Publications

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

[J1] Michael Herrmann, Martin Hoernig and Bernd Radig,  
**Online Multi-player Tracking in Monocular Soccer Videos**,  
*AASRI Procedia*, 8(0): 30 - 37, 2014.

[J2] Herrmann, Michael, Mayer, Christoph, Radig and Bernd,  
**Automatic Generation of Image Analysis Programs**,  
*Pattern Recognition and Image Analysis*, 24(3): 400-408, 2014.

[J3] Martin Hoernig, Andreas Bigontina and Bernd Radig,  
**A Comparative Evaluation of Current HTML5 Web Video Implementations**,  

[J4] Mayer, Christoph, Eggers, Martin, Radig and Bernd,  
**Cross-database evaluation for facial expression recognition**,  

[C1] Andreas Bigontina, Michael Herrmann, Martin Hoernig and Bernd 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] Martin Hoernig, Michael Herrmann and Bernd Radig,  
**Multi Temporal Distance Images for Shot Detection in Soccer Games**,  
*EUSIPCO 2014 (22nd European Signal Processing Conference 2014) (EUSIPCO 2014)*,  
Lisbon, Portugal, September 2014.

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

[PhD2] Kunze and Lars,  
**Nave Physics and Commonsense Reasoning for Everyday Robot Manipulation**,  
Technische Universität München, München, 2014.

[PhD3] Siles Canales and Francisco,  
**Automated Semantic Annotation of Football Games from TV Broadcast**,  
Technische Universität München, München, 2014.


[C7] Msenlehner, Lorenz, Beetz and Michael,
**Fast Temporal Projection Using Accurate Physics-Based Geometric Reasoning**, 

[C8] Nissler, Christian, Marton, Zoltan-Csaba, Suppa and Michael,
**Sample consensus fitting of bivariate polynomials for initializing EM-based modeling of smooth 3D surfaces**, 

[C9] Rink, Christian, Marton, Zoltan-Csaba, Seth, Daniel, Bodenmuller, Tim, Suppa and Michael,
**Feature based particle filter registration of 3D surface models and its application in robotics**, 

[C10] Tenorth, Moritz, Torre, Fernando De la, Beetz and Michael,
**Learning Probability Distributions over Partially-Ordered Human Everyday Activities**, 

[C11] Witzig, Thomas, Zllner, J. Marius, Pangercic, Dejan, Osentoski, Sarah, Roan, Philip, Jkel, Rainer, Dillmann and Rdiger,
**Context Aware Shared Autonomy for Robotic Manipulation Tasks**, 

**Tutorial: Point Cloud Library: Three-Dimensional Object Recognition and 6 DOF Pose Estimation**, 

[J2] Bandouch, Jan, Jenkins, Odest Chadwicke, Beetz and Michael,
**A Self-Training Approach for Visual Tracking and Recognition of Complex Human Activity Patterns**, 

[J3] Beetz, Michael, Jain, Dominik, Msenlehner, Lorenz, Tenorth, Moritz, Kunze, Lars, Boldow, Nico, Pangercic and Dejan,
**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): 24542471, 2012.

**Ensembles of Strong Learners for Multi-cue Classification**, 
*Pattern Recognition Letters (PRL), Special Issue on Scene Understandings and Behaviours Analysis*, 2012.


[C8] Kammerl, Julius, Blodow, Nico, Rusu, Radu Bogdan, Gedikli, Suat, Beetz, Michael, Steinbach and Eckehard, 
Real-time Compression of Point Cloud Streams, 

[C9] Kidson, Ross, Stanimirovic, Darko, Pangercic, Dejan, Beetz and Michael, 
Elaborative Evaluation of RGB-D based Point Cloud Registration for Personal Robots, 

[C10] Klank, Ulrich, Msenlechner, Lorenz, Maldonado, Alexis, Beetz and Michael, 
Robots that Validate Learned Perceptual Models, 

[C11] Klapfer, Reinhard, Kunze, Lars, Beetz and Michael, 
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*, Saarbrucken, Germany, September 2012.

[C12] Kresse, Ingo, Beetz and Michael, 
Movement-aware Action Control Integrating Symbolic and Control-theoretic Action Execution, 

[C13] Kunze, Lars, Beetz, Michael, Saito, Manabu, Azuma, Haseru, Okada, Kei, Inaba and Masayuki, 
Searching Objects in Large-scale Indoor Environments: A Decision-theoretic Approach, 

[C14] Kunze, Lars, Haidu, Andrei, Beetz and Michael, 
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)*, Saarbrucken, Germany, September 2012.

[C15] Maldonado, Alexis, Alvarez-Heredia, Humberto, Beetz and Michael, 
Improving robot manipulation through fingertip perception, 

[C16] Marco, Daniel di, Tenorth, Moritz, Hussermann, Kai, Zweigle, Oliver, Levi and Paul, 
RoboEarth Action Recipe Execution, 


[C20] Nyga, Daniel, Beetz and Michael, Everything Robots Always Wanted to Know about Housework (But were afraid to ask), *2012 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Vila-moura, Portugal, October 2012.


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

[C27] Tenorth, Moritz, Beetz and Michael,  
*Knowledge Processing for Autonomous Robot Control*,  

[C28] Tenorth, Moritz, Beetz and Michael,  
*A Unified Representation for Reasoning about Robot Actions, Processes, and their Effects on Objects*,  

[C29] Tenorth, Moritz, Kamei, Koji, Satake, Satoru, Miyashita, Takahiro, Hagita and Norihiro,  
*Towards a Networked Robot Architecture for Distributed Task Execution and Knowledge Exchange*,  

[C30] Tenorth, Moritz, Perzylo, Alexander Clifford, Lafrenz, Reinhard, Beetz and Michael,  
*The RoboEarth language: Representing and Exchanging Knowledge about Actions, Objects, and Environments*,  

[C31] Usenko, Vladyslav, Seidel, Florian, Marton, Zoltan-Csaba, Beetz and Dejan Pangeric Michael,  
*Furniture Classification using WWW CAD Models*,  
*IROS12 Workshop on Active Semantic Perception (ASP12)*, Vilamoura, Portugal, October 2012.

[C32] Weikersdorfer, David, Gossow, David, Beetz and Michael,  
*Depth-Adaptive Superpixels*,  

[PhD1] Jain and Dominik,  
Technische Universitt Munchen, 2012.

[PhD2] Klank and Ulrich,  
*Everyday Perception for Mobile Manipulation in Human Environments*,  
Technische Universitt Munchen, 2012.

[PhD3] Mayer and Christoph,  
*Facial Expression Recognition With A Three-Dimensional Face Model*,  
Technische Universitt Munchen, Munchen, 2012.
<table>
<thead>
<tr>
<th>Publication</th>
<th>Title</th>
<th>Journal/Conference</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>[J3]</td>
<td>Face model fitting with learned displacement experts and multi-band images</td>
<td><em>Pattern Recognition and Image Analysis</em>, 21(3): 526-529, September 2011</td>
<td></td>
</tr>
<tr>
<td>[B1]</td>
<td>Learning Probabilistic Models of Robot Behaviour from Logged Execution Traces</td>
<td></td>
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<tr>
<td>[B2]</td>
<td>A Robot that Shops for and Stores Groceries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[C1]</td>
<td>Imitating human reaching motions using physically inspired optimization principles</td>
<td><em>11th IEEE-RAS International Conference on Humanoid Robots</em>, Bled, Slovenia, October 2011</td>
<td></td>
</tr>
</tbody>
</table>
Publications

[C2] Aldoma, Aitor, Vincze, Markus, Blodow, Nico, Gossow, David, Gedikli, Suat, Rusu, Radu Bogdan, Bradski and Gary R.,
CAD-model recognition and 6DOF pose estimation using 3D cues,

[C3] Beetz, Michael, Klank, Ulrich, Kresse, Ingo, Maldonado, Alexis, Msenlechner, Lorenz, Pangercic, Dejan, Rhr, Thomas, Tenorth and Moritz,
Robotic Roommates Making Pancakes,
11th IEEE-RAS International Conference on Humanoid Robots, Bled, Slovenia, October 2011.

[C4] Beetz, Michael, Klank, Ulrich, Maldonado, Alexis, Pangercic, Dejan, Rhr and Thomas,
Robotic Roommates Making Pancakes - Look Into Perception-Manipulation Loop,

[C5] Blodow, Nico, Goron, Lucian Cosmin, Marton, Zoltan-Csaba, Pangercic, Dejan, Rhr, Thomas, Tenorth, Moritz, Beetz and Michael,
Autonomous Semantic Mapping for Robots Performing Everyday Manipulation Tasks in Kitchen Environments,

[C6] Blodow, Nico, Marton, Zoltan-Csaba, Pangercic, Dejan, Rhr, Thomas, Tenorth, Moritz, Beetz and Michael,
Inferring Generalized Pick-and-Place Tasks from Pointing Gestures,

[C7] Gonsior, Barbara, Sosnowski, Stefan, Mayer, Christoph, Blume, Jrgen, Radig, Bernd, Dirk Wollherr, Khnlenz and Kolja,
Improving Aspects of Empathy and Subjective Performance for HRI through Mirroring Facial Expressions,

[C8] Jain and Dominik,
Knowledge Engineering with Markov Logic Networks: A Review,
DKB 2011: Proceedings of the Third Workshop on Dynamics of Knowledge and Belief, 2011.

