

Advanced Methodologies for Bayesian Networks 2017: Preface

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Over the last few decades, graphical models such as Bayesian and Markov networks have become increasingly popular AI approaches. In the International Workshop on Advanced Methodologies for Bayesian Networks (AMBN), we explore methodologies for enhancing the effectiveness of graphical models including modeling, reasoning, model selection, logic-probability relations, and causality. The first and second AMBNs were held in Tokyo and Yokohama in 2010 and 2015, respectively.

This AMBN is the first to publish accepted papers in the Proceedings of the Machine Learning Research. These proceedings contain fifteen contributed papers and six invited talk abstracts that are presented at the third AMBN, held in Kyoto, Japan on September 20-22, 2017. The fifteen contributed papers were selected out of 22 submissions by the program committee with additional help from external reviewers.

The invited talks are by Kun Zhang (Carnegie Mellon University) for causality, Taisuke Sato (AIST) for discrete & logics, Wray Buntine (Monash University, Australia), Tomi Silander (Xerox Research Centre Europe), and Marco Scutari (University of Oxford) for BDeu, and John Halloran (University of California, Davis) for applications. In addition to regular sessions on a variety of graphical model topics, the workshop includes two special sessions: one on causality and another on Bayesian network model selection criteria.

We thank all the people below and others to collaborate the conference. In particular, we appreciate the Artificial Intelligence Research Center (AIRC), National Institute of Advanced Industrial Science and Technology (AIST) and Research Institute for Mathematical Sciences (RIMS), Kyoto University.

Joe Suzuki, Antti Hyttinen, and Brandon Malone,
AMBN 2017 Program Chairs

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