List of Publications

2015

Journal Articles

[J1] M Hoernig, M Herrmann and B Radig,
Real-Time Segmentation Methods for Monocular Soccer Videos,
Pattern Recognition and Image Analysis, To appear, 2015.

2014

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[J1] M Herrmann, M Hoernig and B Radig,
Online Multi-player Tracking in Monocular Soccer Videos,
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[J2] M Herrmann, C Mayer and B Radig,
Automatic Generation of Image Analysis Programs,
Pattern Recognition and Image Analysis, 24(3): 400-408, 2014.

[J3] M Hoernig, A Bigontina and B Radig,
A Comparative Evaluation of Current HTML5 Web Video Implementations,

[J4] C Mayer, M Eggers and B Radig,
Cross-database evaluation for facial expression recognition,

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[C1] A Bigontina, M Herrmann, M Hoernig and B Radig,
Human Body Part Classification in Monocular Soccer Images,
9-th Open German-Russian Workshop on Pattern Recognition and Image Understanding,
Koblenz, 12 2014.

[C2] M Hoernig, M Herrmann and B Radig,
Multi Temporal Distance Images for Shot Detection in Soccer Games,
EUSIPCO 2014 (22nd European Signal Processing Conference 2014) (EUSIPCO 2014),
Lisbon, Portugal, sep 2014.

PhDThesis

[PhD1] M Durus,
Ball Tracking and Action Recognition of Soccer Players in TV Broadcast Videos,
Technische Universität München, München, 2014.

[PhD2] L Kunze,
Naive Physics and Commonsense Reasoning for Everyday Robot Manipulation,
Technische Universität München, München, 2014.

[PhD3] F Siles Canales,
Automated Semantic Annotation of Football Games from TV Broadcast,
Technische Universität München, München, 2014.
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[J1] M Eggers, V Dikov, C Mayer, C Steger and B Radig,
Setup and calibration of a distributed camera system for surveillance of laboratory space,

[J2] C Mayer and B Radig,
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[J3] M Tenorth and M Beetz,
KnowRob – A Knowledge Processing Infrastructure for Cognition-enabled Robots. Part 1: The KnowRob System,

[J4] M Tenorth, AC Perzylo and Rand BM Lafrenz,
Representation and Exchange of Knowledge about Actions, Objects, and Environments in the RoboEarth Framework,

Conference and Workshop Papers

[C1] S Amin, M Andriluka, M Rohrbach and B Schiele,
Multi-view Pictorial Structures for 3D Human Pose Estimation,

[C2] K Hausman, F Balint-Benczedi, D Pangercic, ZC Marton, R Ueda, K Okada and M Beetz,
Tracking-based Interactive Segmentation of Textureless Objects,
*IEEE International Conference on Robotics and Automation (ICRA)*, Karlsruhe, Germany, may 2013.

[C3] M Herrmann, C Mayer and B Radig,
Automatic Generation of Image Analysis Programs,

[C4] M Hoernig, M Herrmann and B Radig,
Real Time Soccer Field Analysis from Monocular TV Video Data,

[C5] CML Hughes, M Tenorth and Mand HJ Bienkiewicz,
Action sequencing and error production in stroke patients with apraxia – Behavioral modeling using Bayesian Logic Networks,
*6th International Conference on Health Informatics (HEALTHINF 2013)*, Barcelona, Spain, feb 2013.

[C6] S Kriegel, M Brucker, ZC Marton, T Bodenmuller and M Suppa,
Combining object modeling and recognition for active scene exploration,
[C7] L Mösenlechner and M Beetz,
Fast Temporal Projection Using Accurate Physics-Based Geometric Reasoning,
*IEEE International Conference on Robotics and Automation (ICRA)*, Karlsruhe, Germany, may 2013.

[C8] C Nissler, ZC Marton and M Suppa,
Sample consensus fitting of bivariate polynomials for initializing EM-based modeling of smooth 3D surfaces,

[C9] C Rink, ZC Marton, D Seth, T Bodenmuller and M Suppa,
Feature based particle filter registration of 3D surface models and its application in robotics,

[C10] M Tenorth, FDla Torre and M Beetz,
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*IEEE International Conference on Robotics and Automation (ICRA)*, Karlsruhe, Germany, may 2013.

[C11] T Witzig, J. M Zöllner, D Pangercic, S Osentoski, P Roan, R Jäkel and R Dillmann,
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[J1] A Aldoma, ZC Marton, F Tombari, W Wohlkinger, C Potthast, B Zeisl, RB Rusu, S Gedikli and M Vincze,
Tutorial: Point Cloud Library: Three-Dimensional Object Recognition and 6 DOF Pose Estimation,

[J2] J Bandouch, OC Jenkins and M Beetz,
A Self-Training Approach for Visual Tracking and Recognition of Complex Human Activity Patterns,

[J3] M Beetz, D Jain, L Mösenlechner, M Tenorth, L Kunze, N Blodow and D 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.

