



College of Liberal Arts
and Social Sciences

香港城市大學
City University of Hong Kong



Department of
Public and International Affairs

香港城市大學
City University of Hong Kong



CAMS

CLASS Advanced Methods School

Modules

SPATIAL-ECONOMETRIC ANALYSIS OF INTERDEPENDENCE

Speaker

Professor Robert J Franzese



Professor

University of Michigan, USA



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**LI-3500
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SPATIAL-ECONOMETRIC ANALYSIS OF INTERDEPENDENCE

Abstract

Spatial (i.e., geospatial or otherwise cross-unit) association and interdependence are ubiquitous throughout the social sciences. Where cross-unit association arises from interdependence (contagion), standard statistical methods assuming independent observations are inappropriate, and design-based methods of nonparametric causal-inference are (at best) inadequate. This workshop covers methods of distinguishing spatial-association from spatial-interdependence and for proper estimation and interpretation of interdependent processes, emphasizing spatial and spatiotemporal autoregressive models: testing for & measuring spatial correlation; spatial- & spatiotemporal-autoregressive model estimation (instrumental-variables, maximum-likelihood, and Bayesian estimators); distinguishing & estimating multiple sources spatial correlation (spatial-lag X , y , and e) and behavioral bases of spatial interdependence (multiple spatial-autoregressive lags); and calculating and presenting the spatiotemporal effects that such spatial-interdependence/contagion processes-*cum*-models properly entail (spatial & spatiotemporal multipliers and dynamics); plus, time permitting: spatial interdependence in qualitative dependent-variables and network-behavior “coevolution”.

Speaker Bio

Rob Franzese (Ph.D. Government 1996, A.M. Economics 1995, Harvard University) is Professor & Associate Chair of Political Science at the University of Michigan; Director of the ICPSR Summer Program in Quantitative Methods; and Fellow and 15th (former) President of The Society for Political Methodology. His research focuses on spatial-econometric models of interdependence, particularly the specification, estimation, and interpretation of empirical models of interdependence (contagion, spillovers). His work includes 8 books and edited volumes, 41 articles and chapters, and 12 other publications across three disciplines (political science, economics, statistics), in five languages (English, and in translation: Chinese, German, Italian, Japanese).