Cognitive Perception

List of Publications

[C1] Ulrich Klank, Lorenz Mösenlechner, Alexis Maldonado and Michael Beetz,
Robots that Validate Learned Perceptual Models,
IEEE International Conference on Robotics and Automation (ICRA), St. Paul, MN, USA,
May 14–18 2012.

[C2] Ferenc Balint-Benczedi, Zoltan-Csaba Marton and Michael Beetz,
Efficient Part-Graph Hashes for Object Categorization,
5th International Conference on Cognitive Systems (CogSys), 2012.

[C3] Zoltan-Csaba Marton, Ferenc Balint-Benczedi, Florian Seidel, Lucian Cosmin Goron and
Michael Beetz,
Object Categorization in Clutter using Additive Features and Hashing of Part-
graph Descriptors,
Proceedings of Spatial Cognition (SC), Abbey Kloster Seeon, Germany, 2012.

[C4] 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.

[C5] 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.

[PhD1] Ulrich Klank,
Everyday Perception for Mobile Manipulation in Human Environments,
Technische Universität München, 2012.

[J1] 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,

[J2] Zoltan Csaba Marton, Dejan Pangeric, Nico Blodow and Michael Beetz,
Combined 2D-3D Categorization and Classification for Multimodal Perception
Systems,

[C1] Ulrich Klank, Daniel Carton and Michael Beetz,
Transparent Object Detection and Reconstruction on a Mobile Platform,
IEEE International Conference on Robotics and Automation (ICRA), Shanghai, China,
May, 9–13 2011.

[C2] Michael Beetz, Ulrich Klank, Alexis Maldonado, Dejan Pangeric and Thomas Rühr,
Robotic Roommates Making Pancakes - Look Into Perception-Manipulation
Loop,
IEEE International Conference on Robotics and Automation (ICRA), Workshop on Mobile
Cop: Cognitive Perception

List of Publications

[C3] Shulei Zhu, Dejan Pangercic and Michael Beetz, 
*Contracting Curve Density Algorithm for Applications in Personal Robotics*, 

[C4] Michael Beetz, Ulrich Klank, Ingo Kresse, Alexis Maldonado, Lorenz Mösenlechner, Dejan 
Pangercic, Thomas Rühr and Moritz Tenorth, 
*Robotic Roommates Making Pancakes*, 

[C5] Ingo Kresse, Ulrich Klank and Michael Beetz, 
*Multimodal Autonomous Tool Analyses and Appropriate Application*, 

[C6] Dejan Pangercic, Vladimir Haltakov and Michael Beetz, 
*Fast and Robust Object Detection in Household Environments Using Vocabulary Trees with SIFT Descriptors*, 

[C7] Asako Kanezaki, Zoltan-Csaba Marton, Dejan Pangercic, Tatsuya Harada, Yasuo Kuniyoshi and Michael Beetz, 
*Voxelized Shape and Color Histograms for RGB-D*, 

[C8] Zoltan-Csaba Marton, Dejan Pangercic and Michael Beetz, 
*Efficient Surface and Feature Estimation in RGBD*, 

[C9] William R. Murray and Dominik Jain, 
*Modeling Cognitive Frames for Situations with Markov Logic Networks*, 

[BC1] Nicolai v. Hoyningen-Huene and Michael Beetz, 
*Importance Sampling as One Solution to the Data Association Problem in Multi-target Tracking*, 
[C1] Zoltan-Csaba Marton, Dejan Pangercic, Nico Blodow, Jonathan Kleinehellefort and Michael Beetz,
*General 3D Modelling of Novel Objects from a Single View*,

[C2] Dejan Pangercic, Moritz Tenorth, Dominik Jain and Michael Beetz,
*Combining Perception and Knowledge Processing for Everyday Manipulation*,

[C3] Zoltan-Csaba Marton, Dejan Pangercic, Radu Bogdan Rusu, Andreas Holzbach and Michael Beetz,
*Hierarchical Object Geometric Categorization and Appearance Classification for Mobile Manipulation*,

[C4] Nico Blodow, Dominik Jain, Zoltan-Csaba Marton and Michael Beetz,
*Perception and Probabilistic Anchoring for Dynamic World State Logging*,

[C5] Lucian Cosmin Goron, Zoltan Csaba Marton, Gheorghe Lazea and Michael Beetz,
*Automatic Layered 3D Reconstruction of Simplified Object Models for Grasping*,
Joint 41st International Symposium on Robotics (ISR) and 6th German Conference on Robotics (ROBOTIK), Munich, Germany, 2010.

