LSGI Distinguished Lecture Series
"From CyberGIS to Spatial Data Science "

Overview

It was our pleasure to invite Prof. Shaowen Wang, Professor of Geography & Geographic Information Science at the University of Illinois at Urbana-Champaign, USA, to deliver a seminar of the LSGI Distinguished Lecture Series on 31 May 2017.

Abstract

CyberGIS represents an interdisciplinary field combining advanced computing and cyberinfrastructure, geographic information science and systems (GIS), spatial analysis and modeling, and a number of geospatial domains (e.g., emergency management, smart cities, and the nexus of food, energy, and water systems) to enable broad scientific and technological advances. It has also emerged as new-generation GIS based on holistic integration of high-performance and distributed computing, data-driven knowledge discovery, visualization and visual analytics, and collaborative problem-solving and decision-making capabilities. The growing importance of cyberGIS is reflected by increasing calls for solutions to bridge the significant digital divide between advanced cyberinfrastructure and geospatial communities in the big data era. This lecture discusses challenges and opportunities for synergistically advancing cyberGIS and spatial data science to transform geospatial discovery and innovation through interdisciplinary approaches.

Prof. Shaowen Wang

Shaowen Wang's research and teaching interests primarily include geographic information science and systems (GIS), advanced cyberinfrastructure and cyberGIS, complex environmental and geospatial problems, computational and data sciences, high-performance parallel and distributed computing, and spatial analysis and modeling. He has received research funding from the US Centers for Disease Control and Prevention (CDC), Department of Energy (DOE), Environmental Protection Agency (EPA), National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), US Department of Agriculture (USDA), US Geological Survey (USGS), and industry; and served as Principal Investigator (PI) for about $14 million competitive research grants, PI for tens of millions of normalized computing hours to utilize NSF supercomputing resources, and co-PI and investigator for contributing to sponsored research supported with tens of millions of US dollars. He has published many peer-reviewed papers including articles in more than 20 journals. He has served as an Action Editor of GeoInformatica, Associate Editor of SoftwareX, and guest editor or editorial board member for multiple other journals, book series and proceedings. He served as President of the International Association of Chinese Professionals in Geographic Information Sciences (CPGIS) and Chair of CPGIS Board. He served on the University Consortium for Geographic Information Science (UCGIS) Board of Directors from 2009 to 2012, and currently is President of UCGIS. He was appointed two terms as a Councilor of the Open Science Grid Consortium. He is a current member of the Board on Earth Sciences and Resources of the US National Academies of Sciences, Engineering, and Medicine. He was a visiting scholar at Lund University sponsored by NSF in 2006 and NCSA Fellow in 2007, and received the NSF CAREER Award in 2009.