SEMINAR SERIES

Spike-and-Slab Priors for Variable and Edge Selection and Applications to Large-scale Data

Tuesday, November 19th, 2019
11:30AM – 12:30PM
UTHealth SPH W-102B

Presenter:

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Abstract

There is now a huge literature on Bayesian methods for variable selection that use spike-and-slab priors. Such methods, in particular, have been quite successful for applications in a variety of different fields. High-throughput genomics and neuroimaging are two such examples. In this talk I will first review spike-and-slab priors for variable selection in the context of linear regression models. I will then talk about parallel methodological developments for graphical models, where priors are specified on precision matrices. I will address in particular the case of estimation on multiple graphs that may share common features. If time allows I will also describe extensions of the models to non-Gaussian data, in particular count data, for applications to microbiome data.