


Prof. Michael Beetz

List of Publications

[J1] Jan Bandouch, Odest Chadwicke Jenkins and Michael Beetz,
A Self-Training Approach for Visual Tracking and Recognition of Complex Human Activity Patterns,

[J2] Michael Beetz, Dominik Jain, Lorenz Mösenlechner, Moritz Tenorth, Lars Kunze, Nico Blodow and Dejan Pangercic,
Cognition-Enabled Autonomous Robot Control for the Realization of Home Chore Task Intelligence,
*Proceedings of the IEEE, Special Issue on Quality of Life Technology*, 100(8): 2454-2471, 2012.

[J3] Freek Stulp, Andreas Fedrizzi, Lorenz Mösenlechner and Michael Beetz,
Learning and Reasoning with Action-Related Places for Robust Mobile Manipulation,

[J4] Zoltan-Csaba Marton, Florian Seidel, Ferenc Balint-Benczedi and Michael Beetz,
Ensembles of Strong Learners for Multi-cue Classification,
*Pattern Recognition Letters (PRL), Special Issue on Scene Understandings and Behaviours Analysis*, 2012.

[C1] Julius Kammerl AND Nico Blodow AND Radu Bogdan Rusu AND Suat Gedikli AND Michael Beetz AND Eckehard Steinbach,
Real-time Compression of Point Cloud Streams,

[C2] Karol Hausman, Christian Bersch, Dejan Pangercic, Sarah Osentoski, Zoltan-Csaba Marton and Michael Beetz,
Segmentation of Cluttered Scenes through Interactive Perception,

[C3] Ross Kidson, Darko Stanimirovic, Dejan Pangercic and Michael Beetz,
Elaborative Evaluation of RGB-D based Point Cloud Registration for Personal Robots,

[C4] Martin Schuster, Dominik Jain, Moritz Tenorth and Michael Beetz,
Learning Organizational Principles in Human Environments,

[C5] Thomas Rühr, Jürgen Sturm, Dejan Pangercic, Michael Beetz and Daniel Cremers,
A Generalized Framework for Opening Doors and Drawers in Kitchen Environments,


[C17] David Weikersdorfer, David Gossow and Michael Beetz,
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[C18] Christian Bersch, Dejan Pangercic, Sarah Osentoski, Karol Hausman, Zoltan-Csaba Marton, Ryohei Ueda, Kei Okada and Michael Beetz,
Segmentation of Textured and Textureless Objects through Interactive Perception,

[C19] Moritz Tenorth and Michael Beetz,
A Unified Representation for Reasoning about Robot Actions, Processes, and their Effects on Objects,

[C20] Daniel Nyga and Michael Beetz,
Everything Robots Always Wanted to Know about Housework (But were afraid to ask),

[C21] Dejan Pangercic, Moritz Tenorth, Benjamin Pitzer and Michael Beetz,
Semantic Object Maps for Robotic Housework - Representation, Acquisition and Use,

[C22] Alexis Maldonado, Humberto Alvarez-Heredia and Michael Beetz,
Improving robot manipulation through fingertip perception,

[C23] Lucian Cosmin Goron, Zoltan Csaba Marton, Gheorghe Lazea and Michael Beetz,
Segmenting Cylindrical and Box-like Objects in Cluttered 3D Scenes,
7th German Conference on Robotics (ROBOTIK), Munich, Germany, May 2012.

[C24] Zoltan-Csaba Marton, Florian Seidel and Michael Beetz,
Towards Modular Spatio-temporal Perception for Task-adapting Robots,
Postgraduate Conference on Robotics and Development of Cognition (RobotDoC-PhD), a satellite event of the 22nd International Conference on Artificial Neural Networks (ICANN), Lausanne, Switzerland, 2012.

[C25] Reinhard Klapfer, Lars Kunze and Michael Beetz,
Pouring and Mixing Liquids — Understanding the Physical Effects of Everyday Robot Manipulation Actions,
35th German Conference on Artificial Intelligence (KI-2012), Workshop on Human Reasoning and Automated Deduction, Saarbrücken, Germany, September 24–27 2012.
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[C26] Lars Kunze, Andrei Haidu and Michael Beetz,
Making Virtual Pancakes — Acquiring and Analyzing Data of Everyday Manipulation Tasks through Interactive Physics-based Simulations,
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The SHERPA project: smart collaboration between humans and ground-aerial robots for improving rescuing activities in alpine environments,
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[C28] Vladyslav Usenko, Florian Seidel, Zoltan-Csaba Marton and Dejan Pangercic Michael Beetz,
Furniture Classification using WWW CAD Models,
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[J1] Séverin Lemaignan, Raquel Ros, E. Akin Sisbot, Rachid Alami and Michael Beetz,
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[J2] Moritz Tenorth, Ulrich Klank, Dejan Pangercic and Michael Beetz,
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[J3] Markus Waibel, Michael Beetz, Raffaello D’Andrea, Rob Janssen, Moritz Tenorth, Javier Civera, Jos Elfring, Dorian Gálvez-López, Kai Häussermann, J.M.M. Montiel, Alexander Perzylo, Björn Schießle, Oliver Zweigle and René van de Molengraft,
RoboEarth - A World Wide Web for Robots,

