



ICTS Seminar

Title : Horizontal Immersions in Fat Distributions

Speaker : Aritra Bhowmick (Indian Statistical Institute, Kolkata)

Date : Friday, August 06, 2021

Time : 11:00 am (IST)

Abstract : A major interest of differential geometry is the study of smooth distributions on a manifold M . In this talk, we shall address the following question : what is the maximum possible dimension of a submanifold of M , which is horizontal to a given distribution?

This question has been studied extensively for contact and Engel distributions, but very little is known outside these cases. The answer is generally presented in the language of h-Principle, which is the philosophy of “turning a hard problem in the realm of differential geometry to a soft problem in algebraic topology”.

In the talk, we shall introduce fat distributions; contact structures are examples of this. Among other important examples, we have the holomorphic and quaternionic counterparts of the contact structure. Following Gromov’s techniques, we shall obtain some dimension criteria, under which horizontal immersions always exist for the afore mentioned distributions.

Everyone is cordially invited.

Venue : Please click on the below link to join the meeting

<https://us06web.zoom.us/j/84252726302?pwd=Qm9ERUF3TXRWcVI2S0ZZaEgYeUFiQT09>

Meeting ID: 842 5272 6302

Passcode: 010891