

ICM 2002  
Satellite conference

Opening Address or  
Greetings from Karlsruhe

Dear Colleagues,

This conference, a satellite to ICM 2002 in Beijing, on Electronic Information and Communication in Mathematics, is an important event in building and fostering bridges between our globally distributed cultures. The conference topics show very clearly that we have to include a whole set of aspects to be solved or covered in a digital environment, and the responsible scientific committee and both organizers did a good job building up a comprehensive program.

As a member of one of the conference sponsors I want to thank especially our hosts from Tsinghua University for their excellent organization, which gave sufficient room for fruitful discussions (and meals) and for fun during the social events.

It is certainly well received that Springer-Verlag offered to publish these proceedings in the series Lecture Notes in Computer Science, and I personally hope that you will well remember our time in Beijing when rereading the presentations – and you will be reminded of some of your fellow participants.

Now it is already time to think about the follow-up workshop to see what progress has been achieved or where we should concentrate forces to get commonly agreed improved services and communication possibilities. The next ICM is in front of us!

With my warmest regards,  
Prof. Dr.-Ing. Georg F. Schultheiss  
General Director  
Fachinformationszentrum Karlsruhe  
Germany

## Preface

At the end of August 2002 a workshop on Electronic Information and Communication in Mathematics took place at the Tsinghua University in Beijing. The title was “Find and Post Mathematics in the Web,” we were trying to attract contributions from the most important groups worldwide, that are working on this subject. Having date and location tightly connected with the ICM 2002 (International Congress of Mathematicians), organized by the IMU (International Mathematical Union) in Beijing, the workshop benefited significantly from having the ICM participants nearby. In particular it was possible to attract several members of the CEIC (Committee for Electronic Information and Communication), which is an IMU committee in charge of the topic of the workshop. Hence the workshop succeeded in giving a comprehensive survey on the state of the art in electronic information and communication in mathematics.

The detailed topics covered by the presentations were: models and standards for information and meta-information representation; methods and tools for data search, discovery, retrieval and analysis; access to distributed and heterogeneous digital collections (interoperability, scalability, relevant information discovery, meta-information integration); intelligent user interfaces in electronic libraries, agent technologies, co-operative work on the data; advanced technologies of digital collection generation in mathematics; authoring tools and preparation of electronic publications in mathematics; business models for the generation and distribution of digital collections; and data security and information protection. The contributions dealt with both sides, the current practical work for the production and distribution of electronic information in mathematics and the structural investigations for their management.

The papers of this volume cover all these aspects, though it was not possible to include articles from all participants. Two additional articles were accepted from authors who could not participate in the workshop, but where the editors of this volume had the impression that the articles dealt with an important aspect of the programme. Taking into account the rapid development in the area of electronic information and communication in mathematics, the editors decided to publish the proceedings after the workshop. This gave us the chance to include the most recent developments, some even partially obtained shortly after the workshop.

As organizers of the conference the editors want to thank all who contributed to its success. All participants appreciated the hospitality of Tsinghua University. Special thanks should go to the sponsors who made the financing of the event possible. Finally we are very glad that Springer-Verlag agreed to publish the proceedings in their series Lecture Notes in Computer Science.

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