[J4] Oscar Martinez Mozos, Zoltan Csaba Marton and Michael Beetz,
Furniture Models Learned from the WWW – Using Web Catalogs to Locate and Categorize Unknown Furniture Pieces in 3D Laser Scans,

[J5] Zoltan Csaba Marton, Dejan Pangercic, Nico Blodow and Michael Beetz,
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[C1] Federico Ruiz-Ugalde, Gordon Cheng and Michael Beetz,
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[C2] Sebastian Albrecht, Karinne Ramirez-Amaro, Federico Ruiz-Ugalde, David Weikersdorfer, Marion Leibold, Michael Ulbrich and Michael Beetz,
Imitating human reaching motions using physically inspired optimization principles,

[C3] Lars Kunze, Mihai Emanuel Dolha, Emitza Guzman and Michael Beetz,
Simulation-based Temporal Projection of Everyday Robot Object Manipulation,
Yolum, Tumer, Stone and Sonenberg(Eds.), Proc. of the 10th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS 2011), Taipei, Taiwan, IFAAMAS, May, 2–6 2011.

[C4] Lars Kunze, Tobias Roehm and Michael Beetz,
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[C5] Daniel Nyga, Moritz Tenorth and Michael Beetz,
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[C6] Ulrich Klank, Daniel Carton and Michael Beetz,
Transparent Object Detection and Reconstruction on a Mobile Platform,

[C7] Michael Beetz, Ulrich Klank, Alexis Maldonado, Dejan Pangercic and Thomas Rühr,
Robotic Roommates Making Pancakes - Look Into Perception-Manipulation Loop,

[C8] Nico Blodow, Zoltan-Csaba Marton, Dejan Pangercic, Thomas Rühr, Moritz Tenorth and Michael Beetz,
Inferring Generalized Pick-and-Place Tasks from Pointing Gestures,

[C9] Nico Blodow, Lucian Cosmin Goron, Zoltan-Csaba Marton, Dejan Pangercic, Thomas Rühr, Moritz Tenorth and Michael Beetz,
Autonomous Semantic Mapping for Robots Performing Everyday Manipulation Tasks in Kitchen Environments,

[C10] Lars Kunze, Mihai Emanuel Dolha and Michael Beetz,
Logic Programming with Simulation-based Temporal Projection for Everyday Robot Object Manipulation,
[C11] Zoltan-Csaba Marton, Nico Blodow and Michael Beetz, 
Advantages of Spatial-temporal Object Maps for Service Robotics, 
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and Abstract Constraint Learning, 
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[C13] Lorenz Mösenlechner and Michael Beetz, 
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[C14] Shulei Zhu, Dejan Pangercic and Michael Beetz, 
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[C16] Ingo Kresse, Ulrich Klank and Michael Beetz, 
Multimodal Autonomous Tool Analyses and Appropriate Application, 
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[C17] Manabu Saito, Haseru Chen, Kei Okada, Masayuki Inaba, Lars Kunze and Michael Beetz, 
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[C18] Dejan Pangercic, Vladimir Haltakov and Michael Beetz, 
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[C19] Asako Kanezaki, Zoltan-Csaba Marton, Dejan Pangercic, Tatsuya Harada, Yasuo Kuniyoshi 
and Michael Beetz, 
Voxelized Shape and Color Histograms for RGB-D, 
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[C20] Zoltan-Csaba Marton, Dejan Pangercic and Michael Beetz,
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[J1] Michael Beetz, Freek Stulp, Piotr Esden-Tempski, Andreas Fedrizzi, Ulrich Klank, Ingo Kresse, Alexis Maldonado and Federico Ruiz,
*Generality and Legibility in Mobile Manipulation*,

[J2] Wykowska, Agnieszka, Maldonado, Alexis, Beetz, Michael, Schuboe and Anna,
*How Humans Optimize Their Interaction with the Environment: The Impact of Action Context on Human Perception*,

[J3] Michael Beetz, Moritz Tenorth, Dominik Jain and Jan Bandouch,
*Towards Automated Models of Activities of Daily Life*,

[J4] Michael Beetz, Dominik Jain, Lorenz Mösenlechner and Moritz Tenorth,
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[J5] Michael Beetz, Martin Buss and Bernd Radig,
*Learning from Humans – Cognition-enabled Computational Models of Everyday Activity*,

[J6] Martin Buss and Michael Beetz,
*CoTeSys – Cognition for Technical Systems*,

[J7] Moritz Tenorth, Dominik Jain and Michael Beetz,
*Knowledge Representation for Cognitive Robots*,

[J8] Michael Beetz and Alexandra Kirsch,
*Special Issue on Cognition for Technical Systems*,

*Artificial Cognition in Production Systems*,
[BC1] Nicolai v. Hoyningen-Huene and Michael Beetz,
Importance Sampling as One Solution to the Data Association Problem in Multi-target Tracking,

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Understanding and Executing Instructions for Everyday Manipulation Tasks from the World Wide Web,

[C2] Moritz Tenorth and Michael Beetz,
Priming Transformational Planning with Observations of Human Activities,

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[C4] Dominik Jain and Michael Beetz,
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[C7] Dejan Pangercic, Moritz Tenorth, Dominik Jain and Michael Beetz,
Combining Perception and Knowledge Processing for Everyday Manipulation,

[C8] Michael Beetz, Lorenz Mösenlechner and Moritz Tenorth,
CRAM – A Cognitive Robot Abstract Machine for Everyday Manipulation in Human Environments,
[C9] Lorenz Mösenlechner, Nikolaus Demmel and Michael Beetz, 
Becoming Action-aware through Reasoning about Logged Plan Execution Traces,  
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pei, Taiwan, October 18-22 2010.

