Preface

The *Uncertainty in Artificial Intelligence (UAI) Application Workshop* was conceived in 2002, and first held at UAI 2003 in Acapulco, Mexico; the first time a workshop was associated with the Conference. This year marks the Workshop's tenth anniversary, having been held in all years since but 2010. The goal of the workshops has been and will continue to be to look at the practical issues that arise in fielding applications based on the methods explored in the main conference.

Two half-day application Workshops where held on July 15, 2013 in Bellevue, Washington, USA, after the main UAI 2013 conference, along with two other workshops on specific topics. This volume collects the papers from both application workshops.

Application Workshop I: Big Data meet Complex Models

The theme of this workshop was large data sets containing many different kinds of data, and it especially emphasized the procedures that are used to combine data from various sources as part of the modeling process. There were 9 submissions. Each submission was reviewed by at least 1, and on the average 2.8 program committee members. The committee decided to accept 6 papers. Because one paper contained references to proprietary information, one set of authors published only the abstract in this volume.

Application Workshop II: Spatial, Temporal, and Network Models

The theme of this workshop was spatial, temporal, and network data. One may be interested in considering uncertainty in mobile data, generated by a GPS-enabled phone or a car. Another example is this: A scientist develops a probabilistic model in the form of a Bayesian network or a Markov random field. A computer scientist or computer engineer is then concerned about how to efficiently compile and execute the model in order to compute posterior distributions or estimate parameters on a multi-core CPU, a GPU, a Hadoop cluster, or a supercomputer. How well has this model worked, and what are current challenges and opportunities? There were 7 submissions. Each submission was reviewed by 3 program committee members. The committee decided to accept 5 papers, and all of these are being published in this volume.

Thanks to the program committees who put up with all of our nagging, and to all of the authors who came to us with a wide variety different applications, making the job of reading the papers much more interesting. Special thanks to John Mark Agosta of Toyota-ITC who as the UAI Workshop Chair (and past Applications Workshop Chair) helped us work out many details; and to Marina Meila of the University of Washington, who handled the local arrangements for us. Thanks also to EasyChair.org for helping with the submission and review process, to the volunteers who created the ceur-make facility for helping with the proceedings, and the people at CEUR for hosting our final papers.

Finally, thanks to the Association for Uncertainty in Artificial Intelligence (`http://auai.org/`) for hosting this workshop.

July 15, 2013   Russell G. Almond and Ole J. Mengshoel
Bellevue, Washington, USA

Program Committee

Part I: Big Data meet Complex Models

Russell Almond	Florida State University
Marek Druzdzel	University of Pittsburg
Julia Flores	Universidad de Castilla-La Mancha
Lionel Jouffe	Bayesia SAS
Kathryn Laskey	George Mason University
Suzanne Mahoney	Innovative Decisions
Thomas O'Neil	The American Board of Family Medicine
Linda van der Gaag	Utrecht University
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Martínez, Ana María	

Part II: Models for Spatial, Temporal, and Network Data

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Oscar Kipersztok	Boeing
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