
Joint Statistics Seminar

The Hong Kong University of Science and Technology

Model Selection Consistency of Cp-LASSO in Linear Regression with Orthonormal Predictors

by

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Date: November 27, 2009 (Friday)

Time: 4:00 p.m. - 5:00 p.m.

Venue: Room 3401 (Lift 17/18)

Abstract

Model selection coupled with regularization is a commonly used method for model fitting to achieve sparsity or parsimony of resulting model. In this paper, we study the model selection consistency of the Lasso coupled with Mallows' Cp on identifying orthogonal predictors linear regression when the number of predictors grows with the sample size. As suggested in the analysis, the forward predictor selection process should stop at the first local minimum of Cp-Lasso. The overfitting with the first local minimum of Cp-Lasso is mild when the minimum magnitude of nonzero coefficients of predictors is large. Extension to the case that the number of predictors is larger than the sample size will also be addressed.

❖ ***All interested are welcome!*** ❖

For details, please contact ISOM Department.