

Preface

In February 2008 Andrew U. Frank, head of the Institute for Geoinformation and Cartography of the Vienna University of Technology, celebrated his 60th birthday. This anniversary gave reason to organize a scientific meeting in Vienna on June 30th and July 1st 2008. We invited six renowned key researchers and asked others to propose presentations. The topic of the whole meeting was defined by Andrew U. Frank's main interest: Upcoming fields of research.

The final program consisted of sixteen presentations: six keynote presentations held by Helen Couclelis, Max J. Egenhofer, Mike F. Goodchild, Werner Kuhn, David M. Mark, and Lotfi A. Zadeh and ten short presentations. Approximately 60 researchers from 5 continents used the opportunity to get in contact with new research ideas. A major issue, when creating the schedule, was to put in enough time for discussion. This proved successful and everybody left the meeting with a bunch of new ideas and full of enthusiasm to explore them further.

The only blemish of this wonderful meeting was that there were no adequate proceedings. Although a paperback collection of the papers were printed, they were no match for the quality of the presentations and the discussions. Therefore, we asked Springer if they would be interested in publishing a book containing most of the presented material. Springer agreed and we asked the presenters of the meeting to submit extended versions of their papers. We also informed several other key scientists, who could not participate in the meeting, about the possibility to contribute to the book. Unfortunately, some of the participants of the meeting could not submit their papers because they were already submitted elsewhere. However, we received a fair number of papers and after a review process eighteen papers were selected for publication.

The result of this process lies before you. The eighteen papers are arranged in three groups:

- philosophical background and semantics (chapters 1 to 5),
- mathematical methods (chapters 6 to 13), and
- tools and application (chapters 14 to 18).

In some cases it was difficult where to put the paper. Other editors would have moved some papers to other parts of the book. A reason for this is that papers do not concentrate on a few core topics. The topics are distributed over the wide field of geoinformation science and thus no crisp groups can be determined. I tried to group papers with similar topics and to order the material in a suitable way.

Many people helped were responsible for the success of the meeting and the completion of this book. I want to thank everybody who was involved. Special thanks go to our secretary Edith Unterweger for executing all administrative tasks and to our publication editor Christian Gruber for both his help with the printed results and his performance as a magician at the meeting. The whole team of the Institute for Geoinformation and Cartography supported me in a fantastic way during the process and many details would not have worked without their help. Without the presenters of the meeting and the authors of the chapters in this book I would have had nothing to edit. Thus they earn a big ‘thank you’! Finally, I have to thank the reviewers, who gave invaluable input to all authors and thus helped to guarantee high quality of the final book (in alphabetic order):

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I hope the book inspires young and experienced researchers alike and leads to new ideas. Please keep in mind the motto of the meeting:

If everybody shares his ideas then everybody gains and nobody loses.

Gerhard Navratil

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