INDIAN STATISTICAL INSTITUTE

Theoretical Statistics and Mathematics Unit, Kolkata

SEMINAR

Date: August 19, 2024
Time: 04:00 PM

VENUE:

L- 2

(4th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

TITLE:

A motivic Riemann-Roch theorem for Deligne-Mumford stacks

SPEAKER:

Neeraj Deshmukh

IMPAN, Poland

ABSTRACT:

The Grothendieck-Riemann-Roch theorem fails to hold in the case of Deligne-Mumford stacks due to the presence of stabilisers. Several modified constructions, using the inertia stack and related objects, have been proposed by Edidin, Graham, Toën, and others.

In this talk, we will analyse Toën's formulation of the Riemann-Roch theorem from a motivic perspective. More specifically, we will construct an object (associated to every Deligne-Mumford stack) in Voevodsky's triangulated category of motives which we will then use to reformulate (and perhaps even generalise) Toën's Riemann-Roch isomorphism in the language of motivic cohomology. This is joint work with Utsav Choudhury and Amit Hogadi.

ALL ARE CORDIALLY INVITED