

## Foreword by the Editors

The beautiful world cultural heritage city of Salzburg is the setting for the third Geoinformatics Forum (GI\_Forum, [www.gi-forum.org](http://www.gi-forum.org)) symposium from July 07-10, 2009 jointly organised by Salzburg University's Centre for Geoinformatics (ZGIS) and the Institute of GIScience at the Austrian Academy of Sciences (OeAW-GIScience). The interdisciplinary GI\_Forum focuses on an international GIScience audience, communicating in English, and sharing an interest in translating new methods and techniques into a broad range of application domains in geoinformatics. GI\_Forum has become an annual event for a vibrant GI community from academia, industry, and government to analyze progress and to explore new research directions. The symposium is co-located with the highly regarded annual German language conference on Applied Geoinformatics (AGIT, [www.agit.at](http://www.agit.at)).

The proceedings of the GI\_Forum'09 consist of papers on emerging topics and research outcomes related to Geoinformatics methodology. These topics include geospatial data acquisition and GI-technology, advanced spatial analysis, knowledge extraction and geo-visualization, standards and spatial data infrastructure, distributed and mobile services, and dynamic modelling and simulation. GI\_Forum'09 also attracted contributions pertaining to the following specific topics:

- *Digital Cities*  
are meant to provide collaborative environments built upon a fine resolution 3D digital city and its infrastructure today and in the future. Respective contributions address these issues both at a conceptual and computational level.
- *Sustainable Environments*  
Developing and managing our natural, societal and technical environments in a sustainable way is one of today's major challenges. This includes the generation of renewable energy as well as integrated approaches to mobility and regional development and the use of geoinformatics as an indispensable set of tools.
- *Global Monitoring – Observing, Understanding and Visualizing Planet Earth*  
Global initiatives such as Global Earth Observation System of Systems (GEOSS) and the EU-ESA joint programme Global Monitoring for Environment and Security (GMES) provide the open stage for creating, developing and implementing a range of EO-based information services. They build on cutting-edge technology in data integration and processing, spatio-temporal analysis, information extraction and visualization while addressing users' needs.
- *Learning with Geoinformation*  
attracted contributions discussing various issues related to geoinformation in education. The bilingual conference on Learning with Geoinformation hosted such contributions in respective sessions; these sessions are shared with GI\_Forum and in cooperation with the Herodot network ([www.herodot.net](http://www.herodot.net)). These contributions are published in separate proceedings.

The programme committee has selected over 50 contributions to be presented as publications, in discussion sessions or as poster presentations at the GI\_Forum'09. We thank all authors who submitted their contributions to the peer review process! 34 of these contributions qualified for publication in this book based on the review outcomes. More than half

of them were accepted based on a full paper review; they profoundly contribute to further development in the field of GIScience and Technology. At the GI\_Forum'08 we introduced the thematic *discussion session* format to facilitate the exchange of experience and further enhance discussion among the presenters and audience, which proved particularly fruitful for presenting early ideas. Due to excellent feedback by both presenters and audience we decided to again organise a number of sessions in this manner. Summaries of the respective contributions are available as extended abstracts in these proceedings.

The quality of all contributions greatly depends on the critical and constructive feedback from the GI\_Forum programme committee members – an internationally acknowledged team of experts from academia and industry. We thank all of them for this well done, challenging and time consuming task!

Our very special thank-you goes to Gerold Olbrich from Wichmann Verlag for yet another highly professional cooperation that resulted in a high quality book published in time for the GI\_Forum'09.

The GI\_Forum programme was significantly enriched by two keynote speakers, distinguished researchers in the area of GIScience. Sucharita Gopal from Boston University, U.S.A., focused on geosocial networking, considered as one of *the hot* application areas in 2009. Geosocial networking emerges from integrating social networks like Facebook or MySpace and location based services (LBS) enabling people to share their content and location, thereby adding physical context to social networks. In her keynote Mrs. Gopal examined the evolution and technology of geosocial networking, its implications, as well as its place in creating a more socially relevant and friendly GIS.

Claire Jarvis from the University of Leicester, UK, addressed spatial literacy. Spatial literacy has become increasingly important in order to achieve effective teaching and learning in GIScience. In her keynote Mrs. Jarvis first investigated a spatial literacy continuum based on a synthesis of research from a range of disciplines. She examined aspects of spatial literacy in relation to the Body of Knowledge in GIScience and exemplified teaching interventions designed either to compensate for and/or augment spatial literacy in the GIScience learner.

The organisation of the GI\_Forum as well as of the annual AGIT, AGIT EXPO and accompanying events would be impossible without the ZGIS team members who work all year round. Bernhard Zagel supported by Dagmar Baumgartner is in charge of the overall event organisation. Gerald Griesebner and Bernhard Bretz are responsible for a smooth technical operation of the peer review process from paper submission to the published proceedings. Petra Jenewein and Anna Karnassioti are involved with the operational side of GI\_Forum ensuring answered emails and successful symposium registrations. To them and the remaining team members we owe a big thank you!

Annual events of and around AGIT and GI\_Forum also present a showcase of Salzburg's unique scientific environment in the field of Geoinformatics and GIScience: basic and applied research activities at ZGIS and OeAW-GIScience, the research studio "iSpace" and the Province of Salzburg research institute "Salzburg Research" complement academic study programs at a graduate and postgraduate level (the MSc "Applied Geoinformatics", UNIGIS postgraduate online distance learning programs, and an innovative doctoral study program). In such an environment AGIT/GI\_Forum stimulate new creative activities re-

sulting in regional, national and international initiatives, new projects, seminars, and research outputs. For more information visit [www.zgis.at](http://www.zgis.at) and [www.oeaw-giscience.org](http://www.oeaw-giscience.org), an entry to a world wide GIS community network.

Geospatial crossroads @ GI\_Forum is a great opportunity for interconnecting people, ideas and institutions. We hope you will find this book a revealing and motivating reading and hope to see you at the GI\_Forum 2010!

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