

Session Program

6-9 Dec 2023



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

Workshop on Gravitational Waves

IIT Guwahati

Wednesday 6 December

14:15

Workshop on Gravitational Waves

Session | Location: IIT Guwahati | Conveners: Sukanta Bose, Parameswaran Ajith

14:15–14:45
Probing fundamental physics with gravitational wave observations (Invited Talk)
Speaker
Anuradha Gupta

14:45–15:00
Quasinormal Modes of Slowly Rotating Black Holes in Dynamical Chern-Simons Gravity up to Second Order in Spin
Speaker
Alapati Tharaka Rama Chowdary

15:00–15:15 **Noise analysis of the Indian Pulsar Timing Array data release I**
Speaker
Aman Srivastava

15:15–15:30 **Novel probes of dark matter with continuous gravitational waves**
Speaker
Andrew Miller

15:30–15:45 **Multi-band Extension of the Wideband Timing Technique**
Speaker
Avinash Kumar Paladi

15:45–16:00
Probing globular clusters and other astrophysical environments with gravitational waves emitted by accelerated compact binary mergers
Speaker
AVINASH TIWARI

16:00–16:15
A Bayesian investigation of the neutron star equation-of-state vs. gravity degeneracy
Speaker
Bhaskar Biswas

16:15–16:30
Analysing the sensitivity of nuclear equation of state parameters with stellar observables using f-modes oscillations in Neutron Stars
Speaker
Mr Debanjan Guha Roy

16:30

Thursday 7 December

14:30

Workshop on Gravitational Waves

Session | **Location:** IIT Guwahati | **Conveners:** Sukanta Bose, Parameswaran Ajith

14:30–14:45

“ENIGMA” - An aligned-spin eccentric IMR waveform model for compact binary mergers

Speaker

Kaushik Paul

14:45–15:00

Inferring the quantum black hole signatures from gravitational-wave observations

Speaker

Krishnendu N V

15:00–15:15

Testing general relativity via direct measurement of black hole kicks

Speaker

Parthapratim Mahapatra

15:15–15:30

Testing of general relativity at the fourth post-Newtonian order

Speaker

Dr Poulami Dutta Roy

15:30–15:45

Precision Gravity: Gravitational waves using Feynman diagrams

Speaker

Raj Patil

15:45–16:00

Addressing issues in defining the Love numbers for black holes

Speaker

Rajendra Prasad Bhatt

16:00

Friday 8 December

14:15

Workshop on Gravitational Waves

Session | **Location:** IIT Guwahati | **Conveners:** Sukanta Bose, Parameswaran Ajith

14:15–14:45

New black hole mergers in LVK data from a gravitational wave search including higher-order harmonics (Invited Talk)

Speaker

Tejaswi Venumadhav

14:45–15:00

Exploring the Efficacy of Curriculum Learning in Training Neural Networks for Gravitational Wave Detection and Parameter Estimation in Near-Realistic Conditions

Speaker

Rakesh Kabir

15:00–15:15

Black holes immersed in environment

Speaker

Sayak Datta

15:15–15:30

Unmasking noise transients mimicking intermediate-mass black hole binaries

Speaker

Sayantan Ghosh

15:30–15:45

Effect of spins on the orbital dynamics of a binary system

Speaker

Soham Bhattacharyya

15:45–16:00

Gear-up for the Action Replay: Leveraging Lensing for Enhanced Gravitational-Wave Early-Warning

Speaker

Sourabh Magare

16:00–16:15

Probing the nature of dark matter using gravitational-wave strong lensing

Speaker

Souvik jana

16:30

Saturday 9 December

14:30

Workshop on Gravitational Waves

Session | Location: IIT Guwahati | Conveners: Parameswaran Ajith, Sukanta Bose

14:30–15:00 TBD (Invited Talk)

Speaker
Nancy Aggarwal

15:00–15:15 Can LIGO Detect Non-Annihilating Dark Matter?

Speaker
Sulagna Bhattacharya

15:15–15:30
Tidal heating as a direct probe of Strange matter inside Neutron stars

Speaker
Suprovo Ghosh

15:30–15:45 A novel test of strong field gravity using binary black hole ringdowns

Speaker
Swetha Bhagwat

15:45–16:00
Bayesian framework to infer the Hubble constant from cross-correlation of individual gravitational wave events with galaxies

Speaker
Mr Tathagata Ghosh

16:00–16:15
Tidal deformation of dynamical horizons in binary black hole mergers and its imprint in their gravitational radiation

Speaker
Vaishak Prasad

17:00