

Modeling and Analysis of Correlated Data using Pairwise Likelihood

Grace Yi

University of Waterloo, University of Western Ontario
E-mail: yyi@uwaterloo.ca

Abstract: Correlated data arise commonly in practice, and modeling and analysis of such data have attracted extensive research interest. Although many methods have been developed, research gaps remain due to emerging issues. For instance, for correlated data with complex structures, modelling complexity is a serious issue, and it is desirable to develop flexible models that are both computationally manageable and interpretatively meaningful. In terms of estimation, much research has been directed to estimation of the mean parameters with the association parameters treated as nuisance. There is relatively less work concerning both the marginal and association structures, especially in the semiparametric framework. In this talk, I will describe some methods of handling correlated data which are developed based on the pairwise likelihood formulation. Associated modeling strategies and estimation procedures will be discussed.