

Colloquium

**Dr. Jeffrey Andrews,
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**Friday, November 23, 2012
11:00a.m., HH-3026**

***Model-based learning: t-families, variable selection
and parameter estimation***

Abstract:

This talk details recent research carried out in the field of model-based clustering and classification. After motivating the use of mixture models in statistical learning, a summary of two recently developed families is provided. These families, developed through constraints on the component covariance matrices of mixtures of multivariate t-distributions, provide a robust alternative to the more commonly used multivariate Gaussian mixtures. This talk also presents challenges, and some recently propounded solutions, that arise in the field of model-based clustering, including how to eliminate expendable variables and the difficulties surrounding parameter estimation.

Teaching Demonstration:

Thursday November 22 @ 3:00, HH-3026

Topic: "Hypothesis testing -- Most powerful test", Section 8.3.2 of Casella and Berger's book 'Statistical Inference', 2nd ed.