GUEST EDITORIAL PREFACE

Special Issue on Spatial Temporal Analysis and Modeling

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Space and time are two critical dimensions in a many applied geospatial research projects and a body of literature on space and time analysis and modeling has flourished in the past two decades. To provide a timely snapshot of current research that utilizes space and time methods, the Spatial Analysis and Modeling Specialty Group of the Association of American Geographers and the editorship of the *International Journal of Applied Geospatial Research* (IJAGR) decided to organize a special issue of IJAGR on the theme of spatial temporal analysis and modeling. The first call for papers was circulated in July 2010. We received 18 submissions. After a double-blind peer review process, we accepted 9 for publication in the special issue, along with an overview paper compiled by the guest editors.

Similar to many journals, IJAGR has a volume limit for each issue, which makes it necessary to split the papers so 5 papers are included in this issue and the other 4 papers will appear in upcoming IJAGR issues. In this issue, the review paper by Delmelle, Kim, Xiao, and Chen discusses recent developments in the broad area of spatial-temporal data analysis and modeling. The paper by Murray, Koschinsky, Liu, Rey, and Brown highlights the importance of local spatial-temporal perspective to existing research considering hotspot spillover effects in foreclosure research. Kim and Kim's paper utilizes a unique data set named DB1B on airline industry to examine the role of mergers and acquisitions on hub and spoke network performance. Delmelle, Casas, Rojas, and Varela examine the Dengue fever to show the spatial and temporal relations between infected individuals during a dengue-epidemic year. Finally, Zolnik draws on a multilevel statistical view of the unemployment rates to explore how gender affects spatial variation in unemployment.

Equally important are the 4 papers that will appear in later issues of the IJAGR. The paper by Gelernter and Carley employs spatiotemporal social network analysis to show relationships among people at a particular time and location. Abdul, Pausas, Pardo, and Ruiz use remotely sensed ecological data for a spatiotemporal analysis of vegetation response and distribution after forest fire events over selected Mediterranean ecosystems. Mohapatra and Wu examine

the historical trend of urban growth and the associated drivers through econometric analysis. Song and Kim empirically assess the interplay between subway accessibility and land use.

We are grateful to the 29 reviewers who have greatly helped us in screening the papers. Without their intelligent input, it is impossible for us to make the publication of the special real. It is our hope that the papers presented here can lead to a fruitful future of research in the field of spatial temporal analysis and modeling.

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Changjoo Kim is an assistant professor in the Department of Geography, University of Cincinnati. His research and teaching interests are in urban transportation, networks, location analysis, and geographic information science. His research addresses theoretical and substantive questions in urban and economic geography through the application of GIS methods. He investigates a range of urban and economic concerns including urban sprawl, commuting, airline industry, retailing, etc.

Eric Delmelle is an Assistant Professor with the Department of Geography and Earth Sciences, University of North Carolina (Charlotte). His works focuses on spatial analysis and modeling with GIS, specifically health care accessibility and space-time clustering of disease as well as spatial optimization.

Ningchuan Xiao is an Associate Professor with the Department of Geography at The Ohio State University. His works focuses on geographical information science, location analysis, spatial decision support systems, ecological and environmental modeling, computational geography and genetic and evolutionary algorithms