Paper Session:

5118 Land Change Modeling: Concepts, Techniques, and Applications

is scheduled on Saturday, 4/13/2013, from 8:00 AM - 9:40 AM in Santa Barbara B, Westin, Lobby Level

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

Organizer(s):
Ting Liu
Xiaojun Yang - Florida State University

Chair(s):
Ting Liu

Abstract(s):

8:00 AM Author(s): *Xue Li - Michigan State University
Joseph Messina - Michigan State University

Abstract Title: *Simulating future urban change under different development strategies, a case study of Urumqi, China*

8:20 AM Author(s): *Zhaoya Gong - University of North Carolina at Charlotte
Jean-Claude Thill - University of North Carolina at Charlotte
Wenwu Tang - University of North Carolina at Charlotte

Abstract Title: *Multi-scale Modeling of Land-use Change in A Polycentric Urban System: A Cyber-enabled High-performance Computing Approach*

8:40 AM Author(s): *Justin Laue - University of Texas
Eugenio Arima - University of Texas

Abstract Title: *Land Abandonment and Forest Regrowth in the Brazilian Amazon*

9:00 AM Author(s): *Ziyue Chen -

Abstract Title: *Modelling 3D Urban Landscape Ecology Using Airborne Lidar Data*

9:20 AM Author(s): *Ting Liu - Florida State University
Xiaojun Yang - Florida State University

Abstract Title: *Simulating Residential Development Decisions Through An Agent-Based Approach*

Session Description: Land changes are a complex process in which human and natural systems interact over space and time. And geospatial modeling techniques can enhance our understanding of the land change process. Over the past several decades, various modeling approaches have been developed, including statistical models, rule-based models, mathematical optimization, cellular automata, agent-based models, and hybrid models. They provide insights into the functioning of land changes at aggregated and individual levels, across various spatio-temporal scales, as well as in human, natural, or

the coupled systems. This session will provide a forum for researchers to exchange new ideas in theories, methods, and techniques relating to the development of geospatial models for land change simulation. Topics may include but are not limited to:

- Issues in model conceptualization: representation of complexity, human-environment interactions, decision-making, and spatial and temporal scales;
- Issues in model implementation: data integration, computational algorithms, and methods of parameter calibration;
- Issues in model validation: landscape pattern characterization, uncertainty, and error measurements; and
- Issues in model applications: scenario design, implementation, and applications.

New Query