



AAG Annual Meeting

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Paper Session:

4420 Symposium on Synergistic Advances of CyberGIS and Geography: Synergistic Advances of CyberGIS and Data Science

is scheduled on Friday, 4/11/2014, from 12:40 PM - 2:20 PM in Room 20, TCC, First Floor

Sponsorship(s):

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

Organizer(s):

[Shaowen Wang](#) - University of Illinois at Urbana-Champaign
[Budhendra Bhaduri](#) - Oak Ridge National Laboratory

Chair(s):

[Ming-Hsiang Tsou](#) - San Diego State University

Abstract(s):

12:40 PM Author(s): *Eric Shook - Kent State University
Babak Behzad - University of Illinois at Urbana-Champaign
Shaowen Wang - University of Illinois at Urbana-Champaign
Michael Hodgson - University of South Carolina

Abstract Title: *Designing a parallel and high-performance computing language for geographic information scientists*

1:00 PM Author(s): *Shaowen Wang - University of Illinois at Urbana-Champaign

Abstract Title: *A CyberGIS Framework for Scalable Spatiotemporal Data Analytics*

1:20 PM Author(s): *Chaoyi Chang - the Nelson Institute for Environmental Studies, University of Wisconsin, Madison
Zhiwei Ye - the Nelson Institute for Environmental Studies, University of Wisconsin, Madison

Abstract Title: *Land use change classification using a big data approach*

1:40 PM Author(s): *Wenwu Tang - University of North Carolina at Charlotte

Abstract Title: *Massively Parallel Spatial Point Pattern Analysis: Ripley's K Function Accelerated Using General-purpose Graphics Processing Units*

2:00 PM Author(s): *David Todd - Pennsylvania State University

Abstract Title: *Building an Integrated Web Mapping and Incident Reporting Platform for Volunteer Organizations Using Open Source Technology*

Session Description: AAG 2014 Symposium on Synergistic Advances of CyberGIS and Geography

Organizing Committee: Luc Anselin, Budhendra Bhaduri, Chen-Chieh Feng, Jianya Gong, Diansheng Guo, Michael Goochild, Krzysztof Janowicz, Mei-Po Kwan, Wenwen

Li, Timothy Nyerges, Ed Parsons, Sergio Rey, Douglas Richardson, Anand Padmanabhan, Eric Shook, Alexandre Sorokine, Ming-Hsiang (Ming) Tsou, E. Lynn User, Shaowen Wang, Nancy Wilkins-Diehr, David White, Dawn Wright, Huayi Wu, and Chaowei Yang

CyberGIS - geographic information science and systems (GIS) based on advanced infrastructure of computing, information, and communication technologies (aka cyberinfrastructure or e-infrastructure) - has emerged over the past several years as a vibrant interdisciplinary field and played essential roles in enabling computing- and data-intensive geospatial research and education across a number of domains with significant societal impact. At AAG 2014, we plan to address synergistic advances of CyberGIS and Geography by building on the success of the CyberGIS Symposium @ AAG 2013 (with 17 paper and panel sessions and active participation from academia, government and industry). To this end, the AAG 2014 Symposium on CyberGIS and Geography is scheduled to take place during April 8-11, and will include a suite of panel and paper sessions.

Panel Sessions

- * CyberGIS and Geography: Fostering Synergistic Advances
- * CyberGIS as an Integration Science
- * CyberGIS Body of Knowledge
- * CyberGIS Education
- * Frontiers and Roadmaps: Academic, Governmental, Industrial Perspectives
- * 360-Degree Comparison – CyberGIS and Related (e.g., Cloud GIS, GeoWeb, Internet GIS, Mobile GIS, Online GIS, Spatial Computing, Geospatial and Spatial Cyberinfrastructure, Web GIS, etc.)
- * Turning Big Data to Rich Data and Knowledge: Roles of CyberGIS and Geography

Paper Sessions

- * Bridging CyberGIS and Sustainability Sciences
- * CyberGIS for Collaborative Geographic Sciences
- * CyberGIS for Complex Geographic Problem Solving
- * CyberGIS for Taming Big Data
- * CyberGIS, Linked Data, and Geospatial Semantics
- * Multi-scale Spatiotemporal Modeling and Simulation
- * Research Frontiers across CyberGIS and Geography
- * Synergistic Advances of CyberGIS and Data Sciences

Possible questions and topics addressed by the Symposium include but are not limited to:

- * How to educate the next-generation workforce with cutting edge CyberGIS and geographic knowledge?
- * What desirable advances in Geography may not be possible without CyberGIS?
- * What new research and education frontiers does CyberGIS represent?
- * What theories and principles of Geography can and should guide the development of CyberGIS?
- * What are major geographic challenges and questions to fuel CyberGIS innovation?
- * What are the best approaches to synergistically advancing CyberGIS and Geography?
- * What scientific breakthroughs does CyberGIS enable that would not otherwise have been possible without it?
- * Why is CyberGIS a complex systems science?

If you are interested in organizing any sessions as part of the symposium, please contact Shaowen Wang via shaowen@illinois.edu. To present a paper in any of the Symposium sessions, please register and submit your abstract online, and email your presenter identification number (PIN), paper title, and abstract to aag14@cybergis.org by December 3, 2013. We look forward to your submissions and participation!

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