Christoph SchnÃ¶rr

List of Publications by Year
in descending order

120	3,989	279778	138468
papers	citations	23 h-index	58 g-index

123	123	123	2913
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lucas/Kanade Meets Horn/Schunck: Combining Local and Global Optic Flow Methods. International Journal of Computer Vision, 2005, 61, 1-21.	15.6	935
2	Diffusion Snakes: Introducing Statistical Shape Knowledge into the Mumford-Shah Functional. International Journal of Computer Vision, 2002, 50, 295-313.	15.6	253
3	A Theoretical Framework for Convex Regularizers in PDE-Based Computation of Image Motion. International Journal of Computer Vision, 2001, 45, 245-264.	15.6	231
4	Combined SVM-Based Feature Selection and Classification. Machine Learning, 2005, 61, 129-150.	5.4	207
5	Variational Optic Flow Computation with a Spatio-Temporal Smoothness Constraint. , 2001, 14, 245-255.		197
6	Variational fluid flow measurements from image sequences: synopsis and perspectives. Experiments in Fluids, 2010, 48, 369-393.	2.4	162
7	A Multigrid Platform for Real-Time Motion Computation with Discontinuity-Preserving Variational Methods. International Journal of Computer Vision, 2006, 70, 257-277.	15.6	136
8	A Comparative Study of Modern Inference Techniques for Structured Discrete Energy Minimization Problems. International Journal of Computer Vision, 2015, 115, 155-184.	15.6	125
9	A Comparative Study of Modern Inference Techniques for Discrete Energy Minimization Problems. , 2013, , .		107
10	Spine Detection and Labeling Using a Parts-Based Graphical Model. Lecture Notes in Computer Science, 2007, 20, 122-133.	1.3	98
11	A Study of Parts-Based Object Class Detection Using Complete Graphs. International Journal of Computer Vision, 2010, 87, 93-117.	15.6	98
12	Spectral clustering of linear subspaces for motion segmentation. , 2009, , .		97
13	Discrete Orthogonal Decomposition and Variational Fluid Flow Estimation. Journal of Mathematical Imaging and Vision, 2007, 28, 67-80.	1.3	91
14	A Multiphase Dynamic Labeling Model for Variational Recognition-driven Image Segmentation. International Journal of Computer Vision, 2006, 66, 67-81.	15.6	87
15	Pedestrian Detection and Tracking Using a Mixture of View-Based Shapeâ€“Texture Models. IEEE Transactions on Intelligent Transportation Systems, 2008, 9, 333-343.	8.0	82
16	The Benefits of Dense Stereo for Pedestrian Detection. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 1096-1106.	8.0	78
17	Optical Stokes flow estimation: an imaging-based control approach. Experiments in Fluids, 2006, 42, 61-78.	2.4	77
18	Average case recovery analysis of tomographic compressive sensing. Linear Algebra and Its Applications, 2014, 441, 168-198.	0.9	54

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19	Variational estimation of experimental fluid flows with physics-based spatio-temporal regularization. Measurement Science and Technology, 2007, 18, 755-763.	2.6	53
20	Median and related local filters for tensor-valued images. Signal Processing, 2007, 87, 291-308.	3.7	50
21	Natural Image Statistics for Natural Image Segmentation. International Journal of Computer Vision, 2005, 63, 5-19.	15.6	48
22	Phase Transitions and Cosparse Tomographic Recovery of Compound Solid Bodies from Few Projections. Fundamenta Informaticae, 2014, 135, 73-102.	0.4	47
23	Image Labeling by Assignment. Journal of Mathematical Imaging and Vision, 2017, 58, 211-238.	1.3	46
24	Probabilistic intra-retinal layer segmentation in 3-D OCT images using global shape regularization. Medical Image Analysis, 2014, 18, 781-794.	11.6	40
25	A class of quasi-variational inequalities for adaptive image denoising and decomposition. Computational Optimization and Applications, 2013, 54, 371-398.	1.6	31
26	A bundle approach to efficient MAP-inference by Lagrangian relaxation. , 2012, , .		30
27	Variational Adaptive Correlation Method for Flow Estimation. IEEE Transactions on Image Processing, 2012, 21, 3053-3065.	9.8	23
28	Geometric numerical integration of the assignment flow. Inverse Problems, 2020, 36, 034003.	2.0	23
29	Higher-order segmentation via multicuts. Computer Vision and Image Understanding, 2016, 143, 104-119.	4.7	22
30	Convex Hodge Decomposition and Regularization of Image Flows. Journal of Mathematical Imaging and Vision, 2009, 33, 169-177.	1.3	21
31	Total-Variation Based Piecewise Affine Regularization. Lecture Notes in Computer Science, 2009, , 552-564.	1.3	19
32	Robust 3D object registration without explicit correspondence using geometric integration. Machine Vision and Applications, 2010, 21, 601-611.	2.7	17
33	Model-Based Multiple Rigid Object Detection and Registration inÂUnstructured Range Data. International Journal of Computer Vision, 2011, 92, 32-52.	15.6	17
34	Discrete and Continuous Models for Partitioning Problems. International Journal of Computer Vision, 2013, 104, 241-269.	15.6	17
35	Towards Efficient and Exact MAP-Inference for Large Scale Discrete Computer Vision Problems via Combinatorial Optimization. , 2013, , .		17
36	Assignment Flows. , 2020, , 235-260.		15

