



INDIAN STATISTICAL INSTITUTE
Theoretical Statistics and Mathematics Unit, Kolkata

LECTURE

Date: January 13, 2023, Friday
Time: 03:00 PM

VENUE:

L-infinity

(5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

TITLE:

Contact structures, Open Book Decompositions, and
Legendrian Submanifolds

SPEAKER:

Agniva Roy

Georgia Institute of Technology, USA

ABSTRACT:

Contact structures are an odd-dimensional analogue of symplectic structures. These evolved from the study of wavefronts and optics, but have led to a rich field of mathematics with various applications, notably to smooth low-dimensional topology. Open books are a topological decomposition of smooth manifolds that encode contact structures. Legendrian submanifolds are analogous to Lagrangians in the symplectic setting, which are useful in studying and constructing contact structures but have interesting questions of their own. The first half of the talk will be a quick overview of these topics, and in the second half I will talk about my thesis work about constructions and isotopies of high dimensional Legendrian spheres related to open book decompositions.

ALL ARE CORDIALLY INVITED