[C9] Jain, Dominik, Gleissenthall, Klaus von, Beetz and Michael,
Bayesian Logic Networks and the Search for Samples with Backward Simulation and Abstract Constraint Learning,
[C10] Kanezaki, Asako, Marton, Zoltan-Csaba, Pangeric, Dejan, Harada, Tatsuya, Kuniyoshi, Yasuo, Beetz and Michael, 
Voxelized Shape and Color Histograms for RGB-D, 

[C11] Klank, Ulrich, Carton, Daniel, Beetz and Michael, 
Transparent Object Detection and Reconstruction on a Mobile Platform, 
IEEE International Conference on Robotics and Automation (ICRA), Shanghai, China, May 2011.

[C12] Kresse, Ingo, Klank, Ulrich, Beetz and Michael, 
Multimodal Autonomous Tool Analyses and Appropriate Application, 
11th IEEE-RAS International Conference on Humanoid Robots, Bled, Slovenia, October 2011.

[C13] Kunze, Lars, Dolha, Mihai Emanuel, Beetz and Michael, 
Logic Programming with Simulation-based Temporal Projection for Everyday Robot Object Manipulation, 

[C14] Kunze, Lars, Dolha, Mihai Emanuel, Guzman, Emitza, Beetz and Michael, 
Simulation-based Temporal Projection of Everyday Robot Object Manipulation, 

[C15] Kunze, Lars, Roehm, Tobias, Beetz and Michael, 
Towards Semantic Robot Description Languages, 
IEEE International Conference on Robotics and Automation (ICRA), Shanghai, China, 55895595, May 2011.

[C16] Maier, Paul, Jain, Dominik, Sachenbacher and Martin, 
Compiling AI Engineering Models for Probabilistic Inference, 

[C17] Maier, Paul, Jain, Dominik, Sachenbacher and Martin, 
Diagnostic Hypothesis Enumeration vs. Probabilistic Inference for Hierarchical Automata Models, 

[C18] Marton, Zoltan-Csaba, Blodow, Nico, Beetz and Michael, 
Advantages of Spatial-temporal Object Maps for Service Robotics, 
[C19] Marton, Zoltan-Csaba, Pangercic, Dejan, Beetz and Michael, 
Efficient Surface and Feature Estimation in RGBD, 

[C20] Mayer, Christoph, Radig and Bernd, 
Learning Displacement Experts from Multi-band Images for Face Model Fitting, 
International Conference on Advances in Computer-Human Interaction, February 2011.

[C21] Murray, William R., Jain and Dominik, 
Modeling Cognitive Frames for Situations with Markov Logic Networks, 

[C22] Msenlechner, Lorenz, Beetz and Michael, 
Parameterizing Actions to have the Appropriate Effects, 

[C23] Nyga, Daniel, Tenorth, Moritz, Beetz and Michael, 
How-Models of Human Reaching Movements in the Context of Everyday Manipulation Activities, 
IEEE International Conference on Robotics and Automation (ICRA), Shanghai, China, May 2011.

[C24] Pangercic, Dejan, Haltakov, Vladimir, Beetz and Michael, 
Fast and Robust Object Detection in Household Environments Using Vocabularly Trees with SIFT Descriptors, 

[C25] Ruiz-Ugalde, Federico, Cheng, Gordon, Beetz and Michael, 
Fast adaptation for effect-aware pushing, 
11th IEEE-RAS International Conference on Humanoid Robots, Bled, Slovenia, October 2011.

[C26] Saito, Manabu, Chen, Haseru, Okada, Kei, Inaba, Masayuki, Kunze, Lars, Beetz and Michael, 
Semantic Object Search in Large-scale Indoor Environments, 

[C27] Zhu, Shulei, Pangercic, Dejan, Beetz and Michael, 
Contracting Curve Density Algorithm for Applications in Personal Robotics, 
11th IEEE-RAS International Conference on Humanoid Robots, Bled, Slovenia, October 2011.
Publications

[PhD1] Bandouch and Jan,
Observing and Interpreting Complex Human Activities in Everyday Environments,
Technische Universitt Mchnen, 2011.

[PhD2] von Hoyningen-Huene and Nicolai,
Real-time Tracking of Player Identities in Team Sports,
Technische Universitt Mchnen, 2011.

[PhD3] Tenorth and Moritz,
Knowledge Processing for Autonomous Robots,
Technische Universitt Mchnen, 2011.

[J1] Beetz, Michael, Buss, Martin, Radig and Bernd,
Learning from Humans Cognition-enabled Computational Models of Everyday Activity,
Knstliche Intelligenz, 2010.

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

[J3] Beetz, Michael, Kirsch and Alexandra,
Special Issue on Cognition for Technical Systems,

[J4] Beetz, Michael, Stulp, Freek, Esden-Tempski, Piotr, Fedrizzi, Andreas, Klank, Ulrich, Kresse, Ingo, Maldonado, Alexis, Ruiz and Federico,
Generality and Legibility in Mobile Manipulation,

[J5] Beetz, Michael, Tenorth, Moritz, Jain, Dominik, Bandouch and Jan,
Towards Automated Models of Activities of Daily Life,

[J6] Buss, Martin, Beetz and Michael,
CoTeSys Cognition for Technical Systems,
Knstliche Intelligenz, 2010.

[J7] Kirsch, Alexandra, Kruse, Thibault, Sisbot, E. Akin, Alami, Rachid, Lawitzky, Martin, Bri, Draen, Hirche, Sandra, Basili, Patrizia, Glasauer and Stefan,
Plan-based Control of Joint Human-Robot Activities,

[J8] Stulp, Freek, Utz, Hans, Isik, Michael, Mayer and Gerd,
Implicit Coordination with Shared Belief: A Heterogeneous Robot Soccer Team Case Study,

[J9] Tenorth, Moritz, Jain, Dominik, Beetz and Michael,
Knowledge Representation for Cognitive Robots,


[C7] Kirsch, Alexandra, Chen and Yuxiang,
A Testbed for Adaptive Human-Robot Collaboration,
33rd Annual German Conference on Artificial Intelligence (KI 2010), 2010.

[C8] Kirsch, Alexandra, Cheng and Fan,
Learning Ability Models for Human-Robot Collaboration,

[C9] Kruse, Thibault, Kirsch and Alexandra,
Towards Opportunistic Action Selection in Human-Robot Cooperation,
33rd Annual German Conference on Artificial Intelligence (KI 2010), 2010.

[C10] Kruse, Thibault, Kirsch, Alexandra, Sisbot, E. Akin, Alami and Rachid,
Dynamic Generation and Execution of Human Aware Navigation Plans,

[C11] Kruse, Thibault, Kirsch, Alexandra, Sisbot, E. Akin, Alami and Rachid,
Exploiting Human Cooperation in Human-Centered Robot Navigation,
IEEE International Symposium in Robot and Human Interactive Communication (Ro-Man), 2010.

[C12] Kunze, Lars, Tenorth, Moritz, Beetz and Michael,
Putting People’s Common Sense into Knowledge Bases of Household Robots,
33rd Annual German Conference on Artificial Intelligence (KI 2010), Karlsruhe, Germany, Springer, 151159, September 2010.

[C13] Lemaignan, Sverin, Ros, Raquel, Msenlechner, Lorenz, Alami, Rachid, Beetz and Michael,
ORO, a knowledge management module for cognitive architectures in robotics,

[C14] Lenz, C., Rder, T., Eggers, Martin, Amin, S., Kisler, T., Radig, Bernd, Panin, G., Knoll and A.,
A Distributed Many-Camera System for Multi-Person Tracking,
Wichert, R., Ruyter and B. de(Eds.), Proceedings of the First International Joint Conference on Ambient Intelligence (AmI 2010), Springer Lecture Notes in Computer Science, November 2010.

