2022
Conference and Workshop Papers

[C1] L Koestler, D Grittner, M Moeller, D Cremers and Z Lähner,
Intrinsic Neural Fields: Learning Functions on Manifolds,
European Conference on Computer Vision (ECCV), 2022.

2021
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[C1] M Gao, Z Lähner, J Thunberg, D Cremers and F Bernard,
Isometric Multi-Shape Matching,

2020
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[C1] R. Wang, N. Yang, J. Stueckler and D. Cremers,
DirectShape: Photometric Alignment of Shape Priors for Visual Vehicle Pose and Shape Estimation,

[C2] M. Eisenberger and D. Cremers,
Hamiltonian Dynamics for Real-World Shape Interpolation,
European Conference on Computer Vision (ECCV), 2020, Spotlight Presentation.

[C3] B Holzschuh, Z Lähner and D Cremers,
Simulated Annealing for 3D Shape Correspondence,

[C4] M Aygün, Z Lähner and D Cremers,
Unsupervised Dense Shape Correspondence using Heat Kernels,

2017
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Efficient Deformable Shape Correspondence via Kernel Matching,
International Conference on 3D Vision (3DV), Qingdao, China, October 2017, Oral Presentation.

2016
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[C1] Z. Lähner, E. Rodola, F. R. Schmidt, M. M. Bronstein and D. Cremers,
Efficient Globally Optimal 2D-to-3D Deformable Shape Matching,
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), May 2016.
Keywords: Shape

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*SHREC’16: Matching of Deformable Shapes with Topological Noise*,
*Proc. of Eurographics Workshop on 3D Object Retrieval (3DOR)*, May 2016.

[C3] L. Cosmo, E. Rodola, M. M. Bronstein, A. Torsello, D. Cremers and Y. Sahillioglu,
*SHREC’16: Partial Matching of Deformable Shapes*,
*Proc. of Eurographics Workshop on 3D Object Retrieval (3DOR)*, May 2016.

2015

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[J1] A. Albarelli, E. Rodola and A. Torsello,
*Fast and Accurate Surface Alignment through an Isometry-Enforcing Game*,

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[C1] J. Stühmer and D. Cremers,
*A Fast Projection Method for Connectivity Constraints in Image Segmentation*,

2013

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[J1] E. Rodola, A. Albarelli, F. Bergamasco and A. Torsello,
*A Scale Independent Selection Process for 3D Object Recognition in Cluttered Scenes*,

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[C1] J. Stühmer, P. Schröder and D. Cremers,
*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.

2012

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[C1] E. Rodola, A.M. Bronstein, A. Albarelli, F. Bergamasco and A. Torsello,
*A game-theoretic approach to deformable shape matching*,
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2011

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[BC1] D. Cremers,
*Image Segmentation with Shape Priors: Explicit Versus Implicit Representations*,

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[C1] A. Albarelli, E. Rodola and A. Torsello,
*A Non-Cooperative Game for 3D Object Recognition in Cluttered Scenes*,
_International Conference on 3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT)_,
252-259, 2011.

[C2] A. Torsello, E. Rodola and A. Albarelli,
*Sampling Relevant Points for Surface Registration*,
_International Conference on 3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT)_,
290-295, 2011.

[C3] M. Aubry, U. Schlickewei and D. Cremers,
*The Wave Kernel Signature: A Quantum Mechanical Approach To Shape Analysis*,
_IEEE International Conference on Computer Vision (ICCV) - Workshop on Dynamic Shape Capture and Analysis (4DMOD)_,
2011.

2010

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[C1] A. Albarelli, E. Rodola and A. Torsello,
*A Game-Theoretic Approach to Fine Surface Registration without Initial Motion Estimation*,
_IEEE Conference on Computer Vision and Pattern Recognition (CVPR)_,

2009

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[J1] T. Brox, B. Rosenhahn, J. Gall and D. Cremers,
*Combined region- and motion-based 3D tracking of rigid and articulated objects*,

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[C1] F. R. Schmidt and D. Cremers,
*A Closed-Form Solution for Image Sequence Segmentation with Dynamical Shape Priors*,
_Pattern Recognition (Proc. DAGM)_,
Jena, Germany, September 2009.

