ICTS M.Sc Project Seminar

Title : Dynamic Multiscaling in Turbulent Flows with Polymer Additives: A Shell Model Study

Speaker : Swapan Limbu (ICTS-TIFR, Bengaluru)

Date : Wednesday, 30 July 2025

Time : 1:45 PM (IST)

Abstract : We investigate dynamic multiscaling of time-dependent structure functions in a model of turbulent flow with polymer additives. In particular, we use the GOY shell model for turbulence with the added polymeric field and show systematically the effect of the Deborah number on the scaling of the p-thorder, integral time-scales extracted from the non-equilibrium statistical steady states in this system. We also show how the spectral scaling and the equal-time exponents of the correlation functions of both the velocity and polymer fields are influenced by the Deborah number.

Venue : Feynman Lecture Hall
Zoom link: https://icts-res-in.zoom.us/j/97028575114?pwd=1hRNV9gO6sdfIgvrumm4wmOamY5z4H.1
Meeting ID: 970 2857 5114
Passcode: 728167