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Preface

Since its inception in Savannah, Georgia (USA) in 2000, the highly successful GIScience conference series (www.giscience.org) has regularly attracted over 250 researchers from all over the world whose common interest lies in advancing the research frontiers of fundamental aspects of the production, dissemination, and use of geographic information. The conference is bi-annual and brings together leading researchers from all cognate disciplines reflecting the interdisciplinary breadth of GIScience, including (but not limited to) geography, cognitive science, computer science, engineering, information science, mathematics, philosophy, psychology, social science, and (geo)statistics.

Following the, literally breathtaking, conference in Park City, Utah (USA) at 2103m, the sixth GIScience 2010 conference returned to Europe for the second time. The 2010 conference was held in Zurich, Switzerland, a place nominated repeatedly as the world's most livable (if not cheapest!) city. Zurich is also a GIScience landmark, as in 1990 one of the founders of the GIScience conference series, Dr. Michael Goodchild, delivered a memorable talk setting out how fundamental research on GISystems could turn into GIScience at the very same conference location during the Spatial Data Handling Symposium.

To accommodate the variety of publication cultures within an interdisciplinary research community, GIScience 2010 provided, as in previous years, two refereed submission tracks: full papers (15 pages), and extended abstracts (1500 words). In all, 87 full papers were each thoroughly reviewed by at least three Program Committee members, of which 22 were selected for a 30-minute presentation at the conference and included in this volume. Of the 146 submitted extended abstracts describing work in progress that were submitted and reviewed by Program Committee members, 98 were accepted for either oral or poster presentation. All extended abstracts appeared in a single proceedings volume disseminated as a USB stick at the conference, and are permanently archived online at the GIScience 2010 website (www.giscience2010.org).

The GIScience 2010 proceedings serve as impressive evidence of the maturity and continuing growth of this still young, but vibrant, and interdisciplinary research arena. Despite the economic downturn, 2010 saw the second highest total number of submissions (after Münster in 2006) in the series. The breadth of the topics in this volume also reflects the breadth of the disciplines involved in fundamental research related to geographic information. While traditional research topics such as spatio-temporal representations, spatial relations, interoperability, geographic databases, cartographic generalization, geographic visualization, navigation, spatial cognition, etc. are alive and well in GIScience, research on how to handle massive and rapidly growing databases of dynamic space-time phenomena at fine-grained resolution (i.e., moving objects, GPS trajectory data, etc.),

for example, generated through sensor networks, has clearly emerged as a new and popular research frontier in the field.

In addition to the many paper sessions, GIScience2010 also offered four peer-reviewed workshops, and for the first time also four tutorials one day before the main conference. These pre-conference events were intended as complementary opportunities to additionally facilitate dialogue across disciplinary boundaries. Another novelty included a doctoral colloquium after the main conference. Two keynote speakers, two poster sessions, an expert panel, a capstone talk, as well as social events rounded off the stimulating GIScience2010 conference activities. The conference dinner was held on top of Zurich's "house mountain," at the Üetliberg (800m), reachable on foot or by train, with stunning views of the entire city, Lake Zurich and surroundings, including the Swiss Alps.

Organizing a successful conference is not possible without the commitment, additional effort, and diligent help of many people we would like to thank: the international Program Committee for timely and thorough reviews; the sponsors and supporters for providing travel support for students and keynote speakers, for supplying materials at the conference, and for supporting social events. Furthermore, the organizers of the workshops, tutorials, and doctoral colloquium contributed an important part of the overall program. We would also like to thank the Conference Chair Robert Weibel and the Zurich organizing crew for all the hard work behind the scenes. Our special thanks go to Annica Mandola and Lisa Büschlen at the Department of Geography of the University of Zurich, who efficiently handled all administrative matters, and Ross Purves, who not only designed and maintained the conference website, but also swiftly managed the EasyChair conference management system, including respective digital communication and outreach matters. Finally, we would like to thank the most important people at any conference – those who came to present and discuss their work, and who by so doing demonstrated the continuing strength of GIScience as a discipline in its own right.

June 2010

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