A. Narr, R. Triebel and D. Cremers, 
Stream-based Active Learning for Efficient and Adaptive Classification of 3D Objects,

I. Chiotellis, R. Triebel, T. Windheuser and D. Cremers, 
Non-Rigid 3D Shape Retrieval via Large Margin Nearest Neighbor Embedding, 
*European Conference on Computer Vision (ECCV)*, October 2016.

S. Sharifzadeh, I. Chiotellis, R. Triebel and D. Cremers, 
Learning to Drive using Inverse Reinforcement Learning and Deep Q-Networks, 
NIPS Workshops, December 2016.

Hugo Grimmett, Rudolph Triebel, Rohan Paul and Ingmar Posner, 
Introspective classification for robot perception, 

D. Mund, R. Triebel and D. Cremers, 
Active Online Confidence Boosting for Efficient Object Classification, 

SPENCER: A Socially Aware Service Robot for Passenger Guidance and Help in Busy Airports, 

Y. Tao, R. Triebel and D. Cremers, 
Semi-supervised Online Learning for Efficient Classification of Objects in 3D Data Streams, 

F. Stark, C. Hazirbas, R. Triebel and D. Cremers, 
CAPTCHA Recognition with Active Deep Learning, 
*GCPR Workshop on New Challenges in Neural Computation*, Aachen, Germany, 2015.

T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers, 
Optimal Intrinsic Descriptors for Non-Rigid Shape Analysis, 

R. Triebel, J. Stühmer, M. Souiai and D. Cremers, 
Active Online Learning for Interactive Segmentation Using Sparse Gaussian Processes, 
*German Conference on Pattern Recognition*, 2014.
[C3] S. Debnath, S. S. Baishya, R. Triebel, V. Dutt and D. Cremers,
Environment-adaptive Learning: How Clustering Helps to Obtain Good Training Data,

*Toward Automated Driving in Cities using Close-to-Market Sensors*,

Knowing When We Don’t Know: Introspective Classification for Mission-Critical Decision Making,

[C3] R. Triebel, H. Grimmett and I. Posner,
Confidence Boosting: Improving the Introspectiveness of a Boosted Classifier for Efficient Learning,

Introspective Active Learning for Scalable Semantic Mapping,

Driven Learning for Driving: How Introspection Improves Semantic Mapping,
*The International Symposium on Robotics Research (ISRR)*, 2013.

[C1] R. Paul, R. Triebel, D. Rus and P. Newman,
Semantic Categorization of Outdoor Scenes with Uncertainty Estimates using Multi-Class Gaussian Process Classification,

Parsing Outdoor Scenes from Streamed 3D Laser Data Using Online Clustering and Incremental Belief Updates,

[C1] J. Shin, R. Triebel and R. Siegwart,
Unsupervised 3D Object Discovery and Categorization for Mobile Robots,

[C2] J. Maye, R. Triebel, L. Spinello and R. Siegwart,
Bayesian On-line Learning of Driving Behaviors,
[J1] L. Spinello, R. Triebel and R. Siegwart, 
Multiclass Multimodal Detection and Tracking in Urban Environments, 

[C1] R. Kaestner, N. Engelhard, R. Triebel and R. Siegwart, 
A Bayesian Approach to Learning 3D Representations of Dynamic Environments, 
*Proc. of the 12th International Symposium on Experimental Robotics (ISER)*, Berlin, 

[C2] L. Spinello, R. Triebel, D. Vasquez, K. Arras and R. Siegwart, 
Exploiting Repetitive Object Patterns for Model Compression and Completion, 

[C3] R. Triebel, J. Shin and R. Siegwart, 
Segmentation and Unsupervised Part-based Discovery of Repetitive Objects, 

[C4] L. Spinello, K. O. Arras, R. Triebel and R. Siegwart, 
A Layered Approach to People Detection in 3D Range Data, 
*special track on Physically Grounded AI of AAAI*, 2010.

[C5] J. Shin, R. Triebel and R. Siegwart, 
Unsupervised Discovery of Repetitive Objects, 

[C6] J. Maye, L. Spinello, R. Triebel and R. Siegwart, 
Inferring the Semantics of Direction Signs in Public Places, 

[C1] L. Spinello, A. Macho, R. Triebel and R. Siegwart, 
Detecting Pedestrians at Very Small Scales, 

[C2] L. Spinello, R. Triebel and R. Siegwart, 
Multiclass Multimodal Detection and Tracking in Urban Environments, 
*Proc. of Field and Service Robotics (FSR)*, 2009.

[C3] D. Engel, L. Spinello, R. Triebel, C. Curio, R. Siegwart and H. Blthoff, 
Medial Features for Superpixel Segmentation, 

[J1] R. Kummerle, R. Triebel, P. Pfaff and W. Burgard, 
Monte Carlo localization in outdoor terrains using multilevel surface maps, 
[C1] L. Spinello, R. Triebel and R. Siegwart, 
Multimodal Detection and Tracking of Pedestrians in Urban Environments with Explicit Ground Plane Extraction, 

[C2] L. Spinello, R. Triebel and R. Siegwart, 
Multimodal People Detection and Tracking in Crowded Scenes, 

[J1] . Martinez Mozos, R. Triebel, P. Jensfelt, A. Rottmann and W. Burgard, 
Supervised semantic labeling of places using information extracted from sensor data, 

[J2] P. Pfaff, R. Triebel and W. Burgard, 
An Efficient Extension to Elevation Maps for Outdoor Terrain Mapping and Loop Closing, 

[J3] H. Andreasson, R. Triebel and A. Lilienthal, 
Non-iterative Vision-based Interpolation of 3D Laser Scans, 

[C1] R. Triebel, . Martinez Mozos and W. Burgard, 
Collective Classification for Labeling of Places and Objects in 2D and 3D Range Data, 

Active Monte Carlo Localization in Outdoor Terrains using Multi-Level Surface Maps, 

[C3] R. Triebel and W. Burgard, 
Recovering the Shape of Objects in 3D Point Clouds with Partial Occlusions, 

Monte Carlo Localization in Outdoor Terrains using Multi-Level Surface Maps, 

Towards Mapping of Cities, 

Instance-based AMN Classification for Improved Object Recognition in 2D and 3D Laser Range Data, 
[C1] R. Triebel, P. Pfaff and W. Burgard,  
*Multi-Level Surface Maps for Outdoor Terrain Mapping and Loop Closing*,  

[C2] R. Triebel, K. Kersting and W. Burgard,  
*Robust 3D Scan Point Classification using Associative Markov Networks*,  

[C3] H. Andreasson, R. Triebel and A. Lilienthal,  
*Vision-based Interpolation of 3D Laser Scans*,  

[C1] H. Andreasson, R. Triebel and W. Burgard,  
*Improving Plane Extraction from 3D Data by Fusing Laser Data and Vision*,  

[C2] R. Triebel and W. Burgard,  
*Improving Simultaneous Localization and Mapping in 3D Using Global Constraints*,  
*Proc. of the Twentieth National Conference on Artificial Intelligence (AAAI)*, 2005.

[C3] R. Triebel, W. Burgard and F. Dellaert,  
*Using Hierarchical EM to Extract Planes from 3D Range Scans*,  

[C1] R. Triebel, B. Frank, J. Meyer and W. Burgard,  
*First steps towards a robotic system for flexible volumetric mapping of indoor environments*,  

*A system for volumetric robotic mapping of underground mines*,  

[C2] D. Hnuel, R. Triebel, W. Burgard and S. Thrun,  
*Map Building with Mobile Robots in Dynamic Environments*,  