統計科學研究所
INSTITUTE OF STATISTICAL SCIENCE

學　術　演　講

講　題：Iterative Estimating Equations for Disease Mapping with Spatial Zero-inflated Poisson Data

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時　間：2024年4月22日(星期一)，10:30-12:00

地　點：統計所B1演講廳

Abstract

Spatial epidemiology often involves the analysis of spatial count data with an unusually high proportion of zero observations. While Bayesian hierarchical models perform very well for zero-inflated data in many situations, a smooth response surface is usually required for the Bayesian methods to converge. However, for infectious disease data with excessive zeros, a Wombling issue with large spatial variation could make the Bayesian methods infeasible. To address this issue, we develop estimating equations associated with disease mapping by including over-dispersion and spatial noises in a spatial zero-inflated Poisson model. Asymptotic properties are derived for the parameter estimates. Simulations and data analysis are used to assess and illustrate the proposed method.

※ 茶 會：10：10開始。
※ 實體與線上視訊同步進行。