[C2] F. R. Schmidt, E. Toeppe and D. Cremers,
*Efficient Planar Graph Cuts with Applications in Computer Vision*,
_IEEE Conference on Computer Vision and Pattern Recognition (CVPR)_,
Miami, Florida, 351-356, jun 2009, Received a CVPR Doctoral Spotlight Award.
2008
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[J1] D. Cremers,
Nonlinear Dynamical Shape Priors for Level Set Segmentation,

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[C1] D. Cremers, F. R. Schmidt and F. Barthel,
Shape Priors in Variational Image Segmentation: Convexity, Lipschitz Continuity and Globally Optimal Solutions,

[C2] B. Andres, C. Nieuwenhuis, D. Kondermann, U. Köthe and R. Hamprecht,
On Errors-In-Variables Regression with Arbitrary Covariance and its Application to Optical Flow Estimation,

2007
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[J1] D. Cremers, M. Rousson and R. Deriche,
A review of statistical approaches to level set segmentation: integrating color, texture, motion and shape,

Book Chapters

[BC1] D. Cremers and M. Rousson,
Efficient kernel density estimation of shape and intensity priors for level set segmentation,

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[C1] T. Schoenemann and D. Cremers,
Globally Optimal Image Segmentation with an Elastic Shape Prior,

[C2] F. R. Schmidt, D Farin and D. Cremers,
Fast Matching of Planar Shapes in Sub-cubic Runtime,

[C3] F. R. Schmidt, E. Toeppe, D. Cremers and Y. Boykov,
Intrinsic Mean for Semimetrical Shape Retrieval via Graph Cuts,
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[C4] F. R. Schmidt, E. Toeppe, D. Cremers and Y. Boykov,
Efficient Shape Matching via Graph Cuts,

[C5] D. Cremers,
Nonlinear Dynamical Shape Priors for Level Set Segmentation,

2006
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[J1] D. Cremers,
Dynamical statistical shape priors for level set based tracking,

[J2] S. Manay, D. Cremers, B.-W. Hong, A. Yezzi and S. Soatto,
Integral invariants for shape matching,

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[C1] F. R. Schmidt, M. Clausen and D. Cremers,
Shape Matching by Variational Computation of Geodesics on a Manifold,

[C2] D. Cremers and L. Grady,
Statistical priors for combinatorial optimization: efficient solutions via Graph Cuts,

[C3] T. Kohlberger, D. Cremers, M. Rousson and R. Ramaraj,
4D shape priors for level set segmentation of the left myocardium in SPECT sequences,

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[C1] D. Cremers and G. Funka-Lea,
Dynamical statistical shape priors for level set based tracking,

[C2] S. Manay, D. Cremers, A. J. Yezzi and S. Soatto,
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[C3] M. Rousson and D. Cremers,
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[C1] T. Brox, A. Bruhn, N. Papenberg and J. Weickert,
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Best Paper Award’60;/a¿.

[C2] D. Cremers, S. J. Osher and S. Soatto,
Kernel density estimation and intrinsic alignment for knowledge-driven segmentation: Teaching level sets to walk,

[C3] D. Cremers, N. Sochen and C. Schnörr,
Multiphase dynamic labeling for variational recognition-driven image segmentation,

2003
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[J1] D. Cremers, T. Kohlberger and C. Schnörr,
Shape Statistics in Kernel Space for Variational Image Segmentation,

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[C1] D. Cremers and S. Soatto,
A pseudo-distance for shape priors in level set segmentation,

[C2] D. Cremers, N. Sochen and C. Schnörr,
Towards Recognition-based Variational Segmentation Using Shape Priors and Dynamic Labeling,
2002

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[J1] D. Cremers, F. Tischhäuser, J. Weickert and C. Schnörr,
Diffusion Snakes: Introducing statistical shape knowledge into the Mumford–Shah functional,

Conference and Workshop Papers

[C1] D. Cremers, T. Kohlberger and C. Schnörr,
Nonlinear shape statistics in Mumford–Shah based segmentation,

2000

Conference and Workshop Papers

[C1] D. Cremers, C. Schnörr, J. Weickert and C. Schellewald,
Learning of translation invariant shape knowledge for steering diffusion snakes,

[C2] D. Cremers, C. Schnörr, J. Weickert and C. Schellewald,
Diffusion Snakes using statistical shape knowledge,