[C15] Maier, Paul, Jain, Dominik, Waldherr, Stefan, Sachenbacher and Martin,
Plan Assessment for Autonomous Manufacturing as Bayesian Inference,

[C16] Maldonado, Alexis, Klank, Ulrich, Beetz and Michael,
Robotic grasping of unmodeled objects using time-of-flight range data and finger torque information,
[C17] Marton, Zoltan-Csaba, Pangercic, Dejan, Blodow, Nico, Kleinhekkefort, Jonathan, Beetz and Michael,
General 3D Modelling of Novel Objects from a Single View,

[C18] Marton, Zoltan-Csaba, Pangercic, Dejan, Rusu, Radu Bogdan, Holzbach, Andreas, Beetz and Michael,
Hierarchical Object Geometric Categorization and Appearance Classification for Mobile Manipulation,

[C19] Mayer, Christoph, Sosnowski, Stefan, Khnlenz, Kolja, Radig and Bernd,
Towards robotic facial mimicry: system development and evaluation,

[C20] Msenlechner, Lorenz, Demmel, Nikolaus, Beetz and Michael,
Becoming Action-aware through Reasoning about Logged Plan Execution Traces,
IEEE/RSJ International Conference on Intelligent RObots and Systems., Taipei, Taiwan, 22312236, October 2010.

[C21] Pangercic, Dejan, Tenorth, Moritz, Jain, Dominik, Beetz and Michael,
Combining Perception and Knowledge Processing for Everyday Manipulation,

[C22] Ruiz-Ugalde, Federico, Cheng, Gordon, Beetz and Michael,
Prediction of action outcomes using an object model,

[C23] Sosnowski, Stefan, Mayer, Christoph, Khnlenz, Kolja, Radig and Bernd,
Mirror my emotions! Combining facial expression analysis and synthesis on a robot,
The Thirty Sixth Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB2010), 2010.

[C24] Tenorth, Moritz, Beetz and Michael,
Priming Transformational Planning with Observations of Human Activities,

[C25] Tenorth, Moritz, Kunze, Lars, Jain, Dominik, Beetz and Michael,
KNOWROB-MAP Knowledge-Linked Semantic Object Maps,
[C26] Tenorth, Moritz, Nyga, Daniel, Beetz and Michael,
Understanding and Executing Instructions for Everyday Manipulation Tasks from the World Wide Web,

[C27] Wallhoff, Frank, Rehrl, Tobias, Mayer, Christoph, Radig and Bernd,
Real-Time Face and Gesture Analysis for Human-Robot Interaction,

Multi Joint Action in CoTeSys Setup and Challenges,
CoTeSys-TR-10-01, CoTeSys Cluster of Excellence: Technische Universitt Mnchen &38; Ludwig-Maximilians-Universitt Mnchen, Munich, Germany, June 2010.

[R2] Kirsch and Alexandra,
Be a Robot A Study on Everyday Activities Performed in Real and Virtual Worlds,
TUM-I1006, Technische Universitt Mnchen, 2010.

[R3] Tenorth, Moritz, Beetz and Michael,
Deliverable D5.2: The RoboEarth Language Language Specification,

[J1] Beetz, Michael, Hoyningen-Huene, Nicolai von, Kirchlechner, Bernhard, Gedikli, Suat, Siles, Francisco, Durus, Murat, Lames and Martin,
ASpOGAMo: Automated Sports Game Analysis Models,

[J2] Kirsch and Alexandra,
Robot Learning Language Integrating Programming and Learning for Cognitive Systems,

[J3] Mayer, Christoph, Wimmer, Matthias, Radig and Bernd,
Adjusted Pixel Features for Facial Component Classification,

[J4] Rusu, Radu Bogdan, Bandouch, Jan, Meier, Franziska, Essa, Irfan, Beetz and Michael,
Human Action Recognition using Global Point Feature Histograms and Action Shapes,

[J5] Rusu, Radu Bogdan, Sundaresan, Aravind, Morisset, Benoit, Hauser, Kris, Agrawal, Motilal, Latombe, Jean-Claude, Beetz and Michael,
Leaving Flatland: Efficient Real-Time 3D Navigation,
[BC1] 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,
Kim, Jong-Hwan, Ge, Shuzhi Sam, Vadakkepat, Prahlad, Jesse, Norbert, Al Manum,
Abdullah, Puthusserypady K, Sadasivan, Rckert, Ulrich, Sitte, Joaquin, Witkowski, Ulf,
Nakatsu, Ryohei, Braunl, Thomas, Baltes, Jacky, Anderson, John, Wong, Ching-Chang,
Verner, Igor, Ahlgren and David(Eds.), Progress in Robotics, Springer Berlin Heidelberg,

[BC2] Zh, Michael F., Beetz, Michael, Shea, Kristina, Reinhart, Gunther, Bender, K., Lau, Christ-
ian, Ostgathe, Martin, Vogl, W., Wiesbeck, Mathey, Engelhard, Marco, Ertelt, Christoph,
Rhr, Thomas, Friedrich, M., Herle and S.,
The Cognitive Factory,
355371, 2009.

[C1] Andreakis, Andreas, Hoyningen-Huene, Nicolai von, Beetz and Michael,
Incremental Unsupervised Time Series Analysis Using Merge Growing Neural
Gas,
Prncipe, Jos Carlos, Miikkulainen and Risto(Eds.), WSOM, Springer, Lecture Notes in

[C2] Bandouch, Jan, Beetz and Michael,
Tracking Humans Interacting with the Environment Using Efficient Hierarchi-
ical Sampling and Layered Observation Models,
IEEE Int. Workshop on Human-Computer Interaction (HCI). In conjunction with IC-

[C3] Beetz, Michael, Bandouch, Jan, Jain, Dominik, Tenorth and Moritz,
Towards Automated Models of Activities of Daily Life,
First International Symposium on Quality of Life Technology Intelligent Systems for

[C4] Beetz, Michael, Blodow, Nico, Klank, Ulrich, Marton, Zoltan Csaba, Pangercic, Dejan,
Rusu and Radu Bogdan,
CoP-Man Perception for Mobile Pick-and-Place in Human Living Environ-
ments,
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 2009.

[C5] Blas, Morten Rufus, Rusu, Radu Bogdan, Blanke, Mogens, Beetz and Michael,
Fault-tolerant 3D Mapping with Application to an Orchard Robot,
Proceedings of the 7th IFAC International Symposium on Fault Detection, Supervision and
Safety of Technical Processes (SAFEPROCESS’09), Barcelona, Spain, June 30 - July 3,
2009.

[C6] Blodow, Nico, Rusu, Radu Bogdan, Marton, Zoltan Csaba, Beetz and Michael,
Partial View Modeling and Validation in 3D Laser Scans for Grasping,
9th IEEE-RAS International Conference on Humanoid Robots (Humanoids), Paris, France,
December 2009.
<table>
<thead>
<tr>
<th>Publication Key</th>
<th>Author(s)</th>
<th>Title</th>
<th>Conference/Book Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>C7</td>
<td>Engstler, Florian, Bandouch, Jan, Bubb and Heiner</td>
<td>MeMoMan - Model Based Markerless Capturing of Human Motion</td>
<td>The 17th World Congress on Ergonomics (International Ergonomics Association, IEA), Beijing, China, 2009.</td>
</tr>
<tr>
<td>C8</td>
<td>Ertelt, Christoph, Rhr, Thomas, Pangercic, Dejan, Shea, Kristina, Beetz and Michael</td>
<td>Integration of Perception, Global Planning and Local Planning in the Manufacturing Domain</td>
<td>Proceedings of Emerging Technologies and Factory Automation (ETFA), 2009.</td>
</tr>
<tr>
<td>C13</td>
<td>Hoyningen-Huene, Nicolai von, Beetz and Michael</td>
<td>Robust real-time multiple target tracking</td>
<td>Ninth Asian Conference on Computer Vision (ACCV), Xi’an, China, September 2009.</td>
</tr>
</tbody>
</table>
Publications

[C17] Klank, Ulrich, Pangercic, Dejan, Rusu, Radu Bogdan, Beetz and Michael,
Real-time CAD Model Matching for Mobile Manipulation and Grasping,

[C18] Klank, Ulrich, Zia, Muhammad Zeeshan, Beetz and Michael,
3D Model Selection from an Internet Database for Robotic Vision,

[C19] Leha, Andreas, Pangercic, Dejan, Rhr, Thomas, Beetz and Michael,
Optimization of Simulated Production Process Performance using Machine Learning,

[C20] Li, Jun, Maldonado, Alexis, Beetz, Michael, Schuboe and Anna,
Obstacle avoidance in a pick-and-place task,

[C21] Maier and Paul,
Self-Diagnosis and Self-Planning with Constraint-based Hybrid Models,

[C22] Maier, Paul, Sachenbacher and Martin,
Diagnosis and Fault-adaptive Control for Mechatronic Systems using Hybrid Constraint Automata,
Proc. First International Conference on Prognostics and Health Management (PHM’09), San Diego, CA, USA, September 2009.

[C23] Maier, Paul, Sachenbacher and Martin,
Factory Monitoring and Control with Mixed Hardware/Software, Discrete/Continuous Models,

[C24] Maier, Paul, Sachenbacher and Martin,
Self-Monitoring and Control for Embedded Systems using Hybrid Constraint Automata,

[C25] Maier, Paul, Sachenbacher, Martin, Rhr, Thomas, Kuhn and Lukas,
Integrated Diagnosis and Plan Assessment for Autonomous Production Processes,
Workshop Proc. SAS@ IJCAI, 2009.

