



Theoretical Statistics and Mathematics Unit, Kolkata
INDIAN STATISTICAL INSTITUTE

SEMINAR

Date: February 03, 2026

Time: 03:00 PM

VENUE:

L- 1

(3rd Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

TITLE:

Perfectoid Spaces and Direct Summand Conjecture

SPEAKER:

Om Sai

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ABSTRACT:

Yves Andre gave the proof of Direct Summand Conjecture (DSC) in mixed characteristic in 2016, using the language of Perfectoid Spaces. Soon after that Bhargav Bhatt announced a shorter proof of this result. In this lecture series, we will follow the lecture notes by Bhargav Bhatt.

In the first lecture, I will review some basic definitions and results from Almost Mathematics. I will focus on the notion of "almost etale extensions". After this I will state and prove a primitive version of Almost Purity Theorem in char $p > 0$. If time permits, I will also discuss a categorical version. These results will be helpful later in the proof of DSC.

ALL ARE CORDIALLY INVITED