# 國 立 中 央 大 學

## 統 計 研 究 所

### 畢業所友系列演講

主 講 人：林季平博士（**Center for Geographic Information Science RCHSS, Academia Sinica**）

講　　題：**On Bridging Micro Discrete Events and Macro Continuous Social Outcomes: Flows Analysis and Scientific Computing Challenges for Social Scientists**

時　　間：**101年12月25日（星期二）上午 11：00 ～ 11：50**

地　　點：中央大學鴻經館　605　室

茶　　會：上午 10：00 ～10：50　　　地　點：鴻經館　510　室

## ABSTRACT

This talk contributes to construct a theory of micro-macro link that bridges the micro-discrete outcomes and macro-continuous phenomena in social sciences. The fundamental thought of the constructed micro-macro link theory resembles path integrals in quantum mechanics. Within the constructed micro-macro link theory, the micro theoretical framework is based on individual discrete choice theory, while the so-called "transformation rules" that integrate individual discrete outcomes to continuous-macro phenomena is constructed by using existing statistical theorems and asymptotic theory. The theory can be applied to flow analysis in social network, migration, mobility, and transportation studies. With immigration impact on internal migration as empirical case, the study derives the statistical distributions of aggregate out-migration, in-migration, and thus net flows of migration across domestic labor markets by linking them with individual-level migration probabilities that are estimated functions of a set of explanatory variables. The empirical study is implemented by Gauss language and simulation results help shed lights on the dynamics of internal-international migration complex system.

Keywords: micro-macro link, individual discrete event, macro continuous outcome, transformation rule, social simulation, scientific computing

◎敬請張貼

歡迎參加◎