



ICTS Astrophysics & Relativity Seminar (HYBRID)

Title : Fast Radio Burst Localisation and Followup with CHIME/FRB and uGMRT

Speaker : Arvind Balasubramanian (TIFR)

Date : Friday, 03rd November 2023

Time : 02:00 PM (IST)

Abstract : Fast Radio Bursts (FRBs) are very energetic extragalactic transient astronomical events. Some FRBs repeat, while others are apparently one-off. To tackle the problem of uncovering the progenitors of FRBs, we need localise them to their parent galaxies, and study the local environments of these events. To aid in better localisation of FRBs, the CHIME collaboration is building smaller CHIME-like "outrigger" telescopes in three locations spread across North America. I am contributing to the commissioning and calibration diagnostics of these newly constructed outrigger telescopes. I will discuss the calibration methods developed for regularly spaced arrays, the challenges faced in consistent calibration, and the results. On the follow-up side of things, I am undertaking deep uGMRT observations to study the persistent radio emission from two already localised repeating FRBs to understand their nature. I will present preliminary results from our findings in this talk. Finally, to explore links between FRBs and other energetic transients, I will introduce a broker that I am putting together to listen in on transient and gravitational wave alert circulars and check their coincidence with CHIME FRBs.

Venue : Offline: Chern Lecture Hall

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

<https://zoom.us/j/98002467940?pwd=bWhLa1d4Nm5sMFZadTUrYlNRWlhqQT09>