

ICTS Astrophysics & Relativity Seminar (HYBRID)

Title : **Galactic bubbles and winds**

Speaker : Kartick Sarkar (Tel Aviv University, Israel)

Date : Thursday, 23 February 2023

Time : 04:00 pm (IST)

Abstract : The energy produced by supernovae or supermassive black holes plays a major role in dictating the evolution of galaxies. The produced energy is directly responsible for heating the star-forming gas in the interstellar medium or stopping the gas to reach the galaxy, thus suppressing overall star formation. The interaction between the produced energy and the interstellar medium is often mediated by bubbles and winds, such as the gamma-ray bubbles (known as the Fermi Bubbles) in our Galaxy. Understanding such processes require multi-wavelength observations and a detailed theoretical understanding of these bubbles and winds. In the talk, I will present some of my recent works to understand how bubbles and winds produced by supernovae and supermassive black holes interact with the interstellar medium and their observational signatures. I will also present my works on the state-of-the-art numerical simulations that have been successful to discover so far unknown properties in these systems and are bringing us much closer to bridging the gap between theory and observations in the interstellar medium.

Venue : **Offline:** Feynman Lecture Hall

Online: Please click on the below link to join the seminar

<https://icts-res-in.zoom.us/j/82747825562?pwd=VGR0RnBiSjdxVVRldXQvSXVvRWRlQT09>

Meeting ID: 827 4782 5562

Passcode: 232323