COLLOQUIUM

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Challenges in Gaussian Graphical Models

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A405 Wells Hall
10:20 a.m. - 11:10 a.m.
Refreshments: 10:00 a.m.

Abstract

I will describe Gaussian graphical models (also called covariance selection models) and some of their uses. These models can be thought of as a method of regularization for covariance matrices when n is less than or equal to p and the covariance matrix is thought to be sparse, but also as a method for understanding the conditional independence structure of a set of data. I will compare a variety of penalized likelihood methods for fitting these models (lasso, adaptive lasso, and SCAD) with maximum a posteriori and model averaged Bayesian estimates. I will illustrate the talk with examples of moderate dimension (50-600 variables) from finance and bioinformatics.

To request an interpretor or other accomodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.