

Statistics Seminar
Department of Mathematical Sciences

DATE:	Thursday, October 25, 2018
TIME:	1:15pm - 2:15pm
LOCATION:	WH 100E
SPEAKER:	Fang Yuan, Binghamton University
TITLE:	Dirichlet Process Mixtures of Multivariate Normal-Inverse Gaussian Distributions

Abstract

An expectation-maximization framework for clustering using finite mixture models can sometimes yield uncertainty in deciding the number of clusters. A Dirichlet process mixture model can alleviate this difficulty of finding the correct number of mixture components by inferring the number of clusters directly in a Bayesian framework. In this talk, I will discuss the Dirichlet process as well as the general framework for Dirichlet process mixture models. Implementation of a Dirichlet process mixture of Gaussian distributions will be presented and the generalization of this to a Dirichlet process mixture of Multivariate Normal Inverse Gaussian (MNIG) distribution will be discussed in detail. An algorithm for clustering skewed data based on a Dirichlet process mixture of MNIG distributions will be discussed.

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