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Preface

In the past decade, the GIScience conference series has become home to researchers from fields such as cognitive science, computer science, engineering, geography, information science, mathematics, philosophy, psychology, social science, environmental sciences, and statistics. Starting in 2000, the conference series has attracted a highly interdisciplinary community of GIScience researchers from academia, industry, and government, who have brought exciting basic research findings to the meetings and advanced our knowledge in all aspects of geographic information science. Since 2006, the conference series has adopted a transatlantic pattern. Following the highly successful Zurich meeting, the conference was hosted this year at Columbus, Ohio, the heart of the American Midwest where many great things have taken place since the mid-1950s.

GIScience 2012 followed the conference tradition of a two-track pattern consisting of full papers of up to 14 pages and extended abstracts of 1,500 words that describe work in progress. This pattern has proven to be rather flexible in accommodating different cultures in the GIScience community. This year we received 57 full-paper submissions and each paper was reviewed by at least three Program Committee members. Among these submissions, 26 were accepted and included in this volume of *Lecture Notes in Computer Science*. These papers were included in the conference program for oral presentation. We also received 127 extended abstract submissions for a later deadline. After being reviewed by at least two committee members, 77 extended abstracts were accepted for oral presentation and 28 for poster presentation.

The accepted full papers and extended abstracts represent a broad range of cutting-edge research in GIScience. While the traditional research topics are well reflected in these papers, emerging topics that involve new research hot-spots such as cyberinfrastructure, big data, and Web-based computing also occupied a significant portion of the conference program. In addition to the papers, we had six keynote speakers and a number of workshops and tutorials. We noted the increasing participation in GIScience from Asian countries such as China, India, Japan, and Korea, in both the Program Committee and paper submissions. We are confident that the conference participants experienced an exciting program in Columbus.

None of the above-mentioned events would have happened without help from the Program Committee. We would like to thank all the committee members for their time and hard work in making it all possible. We are grateful to Oscar Larson at the Association of American Geographers for efficiently organizing the conference events; we would have been lost without his insight in conference management. We appreciate the help from the Zurich team, Sara Fabrikant, Ross Purves,

and Robert Weibel, who organized the 2010 GIScience conference. We thank Tom Cova for his constant help during the preparation process. We also thank all the sponsors who supported various events and activities of the conference. Mostly important, we would like to thank our participants for submitting their important work and making exciting contributions to the conference.

July 2012

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