DEPARTMENT OF MATHEMATICAL SCIENCES

Colloquium

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Variable Selection for Fréchet Regression

ABSTRACT: Fréchet Regression is an extension of classical regression to cover more general types of responses, such as distributions, networks, and manifolds, which are becoming more prevalent. It includes both global and local Fréchet Regression, which are the counterparts of linear regression and nonparametric regression, respectively. In such models, predictors are Euclidean while responses are metric space valued. Predictor selection is of major relevance for regression modeling in the presence of multiple predictors but has not yet been addressed for Fréchet Regression. Due to the metric space valued nature of the responses, Fréchet Regression model does not feature model parameters, and this lack of parameters makes it a major challenge to extending existing variable selection methods. This is especially so for the global Fréchet Regression. In this talk, I will focus on the global Fréchet Regression and present a novel variable selection method for it. If time permits, I will briefly mention the variable selection for local Fréchet Regression.

Bio: Yichao Wu is TransUnion Professor and Professor of Statistics. He obtained his PhD in Statistics from The University of North Carolina at Chapel Hill in 2006. His research interests include statistical machine learning, high dimensional data analysis, functional data analysis, and more recently analysis of random objects.

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11:00AM-11:50AM
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