Sergio Rey (Ph.D., University of California, Santa Barbara) is a Professor in the School of Geographical Sciences and Urban Planning at Arizona State University, where he also serves as an executive committee member and core research faculty in the GeoDa Center for Geospatial Analysis and Computation. He is affiliate research professor with the Regional Research Institute at West Virginia University and adjunct research professor in the Regional Economics Application Laboratory (REAL), University of Illinois, Urbana Champaign. Rey is a Fellow of the Spatial Econometrics Association, and has served as Editor of the International Regional Science Review since 1999. Prior to joining ASU in 2008, he was Chair of the Department of Geography at San Diego State University where he also served as founder and director of the Regional Analysis Laboratory (REGAL).

Rey’s research interests focus on the development, implementation, and application of advanced methods of spatial and space-time data analysis in the social sciences. His substantive foci include regional inequality, convergence and growth dynamics as well as neighborhood change, segregation dynamics, spatial criminology and industrial networks. Recent and current research projects include an analysis of the relationships between spatial linkages and urban economic dynamics (EDA), flexible geospatial visual analytics and simulation technologies to enhance criminal justice decision support systems (NLJ), spatial analytical framework for examining community sex offender residency issues over space and time (NSF), and cyberGIS software integration for sustained geospatial innovation (NSF). Rey is the creator and lead developer of the open source package STARS: Space-Time Analysis of Regional Systems as well as PySAL: A Python Library for Spatial Analysis.

This talk provides an overview of a family of recently development methods for the exploratory analysis of spatial dynamics in socioeconomic series. Relying on both visualization and computational methods, these analytics provide insights on the role of spatial context in shaping the articulation of temporal processes as well as the amount and characteristics of evolving spatial patterns. The implementation of these analytics in the open source library PySAL (Python Spatial Analysis Library) is illustrated with applications from the areas of urban neighborhood dynamics, spatial criminology, and regional income growth and inequality.

Date: April 29th 2013
Time: 12-1 pm
Location: GCUA auditorium

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