

## ICTS Astrophysics & Relativity Seminar

**Title** : Mitigating Motion at Low Frequencies: Vibration Isolation and OmniSens for the Einstein Telescope

**Speaker** : Abhay Karia (National Institute for Subatomic Physics, Netherlands)

**Date** : Monday, 09 February 2026

**Time** : 2:00 PM (IST)

**Abstract** : The Einstein Telescope (ET) aims to extend ground based gravitational wave observations deep into the low frequency regime, where seismic and suspension thermal noise become a dominant limitation. The residual motion of the suspended optics significantly impact the detector sensitivity we target to achieve. This talk outlines the resulting vibration isolation requirements for ET-LF. I would be presenting ongoing work focusing on sensing reference mass motion using HoQI sensors and our OmniSens experiment which could inform demonstrations for the design of ET-like isolation systems.

**Venue** : AKR Meeting Room

Zoom Link: <https://icts-res-in.zoom.us/j/99554616289?pwd=qaChGJn83TLRsVZuevKQ1vtzgPHTWb.1>

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