



Wednesday, Dec. 11

**Porter Hall
Room B34 at
12:30 p.m.**

Dimension Reduction Methods for Improving Predictive Inference



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David Shaw is a PhD candidate in the Mathematics Department at the University of Maryland, College Park. His research interests include high-dimensional inference and statistical approaches to pattern recognition. Specifically, he is working on classification problems in which the assumption of identically distributed data is not satisfied, as well as the effect of structural assumptions placed on predictors in regression problems.

Dimension Reduction Methods for Improving Predictive Inference

In many statistical applications, fitting models to handle cases in which the distribution of the predictors changes between training and testing is a common problem. We adopt a general method for learning shared representations between training and testing data, as well as a penalized likelihood framework on which we build models to perform both regression and classification. We show that this method is more beneficial than similar methods both from a practical as well as a theoretical standpoint, and it is used to improve predictive performance in various real-world applications.

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