[C1] Ulrich Klank, Dejan Pangercic, Radu Bogdan Rusu and Michael Beetz,
*Real-time CAD Model Matching for Mobile Manipulation and Grasping*,

[C2] Dejan Pangercic, Rok Tavcar, Moritz Tenorth and Michael Beetz,
*Visual Scene Detection and Interpretation using Encyclopedic Knowledge and Formal Description Logic*,
Proceedings of the International Conference on Advanced Robotics (ICAR)., Munich, Germany, June 22 - 26 2009.

[C3] Ulrich Klank, Muhammad Zeeshan Zia and Michael Beetz,
*3D Model Selection from an Internet Database for Robotic Vision*,

[C4] Muhammad Zeeshan Zia, Ulrich Klank and Michael Beetz,
*Acquisition of a Dense 3D Model Database for Robotic Vision*,
International Conference on Advanced Robotics (ICAR), 2009.

[C5] Li Sun, Ulrich Klank and Michael Beetz,
*EYEWATCHME - 3D Hand and object tracking for inside out activity analysis*,
[C6] Zoltan Csaba Marton, Lucian Cosmin Goron, Radu Bogdan Rusu and Michael Beetz,  
Reconstruction and Verification of 3D Object Models for Grasping,  
Proceedings of the 14th International Symposium on Robotics Research (ISRR09), Lucerne,  
Switzerland, August 31 – September 3 2009.

[C7] Radu Bogdan Rusu, Andreas Holzbach, Gary Bradski and Michael Beetz,  
Detecting and Segmenting Objects for Mobile Manipulation,  
Proceedings of IEEE Workshop on Search in 3D and Video (S3DV), held in conjunction  
with the 12th IEEE International Conference on Computer Vision (ICCV), Kyoto, Japan,  
September 27 2009.

[C8] Nico Blodow, Radu Bogdan Rusu, Zoltan Csaba Marton and Michael Beetz,  
Partial View Modeling and Validation in 3D Laser Scans for Grasping,  
9th IEEE-RAS International Conference on Humanoid Robots (Humanoids), Paris, France,  
December 7-10 2009.

[C9] Radu Bogdan Rusu, Andreas Holzbach, Rosen Diankov, Gary Bradski and Michael Beetz,  
Perception for Mobile Manipulation and Grasping using Active Stereo,  
9th IEEE-RAS International Conference on Humanoid Robots (Humanoids), Paris, France,  
December 7-10 2009.

[C10] Michael Beetz, Nico Blodow, Ulrich Klank, Zoltan Csaba Marton, Dejan Pangercic and  
Radu Bogdan Rusu,  
CoP-Man – Perception for Mobile Pick-and-Place in Human Living Environments,  
Proceedings of the 22nd IEEE/RSJ International Conference on Intelligent Robots and  
Systems (IROS) Workshop on Semantic Perception for Mobile Manipulation, St. Louis,  
MO, USA, October 11-15 2009.

[J1] Ulrich Klank, N. Padoy, H. Feussner and N. Navab,  
Automatic feature generation in endoscopic images,  

[C1] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow and Michael Beetz,  
Persistent Point Feature Histograms for 3D Point Clouds,  
Proceedings of the 10th International Conference on Intelligent Autonomous Systems (IAS-  
10), Baden-Baden, Germany, 2008.

[C2] Dejan Pangercic, Radu Bogdan Rusu and Michael Beetz,  
3D-Based Monocular SLAM for Mobile Agents Navigating in Indoor Environments,  
Proceedings of the 13th IEEE International Conference on Emerging Technologies and  
Factory Automation (ETFA), Hamburg, Germany, September 15-18, 2008.

[C3] Matthias Wimmer, Shinya Fujie, Freek Stulp, Tetsunori Kobayashi and Bernd Radig,  
An ASM Fitting Method Based on Machine Learning that Provides a Robust  
Parameter Initialization for AAM Fitting,  
Proc. of the International Conference on Automatic Face and Gesture Recognition (FGR08), Amsterdam, Netherlands, September 2008.
[PhD1] Armin Müller,
Transformational Planning for Autonomous Household Robots using Libraries of Robust and Flexible Plans,
Technische Universität München, 2008.

[C1] Armin Müller and Michael Beetz,
Towards a Plan Library for Household Robots,

[C2] Radu Bogdan Rusu, Nico Blodow, Zoltan-Csaba Marton, Alina Soos and Michael Beetz,
Towards 3D Object Maps for Autonomous Household Robots,

[J1] Robert Hanek and Michael Beetz,
The Contracting Curve Density Algorithm: Fitting Parametric Curve Models to Images Using Local Self-adapting Separation Criteria,