Foreword

Database research is a field of computer science where theory meets applications. Many concepts and methods, that were regarded as issues of theoretical interest when initially proposed, are now included in implemented database systems and related products. Examples abound in the fields of database design, query languages, query optimization, concurrency control, statistical databases, and many others.

The papers contained in this volume were presented at ICDT'99, the 7th International Conference on Database Theory, in Jerusalem, Israel, January 10–12, 1999. ICDT is an international forum for research on the principles of database systems. It is a biennial conference, and has a tradition of being held in beautiful European sites: Rome in 1986, Bruges in 1988, Paris in 1990, Berlin in 1992, Prague in 1995, and Delphi in 1997. From 1992, ICDT has been merged with another series of conferences on theoretical aspects of database systems, The Symposium on Mathematical Fundamentals of Database Systems (MFDBS), that was initiated in Dresden (1987), and continued in Visegrad (1989) and Rostock (1991). ICDT aims to enhance the exchange of ideas and cooperation in database research both within unified Europe, and between Europe and the other continents.

ICDT'99 was organized in cooperation with:
    ACM Special Interest Group on Management of Data (Sigmod)
    IEEE Israel Chapter
    ILA — The Israel Association for Information Processing
    EDBT Foundation

ICDT'99 was sponsored by:
    The Hebrew University of Jerusalem
    Tel Aviv University
    Tandem Labs Israel, a Compaq Company

This volume contains 26 technical papers selected from 89 submissions. In addition to the technical papers, the conference featured two invited presentations: *Issues raised by three years of developing PJama: An orthogonally persistent platform for Java^{TM}* by Malcolm Atkinson, and *Novel computational approaches to information retrieval and data mining* by Christos H. Papadimitriou. The conference also featured a state-of-the-art tutorial on *Description logics and their relationships with databases* by Maurizio Lenzerini.

The conference organization committee consisted of Catriel Beeri and Tova Milo. Administrative support was provided by Dan Knassim, Ltd, of Ramat-Gan, Israel.

We wish to thank all the authors who submitted papers for consideration, the program committee members, and the external reviewers for their efforts and for their care in evaluating the submitted papers. We also wish to thank the organizing committee and the staff of Dan Knassim for their efforts with the local organization of the conference and Hartmut Liefke for his help in organizing the submissions and reviews. Last, but not least, we wish to express our appreciation and gratitude to the sponsoring organizations for their assistance and support.

Jerusalem, January 1999

Catriel Beeri and Peter Buneman
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