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37	Locally Adaptive Probabilistic Models for Global Segmentation of Pathological OCT Scans. Lecture Notes in Computer Science, 2017, , 177-184.	1.3	15
38	Convex Variational Image Restoration with Histogram Priors. SIAM Journal on Imaging Sciences, 2013, 6, 1719-1735.	2.2	14
39	Globally optimal segmentation of cell nuclei in fluorescence microscopy images using shape and intensity information. Medical Image Analysis, 2019, 58, 101536.	11.6	13
40	Variational Recursive Joint Estimation of Dense Scene Structure and Camera Motion from Monocular High Speed Traffic Sequences. International Journal of Computer Vision, 2013, 105, 269-297.	15.6	12
41	Partial Optimality by Pruning for MAP-Inference with General Graphical Models. , 2014, , .		11
42	Optical Flow. , 2015, , 1945-2004.		10
43	Globally Optimal Joint Image Segmentation and Shape Matching Based on Wasserstein Modes. Journal of Mathematical Imaging and Vision, 2015, 52, 436-458.	1.3	9
44	Image Labeling Based on Graphical Models Using Wasserstein Messages and Geometric Assignment. SIAM Journal on Imaging Sciences, 2018, 11, 1317-1362.	2.2	9
45	Learning of Graphical Models and Efficient Inference for Object Class Recognition. Lecture Notes in Computer Science, 2006, , 273-283.	1.3	9
46	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. Journal of Mathematical Imaging and Vision, 2013, 47, 239-257.	1.3	8
47	Partial Optimality by Pruning for MAP-Inference with General Graphical Models. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 1370-1382.	13.9	8
48	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. Journal of Mathematical Imaging and Vision, 2021, 63, 186-215.	1.3	8
49	Assignment flows for data labeling on graphs: convergence and stability. Information Geometry, 2022, 5, 355-404.	1.2	8
50	Probabilistic Correlation Clustering and Image Partitioning Using Perturbed Multicuts. Lecture Notes in Computer Science, 2015, , 231-242.	1.3	7
51	TomoPIV Meets Compressed Sensing. , 2010, , .		6
52	Discrete Tomography by Continuous Multilabeling Subject to Projection Constraints. Lecture Notes in Computer Science, 2016, , 261-272.	1.3	6
53	Unsupervised Assignment Flow: Label Learning on Feature Manifolds by Spatially Regularized Geometric Assignment. Journal of Mathematical Imaging and Vision, 2020, 62, 982-1006.	1.3	6
54	Self-Assignment Flows for Unsupervised Data Labeling on Graphs. SIAM Journal on Imaging Sciences, 2020, 13, 1113-1156.	2.2	6

