(60) 2015 Annual Meeting, Chicago, Illinois



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Paper Session:

1588 Spatial Data Mining and Big Data Analytics (4)

is scheduled on Tuesday, 4/21/2015, from 2:40 PM - 4:20 PM in 304 Classroom, University of Chicago Gleacher Center, 3rd Floor

Sponsorship(s):

Geographic Information Science and Systems Specialty Group Spatial Analysis and Modeling Specialty Group Cartography Specialty Group

Organizer(s):

<u>Diansheng Guo</u> - UNIVERSITY OF SOUTH CAROLINA <u>May Yuan</u> - University of Texas - Dallas <u>Harvey J. Miller</u> - The Ohio State University

Chair(s):

Caglar Koylu

Abstract(s):

2:40 PM Author(s): *Gordon Green, PhD - Foundation Center

Jake Garcia - Foundation Center Kathye Giesler - Foundation Center Bereketab Lakew - Foundation Center Thomas Provan - Foundation Center Daniel Saronson - Foundation Center

Abstract Title: Improving Geographic Entity Extraction with Network Analysis of Domain-Specific Information

3:00 PM Author(s): *Peng Gao - University at Buffalo Ling Bian - University at Buffalo

Abstract Title: Uncovering the Interplay between Network and Physical Spaces in Spatially Embedded Social Networks

3:20 PM Author(s): *Jian Chen - University of Louisiana Maria Bala Duggimpudi - University of Louisiana at Lafayette Shaaban Abbady - University of Louisiana at Lafayette

Abstract Title: A Scalable Spatio-temporal Data mining Framework for Anomaly Detection

3:40 PM Author(s): *Monsuru Adepeju - University College London Tao Cheng - University College London

Abstract Title: Detection of Emerging Hot-Routes of Crime for Proactive Policing using Prospective Space-Time Scan Statistics (PSTSS)

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.

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