

Statistics Seminar  
Department of Mathematical Sciences

<b>DATE:</b>	Thursday, February 21, 2019
<b>TIME:</b>	1:15pm - 2:15pm
<b>LOCATION:</b>	WH 100E
<b>SPEAKER:</b>	Fang Yuan, Binghamton University
<b>TITLE:</b>	Variable selection in clustering via Dirichlet process mixture models

**Abstract**

Variable selection in clustering via Dirichlet process mixture models Abstract: The increased collection of high-dimensional data in various fields has raised a strong interest in clustering algorithms and variable selection procedures. In this paper, we propose a model-based method that addresses the two problems simultaneously. We introduce a latent binary vector to identify discriminating variables and use Dirichlet process mixture models to define the cluster structure. We update the variable selection index using a Metropolis algorithm and obtain inference on the cluster structure via a split-merge Markov chain Monte Carlo technique. We explore the performance of the methodology on simulated data and illustrate an application with a DNA microarray study.

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Last update: **2019/02/19 19:44**

