadip sau

15:45–16:00

#### Spectral energy distributions for transonic accretion flow in non-Kerr spacetime

##### Speaker

Mr Subhankar Patra

16:00–16:15

#### White dwarfs in Gaia survey to constrain the fine-structure constant

##### Speaker

Dr Surajit Kalita

16:30

## Saturday 9 December

14:30

### Workshop on Astrophysical Relativity

**Session** | **Location:** IIT Guwahati | **Conveners:** Indranil Chattopadhyay, Arunava Mukherjee

14:30-15:00

#### Seeing Hot and Energetic Universe through X-ray Eyes (Invited Talk)

##### Speaker

Vikram Rana

15:00-15:15

#### Inclination distributions in tidal disruption events by spinning supermassive black holes

##### Speaker

Tamanjyot Singh

15:15-15:30

#### Massive, magnetized compact stars: Theory and Simulation

##### Speaker

Zenia Zuraig

15:30-15:45

#### Gravitational analog of Gertsenshtein-Zeldovich effect.

##### Speaker

Susmita Jana

15:45-16:00

#### Astrophysical significance of tidal interaction between white dwarfs and intermediate-mass black holes

##### Speaker

Pritam Banerjee

16:00-16:15

#### Spectral and timing properties of GX 17+2 using AstroSat and NICER simultaneous view

##### Speaker

Dr Biplob Sarkar

16:15-16:30

#### Impact of the net vertical magnetic field on thick accreting torus around black holes

##### Speaker

SAMIK MITRA

16:30-16:45

#### Investigation of black holes in analogous and astrophysical regimes

##### Speaker

Mayank Pathak

16:45-17:00

#### A deeper insight into the accretion scenario of BH-ULXs with XMM-Newton

##### Speaker

Mr Seshadri Majumder

17:00