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55	Second Order Minimum Energy Filtering on $${ext {SE}}_{3}$$ with Nonlinear Measurement Equations. Lecture Notes in Computer Science, 2015, , 397-409.	1.3	6
56	TomoGC: Binary Tomography by Constrained GraphCuts. Lecture Notes in Computer Science, 2015, , 262-273.	1.3	6
57	Variational recursive joint estimation of dense scene structure and camera motion from monocular high speed traffic sequences. , 2011, , .		5
58	A general extending and constraining procedure for linear iterative methods. International Journal of Computer Mathematics, 2012, 89, 231-253.	1.8	5
59	Non-Binary Discrete Tomography by Continuous Non-Convex Optimization. IEEE Transactions on Computational Imaging, 2016, 2, 335-347.	4.4	5
60	Assignment Flow for Order-Constrained OCT Segmentation. International Journal of Computer Vision, 2021, 129, 3088-3118.	15.6	5
61	Learning Linear Assignment Flows for Image Labeling via Exponential Integration. Lecture Notes in Computer Science, 2021, , 385-397.	1.3	5
62	Numerical Integration of Riemannian Gradient Flows for Image Labeling. Lecture Notes in Computer Science, 2017, , 361-372.	1.3	5
63	MAP-Inference for Highly-Connected Graphs with DC-Programming. Lecture Notes in Computer Science, 2008, , 1-10.	1.3	5
64	Continuous graph cuts for prior-based object segmentation. , 2008, , .		4
65	Plane Wave Acoustic Superposition for fast ultrasound imaging. , 2016, , .		4
66	Second-Order Recursive Filtering on the Rigid-Motion Lie Group $${ext {SE}}_{3}$$ SE 3 Based on Nonlinear Observations. Journal of Mathematical Imaging and Vision, 2017, 58, 102-129.	1.3	4
67	A geometric approach for color image regularization. Computer Vision and Image Understanding, 2017, 165, 43-59.	4.7	4
68	Segmentation of cell structures using Model-Based Set Covering with iterative reweighting. , 2017, , .		4
69	Fast multivariate log-concave density estimation. Computational Statistics and Data Analysis, 2019, 140, 41-58.	1.2	4
70	Sumâ€“product graphical models. Machine Learning, 2020, 109, 135-173.	5.4	4
71	Unsupervised Label Learning on Manifolds by Spatially Regularized Geometric Assignment. Lecture Notes in Computer Science, 2019, , 698-713.	1.3	4
72	Compressed Motion Sensing. Lecture Notes in Computer Science, 2017, , 602-613.	1.3	4

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73	On coupled regularization for non-convex variational image enhancement. , 2015, , .		3
74	3D segmentation of vessels by incremental implicit polynomial fitting and convex optimization. , 2015, , .		3
75	Multicuts and Perturb & MAP for Probabilistic Graph Clustering. Journal of Mathematical Imaging and Vision, 2016, 56, 221-237.	1.3	3
76	Approximate variational inference based on a finite sample of Gaussian latent variables. Pattern Analysis and Applications, 2016, 19, 475-485.	4.6	3
77	Segmentation of cell nuclei using intensity-based model fitting and sequential convex programming. , 2018, , .		3
78	On the Geometric Mechanics of Assignment Flows for Metric Data Labeling. Lecture Notes in Computer Science, 2021, , 398-410.	1.3	3
79	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. Lecture Notes in Computer Science, 2019, , 393-405.	1.3	3
80	Unsupervised Labeling by Geometric and Spatially Regularized Self-assignment. Lecture Notes in Computer Science, 2019, , 432-444.	1.3	3
81	Adaptive Dictionary-Based Spatio-temporal Flow Estimation for Echo PIV. Lecture Notes in Computer Science, 2015, , 378-391.	1.3	3
82	Variational Approaches to Image Fluid Flow Estimation with Physical Priors. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2009, , 247-256.	0.3	3
83	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. Lecture Notes in Computer Science, 2011, , 132-146.	1.3	3
84	Estimating Vehicle Ego-Motion and Piecewise Planar Scene Structure from Optical Flow in a Continuous Framework. Lecture Notes in Computer Science, 2015, , 41-52.	1.3	3
85	Multi-view Monocular Depth andÂUncertainty Prediction withÂDeep SfM inÂDynamic Environments. Lecture Notes in Computer Science, 2022, , 373-385.	1.3	3
86	Critical Parameter Values and Reconstruction Properties of Discrete Tomography: Application to Experimental Fluid Dynamics. Fundamenta Informaticae, 2013, 125, 285-312.	0.4	2
87	Image Reconstruction by Multilabel Propagation. Lecture Notes in Computer Science, 2017, , 247-259.	1.3	2
88	MAP Image Labeling Using Wasserstein Messages and Geometric Assignment. Lecture Notes in Computer Science, 2017, , 373-385.	1.3	2
89	Guest Editorial: Best Papers from ICCV 2015. International Journal of Computer Vision, 2017, 125, 1-2.	15.6	2
90	Assignment Flow for Order-Constrained OCT Segmentation. Lecture Notes in Computer Science, 2021, , 58-71.	1.3	2

