

The Third Workshop on Advanced Methodologies for Bayesian Network
September 20-22, 2017, Kyoto, Japan.

Program

(Besides the invited and contributed talks, PC asked seven talks for discussionin, marked as "*").

Wednesday, September 20

9:15-9:30 opening words

Special Session: Causality (1)

9:30-10:30 Invited Talk: Kun Zhang, "Causal Learning and Machine Learning"

10:30-10:55 Jose M. Peña, "Causal Effect Identification in Alternative Acyclic Directed Mixed Graphs"

10:55-11:20 Jose M. Peña, "Learning Causal AMP Chain Graphs"

11:20-11:50 * Hisayuki Hara, "Identifiability of directed Graphical Models with a Latent Variable"

Special Session: Causality (2)

13:20-13:50 * Mario Nagase, "Causal Discovery with Cyclic Structural Equation Models"

13:50-14:20 * Antti Hyttinen, "A Constraint Optimization Approach to Causal Discovery from Subsampled Time Series Data"

Structure learning (1)

14:20-14:45 Mauro Scanagatta, Giorgio Corani and Marco Zaffalon, "Improved Local Search in Bayesian Networks Structure Learning"

14:45-15:10 Kazuki Natori, Masaki Uto and Maomi Ueno, "Consistent Learning Bayesian Networks with Thousands of Variables"

15:10-15:25 Break

Structure learning (2)

15:25-15:50 Colin Lee and Peter van Beek, "An experimental analysis of anytime algorithms for Bayesian network structure learning"

15:50-16:15 Yun Zhou, Jiang Wang and Cheng Zhu, "Multiple DAGs Learning with Non-negative Matrix Factorization"

16:15-16:40 Zhigao Guo, Xiaoguang Gao, Ruohai Di and Hao Ren, "Learning Bayesian Network Parameters with Domain Knowledge and Insufficient Data"

18:00-20:00 Welcome Party

Thursday, September 21

Discrete & Logic (1)

9:00-10:00 Invited Talk: Taisuke Sato, "Learning probability by comparison"

10:00-10:25 Hei Chan. "Incorporating Uncertain Evidence Into Arithmetic Circuits Representing Probability"

10:25-10:40 Break

Discrete & Logic (2)

Distributions"

10:40-11:05 Shan Gao, Masakazu Ishihata and Shin-Ichi Minato, "Fast Message Passing Algorithm Using ZDD-Based Local Structure Compilation"

11:05-11:30 Teruji Sugaya, Masaaki Nishino, Norihito Yasuda and Shin-Ichi Minato, "Fast Compilation of s-t Paths on a Graph for Counting and Enumeration"

11:30-11:55 Giso Dal, Peter Lucas and Steffen Michels, "Reducing the Cost of Probabilistic Knowledge Compilation"

11:55-12:20 Kei Amii, Masaaki Nishino and Akihiro Yamamoto, "On the Sizes of Decision Diagrams Representing the Set of All Parse Trees of a Context-free Grammar"

12:20-13:50 Lunch

Special Session: BDeu (1)

13:50-14:50 Invited Talk: Wray Buntine, "Backoff methods for estimating parameters of a Bayesian network"

14:50-15:05 Break

Special Session: BDeu (2)

15:05-16:05 Invited Talk: Tomi Silander, "Hyperparameter sensitivity revisited"

16:05-16:35 * Maomi Ueno and Shouta Sugahara, "Does BDe really reflect the prior knowledge? "

18:00-20:00 Banquet

Friday, September 22

Special Session: BDeu (3)

9:00-10:00 Invited Talk: Marco Scutari, "Bayesian Dirichlet Bayesian Network Scores and the Maximum Entropy Principle"

10:00-10:30 * Joe Suzuki, "Branch and Bound for Bayesian network Structure Learning"

10:30-10:45 Break

Machine Learning

10:45-11:10 Keisuke Yamazaki and Yoichi Motomura, "Hidden Node Detection between Two Observable Nodes Based on Bayesian Clustering"

11:10-11:35 Aditya Jitta and Arto Klami, "Few-to-few Cross-domain Object Matching"

Applications (1)

11:35-12:00 * Brandon Malone, "Bayesian Prediction of Translation from Ribosome Profiling"

12:00-13:30 Lunch

Applications (2)

13:30-14:30 Invited Talk John Halloran, "Analyzing Tandem Mass Spectra: A Graphical Models Perspective"

14:30-14:55 Naoto Takahashi and Yuuji Ichisugi, "Restricted Quasi Bayesian Networks as a Prototyping Tool for Computational Models of Individual Cortical Areas"

14:55-15:25 Yoichi Motomura, "Bayesian Networks and Probabilistic Latent Semantic Analysis: AI Applications Utilizing Big Data and its Future"

15:25-15:30 Closing