

The workshop takes place at the Faculty of Social Sciences of Charles University in Jinonice. The address is U kříže 8, Praha 5. The location is easily accessible by the underground (Metro) line B, station Jinonice. The university building is about 300 meters from the underground station. In time of registration on Tuesday afternoon and on Wednesday morning the way to the conference site from the station Jinonice will be marked. Coffee and lunches will be served also in this building.

## Tuesday, September 12

15:00 – 20:00 **Registration**

16:00 – 19:00 **Walking tour**

15:45 Meeting at the registration desk.

A bus will take us near to the Prague Castle and a professional guide will guide us on a tour through Prague. We will visit the Prague Castle, the Lesser Town, Charles Bridge, Old Town Square, and other Prague sightseeings.

## Wednesday, September 13

08:30 – 09:00 **Registration**

09:00 – 09:05 **Workshop Opening - Radim Jiroušek**

09:05 – 10:50 **Inference I (General)**  
**Chair: Linda C. van der Gaag**

09:05 Dynamic Weighting A\* Search-based MAP Algorithm for Bayesian Networks.  
*Xiaoxun Sun, Marek J. Druzdzal, and Changhe Yuan*

09:40 Dynamic importance sampling in Bayesian networks using factorisation of probability trees.  
*Irene Martínez, Carmelo Rodríguez, and Antonio Salmerón*

10:15 Optimal Design with Design Networks.  
*Yang Xiang*

10:50 – 11:20 **Coffee Break**

11:20 – 12:30 **Inference II (Propagation)**  
**Chair: José A. Gámez**

11:20 Loopy Propagation: the Convergence Error in Markov Networks.  
*Janneke H. Bolt*

11:55 Hybrid Loopy Belief Propagation.  
*Changhe Yuan and Marek J. Druzdzal*

12:30 – 14:00 **Lunch**

14:00 – 16:00 **Poster Session I: Decision-Making, Applications**  
**Chair: Kristian G. Olesen**

- Complexity Results for Enhanced Qualitative Probabilistic Networks.  
*Johan Kwisthout and Gerard Tel*
- Preprocessing the MAP Problem.  
*Janneke H. Bolt and Linda C. van der Gaag*
- An Empirical Study of Efficiency and Accuracy of Probabilistic Graphical Models.  
*Jens D. Nielsen and Manfred Jaeger*
- Sensitivity analysis of extreme inaccuracies in Gaussian Bayesian Networks.  
*Miguel A. Gómez-Villegas, Paloma Mañá, and Rosario Susi*
- A Bayesian Network Framework for the Construction of Virtual Agents with Human-like Behaviour.  
*Olav Bangsø, Nicolaj Sønderberg-Madsen, and Finn V. Jensen*
- Predictive Maintenance using Dynamic Probabilistic Networks.  
*Demet Özgür-Ünlüakın and Taner Bilgiç*
- Literature Mining using Bayesian Networks.  
*Péter Antal and András Millinghoffer*
- Decision analysis with influence diagrams using Elvira's explanation facilities.  
*Manuel Luque and Francisco J. Díez*
- Continuous Decision MTE Influence Diagrams.  
*Barry R. Cobb*
- Evaluating Causal effects using Chain Event Graphs.  
*Peter Thwaites and Jim Smith*

16:00 – 16:30 **Coffee Break**

16:30 – 18:15 **Applications to Decision-Making**  
**Chair: Antonio Salmerón**

16:30 Selecting Strategies for Infinite-Horizon Dynamic LIMIDS.  
*Marcel A. J. van Gerven and Francisco J. Díez*

17:05 Diagnosing Lyme disease - Tailoring patient specific Bayesian networks for temporal reasoning.

*Kristian G. Olesen, Ole K. Hejlesen, Ram Dessau, Ivan Beltoft, and Michael Trangeled*

17:40 Abstraction and Refinement for Solving Continuous Markov Decision Processes.  
*Alberto Reyes, Pablo Ibarguengoytia, L. Enrique Sucar, and Eduardo Morales*

19:30 – 22:00 **Welcome Party**

19:00 Meeting at the registration desk.

The Welcome Party takes part in Michnův Palác - a part of Tyršův dům - situated in the heart of the city's Lesser Town (Malá Strana). The address of Michnův Palác is Újezd 40/450, Praha 1.

