

## \*\*\*\*\* CALL FOR PAPERS \*\*\*\*\*

The third workshop on Advanced Methodologies for Bayesian Networks (AMBN 2015), Sept. 20–22, 2017, Kyoto, Japan.  
<http://ambn2017.bayesnet.org>

## \*\*\*\*\* IMPORTANT DATES \*\*\*\*\*

Paper submission deadline: June 18th, 2017  
 Author notification: July 15th, 2017  
 Camera-ready submission deadline: July 31th, 2017

## \*\*\*\*\* TOPICS \*\*\*\*\*

Over the last few decades, graphical models such as Bayesian and Markov networks have become an increasingly popular AI approach. In this workshop we explore methodologies for enhancing the effectiveness of graphical models in tasks of modeling, reasoning, model selection, logic-probability relations, and causal inference. The exploration of theoretical methodologies is complemented with discussions of practical considerations for applying graphical models in real world settings, covering needs for scalability, incremental learning, parallelization, and so on.

The conference seeks this year novel contributions not just on Bayesian networks but on graphical models, and provides further discussion on theory and applications in a wider international community. To this end, we invited several leading researchers to give talks, and constructed a distinguished program committee.

We welcome contributions related (but not limited) to the following topics:

Probabilistic reasoning using graphical models  
 Combination of probabilistic reasoning and logic in graphical models  
 Learning graphical models  
 Causal discovery and inference  
 Advanced application of graphical models  
 Statistical physics approaches to graphical models

In particular this year, besides those general topics, we plan two special sessions:

BDeu for Bayesian Network Structure Learning  
 Organizer: Joe Suzuki, Invited speakers: Wray Buntine, Marco Scutari

## 2. Causality

Organizer: Antti Hyttinen, Invited speaker: Kun Zhang

[I would add the structured data / time series here and ``Invited speakers: TBA``.]

Beside the three speakers, Professor Taisuke Sato (Japan) is to give his invited talk.

Submitted papers related to the special session topics are especially welcome; the talks will be given in the special sessions. In addition to the already confirmed invited speakers, the workshop will have more invited speakers.

## \*\*\*\*\* Publication \*\*\*\*\*

The conference proceedings will be published in the proceedings track of the Journal of Machine Learning Research (JMLR).

Besides the JMLR proceedings, all papers will be suggested for publication in a special issue of Behaviormetrika, a Springer journal (the papers will be reviewed and they should contain additional new results (30% more)).

## \*\*\*\*\* Organization \*\*\*\*\*

Program co-Chairs:  
 Joe Suzuki (Osaka University)

Brandon Malone (Max Planck Institute, Germany)  
Antti Hyttinen (University of Helsinki, Finland)

Advisors:

Wray Buntine (Monash University, Australia)  
David Heckerman (Microsoft, USA)  
Aapo Hyvarinen (University College London, Finland)  
Petri Myllymaki (University of Helsinki, Finland)  
Peter Spirtes (CMU, USA)  
Milan Studeny (Institute of Information Theory and Automation, Czech Republic)

Program committee:

Russell Almond (Florida State University, USA)  
Alessandro Antonucci (IDSIA, Switzerland)  
Peter van Beek (University of Waterloo, Canada)  
Cassio P. de Campos (Queens University, UK)  
James Cussens (University of York, UK)  
Hei Chan (The Institute of Statistical Mathematics, Japan)  
Arthur Choi (UCLA, UCLA)  
Robin Evans (University of Oxford, UK)  
Luca Faes (University of Trento, Italy)  
Zhigao Guo (University of Florida, USA)  
Takashi Isozaki (Sony CSL, Japan)  
Manabu Kuroki (The Institute of Statistical Mathematics, Japan)  
Peter Lucas (Institute for Computing and Information Sciences, The Netherlands)  
Shin-Ichi Minato (Hokkaido University, Japan)  
Alessio Moneta (Scuola Superiore Sant'Anna, Italy)  
Pekka Parviainen (Aalto University, Finland)  
Jose M. Pena (Linkoping University)  
Marco Scutari (Oxford University, UK)  
Tomi Silander (Xerox, France)  
Maomi Ueno (University of Electro Communications, Japan)  
Changhe Yuan (Queens College/CUNY, USA)  
Jiji Zhang (Lingnan University, Hong Kong)  
Kun Zhang (Carnegie Mellon University, USA)

Local Organization:

Joe Suzuki (Osaka University, Japan)  
Maomi Ueno (University of Electro Communications, Japan)  
Takashi Isozaki (Sony CSL, Japan)  
Alessandro Antonucci (IDSIA, Switzerland)

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