Preface

The well-established International Conference on Database and Expert Systems Applications – DEXA — provides a forum to bring together researchers and practitioners who are actively engaged both in theoretical and practical aspects of database, information, and knowledge systems. It allows participants to exchange ideas, up-to-date information, and experiences in database and knowledge systems and to debate issues and directions for further research and development.

This volume contains papers selected for presentation at the 28th International Conference on Database and Expert Systems Applications (DEXA 2017), which took place in Lyon, France, during August 28–31, 2017.

DEXA 2017 attracted 166 submissions from all over the world. Decision on acceptance or rejection was based on at least three reviews for each submitted paper. After a thorough review process by the Program Committee members, to whom we owe our acknowledgment and special thanks for the time and effort they invested in reviewing papers, the DEXA 2017 chairs accepted 37 full research papers and 40 short research papers yielding an acceptance rate of 22% and 24%, respectively. Full papers were given a maximum of 15 pages in this volume and short papers were given an eight-page limit. Authors of selected papers presented at the conference will be invited to submit extended versions of their papers for publication in the Springer journal *Transactions on Large-Scale Data- and Knowledge-Centered Systems* (TLDKS). The submitted extended versions will undergo a further review process.

Two high-quality keynote presentations on "Structural and Semantic Summarization of RDF Graphs" given by Ioana Manolescu, Senior Researcher, Inria Saclay and Ecole Polytechnique, France, and "Omnipresent Multimedia – Pain and Gain of the Always Connected Paradigm" given by Gabriele Anderst-Kotsis, Johannes Kepler University Linz, Austria, were also featured in the scientific program of DEXA 2017.

This edition of DEXA also featured five international workshops covering a variety of specialized topics:

- AICTSS 2017: First International Workshop on Advanced ICT Technologies for Secure Societies
- BDMICS 2017: Second International Workshop on Big Data Management in Cloud Systems
- BIOKDD 2017: 8th International Workshop on Biological Knowledge Discovery from Data
- TIR 2017: 14th International Workshop on Technologies for Information Retrieval
- UCC 2017: First International Workshop on Uncertainty in Cloud Computing

The success of DEXA 2017 would not have been possible without the hard work and dedication of many people including Gabriela Wagner as manager of the DEXA organization for her highly skillful management and efficient assistance, Chirine Ghedira and Mahmoud Barhamgi as local Organizing Committee chairs for tackling

different aspects of the local organization and their dedication and commitment to this event, Karim Benouaret, Caroline Wintergerst, Christophe Gravier, Omar Boussaid, Fadila Bentayeb, Nadia Kabachi, Nabila Benharkat, Nadia Bennani, Faty Berkaï, and Claire Petrel as local Organizing Committee members for supporting us all the way through, and Vladimir Marik as publication chair for the preparation of the proceedings volumes. Our special thanks and gratitude also go to the general chairs for their continuous encouragement and great support: Abdelkader Hameurlain (IRIT, Paul Sabatier University, Toulouse, France), Amit Sheth (Kno.e.sis - Wright State University, USA), and Roland R. Wagner (Johannes Kepler University, Linz, Austria).

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Last but not least, we want to thank the international community, including all the authors, the Program Committee members, and the external reviewers, for making and keeping DEXA a nice avenue and a well-established conference in its domain.

For readers of this volume, we hope you will find it both interesting and informative. We also hope it will inspire and embolden you to greater achievement and to look further into the challenges that are still ahead in our digital society.

June 2017   Djamal Benslimane
                                                                Ernesto Damiani
                                                              William I. Grosky