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*Proceedings Vision, Modeling and Visualization (VMV)*, Aachen, Germany, 2015, Received the Best Paper Award.

[C169] C. Kerl, J. Stueckler and D. Cremers, 
Dense Continuous-Time Tracking and Mapping with Rolling Shutter RGB-D Cameras,
*IEEE International Conference on Computer Vision (ICCV)*, Santiago, Chile, 2015.

[C170] M. Souiai, M. R. Oswald, Y. Kee, J. Kim, M. Pollefeys and D. Cremers, 
Entropy Minimization for Convex Relaxation Approaches,
*IEEE International Conference on Computer Vision (ICCV)*, Santiago, Chile, 2015.

[C171] 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.

[C172] N. Nagaraja, F. R. Schmidt and T. Brox, 
Video Segmentation with Just a Few Strokes,
*IEEE International Conference on Computer Vision (ICCV)*, Santiago, Chile, Dec 2015.

Model-Based Tracking at 300Hz using Raw Time-of-Flight Observations,
*IEEE International Conference on Computer Vision (ICCV)*, Santiago, Chile, 2015.

Novel Acquisition Scheme for Diffusion Kurtosis Imaging Based on Compressed-Sensing Accelerated DSI Yielding Superior Image Quality,

Total Variation-Regularized Compressed Sensing Reconstruction for Multi-Shell Diffusion Kurtosis Imaging,

Direct Reconstruction of the Average Diffusion Propagator with Simultaneous Compressed-Sensing-Accelerated Diffusion Spectrum Imaging and Image Denoising by Means of Total Generalized Variation Regularization,
All: 1

List of Publications

[C177] V. Golkov, M.I. Menzel, T. Sprenger, A. Haase, D. Cremers and J.I. Sperl,
Semi-Joint Reconstruction for Diffusion MRI Denoising Imposing Similarity
of Edges in Similar Diffusion-Weighted Images,

Improved Diffusion Kurtosis Imaging and Direct Propagator Estimation Using
6-D Compressed Sensing,

[C179] D. B. AD. CJ. C D. Weikersdorfer,
Event-based 3D SLAM with a depth-augmented dynamic vision sensor,

[C180] F. Steinbruecker, J. Sturm and D. Cremers,
Volumetric 3D Mapping in Real-Time on a CPU,
International Conference on Robotics and Automation (ICRA), Hongkong, China, 2014.

[C181] E. Rodola, S. R Bulo, T. Windheuser, M. Vestner and D. Cremers,
Dense Non-Rigid Shape Correspondence Using Random Forests,

[C182] Y. Kee, M. Souiai, D. Cremers and J. Kim,
Sequential Convex Relaxation for Mutual-Information-Based Unsupervised
Figure-Ground Segmentation,

[C183] H. Alvarez, L.M. Paz, J. Sturm and D. Cremers,
Collision Avoidance for Quadrotors with a Monocular Camera,

[C184] J. Engel, T. Schöps and D. Cremers,
LSD-SLAM: Large-Scale Direct Monocular SLAM,
European Conference on Computer Vision (ECCV), September 2014, Oral Presentation.

[C185] T. Schöps, J. Engel and D. Cremers,
Semi-Dense Visual Odometry for AR on a Smartphone,
International Symposium on Mixed and Augmented Reality, September 2014, Best Short
Paper Award.

[C186] T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers,
Optimal Intrinsic Descriptors for Non-Rigid Shape Analysis,
British Machine Vision Conference (BMVC), 2014.

[C187] M. Strobel, J. Diebold and D. Cremers,
Flow and Color Inpainting for Video Completion,
German Conference on Pattern Recognition (GCPR), Münster, Germany, September 2014, Oral
Presentation.

[C188] R. Maier, J. Sturm and D. Cremers,
Submap-based Bundle Adjustment for 3D Reconstruction from RGB-D Data,
German Conference on Pattern Recognition (GCPR), Münster, Germany, September 2014, Oral
Presentation.
[C189] T. Gurdan, M. R. Oswald, D. Gurdan and D. Cremers,  
Spatial and Temporal Interpolation of Multi-View Image Sequences,  
*German Conference on Pattern Recognition (GCPR)*, Münster, Germany, Vol. 36, sep 2014.