## Thursday, September 14

09:00 – 10:45 **Theoretical Foundations**  
**Chair: Milan Studený**

09:00 Locally specified credal networks.  
*Alessandro Antonucci and Marco Zaffalon*

09:35 Geometry of rank tests.  
*Jason Morton, Lior Pachter, Anne Shiu, Bernd Sturmfels, and Oliver Wienand*

10:10 Reading Dependencies from the Minimal Undirected Independence Map of a Graphoid that Satisfies Weak Transitivity.  
*Jose M. Peña, Roland Nilsson, Johan Björkegren, and Jesper Tegnér*

10:45 – 11:20 **Coffee Break**

11:20 – 12:30 **Classification I: Theory**  
**Chair: Pedro Larrañaga**

- 11:20 Evidence and Scenario Sensitivities in Naive Bayesian Classifiers.  
*Silja Renooij and Linda van der Gaag*
- 11:55 Multi-dimensional Bayesian Network Classifiers.  
*Linda C. van der Gaag and Peter R. de Waal*

12:30 – 14:00 **Lunch**

14:00 – 16:00 **Poster Session II:  
Theoretical Foundations, Learning,  
Classification. Chair: Jiří Vomlel**

- Lattices for Studying Monotonicity of Bayesian Networks.  
*Linda van der Gaag, Silja Renooij, and Petra Geenen*
- A Short Note on Discrete Representability of Independence Models.  
*Petr Šimeček*
- Probabilistic Independence of Causal Influences.  
*Adam Zagorecki and Marek J. Druzdzel*
- Learning Semi-Markovian Causal Models using Experiments. *Stijn Meganck, Sam Maes, Philippe Leray, and Bernard Manderick*
- Learning the Tree Augmented Naive Bayes Classifier from incomplete datasets.  
*Olivier C.H. François and Philippe Leray*
- Learning Complex Bayesian Network Features for Classification.  
*Péter Antal, András Gézsi, Gábor Hullám, and András Millinghoffer*
- Learning Bayesian Networks Structure using Markov Networks.  
*Christophe Gonzales and Nicolas Jouve*
- Unsupervised naive Bayes for data clustering with mixtures of truncated exponentials.  
*José A. Gámez, Rafael Rumí, and Antonio Salmerón*
- Dependency networks based classifiers: learning models by using independence tests.  
*José A. Gámez, Juan L. Mateo, and José M. Puerta*
- The *Independency tree* model: a new approach for clustering and factorisation.  
*M. Julia Flores, José A. Gámez, and Serafín Moral*

16:00 – 16:30 **Coffee Break**

16:30 – 18:15 **Classification II: Learning Aspects**  
**Chair: Jim Smith**

- 16:30 Bayesian Model Averaging of TAN Models for Clustering.  
*Guzmán Santafé, Jose A. Lozano, and Pedro Larrañaga*
- 17:05 Symmetric Causal Independence Models for Classification.  
*Rasa Jurgelenaite and Tom Heskes*
- 17:40 Discriminative Scoring of Bayesian Network Classifiers: a Comparative Study.  
*Ad Feelders and Jevgenijs Ivanovs*

**Friday, September 15**

09:00 – 10:45 **Learning I (General)**  
**Chair: Marek J. Druzdzel**

- 09:00 Estimation of linear, non-gaussian causal models in the presence of confounding latent variables.  
*Patrik O. Hoyer, Shohei Shimizu, and Antti J. Kerminen*
- 09:35 Some Variations on the PC Algorithm.  
*Joaquín Abellán, Manuel Gómez-Olmedo, and Serafín Moral*
- 10:10 Adapting Bayes Network Structures to Non-stationary Domains.  
*Søren H. Nielsen and Thomas D. Nielsen*

10:45 – 11:20 **Coffee Break**

11:20 – 12:30 **Learning II (Hidden Variables)**  
**Chair: Peter Lucas**

- 11:20 Severity of Local Maxima for the EM Algorithm: Experiences with Hierarchical Latent Class Models.  
*Yi Wang and Nevin L. Zhang*
- 11:55 Quartet-Based Learning of Shallow Latent Variables.  
*Tao Chen and Nevin L. Zhang*

12:30 – 14:00 **Lunch**

14:00 – 15:30 **PGM Programme Committee Meeting**



**The third European Workshop on  
Probabilistic Graphical Models**

**Prague, Czech Republic  
September 12–15, 2006**

**Workshop  
Programme**