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[C9] 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.

[C10] 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.

The SHERPA project: smart collaboration between humans and ground-aerial robots for improving rescuing activities in alpine environments,
IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR), College Station, Texas, USA, Nov. 5-8 2012.

[C12] Vladyslav Usenko, Florian Seidel, Zoltan-Csaba Marton and Dejan Pangercic Michael Beetz,
Furniture Classification using WWW CAD Models,
IROS12 Workshop on Active Semantic Perception (ASP12), Vilamoura, Portugal, October 7 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 Pangercic, Nico Blodow and Michael Beetz,
Combined 2D-3D Categorization and Classification for Multimodal Perception Systems,

[C1] Michael Beetz, Ulrich Klank, Alexis Maldonado, Dejan Pangercic and Thomas Rühr,
Robotic Roommates Making Pancakes - Look Into Perception-Manipulation Loop,

[C2] Nico Blodow, Zoltan-Csaba Marton, Dejan Pangercic, Thomas Rühr, Moritz Tenorth and Michael Beetz,
Inferring Generalized Pick-and-Place Tasks from Pointing Gestures,

[C3] 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,
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[C4] Zoltan-Csaba Marton, Nico Blodow and Michael Beetz,
Adventages of Spatial-temporal Object Maps for Service Robotics,
IEEE Workshop on Advanced Robotics and its Social Impacts (ARSO), Half-Moon Bay, CA, USA, October 2-4 2011.

[C5] Shulei Zhu, Dejan Pangercic and Michael Beetz,
Contracting Curve Density Algorithm for Applications in Personal Robotics,

[C6] Michael Beetz, Ulrich Klink, Ingo Kresse, Alexis Maldonado, Lorenz Mösenlechner, Dejan Pangercic, Thomas Rührr and Moritz Tenorth,
Robotic Roommates Making Pancakes,

[C7] Manabu Saito, Haseru Chen, Kei Okada, Masayuki Inaba, Lars Kunze and Michael Beetz,
Semantic Object Search in Large-scale Indoor Environments,

[C8] Asako Kanezaki, Zoltan-Csaba Marton, Dejan Pangercic, Tatsuya Harada, Yasuo Kuniyoshi and Michael Beetz,
Voxelized Shape and Color Histograms for RGB-D,

[C9] Zoltan-Csaba Marton, Dejan Pangercic and Michael Beetz,
Efficient Surface and Feature Estimation in RGBD,

[C1] Nico Blodow, Zoltan-Csaba Marton, Dejan Pangercic and Michael Beetz,
Making Sense of 3D Data,

[C2] Zoltan-Csaba Marton, Dejan Pangercic, Nico Blodow, Jonathan Kleinehellefort and Michael Beetz,
General 3D Modelling of Novel Objects from a Single View,

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

[C6] 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.

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

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

[C2] Zoltan Csaba Marton, Radu Bogdan Rusu, Dominik Jain, Ulrich Klank and Michael Beetz, 
Probabilistic Categorization of Kitchen Objects in Table Settings with a Composite Sensor, 

[C3] Radu Bogdan Rusu, Ioan Alexandru Sucan, Brian Gerkey, Sachin Chitta, Michael Beetz and Lydia E. Kavraki, 
Real-time Perception-Guided Motion Planning for a Personal Robot, 

[C4] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow, Andreas Holzbach and Michael Beetz, 
Model-based and Learned Semantic Object Labeling in 3D Point Cloud Maps of Kitchen Environments, 
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[C5] Radu Bogdan Rusu, Nico Blodow, Zoltan Csaba Marton and Michael Beetz,
Closed-range Scene Segmentation and Reconstruction of 3D Point Cloud Maps
for Mobile Manipulation in Human Environments,
Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems
(IROS), St. Louis, MO, USA, October 11-15 2009.

[C6] Radu Bogdan Rusu, Andreas Holzbach, Nico Blodow and Michael Beetz,
Fast Geometric Point Labeling using Conditional Random Fields,
Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems
(IROS), St. Louis, MO, USA, October 11-15 2009.

