Mathematics, Statistics, and Computer Science **@ UIC**

Statistics and Data Science Seminar

Double empirical Bayes for high-dimensional inference / On Bayesian inference without a model

Raymond Mess / Nick Syring (UIC)

Abstract: This is a special graduate student-organized seminar in which two PhD students (Raymond Mess and Nick Syring) will give 20+ minute talks about their ongoing research. The respective abstracts are below.

(Mess) In this talk, I will introduce the new double empirical Bayes framework, which is based on the use of data to both center and regularize the prior. An application of this framework to the problem of inference in the sparse ($p >> n$) linear model will also be presented.

(Syring) I will introduce a method to obtain Bayesian-like posterior inference for an unknown parameter without the need for a likelihood. Such a method makes producing interval estimates straightforward while avoiding problems that may arise from model misspecification. Finally, I will discuss an application of this approach to an important problem in medical statistics.

Wednesday, November 19 at 4:00 PM in SEO 636