



AAG Annual Meeting

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Paper Session:

4577 Spatiotemporal Symposium: Environmental Change Modeling

is scheduled on Friday, 4/24/2015, from 3:20 PM - 5:00 PM in Alpine 2, Swissôtel, Lucerne Level

Sponsorship(s):

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

Organizer(s):

[Min Sun](#) - George Mason University
[Chaowei Yang](#) - George Mason University
[Keith C. Clarke](#) - University Of California, Santa Barbara

Chair(s):

[Chaowei Yang](#) - George Mason University

Abstract(s):

3:20 PM Author(s): *Minzi Wang - Southern Illinois University
Guangxing Wang - Southern Illinois University Carbondale

Abstract Title: *Wetland Change Detection and Analysis of the Dongting Lake using multi-temporal images*

3:40 PM Author(s): *Joshuah Touyz - George Washington University
Tatiyana V. Apanasovich - George Washington University, Washington DC, USA
Dmitry A. Streletskiy - George Washington University, Washington DC, USA

Abstract Title: *Spatial-temporal modeling of permafrost active-layer thickness*

4:00 PM Author(s): *Chunyu Dong - Heidelberg University
Lucas Menzel - Heidelberg University

Abstract Title: *Spatio-temporal analysis of snow cover in Southwestern Germany during 2002-2014 based on MODIS data*

4:20 PM Author(s): *Hongxing Liu - University of Cincinnati
Bo Yang - University of Cincinnati
Kenneth Hinkel - University of Cincinnati
Richard Beck - University of Cincinnati

Abstract Title: *Change detection for thermokarst lakes in the Arctic Coastal Plain of Alaska using multi-temporal satellite radar images*

4:40 PM Author(s): *Anil Shrestha - Northern Illinois University
Wei Luo, Professor - Northern Illinois University

Abstract Title: *Spatiotemporal Variation of Nitrate in the Groundwater of High Plains Aquifer using a Geographical Detector Technique*

Session Description: Many 21st century challenges, such as climate change,

infrastructure, natural disaster and interdisciplinary discovery, exist within a 4-dimensional (3D space and 1D time) framework. Integrating our understanding and methods across all four dimensions would lead to new approaches to help us address the challenges by providing: 1) new methodologies to improve our knowledge; 2) new computational tools and software to advance relevant technologies; and 3) applications to directly address the challenges. For example, how could we save thousands more lives if an earthquake hits a densely populated area or a huge volcano erupted near a major city? A spatiotemporally aware and optimized approach could help advance GIScience, Cyberinfrastructure, Cloud Computing, Big Data, Social Media, Digital Earth and future generations of GIS and geographic solutions. A better understanding of the spatiotemporal linkage among different domains of geography would enable us to address problems that were previously unsolvable.

Following the great success on ST symposium last year, we are organizing a series of sessions (paper and panel, etc.) again at 2015 AAG annual meeting to continue moving the discussion forward and gradually build a research agenda and community. We welcome a wide range of studies that address or utilize spatiotemporal concepts.

Possible topics include, but are not limited to:

What are the important aspects in spatiotemporal study?

What are the most significant breakthroughs in the past 5 years in spatiotemporal research?

What is missing from current research scheme?

What can be achieved in the next 5 years?

What are the spatiotemporal principles in various geographic domains, such as regional science, climatology, public health, cyberinfrastructure, etc.?

What are the approaches to model and represent spatiotemporal principles?

How can spatiotemporal thinking be formulated and used as a methodology and conceptualization process in earth science discovery and applications?

How can spatiotemporal thinking be used in managing and developing cloud computing?

How can spatiotemporal computing be used for addressing Big Data issues?

What is the way to educate the next generation workforce with spatiotemporal knowledge?

How can we best enable the collaboration on spatiotemporal studies?

New Query