Theoretical Statistics and Mathematics Unit

Indian Statistical Institute

203 B.T. Road, Kolkata - 700108

SEMINAR

Date: June 22, 2026
Time: 03:00 PM

VENUE:

L^{∞} ,5th Floor, A.N. Kolmogorov Bhavan, ISI Kolkata

SPEAKER:

Krishna Goswami

Stat-Math Unit, ISI Kolkata

TITLE:

Rational dichotomy, Moore's conjecture, and inert map

ABSTRACT:

The homotopy groups of a simply connected space, being Abelian, split into a free part and a torsion part. The free part can be studied via rational homotopy theory. In rational homotopy theory, a simply connected space X with rational homology of finite type are either:

- rationally elliptic, with $\pi_*(X) \otimes \mathbb{Q}$ finite dimensional or
- rationally hyperbolic, with $\pi_*(X) \otimes \mathbb{Q}$ growing exponentially.

In this talk, we will discuss some of the tools of rational homotopy theory for studying the free part of the homotopy group and Moore's conjecture that lie in the dichotomy between rationally elliptic and hyperbolic spaces. We will also define the inertness of a map and prove Moore's conjecture by using inertness for some special cases.

ALL ARE CORDIALLY INVITED

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