[C11] Alexis Maldonado, Ulrich Klank and Michael Beetz,  
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ger torque information,  
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Putting People’s Common Sense into Knowledge Bases of Household Robots,  
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[C13] Zoltan-Csaba Marton, Dejan Pangercic, Radu Bogdan Rusu, Andreas Holzbach and Mi-
chael Beetz,  
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[C14] Nico Blodow, Dominik Jain, Zoltan-Csaba Marton and Michael Beetz,  
Perception and Probabilistic Anchoring for Dynamic World State Logging,  
*10th IEEE-RAS International Conference on Humanoid Robots*, Nashville, TN, USA, 160- 
166, December 6-8 2010.

[C15] Moritz Tenorth, Lars Kunze, Dominik Jain and Michael Beetz,  
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[C16] Séverin Lemaignan, Raquel Ros, Lorenz Mösenlechner, Rachid Alami and Michael Beetz,  
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[C17] Lucian Cosmin Goron, Zoltan Csaba Marton, Gheorghe Lazea and Michael Beetz,  
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sping,  
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Multi Joint Action in CoTeSys — Setup and Challenges, 

[R2] Moritz Tenorth and Michael Beetz, 
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[J1] Radu Bogdan Rusu, Aravind Sundaresan, Benoit Morisset, Kris Hauser, Motilal Agrawal, Jean-Claude Latombe and Michael Beetz, 
Leaving Flatland: Efficient Real-Time 3D Navigation, 

[J2] Michael Beetz, Nicolai von Hoyningen-Huene, Bernhard Kirchlechner, Suat Gedikli, Francisco Siles, Murat Durus and Martin Lames, 
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[J3] Radu Bogdan Rusu, Jan Bandouch, Franziska Meier, Irfan Essa and Michael Beetz, 
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[BC1] Wykowska, Agnieszka, Maldonado, Alexis, Beetz, Michael, Schuboe and Anna, 
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[C1] Freek Stulp, Erhan Oztop, Peter Pastor, Michael Beetz and Stefan Schaal, 
Compact Models of Motor Primitive Variations for Predictable Reaching and Obstacle Avoidance, 
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[C2] Freek Stulp, Andreas Fedrizzi, Franziska Zacharias, Moritz Tenorth, Jan Bandouch and Michael Beetz,
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[C3] Ulrich Klank, Dejan Pangercic, Radu Bogdan Rusu and Michael Beetz,
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[C4] Zoltan Csaba Marton, Radu Bogdan Rusu, Dominik Jain, Ulrich Klank and Michael Beetz,
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[C5] Radu Bogdan Rusu, Ioan Alexandru Sucan, Brian Gerkey, Sachin Chitta, Michael Beetz and Lydia E. Kavraki,
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[C6] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow, Andreas Holzbach and Michael Beetz,
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[C7] Radu Bogdan Rusu, Nico Blodow, Zoltan Csaba Marton and Michael Beetz,
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[C8] Radu Bogdan Rusu, Andreas Holzbach, Nico Blodow and Michael Beetz,
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[C9] Christoph Ertelt, Thomas Rühr, Dejan Pangercic, Kristina Shea and Michael Beetz,
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[C10] Freek Stulp, Andreas Fedrizzi and Michael Beetz,
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[C11] Florian Friesdorf, Dejan Pangercic, Heiner Bubb and Michael Beetz,
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[C12] Radu Bogdan Rusu, Wim Meeussen, Sachin Chitta and Michael Beetz,
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[C21] Ulrich Klank, Muhammad Zeeshan Zia and Michael Beetz,
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[C22] Dominik Jain, Lorenz Mösenlechner and Michael Beetz,
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[C23] Nicolai von Hoyningen-Huene and Michael Beetz,
*Rao-Blackwellized Resampling Particle Filter for Real-Time Player Tracking in Sports,*

[C24] Andreas Andreakis, Nicolai von Hoyningen-Huene and Michael Beetz,
*Incremental Unsupervised Time Series Analysis Using Merge Growing Neural Gas,*

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*Using Physics- and Sensor-based Simulation for High-fidelity Temporal Projection of Realistic Robot Behavior,*
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[C32] Andreas Leha, Dejan Pangercic, Thomas Rühr and Michael Beetz,
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[C33] Li Sun, Ulrich Klank and Michael Beetz,
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[C34] Zoltan Csaba Marton, Lucian Cosmin Goron, Radu Bogdan Rusu and Michael Beetz,
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