SCMS & SDS Joint Seminar

JOIN STATISTICS SEMINAR OF SCMS AND SDS

BETTER AUTOLOGISTIC REGRESSION

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Lecture

Time: 10:30-11:30 am., Thursday, Oct. 12, 2017

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Abstract: Autologistic regression is a Markov random field model that can be viewed as an extension of logistic regression to allow for non-independent responses. Forms of the model used in the literature to date differ in two respects. First, the coding of the responses could differ. The 0, 1 coding is habitual in statistics, but -1, +1 coding has been used in other areas. Second, the model could have a centering term that has recently been proposed. The talk will focus on the impact of changing the coding or centering. While these changes may appear innocuous, they in fact produce distinct, non-nested families of probability distributions with large qualitative and quantitative differences. Considering the properties of the models strongly suggests that a model variant not in common use---the -1, +1 coding with no centering term---is the one with the best properties and is recommended for future use.