

# DBKDA 2012

## Foreword

The Fourth International Conference on Advances in Databases, Knowledge, and Data Applications [DBKDA 2012], held between February 29th and March 5th, 2012 in Saint Gilles, Reunion Island, continued a series of international events covering a large spectrum of topics related to advances in fundamentals on databases, evolution of relation between databases and other domains, data base technologies and content processing, as well as specifics in applications domains databases.

Advances in different technologies and domains related to databases triggered substantial improvements for content processing, information indexing, and data, process and knowledge mining. The push came from Web services, artificial intelligence, and agent technologies, as well as from the generalization of the XML adoption.

High-speed communications and computations, large storage capacities, and load-balancing for distributed databases access allow new approaches for content processing with incomplete patterns, advanced ranking algorithms and advanced indexing methods.

Evolution on e-business, e-health and telemedicine, bioinformatics, finance and marketing, geographical positioning systems put pressure on database communities to push the 'de facto' methods to support new requirements in terms of scalability, privacy, performance, indexing, and heterogeneity of both content and technology.

We take here the opportunity to warmly thank all the members of the DBKDA 2012 Technical Program Committee, as well as the numerous reviewers. The creation of such a broad and high quality conference program would not have been possible without their involvement. We also kindly thank all the authors who dedicated much of their time and efforts to contribute to DBKDA 2012. We truly believe that, thanks to all these efforts, the final conference program consisted of top quality contributions.

Also, this event could not have been a reality without the support of many individuals, organizations, and sponsors. We are grateful to the members of the DBKDA 2012 organizing committee for their help in handling the logistics and for their work to make this professional meeting a success.

We hope that DBKDA 2012 was a successful international forum for the exchange of ideas and results between academia and industry and for the promotion of progress in the fields of databases, knowledge, and data applications.

We are convinced that the participants found the event useful and communications very open. We also hope the attendees enjoyed the charm of Saint Gilles, Reunion Island.

### **DBKDA Chairs:**

Friedrich Laux, Reutlingen University, Germany

Aris M. Ouksel, The University of Illinois at Chicago, USA

Lena Strömbäck, SMHI, Sweden

Serge Miranda, Université de Nice Sophia Antipolis, France