



INDIAN STATISTICAL INSTITUTE
Theoretical Statistics and Mathematics Unit, Kolkata

LECTURE

Date: January 10, 2023, Tuesday
Time: 02:00 PM

VENUE:

L-infinity

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

TITLE:

Dualities in Algebra and Topology

SPEAKER:

Samik Basu

ISI Kolkata

ABSTRACT:

Duality phenomena are ubiquitous in mathematics, particularly in topology and algebra. Classical instances on the topology side include Poincaré duality and Alexander duality, which give a relation between the homology and cohomology of spaces. The aim of the seminar is to understand the paper "Duality in algebra and topology" by Dwyer, Greenlees, and Iyengar, which unravels the fact that

- 1. Poincare duality*
- 2. Gorenstein duality for commutative rings*
- 3. Benson-Carlson duality for the cohomology of finite groups,*
- 4. Gross-Hopkins duality in chromatic homotopy theory are examples of a single phenomenon.*

ALL ARE CORDIALLY INVITED