

ICTS Seminar

Title : Geometric mechanics of scalar field theory and Minimal Surfaces

Speaker : Sumanto Chanda, ICTS-TIFR, Bengaluru

Date : Friday, September 25, 2020

Time : 03:45 pm

Venue : Online seminar

Join via Zoom Meeting

Link: <https://zoom.us/j/99759260561?pwd=WnY0SWRqTnZKUDdzMmRjWUpQdGtsdz09>

Meeting ID: 997 5926 0561

Passcode: 208278

Abstract : I will start by discussing geometric mechanics of Randers-Finsler geodesics for point particles, introducing my original formulations of constraint mechanics, gauge-field absorption, and Jacobi lift, and its development along with my collaborators. Then I shall describe the extension of such principles to scalar field theory in Polyakov and Nambu-Goto action as a generalization of point particle mechanics. Afterwards, I shall talk about my work on minimal surfaces as a 2-dimensional generalization of geodesics, involving a physical interpretation and their deformation under external potentials as a problem in statics. Finally, I shall discuss my collaboration work in the study of minimal translation and factorable surfaces in R^3 , and Bianchi-Cartan-Vranceanu (BCV) spaces.