

Colloquium

“Semiparametric Extensions of Finite Mixture Models”

Who:	Dr. Weixin Yao Department of Statistics University of California, Riverside
When:	Thursday February 22, 2018 3:00 P.M.
Where:	Room 9-118 Lambton Tower Father Faught Conference Room

Abstract:

In this talk, several semiparametric extension of the traditional parametric finite mixture models are introduced. Mixture models are widely used when the population consists of several homogeneous subgroups. Currently most of mixture models considered are fully parametric. This talk will introduce three possible semiparametric extensions of traditional parametric mixture models and discuss their applications and estimation methods. The first extension considers the two component mixture model when one component is known and the other component is unknown. The second extension considers the mixture of linear regression model when the mixture proportions depend on predictors nonparametrically. The third extension considers a new class of mixture of single-index models, where the mixing proportions, mean functions, and variances are unknown but smooth functions of an index.