[C26] Maier, Paul, Sachenbacher, Martin, Rhr, Thomas, Kuhn and Lukas,
Constraint-Based Integration of Plan Tracking and Prognosis for Autonomous Production,
Publications


[C29] Maier, Paul, Sachenbacher, Martin, Rhr, Thomas, Kuhn and Lukas, Integrating Model-based Diagnosis and Prognosis in Autonomous Production, Proc. First International Conference on Prognostics and Health Management (PHM’09), San Diego, CA, USA, September 2009.


Publications

[C36] Pangercic, Dejan, Tavcar, Rok, Tenorth, Moritz, Beetz and Michael,
Visual Scene Detection and Interpretation using Encyclopedic Knowledge and
Formal Description Logic,
Proceedings of the International Conference on Advanced Robotics (ICAR), Munich, Germany, June 2009.

[C37] Riaz, Zahid, Beetz, Michael, Radig and Bernd,
Image Normalization for Face Recognition using 3D Model,

[C38] Riaz, Zahid, Gedikli, Suat, Beetz, Michael, Radig and Bernd,
A Unified Features Approach to Human Face Image Analysis and Interpretation,

[C39] Riaz, Zahid, Mayer, Christoph, Beetz, Michael, Radig and Bernd,
3D Model for Face Recognition across Facial Expressions,

[C40] Riaz, Zahid, Mayer, Christoph, Beetz, Michael, Radig and Bernd,
Facial Expressions Recognition from Image Sequences,

[C41] Riaz, Zahid, Mayer, Christoph, Beetz, Michael, Radig and Bernd,
Model Based Analysis of Face Images for Facial Feature Extraction,

[C42] Riaz, Zahid, Mayer, Christoph, Sarfraz, Saquib, Beetz, Michael, Radig and Bernd,
Multi-Feature Fusion in Advanced Robotics Applications,

[C43] Riaz, Zahid, Mayer, Christoph, Wimmer, Matthias, Beetz, Michael, Radig and Bernd,
A Model Based approach for Expression Invariant Face Recognition,

[C44] Rusu, Radu Bogdan, Blodow, Nico, Beetz and Michael,
Fast Point Feature Histograms (FPFH) for 3D Registration,

[C45] Rusu, Radu Bogdan, Blodow, Nico, Marton, Zoltan Csaba, Beetz and Michael,
Close-range Scene Segmentation and Reconstruction of 3D Point Cloud Maps
for Mobile Manipulation in Human Environments,

[C46] Rusu, Radu Bogdan, Holzbach, Andreas, Blodow, Nico, Beetz and Michael,
Fast Geometric Point Labeling using Conditional Random Fields,
[C47] Rusu, Radu Bogdan, Holzbach, Andreas, Bradski, Gary, Beetz and Michael, 
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 2009.

[C48] Rusu, Radu Bogdan, Holzbach, Andreas, Diankov, Rosen, Bradski, Gary, Beetz and Mi-
chael, 
Perception for Mobile Manipulation and Grasping using Active Stereo, 
9th IEEE-RAS International Conference on Humanoid Robots (Humanoids), Paris, France, 
December 2009.

[C49] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Holzbach, Andreas, Beetz and 
Michael, 
Model-based and Learned Semantic Object Labeling in 3D Point Cloud Maps 
of Kitchen Environments, 
Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems 
(IROS), St. Louis, MO, USA, October 2009.

[C50] Rusu, Radu Bogdan, Meeussen, Wim, Chitta, Sachin, Beetz and Michael, 
Laser-based Perception for Door and Handle Identification, 
Proceedings of the International Conference on Advanced Robotics (ICAR), Munich, June 
2009.

[C51] Rusu, Radu Bogdan, Sucan, Ioan Alexandru, Gerkey, Brian, Chitta, Sachin, Beetz, Mi-
chael, Kavraki and Lydia E., 
Real-time Perception-Guided Motion Planning for a Personal Robot, 
Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems 
(IROS), St. Louis, MO, USA, 42454252, October 2009.

[C52] Sarfraz, M. S., Saeed, A., Khan, M. H., Riaz and Zahid, 
Bayesian Prior Models for Vehicle Make and Model Recognition, 

[C53] Stulp, Freek, Fedrizzi, Andreas, Beetz and Michael, 
Action-Related Place-Based Mobile Manipulation, 
Proceedings of the International Conference on Intelligent Robots and Systems (IROS), 
31153120, 2009.

[C54] Stulp, Freek, Fedrizzi, Andreas, Beetz and Michael, 
Learning and Performing Place-based Mobile Manipulation, 
Proceedings of the 8th International Conference on Development and Learning (ICDL), 
17, 2009.

[C55] Stulp, Freek, Fedrizzi, Andreas, Zacharias, Franziska, Tenorth, Moritz, Bandouch, Jan, 
Beetz and Michael, 
Combining Analysis, Imitation, and Experience-based Learning to Acquire a 
Concept of Reachability, 
Publications

[C56] Stulp, Freek, Kresse, Ingo, Maldonado, Alexis, Ruiz, Federico, Fedrizzi, Andreas, Beetz and Michael, 
**Compact Models of Human Reaching Motions for Robotic Control in Everyday Manipulation Tasks,**
*Proceedings of the 8th International Conference on Development and Learning (ICDL).*, 2009.

[C57] Stulp, Freek, Oztop, Erhan, Pastor, Peter, Beetz, Michael, Schaal and Stefan,
**Compact Models of Motor Primitive Variations for Predictable Reaching and Obstacle Avoidance,**

[C58] Sun, Li, Klang, Ulrich, Beetz and Michael,
**EYEWATCHME - 3D Hand and object tracking for inside out activity analysis,**

[C59] Tenorth, Moritz, Bandouch, Jan, Beetz and Michael,
**The TUM Kitchen Data Set of Everyday Manipulation Activities for Motion Tracking and Action Recognition,**
*IEEE International Workshop on Tracking Humans for the Evaluation of their Motion in Image Sequences (THEMIS), in conjunction with ICCV2009,* 2009.

[C60] Tenorth, Moritz, Beetz and Michael,
**KnowRob Knowledge Processing for Autonomous Personal Robots,**

[C61] 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.**

[C62] Zia, Muhammad Zeeshan, Klang, Ulrich, Beetz and Michael,
**Acquisition of a Dense 3D Model Database for Robotic Vision,**
*International Conference on Advanced Robotics (ICAR)*, 2009.

[PhD1] Gedikli and Suat,
**Continual and Robust Estimation of Camera Parameters in Broadcasted Sports Games,**
Technische Universitdt Munchen, 2009.

[PhD2] Rusu and Radu Bogdan,
**Semantic 3D Object Maps for Everyday Manipulation in Human Living Environments,**
Technische Universitdt Munchen, 2009.
[R1] Jain, Dominik, Waldherr, Stefan, Beetz and Michael, 
Bayesian Logic Networks, 
IAS Group, Fakultät für Informatik, Technische Universität München, 2009.

[R2] Tenorth, Moritz, Nyga, Daniel, Beetz and Michael, 
Understanding and Executing Instructions for Everyday Manipulation Tasks from the World Wide Web, 
IAS group, Technische Universität München, Fakultät für Informatik, 2009.

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

[J2] Rusu, Radu Bogdan, Gerkey, Brian, Beetz and Michael, 
Robots in the kitchen: Exploiting ubiquitous sensing and actuation, 

[J3] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Dolha, Mihai, Beetz and Michael, 
Towards 3D Point Cloud Based Object Maps for Household Environments, 

[J4] Stulp, Freek, Beetz and Michael, 
Combining Declarative, Procedural and Predictive Knowledge to Generate and Execute Robot Plans Efficiently and Robustly, 

[J5] Stulp, Freek, Beetz and Michael, 
Refining the execution of abstract actions with learned action models, 
Journal of Artificial Intelligence Research (JAIR), 32: June 2008.

[J6] Wimmer, Matthias, Riaz, Zahid, Mayer, Christoph, Radig and Bernd, 
Recognizing Facial Expressions Using Model-based Image Interpretation, 
Pinder and Shane(Ed.), Advances in Human-Computer Interaction, 1: 587-600, October 2008.

[J7] Wimmer, Matthias, Stulp, Freek, Pietzsch, Sylvia, Radig and Bernd, 
Learning Local Objective Functions for Robust Face Model Fitting, 

[B1] Wimmer and Matthias, 
Future User Interfaces Enhanced by Facial Expression Recognition Interpreting Human Faces with Model-based Techniques, 
VDM, Verlag Dr. Müller March 2008.
[C1] Bandouch, Jan, Engstler, Florian, Beetz and Michael,
    Accurate Human Motion Capture Using an Ergonomics-Based Anthropometric Human Model,
    Proceedings of the Fifth International Conference on Articulated Motion and Deformable Objects (AMDO), 2008.