[C190] M. R. Oswald and D. Cremers,  
Surface Normal Integration for Convex Space-time Multi-view Reconstruction,  

[C191] C. Nieuwenhuis, S. Hawe, M. Kleinsteuber and D. Cremers,  
Co-Sparse Textural Similarity for Interactive Segmentation,  

[C192] M. R. Oswald, J. Stühmer and D. Cremers,  
Generalized Connectivity Constraints for Spatio-temporal 3D Reconstruction,  

[C193] E. Strekalovskiy and D. Cremers,  
Real-Time Minimization of the Piecewise Smooth Mumford-Shah Functional,  

[C194] A. Kanezaki, E. Rodola and T. Harada,  
RGB-D [RGB-D gazou kara no buttai kenshutsu ni okeru taiou tenshuugou ruijido no gakushuu],  

[C195] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,  
[Taiou tenshuugou ruijido gakushuu wo mochiita goutai-higoutai buttai kenshutsu],  

[C196] M. Andreux, E. Rodola, M. Aubry and D. Cremers,  
Anisotropic Laplace-Beltrami Operators for Shape Analysis,  
Sixth Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA), 2014.

[C197] O. Dunkley, J. Engel, J. Sturm and D. Cremers,  
Visual-Inertial Navigation for a Camera-Equipped 25g Nano-Quadrotor,  

[C198] 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.

[C199] S. Debnath, S. S. Baishya, R. Triebel, V. Dutt and D. Cremers,  
Environment-adaptive Learning: How Clustering Helps to Obtain Good Training Data,  

[C200] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,  
Learning Similarities for Rigid and Non-Rigid Object Detection,  
All: 1

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[C201] D. Bender, M. Schikora, J. Sturm and D. Cremers,
INS-Camera Calibration without Ground Control Points,
9th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF), 2014.

[C202] C. Kerl, M. Souiai, J. Sturm and D. Cremers,
Towards Illumination-invariant 3D Reconstruction using ToF RGB-D Cameras,
International Conference on 3D Vision (3DV), 2014.

[C203] J. Stueckler and S. Behnke,
Adaptive Tool-Use Strategies for Anthropomorphic Service Robots,
Proc. of the 14th IEEE-RAS International Conference on Humanoid Robots (Humanoids),
to appear, nov 2014.

[C204] D. Droeschel, J. Stueckler and S. Behnke,
Local Multi-Resolution Surfel Grids for MAV Motion Estimation and 3D Mapping,
Proc. of the 13th International Conference on Intelligent Autonomous Systems (IAS),
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[C205] J. Stueckler, A. Gutt and S. Behnke,
Combining the Strengths of Sparse Interest Point and Dense Image Registration for RGB-D Odometry,
Proc. of the Joint 45th International Symposium on Robotics (ISR) and 8th German Conference on Robotics (ROBOTIK),
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[C206] J. Stueckler and S. Behnke,
Efficient deformable registration of multi-resolution surfel maps for object manipulation skill transfer,

[C207] D. Droeschel, J. Stueckler and S. Behnke,
Local multi-resolution representation for 6D motion estimation and mapping with a continuously rotating 3D laser scanner,
Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA), 5221-5226, may 2014.

[C208] M. Schwarz, J. Stueckler and S. Behnke,
Mobile Teleoperation Interfaces with Adjustable Autonomy for Personal Service Robots,

[C209] F. R. Schmidt, T. Windheuser, U. Schlickewei and D. Cremers,
Dense Elastic 3D Shape Matching,

[C210] J Bergbauer and S Tari,
Wimmelbild Analysis with Approximate Curvature Coding Distance Images,
[C211] J. Bergbauer and S. Tari, 
Top-down visual search in Wimmelbild, 

[C212] F. Bergamasco, A. Albarelli, E. Rodola and A. Torsello, 
Can a fully unconstrained imaging model be applied effectively to central cameras?, 

[C213] M. Souiai, C. Nieuwenhuis, E. Strekalovskiy and D. Cremers, 
Convex Optimization for Scene Understanding, 
ICCV Workshop on Graphical Models for Scene Understanding, 2013.

[C214] J. Bergbauer, C. Nieuwenhuis, M. Souiai and D. Cremers, 
Proximity Priors for Variational Semantic Segmentation and Recognition, 
ICCV Workshop on Graphical Models for Scene Understanding, 2013.

