The Getis-Ord Lecture
in
Spatial Analysis

60th Annual Meeting of WRSA

Western Regional Science Association
Virtual Meeting
February 23, 2021

5:30–7:15 PM (in Pacific Time of the U.S., GMT-8)
Virtual Meeting Room – Las Vegas

https://us02web.zoom.us/j/83298970524

Welcome to the Eighth Annual Getis-Ord Lecture in Spatial Analysis

Chair:
Arthur GETIS
San Diego State Univ., California, USA

Speaker:
Shaowen Wang
Univ. Illinois., Urbana-Champaign, USA

Extreme Digital Transformation in Spatial Analysis and Modeling

Discussant:
Alan Murray
Univ. California, Santa Barbara

Spatial analysis and modeling have been undergoing an extreme digital transformation enabled by cyberGIS and machine intelligence during the past decade. This transformational trend seems likely to persist into the foreseeable future. Meanwhile cyberGIS has emerged as a new generation of geographic information science and systems (GIS) based on holistic integration of high-performance and distributed computing, data-driven knowledge discovery, visualization and visual analytics, and collaborative problem-solving capabilities. This presentation discusses challenges and opportunities for navigating the extreme digital transformation to advance spatial analysis and modeling through cyberGIS-enabled interdisciplinary and transdisciplinary approaches.

Speaker Biography

This year we are pleased to welcome Professor Shaowen Wang who is Head of the Department of Geography and Geographic Information Science; Richard and Margaret Romano Professorial Scholar; and an Affiliate Professor of the Department of Computer Science, Department of Urban and Regional Planning, and School of Information Sciences at the University of Illinois at Urbana-Champaign (UIUC). He has served as Founding Director of the CyberGIS Center for Advanced Digital and Spatial Studies at UIUC since 2013. He served as Associate Director of the National Center for Supercomputing Applications (NCSA) for CyberGIS from 2010 to 2017 and Lead of NCSA's Earth and Environment Theme from 2014 to 2017. His research interests include geographic information science and systems (GIS), advanced cyberinfrastructure and cyberGIS, complex environmental and geospatial problems, computational and data sciences, high-performance and distributed computing, and spatial analysis and modeling. His research has been actively supported by a number of U.S. government agencies (e.g., CDC, DOE, EPA, NASA, NIH, NSF, USDA, and USGS) and industry. He has served as the principal investigator of several multi-institution projects sponsored by the National Science Foundation (NSF) for establishing the interdisciplinary field of cyberGIS and advancing related scientific problem solving in various domains (e.g., agriculture, bioenergy, emergency management, geography and spatial sciences, geosciences, and public health). He has published 150+ peer-reviewed papers including articles in 40+ 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 on the University Consortium for Geographic Information Science's (UCGIS) board of directors from 2009 to 2012 and President of UCGIS from 2016 to 2017. He served on the advisory board of the NSF Extreme Science and Engineering

Discovery Environment (XSEDE) program from 2016 to 2018. He served as a member of the Board on Earth Sciences and Resources of the National Academies of Sciences, Engineering, and Medicine from 2015 to 2020. He was a visiting scholar at Lund University, sponsored by NSF in 2006, and a NCSA fellow in 2007. He received the NSF CAREER Award in 2009. He was named a Helen Corley Petit Scholar for 2011-2012 and Centennial Scholar for 2013-2016 by UIUC's College of Liberal Arts and Sciences. He received a B.S. in Computer Engineering from Tianjin University, an M.S. in Geography from Peking University, and a Master of Computer Science and a Ph.D. in Geography from the University of Iowa.

Following Wang's talk, Professor Alan Murray from University of California, Santa Barbara will offer commentary and discussant remarks.

Lecture History

The inaugural Getis-Ord Lecture was given at WRSA's 52nd annual meeting in Santa Barbara by Keith Ord, Professor and Sebes Fellow in the McDonough School of Business at Georgetown University. The second annual lecture was given by Luc Anselin, a leader in spatial analytic studies. Anselin was followed by econometricians, Harry Kelejian, in 2015, and James LeSage in 2017. The noted Harvard urbanist, Edward Glaeser, was the lecturer in 2016. The leading GIS scientist and a member of the National Academy of Sciences, Michael Goodchild gave the lecture in 2018. In 2019, Michael Batty, the prominent urban and GI scientist provided lecture.