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Scalable Uncertainty Management

13th International Conference, SUM 2019
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Preface

These are the proceedings of the 13th International Conference on Scalable Uncertainty Management (SUM 2019) held during December 16–18, 2019, in Compiègne, France. The SUM conferences are annual events which gather researchers interested in the management of imperfect information from a wide range of fields, such as artificial intelligence, databases, information retrieval, machine learning, and risk analysis, and with the aim of fostering the collaboration and cross-fertilization of ideas from different communities.

The first SUM conference was held in Washington DC in 2007. Since then, the SUM conferences have successively taken place in Napoli in 2008, Washington DC in 2009, Toulouse in 2010, Dayton in 2011, Marburg in 2012, Washington DC in 2013, Oxford in 2014, Québec in 2015, Nice in 2016, Granada in 2017, and Milano in 2018.

The 25 full, 4 short, 4 tutorial, 2 invited keynote papers gathered in this volume were selected from an overall amount of 44 submissions (5 of which were desk-rejected or withdrawn by the authors), after a rigorous peer-review process by at least 3 Program Committee members. In addition to the regular presentations, the technical program of SUM 2019 also included invited lectures by three outstanding researchers: Cassio P. de Campos (Eindhoven University of Technology, The Netherlands) on "Scalable Reliable Machine Learning Using Sum-Product Networks," Jérôme Lang (CNRS, Paris, France) on "Computational Social Choice," and Wolfgang Gatterbauer (Northeastern University, Boston, USA) on "Algebraic approximations of the Probability of Boolean Functions."

An originality of the SUM conferences is the care for dedicating a large space of their programs to invited tutorials about a wide range of topics related to uncertainty management, to further embrace the aim of facilitating interdisciplinary collaboration and cross-fertilization of ideas. This edition includes five tutorials, for which we thank Christophe Gonzales, Thierry Denœux, Marie-Jeanne Lesot, Maximilian Schleich, and the Kay R. Amel working group for preparing and presenting these tutorials (four of these tutorials have a companion paper included in this volume).

We would like to thank all of the authors, invited speakers, and tutorial speakers for their valuable contributions. We in particular also express our gratitude to the members of the Program Committee as well as to the external reviewers for their constructive comments on the submissions. We would like to extend our appreciation to all participants of SUM 2019 for their great contribution and the success of the conference. We are grateful to the Steering Committee for their suggestions and support, and to the Organization Committee for their support in the organization for the great work accomplished. We are also very grateful to the Université de Technologie de Compiègne (UTC) for hosting the conference, to the Heudiasyc laboratory and the

MS2T laboratory of excellence for their financial and technical support, and to Springer for sponsoring the Best Paper Award as well as for the ongoing support of its staff in publishing this volume.

December 2019

Nahla Ben Amor
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