[C215] V. Golkov, T. Sprenger, A. Menini, M.I. Menzel, D. Cremers and J.I. Sperl, 
Effects of Low-Rank Constraints, Line-Process Denoising, and q-Space Compressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor Estimation, 

[C216] V. Golkov, T. Sprenger, M.I. Menzel, D. Cremers and J.I. Sperl, 
Line-Process-Based Joint SENSE Reconstruction of Diffusion Images with Intensity Inhomogeneity Correction and Noise Non-Stationarity Correction, 
European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Annual Meeting, 2013, Certificate of Merit Award.

[C217] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl, 
Reconstruction, Regularization, and Quality in Diffusion MRI Using the Example of Accelerated Diffusion Spectrum Imaging, 
16th Annual Meeting of the German Chapter of the ISMRM, 2013, Oral Presentation.

[C218] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl, 
Corrected Joint SENSE Reconstruction, Low-Rank Constraints, and Compressed-Sensing-Accelerated Diffusion Spectrum Imaging in Denoising and Kurtosis Tensor Estimation, 
ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013.

SNR-dependent Quality Assessment of Compressed-Sensing-Accelerated Diffusion Spectrum Imaging Using a Fiber Crossing Phantom, 

Phase Sensitive Reconstruction in Diffusion Spectrum Imaging Enabling Velocity Encoding and Unbiased Noise Distribution, 


[C231] J. Sturm and W. Burgard,
Learning Probabilistic Models for Mobile Manipulation Robots,
Proc. of the International Joint Conference on Artificial Intelligence (IJCAI), Track on Best papers in Sister Conferences, 2013.

[C232] M. Souiai, E. Strekalovskiy, C. Nieuwenhuis and D. Cremers,
A Co-occurrence Prior for Continuous Multi-Label Optimization,

[C233] F. Stangl, M. Souiai and D. Cremers,
Performance Evaluation of Narrow Band Methods for Variational Stereo,
35th German Conference on Pattern Recognition (GCPR), 2013.

[C234] T. Möllenhoff, C. Nieuwenhuis, E. Toeppe and D. Cremers,
Efficient Convex Optimization for Minimal Partition Problems with Volume Constraints,

[C235] C. Kerl, J. Sturm and D. Cremers,
Dense Visual SLAM for RGB-D Cameras,

[C236] T. Naseer, J. Sturm and D. Cremers,
FollowMe: Person Following and Gesture Recognition with a Quadrocopter,

[C237] M. Klodt, J. Sturm and D. Cremers,
Scale-Aware Object Tracking with Convex Shape Constraints on RGB-D Images,
German Conference on Pattern Recognition (GCPR), Saarbrücken, Germany, September 2013.

[C238] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
Dense Tracking and Mapping with a Quadrocopter,
Unmanned Aerial Vehicle in Geomatics (UAV-g), Rostock, Germany, September 2013.

[C239] D. Bender, M. Schikora, J. Sturm and D. Cremers,
Graph-based bundle adjustment for INS-camera calibration,
Unmanned Aerial Vehicle in Geomatics (UAV-g), Rostock, Germany, September 2013, Best research paper award.

[C240] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
CopyMe3D: Scanning and Printing Persons in 3D,
German Conference on Pattern Recognition (GCPR), Saarbrücken, Germany, September 2013.

[C241] E. Rodola, T. Harada, Y. Kuniyoshi and D. Cremers,
Efficient Shape Matching using Vector Extrapolation,

[C242] J. Engel, J. Sturm and D. Cremers,
Semi-Dense Visual Odometry for a Monocular Camera,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, December 2013.
Elastic Net Constraints for Shape Matching,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, December 2013.

Total Variation Regularization for Functions with Values in a Manifold,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, December 2013.

Proportion Priors for Image Sequence Segmentation,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, December 2013.

Tree Shape Priors with Connectivity Constraints using Convex Relaxation on General Graphs,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, December 2013, Oral Presentation.

Fast and Accurate Large-scale Stereo Reconstruction using Variational Methods,
ICCV Workshop on Big Data in 3D Computer Vision, Sydney, Australia, December 2013.

