



## **ICTS Astrophysics and Relativity Seminar**

**Title** : The importance of using amplitudes and phases in ringdown to test GR

**Speaker** : Swetha Bhagwat (University of Birmingham)

**Date** : Wednesday, 14 December 2022

**Time** : 11:00 am (IST)

**Abstract** : When two black holes merge to form a remnant black hole, they emit a signal called ringdown. Ringdown comprises the excitation of characteristic modes of remnant black hole a.k.a, Quasinormal modes (QNM) and serves as a powerful probe to test our understanding of strong field gravity around black holes. These tests have traditionally relied on extracting QNM frequencies and damping times. While this is powerful, the excitation amplitudes of QNM also carry vital information about strong-field gravity dynamics. I will specifically talk about tests that we proposed recently on how we could use amplitude and phase information to test for strong field gravity.

**Venue** : **Hybrid Mode**

**Offline:** Feynman Lecture Hall

**Online:** Please click on the below link to join the meeting

<https://icts-res-in.zoom.us/j/82161802093?pwd=eUJCbDRRTGNFMVY0UIZyeTE2RERuQT09>

Meeting ID: 821 6180 2093

Passcode: 141422