

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Covariance-insured Screening for Selecting Ultrahigh Dimensional Variables

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10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

Effective screening methods are crucial to the analysis of big biomedical data. The popular marginal screening relies on restricted assumptions such as the partial faithfulness condition, e.g, the partial correlation between outcome and covariates can be inferred from their marginal correlation. However, such a restrictive assumption is often violated, as the marginal effects of predictors may be quite different from their joint effects, especially when the covariates are correlated. We propose a covariance-insured screening (CIS) method that utilizes the dependence among covariates and identify important features that are likely to be missed by marginal screening procedures.

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