Theoretical Statistics and Mathematics Unit
Indian Statistical Institute
203 B.T. Road, Kolkata-700108

SEMINAR

Date: May 11, 2026
Time: 4:15 PM

VENUE:
L- Infinity (5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

SPEAKER:

Pranay Agarwal
University of Toronto, Canada

TITLE:

KPZ Universality in Polymer Models

ABSTRACT:

Gaussian statistics accurately capture the large-scale behaviour of many physical and mathematical systems driven by independent noise sources. However, several important surface growth and interface models possess a strong correlation structure which does not fit into this framework. Assuming that these distinct models satisfy some common physical constraints, it is conjectured that they form a separate universality class. Now known as the Kardar–Parisi–Zhang (KPZ) universality class, studies have uncovered distinctive scaling exponents, limiting distributions and objects present across these models. I will introduce one such model class—directed polymers in random environments—and go over some results relating to their universality behaviour.

ALL ARE CORDIALLY INVITED