

## WORKSHOP 3

### Classical, Quantum Gravity and Early universe December 10, 2019

#### Session Chairs :

Dawood Kothawala ([dawood@iitm.ac.in](mailto:dawood@iitm.ac.in) )

Rajeev Kumar Jain ([rkjain@iisc.ac.in](mailto:rkjain@iisc.ac.in))

<b>Time</b>	<b>Name</b>	<b>Title</b>
16:00 – 16:30	Sandipan Sengupta	A dynamical formulation of vacuum gravity based on an extra dimension
16:30 – 16:45	Abhirup Ghosh	A "No-hair" test for Binary Black Holes with Observations of Gravitational Waves
16:45 – 17:00	Srijit Bhattacharjee	Strong cosmic censorship conjecture for AdS black holes
17:00 – 17:15	Karthik Rajeev	Exploring the Rindler vacuum and the Euclidean Plane
17:15 – 17:30	Indranil Chakraborty	Displacement and velocity memory effects in exact plane gravitational wave spacetimes

**December 11, 2019**

**Session Chairs :**

Dawood Kothawala ([dawood@iitm.ac.in](mailto:dawood@iitm.ac.in) )

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<b>Time</b>	<b>Name</b>	<b>Title</b>
14:00 – 14:30	S. Shankaranarayanan	Near-horizon black-hole symmetries
14:30 – 14:45	Mandar Patil	Gravitational Lensing by Binary Black Holes
14:45 – 15:00	Bibhas Ranjan Majhi	Unruh effect and Fluctuation-Dissipation relation
15:00 – 15:15	Sanjeev Kalita	On new gravitational physics near the Galactic Center black hole
15:15 – 15:30	Soumen Mondal	The relativistic equation of states in accretion and wind flows

<b>Time</b>	<b>Name</b>	<b>Title</b>
16:00 – 16:15	Nilanjandev Bhaumik	Primordial black holes dark matter from inflection point models of inflation and the effects of reheating
16:15 – 16:30	Abhishek Naskar	Non-Gaussian primordial gravitational waves from inflation
16:30 – 16:45	Swagat Sourav Mishra	Primordial Black Holes from a tiny bump in the Inflaton potential
16:45 – 17:00	Jishnu Sai P.	Consistency relations for cosmic magnetic fields using delta N formalism
17:00-17:15	Satish Kumar Saravanan	Influence of spin in curved geometries.
17:15-17:30	Sarbari Guha	Generalized second law of thermodynamics in an expanding FRW universe

**December 12, 2019**

**Session Chairs :**

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<b>Time</b>	<b>Name</b>	<b>Title</b>
16:00 – 16:30	C. S. Unnikrishnan	Gravity, Quantum State Reduction, and The Quantum Measurement Problem
16:30 – 16:45	Abhishek Mathur	Observer independent SJ formalism for QFT in a hyperbolic spacetime
16:45 – 17:00	Apratim Ganguly	Virial relation in a wide class of extended theories of gravity
17:00-17:15	Suman Ghosh	Particle production by scalar and spin 1/2 fields in a cosmological braneworld background
17:15-17:30	Poulami Dutta Roy	Scalar quasi-normal modes in a symmetric, finite triangular barrier