



THE UNIVERSITY OF
CHICAGO

DEPARTMENT OF STATISTICS

Statistics Colloquium

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“Theory for Cross Validation in Nonparametric Regression”

Monday October 9th, 2023, at 11:30 AM

Jones 303, 5747 S. Ellis Avenue

Refreshments will be served before the seminar at 11:00 am in Jones 303.

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 potentially applicable to a wide range of estimation methods which use tuning parameters.

BIO: I am an Assistant Professor (from 2017 onwards) in the Statistics Department at University of Illinois at Urbana Champaign. Most of my research has been in Nonparametric Function Estimation/ Statistical Signal Processing. I am also interested in Machine Learning and Probability. I obtained my Phd in 2014 at Yale University and then was a Kruskal Instructor at University of Chicago till 2017.