ICTS Colloquium

Title : Watching Black Holes Work: Classical Energy Extraction and Jet Production

Speaker : Prashant Kocherlakota (Black Hole Initiative, Harvard University, USA)

Date : Friday, 27 June 2025

Time : 3:00 PM (IST)

Abstract : Black holes are often viewed as gravitational sinks, yet some of the most energetic phenomena in the universe—relativistic jets—emerge from their edges. These narrow, magnetized plasma outflows are believed to tap into the black hole's spin energy via a classical Penrose-like process. Upcoming upgrades to the Event Horizon Telescope (EHT)—including sharper resolution, multi-wavelength imaging, and long-duration monitoring—will offer an unprecedented opportunity to test this idea. In this talk, I will discuss how theory, simulations, and next-generation observations are converging to test black hole energy extraction. I'll end with a look ahead at the photon ring—a novel strong lensing feature that will also soon become accessible, and which promises fresh insights into black hole spacetimes. With black hole cinema on the horizon, we will soon enter a richer era of experimental gravity.

Venue : Emmy Noether Seminar Room
Zoom Link: https://icts-res-in.zoom.us/j/92047341785?pwd=lixmGYXVK2hcuFOSZIKuM9d3gH76yR.1
Meeting ID: 920 4734 1785
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