

## LSGI Public Lecture Series

# “Social Media: A New Data Source For Human Mobility Analysis”

### Overview

It was our pleasure to invite Dr. Qunying Huang, Associate Professor, Department of Geography University of Wisconsin-Madison, to deliver a seminar of the LSGI Public Lecture Series on 20 Aug 2019.



### Biography

Dr. Qunying Huang is an Associate Professor in the Department of Geography at University of Wisconsin-Madison. She holds a B.S. from Central South University (2004), M.S. from Peking University (2007) and Ph.D. from George Mason University (2011). Her fields of expertise include Geographic Information Science (GIScience), Spatial Big Data Analytics and Fusion, Spatial Data Mining, and Spatial Computing. Dr. Huang’s research aims to bridge the gap between Computer and Information Science (CIScience) and GIScience by generating new computational algorithms and methods to make sense of complex spatial datasets. On one hand, Dr. Huang enhances computing, data mining, machine learning and database technologies by incorporating spatial data, principles, and theories. On the other hand, she synthesizes multi-sourced spatial data and CIScience technologies to facilitate scientific discovery and to inform real-world decision making by developing novel spatial analytics and fusion methods. The problem domains of her research are related to human mobility and natural hazards. Dr. Huang published over 90 articles, and edited three books. Her research is primarily sponsored by Department of Energy, National Science Foundation, National Aeronautics and Space Administration, National Institutes of Health, NOAA Sea Grant, and Wisconsin Alumni Research Foundation. Dr. Huang is a fellow for Next Generation of Hazards & Disasters Researchers, and CyberGIS. Dr. Huang served as the chair for AAG Cyberinfrastructure Specialty Group. She helped start the cloud computing cluster within the Earth Science Information Partnership.

## **Social Media: A New Data Source For Human Mobility Analysis**

Social media emerges as a new data source to describe human daily activity patterns and population dynamics. Despite various appealing aspects of social media data, including a much larger numbers of “subjects”, low acquisition cost and relatively wide geographical and international coverage, these data also have many limitations, including sparseness and irregularity of sampling points over space and time, the lack of background information of users (e.g., home locations and socioeconomic status) and travel semantic information that can describe people’s activities (e.g., the purpose of people’s visit to a location and the nature of the location). A major objective of this talk therefore is to explore the challenges, solutions and the extent that social media data can be used to support human mobility studies and to reveal meaningful movement patterns at different geographic scales.