A Convex Relaxation Approach to Space Time Multi-view 3D Reconstruction,
ICCV Workshop on Dynamic Shape Capture and Analysis (4DMOD), 2013.

Large-Scale Multi-Resolution Surface Reconstruction from RGB-D Sequences,
IEEE International Conference on Computer Vision (ICCV), Sydney, Australia, 2013.

Interactive Person Following and Gesture Recognition with a Flying Robot,
Proc. of the Assistance and Service Robotics Workshop (ASROB) at the IEEE. Int. Conf. on Intelligent Robots and Systems (IROS), Nov. 2013.

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

Relaxations for Minimizing Metric Distortion and Elastic Energies for 3D Shape Matching,

Multi-resolution surfel mapping and real-time pose tracking using a continuously rotating 2D laser scanner,
All: 1

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[C254] J. Stueckler and S. Behnke,
*Efficient Dense 3D Rigid-Body Motion Segmentation in RGB-D Video,*

[C255] M. McElhone, J. Stueckler and S. Behnke,
*Joint detection and pose tracking of multi-resolution surfel models in RGB-D,*

[C256] T. Fiolka, J. Stueckler, D. A. Klein, D. Schulz and S. Behnke,
*Distinctive 3D surface entropy features for place recognition,*

[C257] A. Berner, J Li, D. Holz, J. Stueckler, S. Behnke and R. Klein,
*Combining contour and shape primitives for object detection and pose estimation of prefabricated parts,*

[C258] J. Stueckler and S. Behnke,
*Hierarchical Object Discovery and Dense Modelling From Motion Cues in RGB-D Video,*

[C259] M. Nieuwenhuisen, D. Droeschel, D. Holz, J. Stueckler, A. Berner, J Li, R. Klein and S. Behnke,
*Mobile bin picking with an anthropomorphic service robot,*

[C260] L. Gorelick, F. R. Schmidt and Y. Boykov,
*Fast Trust Region for Segmentation,*

[C261] L. Ma, T. Whelan, E. Bondarev, P. H. N. de With and J. McDonald,
*Planar simplification and texturing of dense point cloud maps,*

[C262] E. Rodola, A.M. Bronstein, A. Albarelli, F. Bergamasco and A. Torsello,
*A game-theoretic approach to deformable shape matching,*

[C263] F. Endres, J. Hess, N. Engelhard, J. Sturm, D. Cremers and W. Burgard,
*An Evaluation of the RGB-D SLAM System,*

[C264] T. Ruehr, J. Sturm, D. Pangercic, M. Beetz and D. Cremers,
*A Generalized Framework for Opening Doors and Drawers in Kitchen Environments,*
[C265] D Joho, GD Tipaldi, N Engelhard, C Stachniss and W Burgard,
Nonparametric Bayesian Models for Unsupervised Scene Analysis and Recon-
struction,

[C266] M. Schikora, A. Gning, L. Mihaylova, D. Cremers, W. Koch and R. Streit,
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[C267] M. Schikora, A. Gning, L. Mihaylova, D. Cremers and W. Koch,
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15th International Conference on Information Fusion (FUSION), Singapore, July 2012.

[C268] L. Zhang, J. Sturm, D. Cremers and D. Lee,
Real-Time Human Motion Tracking using Multiple Depth Cameras,

[C269] E. Strekalovskiy, C. Nieuwenhuis and D. Cremers,
Nonmetric Priors for Continuous Multilabel Optimization,

[C270] T. Windheuser, H. Ishikawa and D. Cremers,
Generalized Roof Duality for Multi-Label Optimization: Optimal Lower
Bounds and Persistency,
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[C271] T. Windheuser, H. Ishikawa and D. Cremers,
QPBO [QPBO arugorizumu no tachika ni yoru hiretsu mojura enerugi saisho-
ka],
Meeting on Image Recognition and Understanding, Fukuoka, Japan, aug 2012.

