

國立臺北大學統計學系

專題演講

講題：Spatial Bayesian Hierarchical Model with Variable Selection to fMRI Data

主講人：李國榮 助理教授 (國立成功大學統計學系)

時間：106 年 4 月 26 日 (星期三，13:00~15:00)

地點：三峽校區商學大樓商 **3F13** 教室

Abstract

A spatial Bayesian hierarchical model is proposed to analyze functional magnetic resonance imaging data for complex spatial and temporal structures. Several studies found that spatial dependence not only appears in signal changes but also in temporal correlations among voxels; however, current statistical approaches ignore the spatial dependence of temporal correlations, thereby keeping computational efficiency. We incorporated the spatial random effects model to simultaneously consider spatial dependence arising from both signal changes and temporal correlations. We conducted simulation studies to demonstrate that the proposed approach increases the accuracy of the detection of brain activities while remaining computationally feasible. A real event-related fMRI data is provided to further illustrate the application and usefulness of the proposed model.

~歡迎參加~

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