

LSGI Distinguished Lecture Series

“GIScience for Human Dynamics Research”

Overview

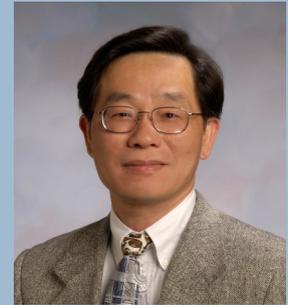
It was our pleasure to invite Prof. Shih-Lung SHAW, Alvin and Sally Beaman Professor, and Arts and Sciences Excellence Professor at University of Tennessee, USA, to deliver a seminar of the LSGI Distinguished Lecture Series on 22 June 2017.



Abstract

Due to widespread use of location-aware technology, information and communication technology (ICT), and mobile technology, there have been many important changes to how people carry out their activities and interactions and how the urban, economic and social systems operate in today's world. With the arrival of a Big Data era, unprecedented data collection of a wide range of human activities and their environments offer opportunities for us to gain insight on human dynamics. In the meantime, these opportunities also present many challenges to both geographic information systems (GIS) and geographic information science (GIScience) to properly support human dynamics research. This presentation will first discuss some important changes to human dynamics in the modern world, followed by some examples of our work of developing a space-time GIS for human dynamics research and using mobile phone data to examine spatiotemporal human mobility patterns. Finally, this presentation will provide a critical review of the conventional GIS and offers an approach of representing human dynamics based on a multiple-space framework to integrate complex human dynamics in the modern world. This “new” approach for GIScience and GIS can better support human dynamics research in a hybrid physical-virtual space and within a space-time context.

Prof. Shih-Lung SHAW



Dr. Shih-Lung Shaw is Alvin and Sally Beaman Professor and Arts and Sciences Excellence Professor of Geography as well as the Director of Confucius Institute at the University of Tennessee, Knoxville. He received his Ph.D. and M.A. degrees from The Ohio State University and his B.S. degree from National Taiwan University. His research interests cover GIS for transportation (GIS-T), space-time GIS, time geography, transportation planning and modeling, and human dynamics. His recent research has focused on space-time analytics of human dynamics in a hybrid physical-virtual world based on various types of individual tracking data such as cell phone data, taxi tracking data, travel-activity survey data, and online social media data. Dr. Shaw currently represents the University Consortium for Geographic Information Science (UCGIS) as an expert panel member to review the U.S. National Spatial Data Infrastructure (NSDI) for the Coalition of Geospatial Organizations. He also serves on the editorial board of International Journal of Geographical Information Science, Journal of Transport Geography, Travel Behaviour and Society, and Geographical Research (China). Dr. Shaw is a Faculty Fellow of the Center for Transportation Research and an affiliated faculty of the Center for Intelligent Systems and Machine Learning and the Center for Sustainable Business and Tourism at the University of Tennessee, Knoxville. He is also appointed as a Guest Professor of Wuhan University and Southeast University in China and a Research Fellow of the Institute of Space and Earth Information Science at the Chinese University of Hong Kong.