[C272] M. R. Oswald, E. Toeppe and D. Cremers,
Fast and Globally Optimal Single View Reconstruction of Curved Objects,
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[C273] E. Strekalovskiy, A. Chambolle and D. Cremers,
A Convex Representation for the Vectorial Mumford-Shah Functional,
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[C274] J. Engel, J. Sturm and D. Cremers,
Camera-Based Navigation of a Low-Cost Quadrocopter,

[C275] J. Sturm, N. Engelhard, F. Endres, W. Burgard and D. Cremers,
A Benchmark for the Evaluation of RGB-D SLAM Systems,

[C276] J. Engel, J. Sturm and D. Cremers,
Accurate Figure Flying with a Quadrocopter Using Onboard Visual and Iner-
tial Sensing,
Proc. of the Workshop on Visual Control of Mobile Robots (ViCoMoR) at the IEEE/RJS
[C277] J. Sturm, W. Burgard and D. Cremers,
Evaluating Egomotion and Structure-from-Motion Approaches Using the TUM RGB-D Benchmark,

Evaluation of DSI Imaging with Compressed Sensing under the Presence of Different Noise Levels on a Diffusion Phantom,

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[C280] N. Ufer, M. Souiai and D. Cremers,
Wehrli 2.0: An Algorithm for Tidying up Art,

[C281] 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,

[C283] U. Hubert, J. Stueckler and S. Behnke,
Bayesian calibration of the hand-eye kinematics of an anthropomorphic robot,
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[C284] J. Stueckler, N. Biresev and S. Behnke,
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[C285] J. Stueckler and S. Behnke,
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*Adjustable autonomy for mobile teleoperation of personal service robots,*
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Learning the State Transition Model to Efficiently Clean Surfaces with Mobile Manipulation Robots,
*Proc. of the Workshop on Manipulation under Uncertainty at the IEEE Int. Conf. on Robotics and Automation (ICRA)*, Shanghai, China, May 2011.
[C309] N. Engelhard, F. Endres, J. Hess, J. Sturm and W. Burgard,
Real-time 3D visual SLAM with a hand-held camera,
Proc. of the RGB-D Workshop on 3D Perception in Robotics at the European Robotics Forum,
Vasteras, Sweden, April 2011.

and R. Siegwart,
Towards a benchmark for RGB-D SLAM evaluation,
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[C311] C. Nieuwenhuis, E. Toeppe and D. Cremers,
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A Convex Framework for Image Segmentation with Moment Constraints,
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Real-Time Visual Odometry from Dense RGB-D Images,
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Mobile Manipulation of Kitchen Containers,
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[C316] M. Schikora, M.Oispuu, W. Koch and D. Cremers,
Multiple Source Localization Based on Biased Bearings Using the Intensity Filter - Approach and Experimental Results,

[C317] S. Madhogaria, M. Schikora, W. Koch and D. Cremers,
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6th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF),
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[C318] M. Schikora, W. Koch, R.L. Streit and D. Cremers,
Sequential Monte Carlo Method for the iFilter,
14th International Conference on Information Fusion (FUSION), Chicago, IL, USA, July 2011.
[C319] M. Oispuu and M. Schikora,
**Multiple Emitter Localization Using a Realistic Airborne Array Sensor,**
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[C320] M. Schikora, W. Koch and D. Cremers,
**Multi-object tracking via high accuracy optical flow and finite set statistics,**

[C321] E. Toepppe, M. R. Oswald, D. Cremers and C. Rother,
**Silhouette-Based Variational Methods for Single View Reconstruction,**

[C322] M. R. Oswald, E. Toepppe, C. Nieuwenhuis and D. Cremers,
**A Survey on Geometry Recovery from a Single Image with Focus on Curved Object Reconstruction,**

[C323] J. Shin, R. Triebel and R. Siegwart,
**Unsupervised 3D Object Discovery and Categorization for Mobile Robots,**

[C324] J. Maye, R. Triebel, L. Spinello and R. Siegwart,
**Bayesian On-line Learning of Driving Behaviors,**

[C325] B. Oehler, J. Stueckler, J. Welle, D. Schulz and S. Behnke,
**Efficient Multi-resolution Plane Segmentation of 3D Point Clouds,**

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**Following human guidance to cooperatively carry a large object,**
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[C327] J. Stueckler, R. Steffens, D. Holz and S. Behnke,
**Real-Time 3D Perception and Efficient Grasp Planning for Everyday Manipulation Tasks.**,
*Proc. of the European Conf. on Mobile Robots (ECMR)*, 177-182, 2011.

[C328] J. Stueckler and S. Behnke,
**Compliant Task-Space Control with Back-Drivable Servo Actuators,**

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