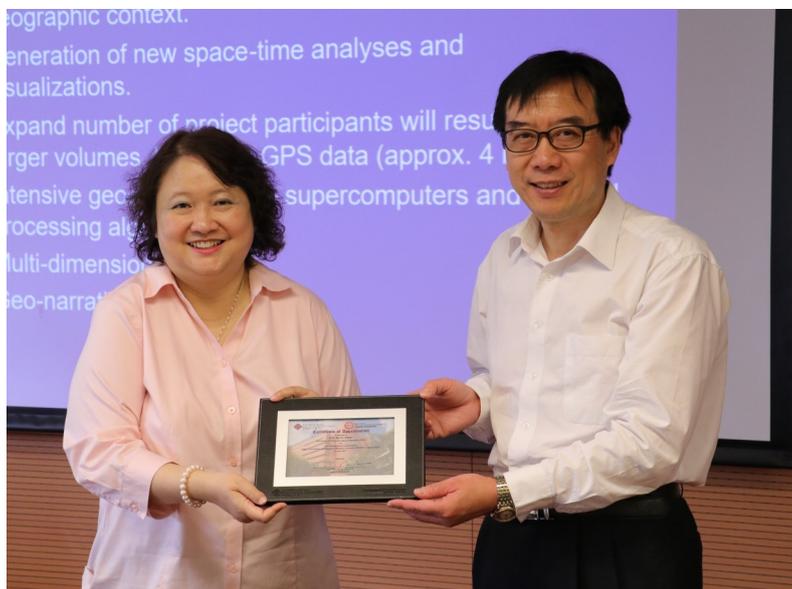


LSGI Distinguished Lecture Series

“Uncertainty and Context in Research on Human Mobility in Space-Time”

Overview

It was our pleasure to invite Prof. Mei-Po KWAN, Professor at the Department of Geography and Geographic Information Science, University of Illinois at Urbana-Champaign, USA , to deliver a seminar of the LSGI Distinguished Lecture Series on 8 June 2017.



Prof. Meipo Kwan



Mei-Po KWAN is a Professor of Geography and Geographic Information Science. Her research addresses health, social, transportation, and environmental issues in urban areas through the application of innovative GIS methods. She is interested in understanding how social differences (e.g., gender, race, ethnicity, and religion) shape urban residents' everyday experiences and perceptions/use of the built environment. Her research interests include environmental health, human mobility, access to healthcare, neighborhood effects, sustainable travel and cities, and application of GIS methods in geographic research. She has received over \$24 million grants as PI or Co-PI from sources including the National Science Foundation, the National Institutes of Health, the U.S. Department of Transportation, and the William T. Grant Foundation. She is currently Editor of the *Annals of the Association of American Geographers* and the book series entitled “SAGE Advances in Geographic Information Science and Technology.”

Abstract

Uncertainty and context pose fundamental challenges in GIScience. Geospatial data are imbued with error (e.g., measurement and sampling error), and understanding of the effects of contextual influences on human behavior and experience are often obfuscated by various types of uncertainty (e.g., contextual uncertainties, algorithmic uncertainties, and uncertainty arising from different spatial scales and zonal schemes). In this presentation, I examine the issues associated with identifying the “true causally relevant” spatial and temporal contexts that influence people’s behavior and experience in a smart city context. Using examples from human mobility research, I argue that the advent of big data significantly increases the role of algorithms in the generation of scientific knowledge. Such increase in algorithmic mediation in the knowledge production process introduces much more uncertainty to the knowledge generated.