# Keywords: Geometry Processing

## List of Publications

### 2023

#### Conference and Workshop Papers

[C1] F Hofherr, L Koestler, F Bernard and D Cremers,  
*Neural Implicit Representations for Physical Parameter Inference from a Single Video*,  

### 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

#### Conference and Workshop Papers

[C1] T Yenamandra, A Tewari, F Bernard, HP Seidel, M Elgharib, D Cremers and C Theobalt,  
*i3DMM: Deep Implicit 3D Morphable Model of Human Heads*,  

[C2] M Gao, Z Lähner, J Thunberg, D Cremers and F Bernard,  
*Isometric Multi-Shape Matching*,  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021, Oral Presentation.

### 2020

#### Journal Articles

[J1] C. Sommer, Y. Sun, L. J. Guibas, D. Cremers and T. Birdal,  
*From Planes to Corners: Multi-Purpose Primitive Detection in Unorganized 3D Point Clouds*,  

#### Conference and Workshop Papers

[C1] M. Eisenberger, Z. Lähner and D. Cremers,  
*Smooth Shells: Multi-Scale Shape Registration with Functional Maps*,  
*IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020, Oral Presentation.

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

[C3] S. Weiss, R. Maier, D. Cremers, R. Westermann and N. Thuerey,  
*Correspondence-Free Material Reconstruction using Sparse Surface Constraints*,  
*IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
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List of Publications

[C4] C. Sommer, Y. Sun, E. Bylow and D. Cremers,
**PrimiTect: Fast Continuous Hough Voting for Primitive Detection,**

[C5] B Holzschuh, Z Lähner and D Cremers,
**Simulated Annealing for 3D Shape Correspondence,**

[C6] M Aygün, Z Lähner and D Cremers,
**Unsupervised Dense Shape Correspondence using Heat Kernels,**

2019

Journal Articles

[J1] E Rodola, Z Lähner, AM. Bronstein, MM. Bronstein and J Solomon,
**Functional Maps Representation on Product Manifolds,**

Conference and Workshop Papers

**Shape Correspondence with Isometric and Non-Isometric Deformations,**
Silvia Biasotti, Guillaume Lavoué and Remco C. Veltkamp(Eds.), *12th Eurographics Workshop on 3D Object Retrieval, 3DOR@Eurographics 2019,* Genoa, Italy, May 5-6, 2019, Eurographics Association, 111-119, 2019.

[C2] M. Eisenberger, Z. Lähner and D. Cremers,
**Divergence-Free Shape Correspondence by Deformation,**

[C3] S. Weiss, R. Maier, R. Westermann, D. Cremers and N. Thuerey,
**Sparse Surface Constraints for Combining Physics-based Elasticity Simulation and Correspondence-Free Object Reconstruction,**

2018

Conference and Workshop Papers

[C1] C. Sommer and D. Cremers,
**Joint Representation of Primitive and Non-primitive Objects for 3D Vision,**

[C2] Z. Lähner, D. Cremers and T. Tung,
**DeepWrinkles: Accurate and Realistic Clothing Modeling,**

[C3] V. Estellers, F. Schmidt and D. Cremers,
**Robust Fitting of Subdivision Surfaces for Smooth Shape Analysis,**
*Proc. of the Int. Conference on 3D Vision (3DV),* September 2018, Received the Best Paper Award at 3DV 2018.
2017
Journal Articles

[J1] E Rodola, M Möller and D Cremers,  
Regularized Pointwise Map Recovery from Functional Correspondence,  

Conference and Workshop Papers

[C1] M. Vestner, R. Litman, E. Rodola, A. Bronstein and D. Cremers,  
Product Manifold Filter: Non-Rigid Shape Correspondence via Kernel Density Estimation in the Product Space,  

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

[C3] F. Bernard, F. R. Schmidt, J. Thunberg and D. Cremers,  
A Combinatorial Solution to Non-Rigid 3D Shape-to-Image Matching,  

2016
Book Chapters

[BC1] M. Vestner, E. Rodola, T. Windheuser, RBS. Bulo and D. Cremers,  
Applying Random Forests to the Problem of Dense Non-rigid Shape Correspondence,  

Conference and Workshop Papers

[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.

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

[C3] 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.

[C4] T. Windheuser and D. Cremers,  
A Convex Solution to Spatially-Regularized Correspondence Problems,  
European Conference on Computer Vision (ECCV), October 2016.
2015
Journal Articles

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

2013
Journal Articles

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

[J2] A. Torsello, A. Albarelli and E. Rodola,
Stable and Fast Techniques for Unambiguous Compound Phase Coding,