GUEST EDITORIAL PREFACE

Special Issue on Spatial Intelligence for Urban and Regional Analysis

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With great volumes of geospatial data by virtue of everyday technology or collected through conversion of analog data from the past, the sharing and utilization of these data have presented great challenges for research and application in geographical information science (GIScience). Moreover, the concepts and technologies of Web 2.0 represent demands for user-oriented interaction and collaboration. There is an emerging need to provide users with integrated tools for spatial exploration and spatial analysis in asking research questions across multiple disciplines. Such an analysis system and platform would use a variety of data which can be modeled by applying spatial analysis, time series, and panel methods. This practice will open up a rich empirical context for interdisciplinary studies and policy interventions.

GIS and space-time analysis have become a common interest in a growing research community of social sciences, aiming at analyzing spatial structures and patterns of socioeconomic trends. Spatial intelligence allows efficient data integration for large-volume and near real time spatial and non-spatial data (multi-source data). At the same time, space-time analysis, data mining, modeling and report generation can make new research opportunities possible in an integrated and interactive environment. Through integrating historical, social and natural science data into GIS, spatial intelligence supports research in the human and natural components of local, regional and global change. In addition it allows users who have very few GIS skills to conduct space-time data analysis easily and effectively. Hence, spatial intelligence serves as a research and education platform to raise space-time awareness across disciplines and among the general public by delivering geographic information service in the data-rich age which is featured by the unprecedented terabytes and petabytes of digitized

data. This special issue is intended to expand the available body of space-time analysis and GIS education literature by exploring applied research of urban and regional analysis based on spatial intelligence, which promotes collaborative research in geospatial studies, the use of geospatial data in teaching, and data sharing. Five peer-reviewed manuscripts were accepted for this special issue of the *International Journal of Applied Geospatial Research*. We thank all authors and reviewers for their contributions to the special issue.

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Guest Editors
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Xinyue Ye is Director of Computational Social Science Lab and an Assistant Professor of GIS at the Department of Geography at Kent State University, Ohio, USA. He is Associate Editor of Stochastic Environmental Research & Risk Assessment (SCI Journal). His work on comparative space-time analytical implementation won national first-place award of "research and analysis" by University Economic Development Association in 2011. He got emerging scholar award from AAG's Regional Development and Planning Specialty Group in 2012. Dr. Ye earned his B.S. in Urban Planning from Zhejiang University, M.A. in Human Geography from University of Wisconsin-Milwaukee, M.S. in GIS from Eastern Michigan University, and Ph.D. in Geography/ Spatial Analysis from University of California, Santa Barbara and San Diego State University.

Shuming Bao received his B.S. in computer science from Hefei University of Technology in 1982, M.A. in applied statistics from Shanghai University of Finance and Economics in 1987, and Ph.D. in applied economics from Clemson University in 1996. He was a research scientist at MathSoft from 1996-97, and is currently the director of the China Data Center at the University of Michigan in Ann Arbor. He was the founding director of the Key Lab of Poyang Lake Ecological Environment and Resources Development of the Ministry of Education at Jiangxi Normal University from 2004 to 2009, and the founding director of the Lab for Urban and Regional Analysis of East China University of Science and Technology from 2009 to current. His primary research interests are in GIS, regional economics, spatial statistics and econometrics.

Bin Li received his undergraduate and graduate degrees in Geography from South China Normal University (1982), University of Nebraska (1987), and Syracuse University (1993) respectively, with an emphasis on Geographic Information Science and Economic Geography. He is a professor and former chair at the Department of Geography, Central Michigan University. He is also the Associate Director of the International Collaborative Center for Geocomputation Studies in Wuhan University, China, where he teaches a graduate course in spatial statistics. He is interested in adapting computational and statistical methods to solving geographic problems.