



ICTS Astrophysics & Relativity Seminar

- Title** : Exploring the Origin of Solar Eruptive Events Using Solar Atmospheric Magnetic Field Simulations
- Speaker** : Prantika Bhowmik (Indian Institute of Science, Bengaluru)
- Date** : Thursday, 06 February 2025
- Time** : 3:30 PM (IST)
- Abstract** : Coronal mass ejections (CMEs) are the most energetic events originating from the Sun's atmosphere, also known as the Corona. They can cause significant and sudden disruption to the magnetic and particulate environment of the heliosphere. Thus, an early warning that a CME has left the Sun is crucial in the current era of space-based technologies. Our magnetofrictional simulations that capture the global corona's continuous and dynamical magnetic field evolution over many months demonstrate that the non-potential evolution of the corona leads to the accumulation of magnetic free energy and helicity, which is periodically shed in eruptive events. I will discuss how our study suggests that magnetofrictional models can, in principle, provide early indication - pre-onset of CMEs.
- Venue** : Feynman Lecture Hall
Zoom Link: <https://icts-res-in.zoom.us/j/98996350843?pwd=ufC7KYxIqQmR.JmEESi4kCNLvj4TVCC.1>
Meeting ID: 989 9635 0843
Passcode: 060708