[J4] ZC Marton, F Seidel and Fand BM Balint-Benczedi,
Ensembles of Strong Learners for Multi-cue Classification,
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[J5] F Stulp, A Fedrizzi, L Mösenlechner and M Beetz,
Learning and Reasoning with Action-Related Places for Robust Mobile Manipulation,

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[B1] TUM Intelligent Autonomous Systems Group,
TUM-ROS code repository,
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[C1] F Balint-Benczedi, ZC Marton and M Beetz,
Efficient Part-Graph Hashes for Object Categorization,
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[C2] M Beetz, L Mösenlechner, M Tenorth and T Rühr,
CRAM – a Cognitive Robot Abstract Machine,

[C3] M Beetz, M Tenorth, D Pangercic and B Pitzer,
Semantic Object Maps for Household Tasks,

[C4] C Bersch, D Pangercic, S Osentoski, K Hausman, ZC Marton, R Ueda, K Okada and M Beetz,
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[C5] LC Goron, ZC Marton and Gand BM Lazea,
Segmenting Cylindrical and Box-like Objects in Cluttered 3D Scenes,
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[C6] D Gossow, D Weikersdorfer and M Beetz,
Distinctive Texture Features from Perspective-Invariant Keypoints,

[C7] K Hausman, C Bersch, D Pangercic, S Osentoski, ZC Marton and M Beetz,
Segmentation of Cluttered Scenes through Interactive Perception,

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Real-time Compression of Point Cloud Streams,
IEEE International Conference on Robotics and Automation (ICRA), Minnesota, USA, may 2012.


[C14] L Kunze, A Haidu and M Beetz, Making Virtual Pancakes — Acquiring and Analyzing Data of Everyday Manipulation Tasks through Interactive Physics-based Simulations, Poster and Demo Track of the 35th German Conference on Artificial Intelligence (KI-2012), Saarbrücken, Germany, sep 2012.


[C18] ZC Marton, F Balint-Benczedi, Nand GLC Blodow and M Beetz, 
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[C20] D Nyga and M Beetz, 
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[C21] D Pangercic, M Tenorth, B Pitzer and M Beetz, 
Semantic Object Maps for Robotic Housework - Representation, Acquisition 
and Use, 
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moura, Portugal, oct 2012.

[C22] M Rohrbach, S Amin, M Andriluka and B Schiele, 
A Database for Fine Grained Activity Detection of Cooking Activities, 
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United States, jun 2012.

[C23] M Rohrbach, M Regneri, M Andriluka, S Amin, M Pinkal and B Schiele, 
Script Data for Attribute-based Recognition of Composite Activities, 
Computer Vision - ECCV 2012 : 12th European Conference on Computer Vision, Firenze, 

[C24] T Rühr, J Sturm, D Pangercic and Mand CD Beetz, 
A Generalized Framework for Opening Doors and Drawers in Kitchen Envi-
ronments, 
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may 2012.

[C25] M Schuster, D Jain, M Tenorth and M Beetz, 
Learning Organizational Principles in Human Environments, 
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3867-3874, may 2012.

[C26] M Tenorth and M Beetz, 
Exchange of Action-related Information among Autonomous Robots, 

[C27] M Tenorth and M Beetz, 
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AAAI Spring Symposium on Designing Intelligent Robots: Reintegrating AI, Stanford, CA, 
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[C28] M Tenorth and M Beetz,
A Unified Representation for Reasoning about Robot Actions, Processes, and their Effects on Objects,

[C29] M Tenorth, K Kamei, S Satake, T Miyashita and N Hagita,
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[C30] M Tenorth, AC Perzylo and Rand BM Lafrenz,
The RoboEarth language: Representing and Exchanging Knowledge about Actions, Objects, and Environments,

[C31] V Usenko, F Seidel, ZC Marton and DPM Beetz,
Furniture Classification using WWW CAD Models,
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[C32] D Weikersdorfer, D Gossow and M Beetz,
Depth-Adaptive Superpixels,

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

[PhD2] U Klank,
Everyday Perception for Mobile Manipulation in Human Environments,
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[PhD3] C Mayer,
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[J1] S Lemaignan, R Ros, E. A Sisbot, R Alami and M Beetz,
Grounding the Interaction: Anchoring Situated Discourse in Everyday Human-Robot Interaction,

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[J3] C Mayer and B Radig,
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[J6] M Tenorth, U Klank, D Pangeric and M Beetz,
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[B1] S Grötzinger,
Learning Probabilistic Models of Robot Behaviour from Logged Execution Traces,
2011.

[B2] D Pangeric, K Mathe, ZC Marton, LC Goron, MS Opris, Mand TM Schuster, D Jain, T Ruehr and M Beetz,
A Robot that Shops for and Stores Groceries,
aug 2011.

