Christoph SchnÃ¶rr

List of Publications by Year
in descending order

120 papers	3,989 citations	279798 23 h-index	138484 58 g-index
123 all docs	123 docs citations	123 times ranked	2913 citing authors

#	ARTICLE	IF	CITATIONS
1	Assignment flows for data labeling on graphs: convergence and stability. Information Geometry, 2022, 5, 355-404.	1.2	8
2	Multi-view Monocular Depth andÂUncertainty Prediction withÂDeep SfM inÂDynamic Environments. Lecture Notes in Computer Science, 2022, , 373-385.	1.3	3
3	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. Journal of Mathematical Imaging and Vision, 2021, 63, 186-215.	1.3	8
4	Assignment Flow for Order-Constrained OCT Segmentation. Lecture Notes in Computer Science, 2021, , 58-71.	1.3	2
5	On the Correspondence Between Replicator Dynamics and Assignment Flows. Lecture Notes in Computer Science, 2021, , 373-384.	1.3	2
6	Unsupervised Data Labeling on Graphs by Selfâ€Assignment Flows. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000156.	0.2	1
7	Characterizing the Role of a Single Coupling Layer in Affine Normalizing Flows. Lecture Notes in Computer Science, 2021, , 1-14.	1.3	0
8	Assignment Flow for Order-Constrained OCT Segmentation. International Journal of Computer Vision, 2021, 129, 3088-3118.	15.6	5
9	On the Geometric Mechanics of Assignment Flows for Metric Data Labeling. Lecture Notes in Computer Science, 2021, , 398-410.	1.3	3
10	Learning Linear Assignment Flows for Image Labeling via Exponential Integration. Lecture Notes in Computer Science, 2021, , 385-397.	1.3	5
11	Quantifying Uncertainty ofÂImage Labelings Using Assignment Flows. Lecture Notes in Computer Science, 2021, , 453-466.	1.3	2
12	On the Correspondence between Replicator Dynamics and Assignment Flows. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
13	Geometric numerical integration of the assignment flow. Inverse Problems, 2020, 36, 034003.	2.0	23
14	Sumâ€"product graphical models. Machine Learning, 2020, 109, 135-173.	5.4	4
15	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
16	Self-Assignment Flows for Unsupervised Data Labeling on Graphs. SIAM Journal on Imaging Sciences, 2020, 13, 1113-1156.	2.2	6
17	Assignment Flows. , 2020, , 235-260.		15
18	Globally optimal segmentation of cell nuclei in fluorescence microscopy images using shape and intensity information. Medical Image Analysis, 2019, 58, 101536.	11.6	13

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19	Segmentation of OCT Scans Using Probabilistic Graphical Models. Biological and Medical Physics Series, 2019, , 105-130.	0.4	0
20	Fast multivariate log-concave density estimation. Computational Statistics and Data Analysis, 2019, 140, 41-58.	1.2	4
21	Spatially Regularized Geometric Assignment for Unsupervised Label Learning on Manifolds. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900258.	0.2	1
22	Riemannian Structure and Flows for Smooth Geometric Image Labeling. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900218.	0.2	0
23	Exponential Integration of the Linear Assignment Flow. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900434.	0.2	1
24	Unsupervised Label Learning on Manifolds by Spatially Regularized Geometric Assignment. Lecture Notes in Computer Science, 2019, , 698-713.	1.3	4
25	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. Lecture Notes in Computer Science, 2019, , 393-405.	1.3	3
26	Unsupervised Labeling by Geometric and Spatially Regularized Self-assignment. Lecture Notes in Computer Science, 2019, , 432-444.	1.3	3
27	A Variational Perspective on the Assignment Flow. Lecture Notes in Computer Science, 2019, , 547-558.	1.3	2
28	Segmentation of cell nuclei using intensity-based model fitting and sequential convex programming. , 2018, , .		3
29	Multiscale Adaptive Correlation Method for Ultrasound Speckle Image Velocimetry. , 2018, , .		0
30	Image Labeling Based on Graphical Models Using Wasserstein Messages and Geometric Assignment. SIAM Journal on Imaging Sciences, 2018, 11, 1317-1362.	2.2	9
31	Geometric Image Labeling with Global Convex Labeling Constraints. Lecture Notes in Computer Science, 2018, , 533-547.	1.3	0
32	Second-Order Recursive Filtering on the Rigid-Motion Lie Group $${\text {SE}}_{3}$$ SE 3 Based on Nonlinear Observations. Journal of Mathematical Imaging and Vision, 2017, 58, 102-129.	1.3	4
33	Image Labeling by Assignment. Journal of Mathematical Imaging and Vision, 2017, 58, 211-238.	1.3	46
34	Image Reconstruction by Multilabel Propagation. Lecture Notes in Computer Science, 2017, , 247-259.	1.3	2
35	MAP Image Labeling Using Wasserstein Messages and Geometric Assignment. Lecture Notes in Computer Science, 2017, , 373-385.	1.3	2
36	A geometric approach for color image regularization. Computer Vision and Image Understanding, 2017, 165, 43-59.	4.7	4

