

# Preface

The European Conference on Advances in Databases and Information Systems (ADBIS) celebrates this year its 21st anniversary. Previous ADBIS conferences were held in St. Petersburg (1997), Poznan (1998), Maribor (1999), Prague (2000), Vilnius (2001), Bratislava (2002), Dresden (2003), Budapest (2004), Tallinn (2005), Thessaloniki (2006), Varna (2007), Pori (2008), Riga (2009), Novi Sad (2010), Vienna (2011), Poznan (2012), Genoa (2013), Ohrid (2014), Poitiers (2015), and Prague (2016). The conferences were initiated and supervised by an international Steering Committee consisting of representatives from Armenia, Austria, Bulgaria, the Czech Republic, Cyprus, Estonia, Finland, France, Germany, Greece, Hungary, Israel, Italy, Latvia, Lithuania, FYR of Macedonia, Poland, Russia, Serbia, Slovakia, Slovenia, and the Ukraine.

ADBIS can be considered as one of the most established and recognized conferences in Europe, in the broad field of databases and information systems.

The ADBIS conferences aim at: (1) providing an international forum for presenting research achievements on database theory and practice, development of advanced DBMS technologies, and their applications as well as (2) promoting interaction and collaboration between the database and information systems research communities from European countries and the rest of the world.

This volume contains short research papers, workshop papers, and doctoral consortium papers presented at the 21st European Conference on Advances in Databases and Information Systems (ADBIS), held on 24–27 September, 2017, in Nicosia, Cyprus.

The program of ADBIS 2017 included keynotes, research papers, thematic workshops, and a doctoral consortium. The main conference, workshops, and doctoral consortium had their own international Program Committees. The main conference attracted 107 paper submissions from 33 countries from all continents. After rigorous reviewing by the Program Committee (88 reviewers from 36 countries in the Program Committee and additionally by 26 external reviewers), the 26 papers included in the LNCS proceedings volume were accepted as full contributions, making an acceptance rate of 24%. In addition, 12 papers were selected as short contributions and are included in these proceedings.

The selected short papers span a wide spectrum of topics related to the ADBIS conference. Most of them are related to database and information systems technologies for advanced applications. Typical applications are text databases, streaming data, and graph processing. In addition, there are also papers covering the theory of databases.

Initially, 6 workshops were accepted to be collocated with ADBIS 2017. A workshop, to be run, had to receive at least 6 submissions. Two workshops did not reach this submission level and were canceled. Finally, the following 4 workshops were run: (1) Workshop on Novel Techniques for Integrating Big Data (BigNovelTI), (2) Workshop on Data Science: Methodologies and Use-Cases (DaS), (3) Semantic

Web for Cultural Heritage (SW4CH), and (4) Data-Driven Approaches for Analyzing and Managing Scholarly Data: Systems, Methods, and Applications (AMSD). BigNovelTI received 8 submissions, out of which 4 were accepted for publication in this volume. DaS received 20 submissions, out of which 11 were accepted. Additionally, an invited paper for DaS is included in this volume. SW4CH accepted 6 submissions out of 11. Finally, AMSD accepted 3 submissions out of 8. Thus, the overall acceptance rate for the four workshops is 51%. A summary of the content of these workshops is included in the chapter “New Trends in Databases and Information Systems: Contributions from ADBIS 2017 Workshops”.

The ADBIS Doctoral Consortium (DC) 2017 was a forum where PhD students had a chance to present their research ideas to the database research community, receive inspiration from their peers and feedback from senior researchers, and tie cooperation bounds. DC papers are single-authored and aim at describing the current status of thesis research. Out of six submissions, the DC Committee selected three papers that were presented at the DC, giving an acceptance rate of 50%. Various topics were addressed, i.e., preference-based stream analysis, database reverse engineering, and conceptual object-role modeling by reasoning. The DC chairs would like to thank the DC Program Committee members for their dedicated work.

July 2017

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