



Theoretical Statistics and Mathematics Unit, Kolkata
INDIAN STATISTICAL INSTITUTE

Thesis Pre-Submission Seminar

Date: April 07, 2025
Time: 03:00 PM

VENUE:

L-infinity

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

TITLE:

**Restricted Mean Value Property on Riemannian Manifolds and
Carleson's problem on Damek-Ricci spaces**

SPEAKER:

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ABSTRACT:

In this talk, we will discuss some aspects of boundary behavior of solutions of certain PDEs on some suitable classes of Riemannian manifolds. We first see some local (for general Riemannian manifolds) and global (for Hadamard manifolds of pinched negative curvature) results in terms of boundary behavior of continuous, bounded functions satisfying the restricted mean value property so that they can be concluded to be harmonic. Next, we address the Carleson's problem of determining the optimal regularity of the initial data for the pointwise convergence of its Schrodinger propagation in the setting of Damek-Ricci spaces. We see a complete characterization of local (in space) mapping properties of the local (in time) maximal function for radial initial data. We also consider some generalizations of the Carleson's problem by looking at convergence along more general approach paths.

ALL ARE CORDIALLY INVITED