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Advances in Databases and Information Systems

10th East European Conference, ADBIS 2006
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Proceedings



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Preface

The 10th East-European Conference on Advances in Databases and Information Systems was held on September 3-7, 2006, in Thessaloniki, Greece. It was organized by the Aristotle University of Thessaloniki, the University of Macedonia and the Alexander Technological Educational Institute of Thessaloniki.

The main objective of the ADBIS series of conferences is to provide a forum for the dissemination of research accomplishments and to promote interaction and collaboration between the database and information systems research communities from Central and East European countries and the rest of the world. The ADBIS conferences provide an international platform for the presentation of research on database theory, development of advanced DBMS technologies, and their advanced applications.

The conference continued the long tradition of successful ADBIS conferences held in St. Petersburg (1997), Poznan (1998), Maribor (1999), Prague (2000), Vilnius (2001), Bratislava (2002), Dresden (2003), Budapest (2004) and Tallinn (2005). The conference included regular sessions with technical contributions reviewed and selected by an international Program Committee, as well as invited talks presented by leaders in their fields: Serge Abiteboul, Yannis Ioannidis and Pavel Zezula. ADBIS 2006 was also taken as an opportunity to host two other very popular events: the 2nd ADBIS Workshop on Data Mining and Knowledge Discovery (ADMKD) and the 5th Hellenic Data Management Symposium (HDMS).

ADBIS 2006 attracted 126 submissions from 36 countries from all over the world. This volume contains 29 high-quality papers selected during a rigorous reviewing process by an international Program Committee. The papers cover a wide range of topics of database and information systems research, all of them addressing hot research issues. A further 17 papers, which ranked top after the 29 papers presented in this volume, were accepted to be included in a separate volume of research communications published as a local volume of ADBIS 2006 proceedings, and published electronically in the CEUR Workshop Proceedings series at <http://ceur-ws.org/>.

Many people and organizations contributed to the success of ADBIS 2006. Our thanks go to the authors and invited speakers for their outstanding contribution to the conference and the proceedings. We are very grateful to the Program Committee members for their reviewing and for accepting a heavy workload. Our thanks go also to the additional referees who carefully reviewed the submissions. Without the willingness and enthusiasm of many scientists, who shared their expertise and voluntarily donated their time to thoroughly evaluating the merits of the work submitted, this conference would not have been possible.

We wish to thank all the members of the organizing team, as well as our sponsors, who made the conference possible. Our special thanks go to Apostolos

Papadopoulos and Konstantinos Tarabanis for their general organizational services, Antonis Sidiropoulos and the other members of the Data Eng. Lab of the Aristotle University for maintaining the ADBIS 2006 Web site, and Michalis Vassilakopoulos for the technical preparation of the conference proceedings. We are also grateful to Springer for supporting the publication of the ADBIS 2006 proceedings in their LNCS series. Finally, we would like to express our gratitude to our sponsors: the Ministry of National Education and Religious Affairs, and the IT companies: Altec and G-net.

This volume of proceedings is dedicated with loving memory to Radu Bercary and Alexander Zamulin, members of the ADBIS family, who passed away.

September 2006

Yannis Manolopoulos
Jaroslav Pokorný
Timos Sellis

In Memory of Radu Bercaru and Alexandre Zamulin

Radu Bercaru was Scientific Director of the National Institute for R&D in Informatics (ICI), Bucharest, Romania, and Secretary of the ICI Scientific Council. He was member of the Program and Steering Committees of the ADBIS conferences. He was author/co-author of more than 40 papers published in national and international journals and proceedings. His areas of expertise were conceptual modelling, development of complex database systems, advanced databases, software engineering, national and international project management and consulting services, and team management in information systems development projects. His international experience consisted in local coordination of EU funded research projects and EU/ PHARE projects. In Romania, he was a member of the Evaluation Board for the Romanian Academy and Ministry of Education and Research Grants, of the Working Groups in charge of the Romanian Information Society Strategy, of the Steering Committee of the Romanian Conferences on Computer Science and Information Technologies, and other committees. He was also Director of the ICI R&D Program “Advanced Technologies and Systems for the Knowledge-Based Information Society”. Radu Bercaru died in February 2005.

Alexandre Zamulin held several research positions at the Novosibirsk Branch of the Institute of Precise Mechanics and Computing Machines of the Academy of Sciences of the USSR (AS USSR), at the Computing Center of the Siberian Branch of the Academy of Sciences of the USSR (SB AS USSR) and at the Institute of Informatics Systems of the Siberian Branch of the Russian Academy of Sciences (IIS SB RAS). He was also Associate Professor of the Novosibirsk Electrotechnical Institute and Professor of the Novosibirsk State University, where he was head of the System Informatics chair in the Information Technologies Department. Moreover, Alexandre Zamulin was a member of the Inter-Departmental Commission on Databanks of the USSR State Research and Technology Committee, member of the Commission on Databanks of the AS USSR Coordinating Committee on Computing Machines and member of the Scientific Council and the Dissertation Council on physics and mathematics of the IIS SB RAS. Over a long period, he was a co-chair of the International Conference on Perspectives of System Informatics (PSI). For several years, he was a member of the Program Committee of the ADBIS conferences and contributed to ADBIS conferences with a number of articles. In the course of his scientific activities Alexandre Zamulin published over 100 works, including 2 monographs, devoted to the various aspects of constructing information systems, databases, programming languages, and specification languages. In recent years his chief scientific interests were connected with methods of algebraic specification of programming languages and databases. He was also a member of the editorial boards of many international editions. Alexandre Zamulin died in February 2006.

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