[C2] Bandouch, Jan, Engstler, Florian, Beetz and Michael,
    Evaluation of Hierarchical Sampling Strategies in 3D Human Pose Estimation,

[C3] Beetz, Michael, Stulp, Freek, Bernd, Bandouch, Jan, Blodow, Nico, Dolha, Mihai, Fedrizzi, Andreas, Jain, Dominik, Klank, Uli, Kresse, Ingo, Maldonado, Alexis, Marton, Zoltan, Msenlechner, Lorenz, Ruiz, Federico, Rusu, Radu Bogdan, Tenorth and Moritz,
    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.

[C4] Heinz, Stefan, Sachenbacher and Martin,
    Using Model Counting to Find Optimal Distinguishing Tests,
    Proc. First International Workshop on Counting Problems in CSP and SAT, and other neighbouring problems (Counting’08), 2008.

[C5] Jain, Dominik, Msenlechner, Lorenz, Beetz and Michael,
    Equipping Robot Control Programs with First-Order Probabilistic Reasoning Capabilities,

[C6] Maier and Paul,
    Adaptive Abstraction of Constraint-Based Models for Self-Diagnosis and Planning,

[C7] Maier, Paul, Sachenbacher and Martin,
    Adaptive Domain Abstraction in a Soft-Constraint Message-Passing Algorithm,

[C8] Maier, Paul, Sachenbacher and Martin,
    Constraint Optimization and Abstraction for Embedded Intelligent Systems,

[C9] Marton, Zoltan Csaba, Blodow, Nico, Dolha, Mihai, Tenorth, Moritz, Rusu, Radu Bogdan, Beetz and Michael,
    Autonomous Mapping of Kitchen Environments and Applications,
[C10] Mayer, Christoph, Wimmer, Matthias, Stulp, Freek, Riaz, Zahid, Roth, Anton, Eggers, Martin, Radig and Bernd,
Interpreting the Dynamics of Facial Expressions in Real Time Using Model-based Techniques,

[C11] Mayer, Christoph, Wimmer, Matthias, Stulp, Freek, Riaz, Zahid, Roth, Anton, Eggers, Martin, Radig and Bernd,
A Real Time System for Model-based Interpretation of the Dynamics of Facial Expressions,
Proc. of the International Conference on Automatic Face and Gesture Recognition (FGR08), Amsterdam, Netherlands, September 2008.

[C12] Msenlechner, Lorenz, Müller, Armin, Beetz and Michael,
High Performance Execution of Everyday Pick-and-Place Tasks by Integrating Transformation Planning and Reactive Execution,

[C13] Pangercic, Dejan, Rusu, Radu Bogdan, Beetz and Michael,
3D-Based Monocular SLAM for Mobile Agents Navigating in Indoor Environments,

[C14] Pietzsch, Sylvia, Wimmer, Matthias, Stulp, Freek, Radig and Bernd,
Face Model Fitting with Generic, Group-specific, and Person-specific Objective Functions,

[C15] Riaz, Zahid, Beetz, Michael, Radig and Bernd,
Shape Invariant Recognition of Segmented Human Faces using Eigenfaces,

[C16] Riaz, Zahid, Mayer, Christoph, Wimmer, Matthias, Radig and Bernd,
Model Based Face Recognition Across Facial Expressions,

[C17] Rusu, Radu Bogdan, Bandouch, Jan, Marton, Zoltan Csaba, Blodow, Nico, Beetz and Michael,
Action Recognition in Intelligent Environments using Point Cloud Features Extracted from Silhouette Sequences,
IEEE 17th International Symposium on Robot and Human Interactive Communication (RO-MAN), München, Germany, 2008.

[C18] Rusu, Radu Bogdan, Blodow, Nico, Marton, Zoltan Csaba, Beetz and Michael,
Aligning Point Cloud Views using Persistent Feature Histograms,
C19] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Beetz and Michael, 
Interpretation of Urban Scenes based on Geometric Features, 
Proceedings of the 21st IEEE/RSJ International Conference on Intelligent Robots and 

C20] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Beetz and Michael, 
Learning Informative Point Classes for the Acquisition of Object Model Maps, 
Proceedings of the 10th International Conference on Control, Automation, Robotics and 

C21] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Beetz and Michael, 
Persistent Point Feature Histograms for 3D Point Clouds, 
Proceedings of the 10th International Conference on Intelligent Autonomous Systems (IAS-
10), Baden-Baden, Germany, 2008.

C22] Rusu, Radu Bogdan, Marton, Zoltan Csaba, Blodow, Nico, Dolha, Mihai Emanuel, Beetz 
and Michael, 
Functional Object Mapping of Kitchen Environments, 
Proceedings of the 21st IEEE/RSJ International Conference on Intelligent Robots and 

C23] Rusu, Radu Bogdan, Sundaresan, Aravind, Morisset, Benoit, Agrawal, Motilal, Beetz and 
Michael, 
Leaving Flatland: Realtime 3D Stereo Semantic Reconstruction, 
Proceedings of the International Conference on Intelligent Robotics and Applications (ICI-

C24] Rusu, Radu Bogdan, Sundaresan, Aravind, Morisset, Benoit, Agrawal, Motilal, Beetz, 
Michael, Konolige and Kurt, 
Realtime Extended 3D Reconstruction from Stereo for Navigation, 
Proceedings of the 21st IEEE/RSJ International Conference on Intelligent Robots and 

C25] Rhr, Thomas, Pangercic, Dejan, Beetz and Michael, 
Structured Reactive Controllers and Transformational Planning for Manufac-
turing, 
Proceedings of the 13th IEEE International Conference on Emerging Technologies and 
Factory Automation (ETFA), Hamburg, Germany, September 15-18, 2008.

C26] Sachenbacher, Martin, Maier and Paul, 
Test Strategy Generation using Quantified CSPs, 
Proc. International Conference on Principles and Practice of Constraint Programming 
(CP’08), 2008.

C27] Sachenbacher, Martin, Schwoon and Stefan, 
Model-based Testing Using Quantified CSPs: A Map, 

C28] Sachenbacher, Martin, Schwoon and Stefan, 
Model-based Test Generation Using Quantified CSPs, 
[C29] Schub, Anna, Maldonado, Alexis, Stork, Sonja, Beetz and Michael,
Subsequent Actions Influence Motor Control Parameters of a Current Grasping Action,
*IEEE 17th International Symposium on Robot and Human Interactive Communication (RO-MAN)*, Muenchen, Germany, 2008.

[C30] Schuller, Bjrn, Wimmer, Matthias, Arsic, Dejan, Moosmayr, Tobias, Rigoll and Gerhard,
Detection of Security Related Affect and Behaviour in Passenger Transport,
*Proc. of the 9th INTERSPEECH*, Brisbane, Australia, ISCA, ASSTA, September 2008.

[C31] Schuller, Bjrn, Wimmer, Matthias, Msenlechner, Lorenz, Kern, Christian, Rigoll and Gerhard,
Brute-Forcing Hierarchical Functionals for Paralinguistics: a Waste of Feature Space?,

[C32] Stulp, Freek, Beetz and Michael,
Learning Predictive Knowledge to Optimize Robot Motor Control,

[C33] Tenorth, Moritz, Beetz and Michael,
Towards Practical and Grounded Knowledge Representation Systems for Autonomous Household Robots,

[C34] Wimmer, Matthias, Fujie, Shinya, Stulp, Freek, Kobayashi, Tetsunori, Radig and Bernd,
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.

[C35] Wimmer, Matthias, MacDonald, Bruce A., Jayamuni, Dinuka, Yadav and Arpit,
Facial Expression Recognition for Human-robot Interaction A Prototype,

[C36] Wimmer, Matthias, Mayer, Christoph, Eggers, Martin, Radig and Bernd,
*Are You Happy with Your First Name?*,

[C37] Wimmer, Matthias, Mayer, Christoph, Pietzsch, Sylvia, Radig and Bernd,
Tailoring Model-based Techniques for Facial Expression Interpretation,
*The First International Conference on Advances in Computer-Human Interaction (ACHI08)*, Sainte Luce, Martinique, February 2008.

[C38] Wimmer, Matthias, Mayer, Christoph, Radig and Bernd,
Recognizing Facial Expressions Using Model-based Image Interpretation,
*Verbal and Nonverbal Communication Behaviours, COST Action 2102 International Workshop*, Vietri sul Mare, Italy, April 2008.
Publications

[C39] Wimmer, Matthias, Mayer, Christoph, Radig and Bernd,
Robustly Classifying Facial Components Using a Set of Adjusted Pixel Features,
Proc. of the International Conference on Face and Gesture Recognition (FGR08), Amsterdam, Netherlands, September 2008.

[C40] Wimmer, Matthias, Mayer, Christoph, Stulp, Freek, Radig and Bernd,
Face Model Fitting based on Machine Learning from Multi-band Images of Facial Components,
Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment, held in conjunction with CVPR, Anchorage, AK, USA, June 2008.

