ProbCog: Probabilistic Cognition for Technical Systems

[List of Publications]

[C1] Moritz Tenorth, Fernando De la Torre and Michael Beetz,
Learning Probability Distributions over Partially-Ordered Human Everyday Activities,

[C1] Martin Schuster, Dominik Jain, Moritz Tenorth and Michael Beetz,
Learning Organizational Principles in Human Environments,

[PhD1] Dominik Jain,
Probabilistic Cognition for Technical Systems: Statistical Relational Models for High-Level Knowledge Representation, Learning and Reasoning,
Technische Universität München, 2012.

[C1] Dominik Jain, Klaus von Gleissenthall and Michael Beetz,
Bayesian Logic Networks and the Search for Samples with Backward Simulation and Abstract Constraint Learning,

[C2] Paul Maier, Dominik Jain and Martin Sachenbacher,
Compiling AI Engineering Models for Probabilistic Inference,

[C3] Dominik Jain,
Knowledge Engineering with Markov Logic Networks: A Review,
*DKB 2011: Proceedings of the Third Workshop on Dynamics of Knowledge and Belief*, 2011.

[C4] William R. Murray and Dominik Jain,
Modeling Cognitive Frames for Situations with Markov Logic Networks,

[C5] Maier, Paul, Jain, Dominik, Sachenbacher and Martin,
Diagnostic Hypothesis Enumeration vs. Probabilistic Inference for Hierarchical Automata Models,
[J1] Michael Beetz, Moritz Tenorth, Dominik Jain and Jan Bandouch,  
Towards Automated Models of Activities of Daily Life,  

[J2] Michael Beetz, Dominik Jain, Lorenz Mösenlechner and Moritz Tenorth,  
Towards Performing Everyday Manipulation Activities,  

[J3] Moritz Tenorth, Dominik Jain and Michael Beetz,  
Knowledge Representation for Cognitive Robots,  

[C1] Dominik Jain, Andreas Barthels and Michael Beetz,  
Adaptive Markov Logic Networks: Learning Statistical Relational Models with Dynamic Parameters,  

[C2] Dominik Jain and Michael Beetz,  
Soft Evidential Update via Markov Chain Monte Carlo Inference,  

[C3] Paul Maier, Dominik Jain, Stefan Waldherr and Martin Sachenbacher,  
Plan Assessment for Autonomous Manufacturing as Bayesian Inference,  

[C4] Dejan Pangercic, Moritz Tenorth, Dominik Jain and Michael Beetz,  
Combining Perception and Knowledge Processing for Everyday Manipulation,  

[C5] Nico Blodow, Dominik Jain, Zoltan-Csaba Marton and Michael Beetz,  
Perception and Probabilistic Anchoring for Dynamic World State Logging,  

[C6] Moritz Tenorth, Lars Kunze, Dominik Jain and Michael Beetz,  
KNOWROB-MAP – Knowledge-Linked Semantic Object Maps,  

[R1] Moritz Tenorth and Michael Beetz,  
Deliverable D5.2: The RoboEarth Language – Language Specification,  
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[C1] Zoltan Csaba Marton, Radu Bogdan Rusu, Dominik Jain, Ulrich Klank and Michael Beetz,
Probabilistic Categorization of Kitchen Objects in Table Settings with a Composite Sensor,

[C2] Dominik Jain, Lorenz Mösenlechner and Michael Beetz,
Equipping Robot Control Programs with First-Order Probabilistic Reasoning Capabilities,

[C3] Michael Beetz, Jan Bandouch, Dominik Jain and Moritz Tenorth,
Towards Automated Models of Activities of Daily Life,
First International Symposium on Quality of Life Technology – Intelligent Systems for Better Living, Pittsburgh, Pennsylvania USA, 2009.

[C4] Dominik Jain, Paul Maier and Gregor Wylezich,
Markov Logic as a Modelling Language for Weighted Constraint Satisfaction Problems,

[R1] Dominik Jain, Stefan Waldherr and Michael Beetz,
Bayesian Logic Networks,
IAS Group, Fakultät für Informatik, Technische Universität München, 2009.

[C1] Michael Beetz, Freek Stulp, Bernd Radig, Jan Bandouch, Nico Blodow, Mihai Dolha, Andreas Fedrizzi, Dominik Jain, Uli Klank, Ingo Kresse, Alexis Maldonado, Zoltan Marton, Lorenz Mösenlechner, Federico Ruiz, Radu Bogdan Rusu and Moritz Tenorth,
The Assistive Kitchen – A Demonstration Scenario for Cognitive Technical Systems,
IEEE 17th International Symposium on Robot and Human Interactive Communication (RO-MAN), Muenchen, Germany, 1-8, 2008.

[C2] Dominik Jain, Lorenz Mösenlechner and Michael Beetz,
Equipping Robot Control Programs with First-Order Probabilistic Reasoning Capabilities,

[C1] Dominik Jain, Bernhard Kirchlechner and Michael Beetz,
Extending Markov Logic to Model Probability Distributions in Relational Domains,