



INDIAN STATISTICAL INSTITUTE
Theoretical Statistics and Mathematics Unit, Kolkata

SEMINAR

Date: January 25, 2023, Wednesday
Time: 04:15 PM

VENUE:

L-infinity

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

TITLE:

**A Theoretically Amenable Cross Validation
Framework for Signal Denoising**

SPEAKER:

Sabyasachi Chatterjee

University of Illinois Urbana-Champaign

ABSTRACT:

We formulate a general cross validation framework for signal denoising. The general framework is then applied to nonparametric regression methods such as Trend Filtering and Dyadic CART. The resulting cross validated versions are then shown to attain nearly the same rates of convergence as are known for the optimally tuned analogues. There did not exist any previous theoretical analyses of cross validated versions of Trend Filtering or Dyadic CART. Our general framework is inspired by the ideas in Chatterjee and Jafarov (2015) and is potentially applicable to a wide range of estimation methods which use tuning parameters.

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