



Theoretical Statistics and Mathematics Unit, Kolkata
INDIAN STATISTICAL INSTITUTE

SEMINAR

Date: November 21, 2025

Time: 12:00 PM

VENUE:

L- Infinity

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

TITLE:

Embeddings of a line in 3-space

SPEAKER:

P M S Sai Krishna

Stat-Math Unit, ISI Kolkata

ABSTRACT:

It is known that every embedding of an affine line in an affine n -space is rectifiable when $n=2$ in the case of a zero characteristic field and when $n>3$ for any characteristic field. However, it is not known when $n = 3$. Abhyankar conjectured that a certain class of embeddings of the affine line inside affine 3-space given by $(t+t^{\{l+2\}}, t^{\{l+1\}}, t^{\{l\}})$, where $l>2$, are not rectifiable.

We will look at some results due to Craighero, Bhatwadekar, and Roy related to this class of embeddings. If time permits, we will briefly look at a bijective correspondence (due to Essen, Rossum, and Masuda) between non-equivalent embeddings of an affine m -space inside an affine n -space and non-equivalent classes of commuting locally nilpotent derivations of $k^{\{[m+n+1]\}}$ with a slice system.

ALL ARE CORDIALLY INVITED