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Amol Deshpande Anthony Hunter (Eds.)

Scalable Uncertainty Management

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Preface

Managing uncertainty and inconsistency has been extensively explored in Artificial Intelligence over a number of years. Now with the advent of massive amounts of data and knowledge from distributed heterogeneous, and potentially conflicting, sources, there is interest in developing and applying formalisms for uncertainty and inconsistency widely in systems that need to better manage this data and knowledge.

The annual International Conference on Scalable Uncertainty Management (SUM) has grown out of this wide-ranging interest in managing uncertainty and inconsistency in databases, the Web, the Semantic Web, and AI. It aims at bringing together all those interested in the management of large volumes of uncertainty and inconsistency, irrespective of whether they are in databases, the Web, the Semantic Web, or in AI, as well as in other areas such as information retrieval, risk analysis, and computer vision, where significant computational efforts are needed. After a promising First International Conference on Scalable Uncertainty Management was held in Washington DC, USA in 2007, the conference series has been successfully held in Napoli, Italy, in 2008, and again in Washington DC, USA, in 2009.

This volume contains the papers presented at the Fourth International Conference on Scalable Uncertainty Management (SUM 2010), which was held in Toulouse, France, during 27-29 September 2010. It contains 26 technical papers, which were selected out of 32 submitted papers. The volume also contains abstracts of the two invited talks. To encourage discussion among the conference participants, we invited several experts in topics related to uncertainty management as *discussants*. The discussants were also invited to contribute to the proceedings; we include six such contributions in the proceedings. We wish to thank all authors who submitted papers and all conference participants for fruitful discussions. We are also very grateful to the invited speakers (Christoph Koch, Torsten Schaub), and the discussants (Salem Benferhat, Didier Dubois, Lluís Godo, Eyke Hüllermeier, Ander de Keijzer, Amedeo Napoli, Odile Papini, Olivier Strauss) for their talks. We would like to thank all the Program Committee members and external referees for their timely expertise in carefully reviewing the submissions. Special thanks are due to Florence Boué, Didier Dubois, and Henri Prade, the local organizers of SUM 2010, for their invaluable help.

September 2010

Amol Deshpande
Anthony Hunter

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