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37	Guest Editorial: Best Papers from ICCV 2015. International Journal of Computer Vision, 2017, 125, 1-2.	15.6	2
38	Segmentation of cell structures using Model-Based Set Covering with iterative reweighting. , 2017, , .		4
39	Numerical Integration of Riemannian Gradient Flows for Image Labeling. Lecture Notes in Computer Science, 2017, , 361-372.	1.3	5
40	Compressed Motion Sensing. Lecture Notes in Computer Science, 2017, , 602-613.	1.3	4
41	Locally Adaptive Probabilistic Models for Global Segmentation of Pathological OCT Scans. Lecture Notes in Computer Science, 2017, , 177-184.	1.3	15
42	Gradient Flows on a Riemannian Submanifold for Discrete Tomography. Lecture Notes in Computer Science, 2017, , 294-305.	1.3	0
43	A Local Spatio-Temporal Approach to Plane Wave Ultrasound Particle Image Velocimetry. Lecture Notes in Computer Science, 2017, , 138-149.	1.3	0
44	The Assignment Manifold: A Smooth Model for Image Labeling. , 2016, , .		1
45	Discrete Tomography by Continuous Multilabeling Subject to Projection Constraints. Lecture Notes in Computer Science, 2016, , 261-272.	1.3	6
46	Plane Wave Acoustic Superposition for fast ultrasound imaging. , 2016, , .		4
47	Non-Binary Discrete Tomography by Continuous Non-Convex Optimization. IEEE Transactions on Computational Imaging, 2016, 2, 335-347.	4.4	5
48	Multicuts and Perturb & MAP for Probabilistic Graph Clustering. Journal of Mathematical Imaging and Vision, 2016, 56, 221-237.	1.3	3
49	Higher-order segmentation via multicuts. Computer Vision and Image Understanding, 2016, 143, 104-119.	4.7	22
50	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
51	Approximate variational inference based on a finite sample of Gaussian latent variables. Pattern Analysis and Applications, 2016, 19, 475-485.	4.6	3
52	A Geometric Approach to Image Labeling. Lecture Notes in Computer Science, 2016, , 139-154.	1.3	1
53	Parametric Dictionary-Based Velocimetry for Echo PIV. Lecture Notes in Computer Science, 2016, , 332-343.	1.3	1
54	Double-Opponent Vectorial Total Variation. Lecture Notes in Computer Science, 2016, , 644-659.	1.3	0

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55	Joint Recursive Monocular Filtering of Camera Motion and Disparity Map. Lecture Notes in Computer Science, 2016, , 233-244.	1.3	0
56	A Computational Approach to Log-Concave Density Estimation. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2015, 23, 151-166.	0.3	0
57	On coupled regularization for non-convex variational image enhancement. , 2015, , .		3
58	3D segmentation of vessels by incremental implicit polynomial fitting and convex optimization. , 2015, , .		3
59	Optical Flow. , 2015, , 1945-2004.		10
60	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
61	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
62	Adaptive Dictionary-Based Spatio-temporal Flow Estimation for Echo PIV. Lecture Notes in Computer Science, 2015, , 378-391.	1.3	3
63	Probabilistic Correlation Clustering and Image Partitioning Using Perturbed Multicuts. Lecture Notes in Computer Science, 2015, , 231-242.	1.3	7
64	Second Order Minimum Energy Filtering on $${ext {SE}}_{3}$$ with Nonlinear Measurement Equations. Lecture Notes in Computer Science, 2015, , 397-409.	1.3	6
65	TomoGC: Binary Tomography by Constrained GraphCuts. Lecture Notes in Computer Science, 2015, , 262-273.	1.3	6
66	SHAPE FROM TEXTURE USING LOCALLY SCALED POINT PROCESSES. Image Analysis and Stereology, 2015, 34, 161.	0.9	2
67	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
68	MAP-Inference on Large Scale Higher-Order Discrete Graphical Models by Fusion Moves. Lecture Notes in Computer Science, 2015, , 469-484.	1.3	0
69	A Convex Relaxation Approach to the Affine Subspace Clustering Problem. Lecture Notes in Computer Science, 2015, , 67-78.	1.3	0
70	Optical Flow. , 2014, , 1-54.		1
71	Partial Optimality by Pruning for MAP-Inference with General Graphical Models. , 2014, , .		11
72	Phase Transitions and Cosparse Tomographic Recovery of Compound Solid Bodies from Few Projections. Fundamenta Informaticae, 2014, 135, 73-102.	0.4	47

