

# Numerical and Analytical Relativity (NAR), IIT-A : March 07-09, 2025

## SCHEDULE

**Breakfast:** 08:15 – 09:30 AM (Everyday) **Venue:** Visitor Hostel - I (VH I)

**Registration:** 09:30 – 10:00 AM on 07/03/2025; **Venue:** Senate Hall

**Day 1: Friday, 07/03/2025**

TIME (IST)		
09:30 – 10:00	<b>Registration</b>	
10:00 – 10:10	<b>Welcome Remarks</b>	
<b>Session dedicated to International Year of Quantum Science &amp; Technology</b>		<b>Venue Senate Hall</b>
<b>Chair: Amitabh Virmani</b>	<b>SPEAKER</b>	<b>TITLE OF THE TALK</b>
10:10 – 11:00 (45+5) min	Dileep Jatkar	What is Black Hole Information Paradox?
11:00 – 11:50 (45+5) min	Swastik Bhattacharya	Symmetries and the prospects of a low energy quantum theory on Black Hole horizon
11:50 – 12:10	<b>TEA</b>	
12:10 – 13:00 (45+5) min	Nilay Kundu	Black hole thermodynamics and entropy bounds in higher derivative theories of gravity
13:00 – 14:30	<b>LUNCH: Visitor Hostel - I</b>	
<b>Venue: Admin Auditorium</b>		
	<b>Chair: Pavan Chakraborty</b>	
14:30 – 14:55 (22+3) min	Chiranjeeb Singha	Scalar tidal response of a rotating BTZ black hole
14:55 – 15:20 (22+3) min	Shailesh Kumar	Exploring non-GR deviations with extreme mass-ratio inspirals
15:20 – 15:45 (22+3) min	Syed Naqvi	Chaos and Einstein-Rosen gravitational waves
15:45 – 16:00 (12+3)	Vivek Kumar Srivastava	Non-perturbative corrections in Black Hole Thermodynamics with Barrow Entropy
16:00 – 16:20	<b>TEA</b>	
	<b>Chair: Srijit Bhattacharjee</b>	
16:20 – 16:35 (12+3) min	Divyesh Vitthani	
16:35 – 17:25 (45+5) min	Enrico Barausse (Hybrid)	Gravitational wave generation beyond General Relativity
20:00 – 21:30	<b>SPECIAL DINNER: Visitor Hostel - I</b>	

**Day 2: Saturday, 08/03/2025**

**Venue: Admin Auditorium**

<b>Time (in IST)</b>	<b>SPEAKER</b>	<b>TITLE OF THE TALK</b>
	<b>Chair:</b> Swastik Bhattacharya	
10:10 – 11:00 (45+5) min	Amitabh Virmani	Index for Black Holes in N=2 Supergravity
11:00 – 11:50 (45+5) min	Sumanta Chakraborty	Probing quantum features at the horizon through gravitational waves
11:50 – 12:10	<b>TEA</b>	
	<b>Chair:</b> Nilay Kundu	
12:10 – 13:00 (45+5) min	Sudipta Sarkar (Hybrid)	Beyond Einstein: An assessment of higher curvature gravity
13:00 – 14:30	<b>LUNCH: Visitor Hostel - I</b>	
	<b>Chair:</b> Sumanta Chakraborty	
14:30 – 15:20 (45+5) min	L. Sriramkumar	Inflationary magnetogenesis: Effects due to non-trivial dynamics
15:20 – 16:10 (45+5) min	Jahanur Hoque (Hybrid)	On the quadrupole formula in de Sitter
16:10 – 16:30	<b>COFFEE</b>	
	<b>Chair:</b> Upendra Kumar	
16:30 – 16:55 (22+3) min	Indranil Chakraborty	Gravitational wave memory effect: some theoretical and phenomenological aspects
16:55 – 17:10 (12+3) min	Abhik Bhattacharjee	Forecasts on Light Massive Relics from CMB-S4
17:10 – 17:25 (12+3) min	Divyesh Solanki	Perturbative Soft Graviton Theorems in de Sitter Spacetime
20:00 – 21:30	<b>DINNER: Visitor Hostel - I</b>	

**Day 3: Sunday, 09/03/2025**

**Venue: Admin Auditorium**

<b>Time (in IST)</b>	<b>SPEAKER</b>	<b>TITLE OF THE TALK</b>
	<b>Chair:</b> Akhilesh Tiwari	
10:10 – 11:00 (45+5) min	Anshuman Maharana	TBA
11:00 – 11:50 (45+5) min	Anjan A. Sen	TBA
11:50 - 12:15	<b>Valedictory Session</b>	
13:00 – 14:30	<b>LUNCH Visitor Hostel- I</b>	