[C41] Wimmer, Matthias, Pietzsch, Sylvia, Mayer, Christoph, Radig and Bernd,
Robustly Estimating the Color of Facial Components Using a Set of Adjusted Pixel Features,

[C42] Wimmer, Matthias, Schuller, Bjørn, Arsic, Dejan, Radig, Bernd, Rigoll and Gerhard,
Low-level Fusion of Audio and Video Feature for Multi-modal Emotion Recognition,

[C43] Zh, M. F., Beetz, M., Shea, K., Reinhart, G., Stursberg, O., Ostgathe, M., Lau, C., Ertelt, C., Pangercic, D., Rhr, Thomas, Ding, H., Paschedag and T.,
An Integrated Approach to Realize the Cognitive Machine Shop,

[PhD1] Kirsch and Alexandra,
Integration of Programming and Learning in a Control Language for Autonomous Robots Performing Everyday Activities,
Technische Universitaet Muenchen, 2008.

[PhD2] Muller and Armin,
Transformational Planning for Autonomous Household Robots using Libraries of Robust and Flexible Plans,
Technische Universitaet Muenchen, 2008.

[R1] Heinz, Stefan, Sachenbacher and Martin,
Using Model Counting to Find Optimal Distinguishing Tests,

[J1] Buss, Martin, Beetz, Michael, Wollherr and Dirk,
CoTeSys Cognition for Technical Systems,
[B1] KI 2007: Advances in Artificial Intelligence,
Hertzberg, Joachim, Beetz, Michael, Englert and Roman(Eds.), Springer-Verlag August 2007.

[C1] Beetz, Michael, Bandouch, Jan, Kirsch, Alexandra, Maldonado, Alexis, Müller, Armin, Rusu and Radu Bogdan,
The Assistive Kitchen A Demonstration Scenario for Cognitive Technical Systems,

[C2] Beetz, Michael, Buss, Martin, Wollherr and Dirk,
Cognitive Technical Systems What Is the Role of Artificial Intelligence?,

[C3] Beetz, Michael, Gedikli, Suat, Bandouch, Jan, Kirchlechner, Bernhard, Hoyningen-Huene, Nico von, Perzylo and Alexander,
Visually Tracking Football Games Based on TV Broadcasts,
Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI), 2007.

[C4] Buss, Martin, Beetz, Michael, Wollherr and Dirk,
CoTeSys Cognition for Technical Systems,

[C5] Gedikli, Suat, Bandouch, Jan, Hoyningen-Huene, Nico von, Kirchlechner, Bernhard, Beetz and Michael,
An Adaptive Vision System for Tracking Soccer Players from Variable Camera Settings,

[C6] Hoyningen-Huene, Nicolai v, Kirchlechner, Bernhard, Beetz and Michael,
GrAM: Reasoning with Grounded Action Models by Combining Knowledge Representation and Data Mining,

[C7] Jain, Dominik, Kirchlechner, Bernhard, Beetz and Michael,
Extending Markov Logic to Model Probability Distributions in Relational Domains,

[C8] Kirsch, Alexandra, Beetz and Michael,
Training on the Job Collecting Experience with Hierarchical Hybrid Automata,
[C9] Kranz, Matthias, Maldonado, Alexis, Hoernler, Benedikt, Rusu, Radu Bogdan, Beetz, Michael, Rigoll, Gerhard, Schmidt and Albrecht,
A Knife and a Cutting Board as Implicit User Interface - Towards Context-Aware Kitchen Utilities,

[C10] Kranz, Matthias, Maldonado, Alexis, Rusu, Radu Bogdan, Hoernler, Benedikt, Rigoll, Gerhard, Beetz, Michael, Schmidt and Albrecht,
Sensing Technologies and the Player-Middleware for Context-Awareness in Kitchen Environments,

[C11] Kunze, Lars, Lingemann, Kai, Nchter, Andreas, Hertzberg and Joachim,
Salient Visual Features to Help Close the Loop in 6D SLAM,

[C12] Mller, Armin, Beetz and Michael,
Towards a Plan Library for Household Robots,

[C13] Mller, Armin, Kirsch, Alexandra, Beetz and Michael,
Transformational Planning for Everyday Activity,
Proceedings of the 17th International Conference on Automated Planning and Scheduling (ICAPS’07), Providence, USA, 248255, September 2007.

[C14] Rusu, Radu Bogdan, Blodow, Nico, Marton, Zoltan-Csaba, Soos, Alina, Beetz and Michael,
Towards 3D Object Maps for Autonomous Household Robots,

[C15] Rusu, Radu Bogdan, Maldonado, Alexis, Beetz, Michael, Gerkey and Brian,
Extending Player/Stage/Gazebo towards Cognitive Robots Acting in Ubiquitous Sensor-equipped Environments,

[C16] Schuller, Bjrn, Wimmer, Matthias, Arsic, Dejan, Rigoll, Gerhard, Radig and Bernd,
Audiovisual Behavior Modeling by Combined Feature Spaces,

[C17] Schultz, R., Oertel, K., Peter, Christian, Wimmer, Matthias, Voskamp, Jrg, Urban and B.,
Emotionale Aspekte in Produktevaluationen,

[C18] Stulp, Freek, Koska, Wolfram, Maldonado, Alexis, Beetz and Michael,
Seamless Execution of Action Sequences,
[C19] Tischler, Martin A., Peter, Christian, Wimmer, Matthias, Voskamp and Jrg,
Application of emotion recognition methods in automotive research,

[C20] Wimmer, Matthias, Mayer, Christoph, Stulp, Freek, Radig and Bernd,
Estimating Natural Activity by Fitting 3D Models via Learned Objective Functions,

[C21] Wimmer, Matthias, Pietzsch, Sylvia, Stulp, Freek, Radig and Bernd,
Learning Robust Objective Functions with Application to Face Model Fitting,

[C22] Wimmer, Matthias, Radig and Bernd,
Initial Pose Estimation for 3D Models Using Learned Objective Functions,

[C23] Wimmer, Matthias, Radig and Bernd,
 Automatically Learning the Objective Function for Model Fitting,

[C24] Wimmer, Matthias, Radig, Bernd, Mayer and Christoph,
SIPBILD Mimik- und Gestikerkennung in der Mensch-Maschine-Schnittstelle,

[C25] Wimmer, Matthias, Stulp, Freek, Radig and Bernd,
Enabling Users to Guide the Design of Robust Model Fitting Algorithms,
Workshop on Interactive Computer Vision, held in conjunction with ICCV 2007, Rio de Janeiro, Brazil, Omnipress, 28, October 2007.

[C26] Wimmer, Matthias, Zucker, Ursula, Radig and Bernd,
Human Capabilities on Video-based Facial Expression Recognition,

[PhD1] Stulp and Freek,
Tailoring Robot Actions to Task Contexts using Action Models,

[PhD2] Wimmer and Matthias,
Model-based Image Interpretation with Application to Facial Expression Recognition,
[J1] Rusu and Radu Bogdan, 
Acquiring Models of Everyday Activities for Robotic Control in ’Current PhD Research in Pervasive Computing’, 
Ferscha, A., Langheinrich, M., Schmidt and A.(Eds.), Technical Reports - University of Munich, Department of Computer Science, Media Informatics Group, LMU-MI-2005-3: March 2006.

[J2] Wimmer, Matthias, Hnmerle and Simone, 
Bitte recht freundlich, 

[J3] Wimmer, Matthias, Radig and Bernd, 
Adaptive Skin Color Classificator, 

[C1] Beetz, Michael, Bandouch, Jan, Gedikli, Suat, Hoyningen-Huene, Nico von, Kirchlechner, Bernhard, Maldonado and Alexis, 
Camera-based Observation of Football Games for Analyzing Multi-agent Activities, 

[C2] Geipel, Markus, Beetz and Michael, 
Learning to shoot goals, Analysing the Learning Process and the Resulting Policies, 
Lakemeyer, Gerhard, Sklar, Elizabeth, Sorenti, Domenico, Takahashi and Tomoihi(Eds.), RoboCup-2006: Robot Soccer World Cup X, Springer Verlag, Berlin, 2006.

[C3] Isik, Michael, Stulp, Freek, Mayer, Gerd, Utz and Hans, 
Coordination without Negotiation in Teams of Heterogeneous Robots, 
Proceedings of the RoboCup Symposium, Bremen, Germany, 355362, 2006.