[C7] Radu Bogdan Rusu, Wim Meeussen, Sachin Chitta and Michael Beetz,
Laser-based Perception for Door and Handle Identification,
Proceedings of the International Conference on Advanced Robotics (ICAR), Munich, June
22-26 2009.

[C8] Benoit Morisset, Radu Bogdan Rusu, Aravind Sundaresan, Kris Hauser, Motilal Agrawal,
Jean-Claude Latombe and Michael Beetz,
Leaving Flatland: Toward Real-Time 3D Navigation,
Proceedings of the IEEE International Conference on Robotics and Automation (ICRA),
Kobe, Japan, May 12-17, 2009.

[C9] Radu Bogdan Rusu, Nico Blodow and Michael Beetz,
Fast Point Feature Histograms (FPFH) for 3D Registration,
Proceedings of the IEEE International Conference on Robotics and Automation (ICRA),
Kobe, Japan, May 12-17, 2009.

[C10] Zoltan Csaba Marton, Radu Bogdan Rusu and Michael Beetz,
On Fast Surface Reconstruction Methods for Large and Noisy Point Clouds,
Proceedings of the IEEE International Conference on Robotics and Automation (ICRA),
Kobe, Japan, May 12-17 2009.

[C11] Morten Rufus Blas, Radu Bogdan Rusu, Mogens Blanke and Michael Beetz,
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.

[C12] 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.

[C13] 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.

[C14] 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.
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[C15] Radu Bogdan Rusu, Andreas Holzbach, Rosen Diankov, Gary Bradski and Michael Beetz, 
Perception for Mobile Manipulation and Grasping using Active Stereo, 

[C16] Michael Beetz, Nico Blodow, Ulrich Klank, Zoltan Csaba Marton, Dejan Pangerlic and Radu Bogdan Rusu, 
CoP-Man – Perception for Mobile Pick-and-Place in Human Living Environments, 

[J1] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow, Mihai Dolha and Michael Beetz, 
Towards 3D Point Cloud Based Object Maps for Household Environments, 

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

[C1] Zoltan Csaba Marton, Nico Blodow, Mihai Dolha, Moritz Tenorth, Radu Bogdan Rusu and Michael Beetz, 
Autonomous Mapping of Kitchen Environments and Applications, 

[C2] Radu Bogdan Rusu, Aravind Sundaresan, Benoit Morisset, Motilal Agrawal, Michael Beetz and Kurt Konolige, 
Realtime Extended 3D Reconstruction from Stereo for Navigation, 

[C3] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow and Michael Beetz, 
Interpretation of Urban Scenes based on Geometric Features, 

[C4] Radu Bogdan Rusu, Aravind Sundaresan, Benoit Morisset, Motilal Agrawal and Michael Beetz, 
Leaving Flatland: Realtime 3D Stereo Semantic Reconstruction, 

[C5] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow and Michael Beetz, 
Learning Informative Point Classes for the Acquisition of Object Model Maps, 
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**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.

[C7] Radu Bogdan Rusu, Jan Bandouch, Zoltan Csaba Marton, Nico Blodow and Michael Beetz,
**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), Muenchen, Germany*, 2008.

[C8] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow and Michael Beetz,
**Persistent Point Feature Histograms for 3D Point Clouds,**

[C9] Radu Bogdan Rusu, Zoltan Csaba Marton, Nico Blodow, Mihai Emanuel Dolha and Michael Beetz,
**Functional Object Mapping of Kitchen Environments,**

[C10] Radu Bogdan Rusu, Nico Blodow, Zoltan Csaba Marton and Michael Beetz,
**Aligning Point Cloud Views using Persistent Feature Histograms,**

[C1] Radu Bogdan Rusu, Nico Blodow, Zoltan-Csaba Marton, Alina Soos and Michael Beetz,
**Towards 3D Object Maps for Autonomous Household Robots,**