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[C1] S Albrecht, K Ramirez-Amaro, Fand WD Ruiz-Ugalde, M Leibold and Mand BM Ulbrich,
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[C2] A Aldoma, M Vincze, N Blodow, Dand GS Gossow, RB Rusu and GR. Bradski,
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[C3] M Beetz, U Klank, I Kresse, A Maldonado, L Mösenerlechner, D Pangeric and Tand TM Rühr,
Robotic Roommates Making Pancakes,
[C4] M Beetz, U Klank, A Maldonado, D Pangercic and T Rühr,
Robotic Roommates Making Pancakes - Look Into Perception-Manipulation Loop,

[C5] N Blodow, LC Goron, ZC Marton, D Pangercic, T Rühr, M Tenorth and M Beetz,
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[C6] N Blodow, ZC Marton, D Pangercic, T Rühr, M Tenorth and M Beetz,
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[C7] B Gonsior, S Sosnowski, C Mayer, J Blume, B Radig, D Wollherr and K Kühnlenz,
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[C9] D Jain, Kvon Gleissenthall and M Beetz,
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[C10] A Kanezaki, ZC Marton, D Pangercic, T Harada, Y Kuniyoshi and M Beetz,
Voxelized Shape and Color Histograms for RGB-D,

[C11] U Klank, D Carton and M Beetz,
Transparent Object Detection and Reconstruction on a Mobile Platform,
IEEE International Conference on Robotics and Automation (ICRA), Shanghai, China, may 2011.

[C12] I Kresse, U Klank and M Beetz,
Multimodal Autonomous Tool Analyses and Appropriate Application,

[C13] L Kunze, ME Dolha and M Beetz,
Logic Programming with Simulation-based Temporal Projection for Everyday Robot Object Manipulation,
[C14] L Kunze, ME Dolha, E Guzman and M Beetz,  
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Towards Semantic Robot Description Languages,  
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[C16] P Maier, D Jain and M Sachenbacher,  
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[C17] P Maier, D Jain and M Sachenbacher,  
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[C23] D Nyga, M Tenorth and M Beetz,  
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lar Trees with SIFT Descriptors,
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[C25] F Ruiz-Ugalde, G Cheng and M Beetz,
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[C26] M Saito, H Chen, K Okada, Mand KL Inaba and M Beetz,
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[PhD2] N von Hoyningen-Huene,
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[PhD3] M Tenorth,
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[J2] M Beetz, D Jain, L Mösenlechner and M Tenorth,
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[J3] M Beetz and A Kirsch,
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[J5] M Beetz, M Tenorth, D Jain and J Bandouch,
*Towards Automated Models of Activities of Daily Life*,

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

*Plan-based Control of Joint Human-Robot Activities*,

[J8] F Stulp, H Utz, M Isik and G Mayer,
*Implicit Coordination with Shared Belief: A Heterogeneous Robot Soccer Team Case Study*,

[J9] M Tenorth, D Jain and M Beetz,
*Knowledge Representation for Cognitive Robots*,

[J10] A Wykowska, A Maldonado, M Beetz and A Schuboe,
*How Humans Optimize Their Interaction with the Environment: The Impact of Action Context on Human Perception*,

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[BC1] Nv Hoyningen-Huene and M Beetz,
*Importance Sampling as One Solution to the Data Association Problem in Multi-target Tracking*,

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[C1] M Beetz, L Mösenlechner and M Tenorth,
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[C6] D Jain and M Beetz,
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[C7] A Kirsch and Y Chen,
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[C8] A Kirsch and F Cheng,
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[C9] T Kruse and A Kirsch,
Towards Opportunistic Action Selection in Human-Robot Cooperation,
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[C10] T Kruse, A Kirsch, E. A Sisbot and R Alami,
Dynamic Generation and Execution of Human Aware Navigation Plans,

[C11] T Kruse, A Kirsch, E. A Sisbot and R Alami,
Exploiting Human Cooperation in Human-Centered Robot Navigation,
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[C12] L Kunze, M Tenorth and M Beetz,
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[C13] S Lemaignan, R Ros, L Mösenlechner, R Alami and M Beetz, 
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[C16] A Maldonado, U Klank and M Beetz, 
**Robotic grasping of unmodeled objects using time-of-flight range data and finger torque information**, 

[C17] ZC Marton, D Pangercic, N Blodow, J Kleinehellefort and M Beetz, 
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[C18] ZC Marton, D Pangercic, RB Rusu, A Holzbach and M Beetz, 
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[C19] C Mayer, S Sosnowski, K Kühnlenz and B Radig, 
**Towards robotic facial mimicry: system development and evaluation**, 

[C20] L Mösenlechner, N Demmel and M Beetz, 
**Becoming Action-aware through Reasoning about Logged Plan Execution Traces**, 

[C21] D Pangercic, M Tenorth, D Jain and M Beetz, 
**Combining Perception and Knowledge Processing for Everyday Manipulation**, 

[C22] F Ruiz-Ugalde, G Cheng and M Beetz, 
**Prediction of action outcomes using an object model**, 
[C23] S Sosnowski, C Mayer, K Kühlmenz and B Radig,
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[C24] M Tenorth and M Beetz,
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[J3] C Mayer, M Wimmer and B Radig, 
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[C4] M Beetz, N Blodow, U Klank, ZC Marton, D Pangeric and RB Rusu,  
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