ICTS String Seminar

Title : Out of time ordered transport

Speaker : Ruchira Mishra (The University of Chicago, USA)

Date : Thursday, 11 June 2026

Time : 11:30 AM (IST)

Abstract : I will discuss our recent work where we construct an effective field theory (EFT) to capture the universal late time behavior of out-of-time order correlators (OTOCs) in generic quantum many-body systems with conservation laws. The EFT hinges on a generalization of the strong-to-weak spontaneous symmetry breaking pattern adapted to out-of-time-order observables and reduces to conventional fluctuating hydrodynamics when time-ordered observables are probed. We use the EFT to explain different power-law behavior observed in OTOCs at late times and show that many OTOCs are entirely fixed by conventional transport data. Nevertheless, we show that a specific combination of OTOCs is sensitive to novel transport parameters, not visible in regular time-ordered correlators. We test our predictions in Hamiltonian and Floquet spin chains in one spatial dimension.

Venue : Madhava Lecture Hall
Zoom Link: https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09
Meeting ID: 880 9276 6911
Passcode: 232322