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73	Average case recovery analysis of tomographic compressive sensing. Linear Algebra and Its Applications, 2014, 441, 168-198.	0.9	54
74	Probabilistic intra-retinal layer segmentation in 3-D OCT images using global shape regularization. Medical Image Analysis, 2014, 18, 781-794.	11.6	40
75	An Entropic Perturbation Approach to TV-Minimization for Limited-Data Tomography. Lecture Notes in Computer Science, 2014, , 262-274.	1.3	0
76	A class of quasi-variational inequalities for adaptive image denoising and decomposition. Computational Optimization and Applications, 2013, 54, 371-398.	1.6	31
77	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. Journal of Mathematical Imaging and Vision, 2013, 47, 239-257.	1.3	8
78	Guest Editorial: Scale-Space and Variational Methods. Journal of Mathematical Imaging and Vision, 2013, 46, 275-275.	1.3	0
79	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
80	Discrete and Continuous Models for Partitioning Problems. International Journal of Computer Vision, 2013, 104, 241-269.	15.6	17
81	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
82	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
83	Towards Efficient and Exact MAP-Inference for Large Scale Discrete Computer Vision Problems via Combinatorial Optimization. , 2013, , .		17
84	Critical Parameter Values and Reconstruction Properties of Discrete Tomography: Application to Experimental Fluid Dynamics. Fundamenta Informaticae, 2013, 125, 285-312.	0.4	2
85	A Comparative Study of Modern Inference Techniques for Discrete Energy Minimization Problems. , 2013, , .		107
86	Convex Variational Image Restoration with Histogram Priors. SIAM Journal on Imaging Sciences, 2013, 6, 1719-1735.	2.2	14
87	A general extending and constraining procedure for linear iterative methods. International Journal of Computer Mathematics, 2012, 89, 231-253.	1.8	5
88	A bundle approach to efficient MAP-inference by Lagrangian relaxation. , 2012, , .		30
89	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
90	Variational Adaptive Correlation Method for Flow Estimation. IEEE Transactions on Image Processing, 2012, 21, 3053-3065.	9.8	23

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91	The Benefits of Dense Stereo for Pedestrian Detection. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 1096-1106.	8.0	78
92	Model-Based Multiple Rigid Object Detection and Registration inÂUnstructured Range Data. International Journal of Computer Vision, 2011, 92, 32-52.	15.6	17
93	SPARSE TEMPLATE-BASED VARIATIONAL IMAGE SEGMENTATION. Advances in Adaptive Data Analysis, 2011, 03, 149-166.	0.6	1
94	Variational recursive joint estimation of dense scene structure and camera motion from monocular high speed traffic sequences. , 2011, , .		5
95	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. Lecture Notes in Computer Science, 2011, , 132-146.	1.3	3
96	Robust 3D object registration without explicit correspondence using geometric integration. Machine Vision and Applications, 2010, 21, 601-611.	2.7	17
97	Variational fluid flow measurements from image sequences: synopsis and perspectives. Experiments in Fluids, 2010, 48, 369-393.	2.4	162
98	A Study of Parts-Based Object Class Detection Using Complete Graphs. International Journal of Computer Vision, 2010, 87, 93-117.	15.6	98
99	TomoPIV Meets Compressed Sensing. , 2010, , .		6
100	Convex Hodge Decomposition and Regularization of Image Flows. Journal of Mathematical Imaging and Vision, 2009, 33, 169-177.	1.3	21
101	Spectral clustering of linear subspaces for motion segmentation. , 2009, , .		97
102	Variational Approaches to Image Fluid Flow Estimation with Physical Priors. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2009, , 247-256.	0.3	3
103	Total-Variation Based Piecewise Affine Regularization. Lecture Notes in Computer Science, 2009, , 552-564.	1.3	19
104	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
105	Continuous graph cuts for prior-based object segmentation. , 2008, , .		4
106	MAP-Inference for Highly-Connected Graphs with DC-Programming. Lecture Notes in Computer Science, 2008, , 1-10.	1.3	5
107	Variational estimation of experimental fluid flows with physics-based spatio-temporal regularization. Measurement Science and Technology, 2007, 18, 755-763.	2.6	53
108	Spine Detection and Labeling Using a Parts-Based Graphical Model. Lecture Notes in Computer Science, 2007, 20, 122-133.	1.3	98

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109	Median and related local filters for tensor-valued images. Signal Processing, 2007, 87, 291-308.	3.7	50
110	Discrete Orthogonal Decomposition and Variational Fluid Flow Estimation. Journal of Mathematical Imaging and Vision, 2007, 28, 67-80.	1.3	91
111	A Multiphase Dynamic Labeling Model for Variational Recognition-driven Image Segmentation. International Journal of Computer Vision, 2006, 66, 67-81.	15.6	87
112	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
113	Optical Stokes flow estimation: an imaging-based control approach. Experiments in Fluids, 2006, 42, 61-78.	2.4	77
114	Learning of Graphical Models and Efficient Inference for Object Class Recognition. Lecture Notes in Computer Science, 2006, , 273-283.	1.3	9
115	Lucas/Kanade Meets Horn/Schunck: Combining Local and Global Optic Flow Methods. International Journal of Computer Vision, 2005, 61, 1-21.	15.6	935
116	Natural Image Statistics for Natural Image Segmentation. International Journal of Computer Vision, 2005, 63, 5-19.	15.6	48
117	Combined SVM-Based Feature Selection and Classification. Machine Learning, 2005, 61, 129-150.	5.4	207
118	Diffusion Snakes: Introducing Statistical Shape Knowledge into the Mumford-Shah Functional. International Journal of Computer Vision, 2002, 50, 295-313.	15.6	253
119	Variational Optic Flow Computation with a Spatio-Temporal Smoothness Constraint. , 2001, 14, 245-255.		197
120	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