

Preface

The International Conference on Scalable Uncertainty Management (SUM) is an annual conference that was launched in 2007 with the goal of exploiting and strengthening the connection between the artificial intelligence and database communities, aiming at bringing together all those researchers interested in the management of uncertain, incomplete, or inconsistent information. Such information originates commonly in applications where significant computational effort is needed to process data in a meaningful and semantically justifiable manner. Typical applications of that kind include databases, the Web, and the life sciences.

Previous SUM conferences have been held in Washington DC (USA) in 2007, in Naples (Italy) in 2008, in Washington DC (USA) in 2009, in Toulouse (France) in 2010, in Dayton (USA) in 2011, in Marburg (Germany) in 2012, again in Washington DC (USA) in 2013, and in Oxford (UK) in 2014.

This volume contains the papers presented at the Ninth International Conference on Scalable Uncertainty Management (SUM 2015) held in Québec City, Canada, September 16–18, 2015.

The call for papers for SUM 2015 solicited submissions in all areas of managing and reasoning with substantial and complex kinds of uncertain, incomplete, or inconsistent information. These include applications in decision support systems, risk analysis, machine learning, belief networks, logics of uncertainty, belief revision and update, argumentation, negotiation technologies, semantic web applications, search engines, ontology systems, information fusion, information retrieval, natural language processing, information extraction, image recognition, vision systems, data and text mining, and the consideration of issues such as provenance, trust, heterogeneity, and complexity of data and knowledge.

The call for papers resulted in 49 submissions, among which 41 were regular papers and 8 were short papers. In a rigorous reviewing process, each submitted article was reviewed by at least three Program Committee members. Based on the review reports and intense discussions, 25 regular papers (one was later withdrawn by the author) and 3 short papers were accepted for publication and presentation at the conference.

In addition, the conference greatly benefited from invited lectures by three world-leading researchers: Jean-Marie De Koninck, Lise Getoor, and Ronald R. Yager. This volume also contains the abstracts of the three invited talks as well as an article for one of them.

A conference such as this can only succeed as a team effort. We would like to thank several people and institutions. We thank all the authors of submitted papers, the invited speakers, and the conference participants. We are grateful to the members of the Program Committee and the external reviewers, to Alfred Hofmann and Springer for providing assistance and advice in the preparation of the proceedings, and to the

creators and maintainers of the conference management system EasyChair. Special thanks go to Patrick Maupin and his team for being our hosts and for the wonderful days in Québec City.

July 2015

Christoph Beierle
Alex Dekhtyar

Scalable Uncertainty Management

9th International Conference, SUM 2015, Québec City,

QC, Canada, September 16-18, 2015. Proceedings

Beierle, C.; Dekhtyar, A. (Eds.)

2015, XIX, 421 p. 77 illus., Softcover

ISBN: 978-3-319-23539-4