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91	On the Correspondence Between Replicator Dynamics and Assignment Flows. Lecture Notes in Computer Science, 2021, , 373-384.	1.3	2
92	A Variational Perspective on the Assignment Flow. Lecture Notes in Computer Science, 2019, , 547-558.	1.3	2
93	SHAPE FROM TEXTURE USING LOCALLY SCALED POINT PROCESSES. Image Analysis and Stereology, 2015, 34, 161.	0.9	2
94	Quantifying Uncertainty ofÂImage Labelings Using Assignment Flows. Lecture Notes in Computer Science, 2021, , 453-466.	1.3	2
95	SPARSE TEMPLATE-BASED VARIATIONAL IMAGE SEGMENTATION. Advances in Adaptive Data Analysis, 2011, 03, 149-166.	0.6	1
96	COAL: a generic modelling and prototyping framework for convex optimization problems of variational image analysis. Optimization Methods and Software, 2013, 28, 1081-1094.	2.4	1
97	Optical Flow. , 2014, , 1-54.		1
98	The Assignment Manifold: A Smooth Model for Image Labeling. , 2016, , .		1
99	Spatially Regularized Geometric Assignment for Unsupervised Label Learning on Manifolds. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900258.	0.2	1
100	Exponential Integration of the Linear Assignment Flow. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900434.	0.2	1
101	Unsupervised Data Labeling on Graphs by Selfâ€Assignment Flows. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000156.	0.2	1
102	A Geometric Approach to Image Labeling. Lecture Notes in Computer Science, 2016, , 139-154.	1.3	1
103	Parametric Dictionary-Based Velocimetry for Echo PIV. Lecture Notes in Computer Science, 2016, , 332-343.	1.3	1
104	Corrections to â€œVariational Adaptive Correlation Method for Flow Estimationâ€•[Jun 12 3053-3065]. IEEE Transactions on Image Processing, 2012, 21, 3813-3814.	9.8	0
105	Guest Editorial: Scale-Space and Variational Methods. Journal of Mathematical Imaging and Vision, 2013, 46, 275-275.	1.3	0
106	Guest Editorial: Variational Models, Convex Analysis and Numerical Optimization in Mathematical Imaging. Journal of Mathematical Imaging and Vision, 2013, 47, 165-166.	1.3	0
107	A Computational Approach to Log-Concave Density Estimation. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2015, 23, 151-166.	0.3	0
108	Multiscale Adaptive Correlation Method for Ultrasound Speckle Image Velocimetry. , 2018, , .		0

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109	Segmentation of OCT Scans Using Probabilistic Graphical Models. Biological and Medical Physics Series, 2019, , 105-130.	0.4	0
110	Riemannian Structure and Flows for Smooth Geometric Image Labeling. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900218.	0.2	0
111	Characterizing the Role of a Single Coupling Layer in Affine Normalizing Flows. Lecture Notes in Computer Science, 2021, , 1-14.	1.3	0
112	An Entropic Perturbation Approach to TV-Minimization for Limited-Data Tomography. Lecture Notes in Computer Science, 2014, , 262-274.	1.3	0
113	MAP-Inference on Large Scale Higher-Order Discrete Graphical Models by Fusion Moves. Lecture Notes in Computer Science, 2015, , 469-484.	1.3	0
114	A Convex Relaxation Approach to the Affine Subspace Clustering Problem. Lecture Notes in Computer Science, 2015, , 67-78.	1.3	0
115	Double-Opponent Vectorial Total Variation. Lecture Notes in Computer Science, 2016, , 644-659.	1.3	0
116	Joint Recursive Monocular Filtering of Camera Motion and Disparity Map. Lecture Notes in Computer Science, 2016, , 233-244.	1.3	0
117	Gradient Flows on a Riemannian Submanifold for Discrete Tomography. Lecture Notes in Computer Science, 2017, , 294-305.	1.3	0
118	A Local Spatio-Temporal Approach to Plane Wave Ultrasound Particle Image Velocimetry. Lecture Notes in Computer Science, 2017, , 138-149.	1.3	0
119	Geometric Image Labeling with Global Convex Labeling Constraints. Lecture Notes in Computer Science, 2018, , 533-547.	1.3	0
120	On the Correspondence between Replicator Dynamics and Assignment Flows. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0