[C4] Kranz, Matthias, Rusu, Radu Bogdan, Maldonado, Alexis, Beetz, Michael, Schmidt and Albrecht, 
A Player/Stage System for Context-Aware Intelligent Environments, 

[C5] Miller, Armin, Beetz and Michael, 
Designing and Implementing a Plan Library for a Simulated Household Robot, 

[C6] Rusu, Radu Bogdan, Maldonado, Alexis, Beetz, Michael, Kranz, Matthias, Msenlechner, Lorenz, Holleis, Paul, Schmidt and Albrecht, 
Player/Stage as Middleware for Ubiquitous Computing, 

33
Publications

[C7] Stulp, Freek, Beetz and Michael,
Action Awareness Enabling Agents to Optimize, Transform, and Coordinate Plans,

[C8] Stulp, Freek, Isik, Michael, Beetz and Michael,
Implicit Coordination in Robotic Teams using Learned Prediction Models,

[C9] Stulp, Freek, Pfiger, Mark, Beetz and Michael,
Feature Space Generation using Equation Discovery,
Proceedings of the 29th German Conference on Artificial Intelligence (KI), 2006.

[C10] Wimmer, Matthias, Radig, Bernd, Beetz and Michael,
A Person and Context Specific Approach for Skin Color Classification,

[C11] Wimmer, Matthias, Stulp, Freek, Tschechne, Stephan, Radig and Bernd,
Learning Robust Objective Functions for Model Fitting in Image Understanding Applications,

[J1] Beetz, Michael, Grosskreutz and Henrik,
Probabilistic Hybrid Action Models for Predicting Concurrent Percept-driven Robot Behavior,

[J2] Beetz, Michael, Kirchlechner, Bernhard, Lames and Martin,
Computerized Real-Time Analysis of Football Games,

[B1] Stulp, Freek, Beetz and Michael,

[B2] Stulp, Freek, Beetz and Michael,
Tailoring Action Parameterizations to Their Task Contexts, 2005.

[BC1] Beetz and Michael,
Towards Comprehensive Computational Models for Plan-Based Control of Autonomous Robots,
[C1] Hmmerle, Simone, Wimmer, Matthias, Radig, Bernd, Beetz and Michael,
Sensor-based Situated, Individualized, and Personalized Interaction in Smart
Environments,
Cremers, Armin B., Manthey, Rainer, Martini, Peter, Steinelage and Volker(Eds.), INFOR-
MATIK 2005 - Informatik LIVE! Band 1, Beitrage der 35. Jahrestagung der Gesellschaft

[C2] Kirsch and Alexandra,
Towards High-performance Robot Plans with Grounded Action Models: Integrating Learning Mechanisms into Robot Control Languages,

[C3] Kirsch, Alexandra, Beetz and Michael,
Combining Learning and Programming for High-Performance Robot Control-
ers,

[C4] Kirsch, Alexandra, Schweitzer, Michael, Beetz and Michael,
Making Robot Learning Controllable: A Case Study in Robot Navigation,

[C5] Stulp, Freek, Beetz and Michael,
Optimized Execution of Action Chains Using Learned Performance Models of
Abstract Actions,
Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence
(IJCAI), 2005.

[C6] Wimmer, Matthias, Radig and Bernd,
Adaptive Skin Color Classifier,
al and Ashraf Aboshosha et(Ed.), Proceedings of the first International Conference on
Graphics, Vision and Image Processing, Cairo, Egypt, ICGST, Vol. I, 324-327, December
2005.

[J1] Beetz, Michael, Schmitt, Thorsten, Hanek, Robert, Buck, Sebastian, Stulp, Freek, Schrter,
Derik, Radig and Bernd,
The AGILO Robot Soccer Team Experience-based Learning and Probabilistic
Reasoning in Autonomous Robot Control,

[J2] Hanek, Robert, Beetz and Michael,
The Contracting Curve Density Algorithm: Fitting Parametric Curve Models
to Images Using Local Self-adapting Separation Criteria,

[C1] Beetz, M., Fischer, F., Flossmann, S., Kirchlechner, B., Unseld, A., Holzer and C.,
Watching Football with the Eyes of Experts: Integrated Intelligent Systems
for the Automatic Analysis of (Simulated) Football Games,
[C2] Beetz, Michael, Flossmann, Sven, Stammmeier and Thomas, 
Motion and Episode Models for (Simulated) Football Games: Acquisition, Re- 
presentation, and Use, 

[C3] Beetz, M., Kirchlechner, B., Fischer and F., 
Interpretation and Processing of Position Data for the Empirical Study of the Behavior of Simulation League Robocup Teams, 

[C4] Beetz, Michael, Kirsch, Alexandra, Müller and Armin, 
RPL-LEARN: Extending an Autonomous Robot Control Language to Perform Experience-based Learning, 

[C5] Fischer, Stefan, Dring, Sven, Wimmer, Matthias, Krummheuer and Antonia, 
Experiences with an Emotional Sales Agent, 

[C6] Müller, Armin, Kirsch, Alexandra, Beetz and Michael, 
Object-oriented Model-based Extensions of Robot Control Languages, 
27th German Conference on Artificial Intelligence, 2004.

[C7] Schrter, Derik, Beetz and Michael, 
Acquiring Models of Rectangular Objects for Robot Maps, 

[C8] Schrter, Derik, Beetz and Michael, 
RG Mapping: Building Object-Oriented Representations of Structured Human Environments, 
6-th Open Russian-German Workshop on Pattern Recognition and Image Understanding (OGRW), Katun/Russia, 2004.

[C9] Schrter, Derik, Weber, T., Beetz, Michael, Radig and Bernd, 
Detection and Classification of Gateways for the Acquisition of Structured Robot Maps, 

[C10] Stulp, Freek, Gedikli, Suat, Beetz and Michael, 
Evaluating Multi-Agent Robotic Systems Using Ground Truth, 

[C11] Stulp, Freek, Kirsch, Alexandra, Gedikli, Suat, Beetz and Michael, 
AGILO RoboCuppers 2004, 
Publications

[C12] Utz, Hans, Stulp, Freek, Mhlenfeld and Arndt,
Sharing Belief in Teams of Heterogeneous Robots,
Nardi, Daniele, Riedmüller, Martin, Sammut and Claude(Eds.), RoboCup-2004: The Eighth

[PhD1] Hanek and Robert,
Fitting Parametric Curve Models to Images Using Local Self-adapting Sepe-
ration Criteria,
Department of Informatics, Technische Universitä Münch, 2004.

[PhD2] Schmitt and Thorsten,
Vision-based Probabilistic State Estimation for Cooperating autonomous Ro-
bots,
Department of Informatics, Technische Universitä Münch, 2004.

[J1] Hanek, Robert, Schmitt, Thorsten, Buck, Sebastian, Beetz and Michael,
Towards RoboCup without color labeling,

[C1] Beetz, Michael, Gedikli, Suat, Hanek, Robert, Schmitt, Thorsten, Stulp and Freek,
AGILO RoboCuppers 2003: Computational Principles and Research Directions,

[C2] Beetz, Michael, Stulp, Freek, Kirsch, Alexandra, Müller, Armin, Buck and Sebastian,
Autonomous Robot Controllers Capable of Acquiring Repertoires of Complex
Skills,

[C3] Schmitt, Thorsten, Beetz and Michael,
Designing Probabilistic State Estimators for Autonomous Robot Control,

[C4] Schmitt, Thorsten, Hanek, Robert, Beetz and Michael,
Developing Comprehensive State Estimators for Robot Soccer,

[PhD1] Buck and Sebastian,
Experience-Based Control and Coordination of Autonomous Mobile Systems
in Dynamic Environments,
Department of Informatics, Technische Universität München, 2003.

[J1] Belker, Thorsten, Beetz, Michael, Cremers and Armin,
Learning Action Models for the Improved Execution of Navigation Plans,

[J2] Meyer, M, Desbrun, M., Schrder, P., Barr and A.H.,
Discrete differential-geometry operators for triangulated 2-manifolds,
Visualization and mathematics, 3(7): 3457, 2002.


Publications


[PhD1] Hansen and Christoph, Modellgetriebene Verfolgung formvariabler Objekte in Videobildfolgen, Department of Informatics, Technische Universitt Mnchen, 2002.


Publications

[J3] Beetz, Michael, Arbuckle, Tom, Bennewitz, Maren, Burgard, Wolfram, Cremers, Armin, Fox, Dieter, Grosskreutz, Henrik, Hnuel, Dirk, Schulz and Dirk, 
Integrated Plan-based Control of Autonomous Service Robots in Human Environments, 

[C1] Beetz and Michael, 
Runtime Plan Adaptation in Structured Reactive Controllers, 

[C2] Beetz, Michael, Belker and Thorsten, 
Learning Structured Reactive Navigation Plans from Executing MDP policies, 

[C3] Belker, Thorsten, Beetz and Michael, 
Learning to Execute Robot Navigation Plans, 

[C4] Buck, Sebastian, Beetz, Michael, Schmitt and Thorsten, 
Planning and Executing Joint Navigation Tasks in Autonomous Robot Soccer, 
5th International Workshop on RoboCup (Robot World Cup Soccer Games and Conferences), 2001.

