Paper Session:

2290 Spatial Data Mining and Big Data Analytics (6)

is scheduled on Wednesday, 4/22/2015, from 10:00 AM - 11:40 AM in 406 Classroom, University of Chicago Gleacher Center, 4th Floor

Sponsorship(s):
Geographic Information Science and Systems Specialty Group
Spatial Analysis and Modeling Specialty Group
Cartography Specialty Group

Organizer(s):
Diansheng Guo - UNIVERSITY OF SOUTH CAROLINA
May Yuan - University of Texas - Dallas
Harvey J. Miller - The Ohio State University

Chair(s):
Fang Qiu - University of Texas - Dallas

Abstract(s):

10:00 AM Author(s): *Qing Zhu - Nanjing Insitute of Geography and Limnology, CAS
Xiaoming Lai - Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences
Fei Xu - Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences
Kaihua Liao - Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences

Abstract Title: *Using Residual Analysis in Electromagnetic Induction Data Interpretation to Improve the Mapping of Hydropedological Properties*

10:20 AM Author(s): *Jing Gao - University of Illinois at Urbana-Champaign
Shaowen Wang - University of Illinois at Urbana-Champaign

Abstract Title: *Simulating plausible spatial distributions of land cover mapping errors for real landscapes*

10:40 AM Author(s): *Qing Liu - University of Denver

Abstract Title: *Bridging the Ocean of Big Data - Building a Web Application with Open Source Technology to Improve Access to Global Night-time Lights Data*

11:00 AM Author(s): *Fang Qiu - University of Texas - Dallas
Feng Ni - University of Texas - Dallas
Yuhong Zhou - University of Texas - Dallas

Abstract Title: *Advances in Remote Sensing Technology Demand New Big Spatial Data Analytics*

Session Description: Big and dynamic spatial data have been, and continue to be, collected with modern data acquisition techniques such as global positioning systems (GPS), high-resolution remote sensing, census surveys, and internet-based volunteered geographic information.While these data offer unprecedented opportunities to advance our understanding of complex geographic processes and phenomena, there are many challenging research questions in analyzing such data to obtain new knowledge. We

invite research contributions in the theory, methodology, implementation, and application of spatial data mining, simulation, and visual analytics for big spatial data analytics. Potential topics include (but not limited to):

Theories and models to represent, quantify, and enable discovery of new types of spatial patterns and relationships;

Computational, statistical, and visual analytical methodologies for big data analytics, knowledge discovery, and decision support in geographic domains;

Domain-specific data analytics and applications: public health, spatial epidemiology, transportation, urban mobility, climate change, crime analysis, migration, geo-social networks, among others;

Simulation, benchmark data generation, complexity modeling, predictive analytics;

Big data collection, curating and management methodologies for heterogeneous data, e.g., texts, videos, images, etc.

New Query