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Conceptual Modeling - ER '98

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on Conceptual Modeling
Singapore, November 16-19, 1998
Proceedings



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Foreword

I would like to welcome you to Singapore and the 17th International Conference on Conceptual Modeling (ER'98). This conference provides an international forum for technical discussion on conceptual modeling of information systems among researchers, developers and users. This is the first time that this conference is held in Asia, and Singapore is a very exciting place to host ER'98. We hope that you will find the technical program and workshops useful and stimulating.

The technical program of the conference was selected by the distinguished program committee consisting of two co-chairs and 83 members. Credit for the excellent final program is due to Tok Wang Ling and Sudha Ram. Special thanks to Frederick H. Lochovsky for selecting interesting panels, and Alain Pirotte for preparation of attractive tutorials. I would also like to thank Yong Meng Teo (Publicity Chair), and the region co-ordinators, Alberto Laender, Erich Neuhold, Shiwei Tang, and Masaaki Tsubaki, for taking care of publicity.

The following three workshops are also organized to discuss specific topics of data modeling and databases: "International Workshop on Data Warehousing and Data Mining" organized by Sham Navathe (Workshop chair) and Mukesh Mohania (Program Committee Chair), "International Workshop on New Database Technologies for Collaborative Work Support and Spatio-Temporal Data Management" organized by Yoshifumi Masunaga, and "International Workshop on Mobile Data Access" organized by Dik L. Lee. Ee Peng Lim took care of all detailed work related to the workshops. I would like to thank all these people who organized the workshops as well as the members of program committees. The workshop proceedings will be published jointly after the workshop.

I would also like to express my appreciation to other organizing committee members, Chuan Heng Ang (Publication), Hock Chuan Chan (Registration), Mong Li Lee and Danny Poo (Local Arrangements), Cheng Hian Goh (Treasurer), and Kian Lee Tan (Industrial Chair). Special thanks to Tok Wang Ling who worked as the central member of the organizing committee, and who made my job very easy. Last, but not least, I would like to express thanks to the members of the Steering Committee, especially to Stefano Spaccapietra (Chair), Bernhard Thalheim (Vice Chair), and Peter Chen (Chair, Emeritus) who invented the widely used ER model and started this influential conference.

Finally I would like to thank all the sponsors and attendees of the conference, and hope that you will enjoy the conference, the workshops, and Singapore to the utmost extent.

Program Chairs' Message

The 17th International Conference on Conceptual Modeling (ER'98) is aimed at providing an international forum for technical discussion among researchers, developers, practitioners, and users whose major emphasis is on conceptual modeling. This conference was originally devoted to the Entity-Relationship (ER) model, but has long since expanded to include all types of semantic data modeling, behavior and process modeling, and object-oriented systems modeling. This year's conference embraces all phases of software development including analysis, specification, design, implementation, evolution, and reengineering. Our emphasis this year has been to bring together industry and academia to provide a unique blend of original research and contributions related to practical system design using conceptual modeling. We have an exciting agenda focusing on emerging topics ranging from conceptual modeling for Web based information systems to data warehousing and industrial case studies on the use of conceptual models.

The conference attracted 95 papers from authors in 31 different countries. Both industry and academic contributions were solicited. Similarly high standards were applied to evaluating both types of submissions. Of the submissions, 32 were accepted for presentation at the conference based on extensive reviews from the Program Committee and external reviewers. The program consists of 26 research papers and 6 industrial papers representing 17 different countries from around the globe. The entire submission and reviewing process was handled electronically, which proved to be a challenge and a blessing at the same time.

A conference of this magnitude is the work of many people. The program committee with the help of external reviewers worked under a tight schedule to provide careful, written evaluations of each paper. Mong Li Lee, Chuan Heng Ang, Choon Leong Chua, and Sew Kiok Toh helped to coordinate the review of our electronic submission and review system, tabulated the scores and distributed reviews to authors. Since the program co-chairs are from two different continents, great coordination was required and achieved through the use of the Internet. Jinsoo Park from the University of Arizona and Mong Li Lee from the National University of Singapore did an outstanding job of assisting the Program Co-Chairs.

On behalf of the entire ER'98 committee, we would like to express our appreciation to all the people who helped with the conference. Finally, our thanks to all of you for attending the conference here in Singapore.

We wish you a week of fun in the enchanting garden city of Singapore!

November 1998

Tok Wang Ling and Sudha Ram
Program Co-Chairs

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Masaaki Tsubaki (Data Research Institute, Japan)

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Tutorials

Multimedia Information Retrieval, Categorisation and Filtering by Carlo Meghini and Fabrizio Sebastini (CNR Pisa, Italy)

Co-design of Structures, Processes and Interfaces for Large-Scale Reactive Information Systems by Bettina Schewe, Klaus-Dieter Schewe and Bernhard Thalheim (Germany)

Advanced OO Modeling: Metamodels and Notations for the Next Millennium by Brian Henderson-Sellers, Rob Allen, Danni Fowler, Don Firesmith, Dilip Patel, and Richard Due

Modeling Information Security - Scope, State-of-the-Art, and Evaluation of Techniques by Gunther Pernul and Essen (Germany)

Spatio-Temporal Information Systems: a Conceptual Perspective by Christine Parent, Stefano Spaccapietra, and Esteban Zimanyi (EPFL Lausanne, Switzerland)

Workshops

Data Warehousing and Data Mining

Chair: Sham Navathe (Georgia Institute of Technology, USA)

Program Chair: Mukesh Mohania (University of South Australia, Australia)

Mobile Data Access

Chair: Dik L. Lee (HK University of Science and Technology, Hong Kong)

New Database Technologies for Collaborative Work Support and Spatio-Temporal Data management

Chair: Yoshifumi Masunaga (University of Library and Info. Science, Japan)

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