[C5] Buck, Sebastian, Weber, U., Beetz, Michael, Schmitt and Thorsten, 
Multi Robot Path Planning for Dynamic Environments: A case study, 

[C6] Hanek and Robert, 
The Contracting Curve Density Algorithm and its Application to Model-based Image Segmentation, 

[C7] Schmitt, Thorsten, Buck, Sebastian, Beetz and Michael, 
AGILO RoboCuppers 2001: Utility- and Plan-based Action Selection based on Probabilistically Estimated Game Situations, 
Stone, P., Balch, T., Kraetzschmar and G.(Eds.), 5th International Workshop on RoboCup (Robot World Cup Soccer Games and Conferences), Springer Verlag, Lecture Notes in Computer Science, 2001.

[C8] Schmitt, Thorsten, Hanek, Robert, Buck, Sebastian, Beetz and Michael, 
Cooperative Probabilistic State Estimation for Vision-based Autonomous Mobile Robots, 

[C9] Schmitt, Thorsten, Hanek, Robert, Buck, Sebastian, Beetz and Michael, 
Cooperative Probabilistic State Estimation for Vision-based Autonomous Soccer Robots, 
[C10] Schmitt, Thorsten, Hanek, Robert, Buck, Sebastian, Beetz and Michael,
Cooperative Probabilistic State Estimation for Vision-based Autonomous Soccer Robots,

[C11] Schumacher, Jrgen, Beetz and Michael,
Ein agentenbasiertes Verfahren zur effizienten Beantwortung von Liefertermi-
nanfragen in einer Supply-Chain,

[J1] Beetz, Michael, Arbuckle, Tom, Belker, Thorsten, Bennewitz, Maren, Cremers, Armin,
Hhnel, Dirk, Schulz and Dirk,
Enabling Autonomous Robots to Perform Complex Tasks,
KI - Künstliche Intelligenz; Special Issue on Autonomous Robots, 2000.

[J2] Thrun, Sebastian, Beetz, Michael, Bennewitz, Maren, Cremers, Armin, Dellaert, Frank,
Fox, Dieter, Hhnel, Dirk, Rosenberg, Charles, Roy, Nicholas, Schulte, Jamieson, Schulz
and Dirk,
Probabilistic Algorithms and the Interactive Museum Tour-Guide Robot Mi-
nerva,

[B1] Beetz and Michael,
Concurrent Reactive Plans: Anticipating and Forestalling Execution Failures,

[C1] Beetz and Michael,
Runtime Plan Adaptation in Structured Reactive Controllers,
Gini, M., Rosenschein and J.(Eds.), Proceedings of the Fourth International Conference

[C2] Beetz, Michael, Belker and Thorsten,
Learning Structured Reactive Navigation Plans from Executing MDP Navigation Policies,
Ferryman(Ed.), 8th International Symposium on Intelligent Robotic Systems, SIRS 2000,
2000.

[C3] Beetz, Michael, Belker and Thorsten,
Environment and Task Adaptation for Robotic Agents,
Horn and W.(Ed.), Procs. of the 14th European Conference on Artificial Intelligence

[C4] Beetz, Michael, Grosskreutz and Henrik,
Probabilistic Hybrid Action Models for Predicting Concurrent Percept-driven Robot Behavior,
Proceedings of the Sixth International Conference on AI Planning Systems, AAAI Press,
2000.
[C5] Beetz, Michael, Schumacher, Jrgen, Cremers, Armin, Hellingrath, Bernd, Mazzocco and Christian, 
Perspectives on Plan-based Multiagent Systems for Distributed Supply Chain Management in the Steel Industry, 

[C6] Buck, Sebastian, Hanek, Robert, Klupsch, Michael, Schmitt and Thorsten, 
Agilo RoboCuppers: RoboCup Team Description, 

[C7] Buck, Sebastian, Riedmiller and Martin, 
Learning Situation Dependent Success Rates Of Actions In A RoboCup Scenario, 
Pacific Rim International Conference on Artificial Intelligence, 809, 2000.

[C8] Hanek, Robert, Schmitt and Thorsten, 
Vision-Based Localization and Data Fusion in a System of Cooperating Mobile Robots, 

[C9] Hanek, Robert, Schmitt, Thorsten, Klupsch, Michael, Buck and Sebastian, 
From Multiple Images to a Consistent View, 

[C10] Malaka, Rainer, Buck and Sebastian, 
Solving Nonlinear Optimization Problems Using Networks Of Spiking Neurons, 

[PhD1] Beetz and Michael, 
Plan-based Control of Robotic Agents, 
University of Bonn, 2000.

[PhD2] Klupsch and Michael, 
Objektorientierte Daten- und Zeitmodelle fr die Echtzeit-Bildfolgenauswertung, 

[PhD3] Ridder and Christof, 
Interpretation von Videobildfolgen zur Beobachtung artikularer Bewegung von Personen anhand eines generischen 3D Objektmodells, 

[C1] Arbuckle, Tom, Beetz and Michael, 
Controlling Image Processing: Providing Extensible, Run-time Configurable Functionality on Autonomous Robots, 
[C2] Arbuckle, Tom, Beetz and Michael,
Extensible, Runtime-configurable Image Processing on Robots - the RECIPE system,

[C3] Bandlow, Thorsten, Klupsch, Michael, Hanek, Robert, Schmitt and Thorsten,
Agilo RoboCuppers: RoboCup Team Description,

[C4] Bandlow, Thorsten, Klupsch, Michael, Hanek, Robert, Schmitt and Thorsten,
Fast Image Segmentation, Object Recognition and Localization in a RoboCup Scenario,

[C5] Beetz and Michael,
Structured Reactive Controllers A computational Model of Everyday Activity,
Etzioni, O., Miller, J., Bradshaw and J.(Eds.), Proceedings of the Third International Conference on Autonomous Agents, 228235, 1999.

[C6] Beetz, Michael, Belker and Thorsten,
Experience- and Model-based Transformational Learning of Symbolic Behavior Specifications,

[C7] Beetz, Michael, Bennewitz, Maren, Grosskreutz and Henrik,
Probabilistic, Prediction-based Schedule Debugging for Autonomous Robot Office Couriers,
Proceedings of the 23rd German Conference on Artificial Intelligence (KI 99), Bonn, Germany, Springer Verlag, 1999.

[C8] Beetz, Michael, Giesenschlag, Markus, Englert, Roman, Glch, Eberhard, Cremers and Armin,
Semi-automatic Acquisition of Symbolically-annotated 3D Models of Office Environments,

[J1] Beetz, Michael, Burgard, Wolfram, Fox, Dieter, Cremers and Armin,
Integrating Active Localization into High-level Control Systems,

[C1] Arbuckle, Tom, Beetz and Michael,
RECIPE - A System for Building Extensible, Run-time Configurable, Image Processing Systems,

[C2] Beetz, Michael, Arbuckle, Tom, Cremers, Armin, Mann and Markus,
Transparent, Flexible, and Resource-adaptive Image Processing for Autonomous Service Robots,
Publications

[C3] Beetz, Michael, Bennewitz and Maren, 
Planning, Scheduling, and Plan Execution for Autonomous Robot Office Couriers, 

[C4] Beetz, M., Grosskreutz and H., 
Causal Models of Mobile Service Robot Behavior, 

[C5] Beetz, Michael, Peters and Hanno, 
Structured Reactive Communication Plans Integrating Conversational Actions into High-level Robot Control Systems, 
Proceedings of the 22nd German Conference on Artificial Intelligence (KI 98), Bremen, Germany, Springer Verlag, 1998.

[C6] Klupsch and Michael, 
Object-Oriented Representation of Time-Varying Data Sequences in Multiagent Systems, 

[C7] Klupsch, Michael, Lckenhaus, Maximilian, Zierl, Christoph, Laptev, Ivan, Bandlow, Thorsten, Grimme, Marc, Kellner, Ignaz, Schwarzer and Fabian, 
Agilo RoboCuppers: RoboCup Team Description, 

[C1] Beetz, M., McDermott and D., 
Expressing Transformations of Structured Reactive Plans, 

[C2] Beetz, M., McDermott and D., 
Fast Probabilistic Plan Debugging, 

[PhD1] Lanser and Stefan, 
Modellbasierte Lokalisation gestützt auf monokulare Videobilder, 
[C1] Beetz, M., McDermott and D.,
Local Planning of Ongoing Activities,

[C2] Beetz, M., McDermott and D.,
Executing Structured Reactive Plans,

[PhD1] Beetz and Michael,
Anticipating and Forestalling Execution Failures in Structured Reactive Plans,
Yale University, 1996.

[C1] Beetz, M., McDermott and D.,
Improving Robot Plans During Their Execution,

[C1] Beetz, M., McDermott and D.,
Declarative Goals in Reactive Plans,

[C1] Bertelsmeier, R., Radig and Bernd,
Kontextunterstzte Analyse von Szenen mit bewegten Objekten.,