Preface

The initiation of the GIScience conference series came with the observation that the GIScience field has a widely fragmented conference landscape. Many papers on geographic information science are presented not only at such specialized meetings as the biennial Conferences on Spatial Information Theory (COSIT), the Symposia on Spatial and Temporal databases (SSTD), the International Symposia on Spatial Accuracy, the Symposia on Spatial Data Handling (SDH), or the ACM Workshop on Geographic Information Systems (ACM GIS), but also at the large meetings of the professional organizations that deal with geographic information systems. The lack of an opportunity to exchange ideas across the disciplinary specializations led to the creation of the GIScience conference series as a forum for all GIScience researchers who are interested in the advances in research in the fundamental aspects of geographic information science. The first meeting was held in Savannah, Georgia, USA, in October 2000 (www.giscience.org/GIScience2000) with 120 paper presentations (selected from the submission of extended abstracts) and over 300 attendees. GIScience 2002 in Boulder, Colorado, USA followed this highly successful inaugural meeting.

A trademark of the research field of geographic information science is the disciplinary mixture of researchers contributing the advancement of our knowledge. One typically finds cognitive scientists, computer scientists, engineers, geographers, information scientists, mathematicians, philosophers, psychologists, social scientists, and statisticians. Of course, this list is neither exhaustive nor exclusive. A critical aspect for the success of the field is the dialog among these researchers, because advances along the many intersections of the contributing disciplines are paramount for geographic information science, requiring the concurrent attention from researchers from multiple disciplines. The GIScience conferences aim to serve as the disciplinary melting pot for geographic information science research.

At the same time, the various scientific disciplines that contribute to geographic information science appear to have their own cultures with respect to publishing research results. Some groups are primarily interested in conference publications that go through a thorough reviewing process, while others, who consider conference papers less important than journal articles, see high-quality fully-refereed conference proceeding papers as a waste of time and energy and, therefore, aim at conference presentations based on the submission of abstracts. GIScience 2002 attempted to address this diversity by giving authors a choice in the type of submission and publication.

Catering to a broad spectrum of geographic information scientists, the conference organizers offered prospective authors several choices to make presentations at GIScience 2002. We organized two cycles of paper submissions, in two separate stages:

- Full papers (of approximately 5,000 words) were refereed by four program committee members each. Out of the 64 submissions, 24 were selected for presentation at the conference and inclusion in this volume.
- Extended abstracts and poster proposals (of 500–1,000 words) were screened by three program committee members each. Out of the 133 submissions, 70 extended abstracts and 20 posters were selected for presentation. The extended abstracts and poster summaries were published in a separate booklet, and are also available through the GIScience 2002 web site (www.giscience.org/GIScience2002/papers).

The deadline for the submission of extended abstracts and poster proposals was after the results of the full-paper review had been announced, to give authors the flexibility to make their choices and to provide the program committee members with an opportunity to take a breath.

A final observation about the disciplinary mixture relates to the program committee. We invited a roster of active GIScience researchers that was intended to cover the field as broadly as possible. It turned out that this program committee was very selective and adhered to high standards. At times, different disciplinary biases surfaced again here – some reviewers expected journal-article quality work as a criterion for the acceptance of a fully-refereed paper. Others expected with every full paper the validation of new concepts in the form a software prototype. Clearly the entire GIScience community is still at an early stage, but the blending of the disciplinary boundaries is making good progress.

The GIScience 2002 program shows that the field is actively moving into new directions. While such traditional topics as map generalization, computational geometry, or models of spatial relations are still being pursued, a significant amount of work is going on in the areas of geo-ontologies and spatial-information retrieval. Often, a goal is to improve access to geospatial information through the web. Another reoccurring theme is related to studies of location-based services, from models of moving objects to concerns about privacy. Spatial analysis methods remains a strong area of GIScience research, while the topics of multi-modal interaction and spatial simulations appear to be on the rise.

GIScience 2002 would have been impossible without the help of many people. Our thanks go to Mike Goodchild, the General Chair of GIScience 2002, and to Art Getis (UCGIS), Werner Kuhn (AGILE), and Doug Richardson (AAG) as co-organizers. Misty Allred (AAG) organized all the logistics. Babs Buttenfield and Jeremy Mennis provided tours and offered facilities at the University of Colorado at Boulder. Jim Farrugia and Matt Duckham gave invaluable help during the formatting of the papers included in this volume. A special thank-you goes to all the members of the program committee, and their helpers. And finally, our thanks go to all the authors who submitted papers to GIScience 2002.

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