Christoph Schnrr

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

116 papers	3,177 citations	24 h-index	55 g-index
123 ext. papers	3,656 ext. citations	2.9 avg, IF	5.44 L-index

#	Paper	IF	Citations
116	Multi-view Monocular Depth and Uncertainty Prediction with Deep SfM in Dynamic Environments. *Lecture Notes in Computer Science*, **2022**, 373-385	0.9	
115	Quantifying Uncertainty of Image Labelings Using Assignment Flows. *Lecture Notes in Computer Science*, **2021**, 453-466	0.9	1
114	Assignment Flows and Nonlocal PDEs on Graphs. *Lecture Notes in Computer Science*, **2021**, 498-512	0.9	
113	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. *Journal of Mathematical Imaging and Vision*, **2021**, 63, 186-215	1.6	7
112	Assignment Flow for Order-Constrained OCT Segmentation. *Lecture Notes in Computer Science*, **2021**, 58-71	0.9	2
111	On the Correspondence Between Replicator Dynamics and Assignment Flows. *Lecture Notes in Computer Science*, **2021**, 373-384	0.9	
110	Unsupervised Data Labeling on Graphs by Self-Assignment Flows. *Proceedings in Applied Mathematics and Mechanics*, **2021**, 20, e202000156	0.2	1
109	Characterizing the Role of a Single Coupling Layer in Affine Normalizing Flows. *Lecture Notes in Computer Science*, **2021**, 1-14	0.9	
108	Assignment Flow for Order-Constrained OCT Segmentation. *International Journal of Computer Vision*, **2021**, 129, 3088	10.6	3
107	On the Geometric Mechanics of Assignment Flows for Metric Data Labeling. *Lecture Notes in Computer Science*, **2021**, 398-410	0.9	1
106	Learning Linear Assignment Flows for Image Labeling via Exponential Integration. *Lecture Notes in Computer Science*, **2021**, 385-397	0.9	3
105	Assignment Flows **2020**, 235-260		11
104	Unsupervised Assignment Flow: Label Learning on Feature Manifolds by Spatially Regularized Geometric Assignment. *Journal of Mathematical Imaging and Vision*, **2020**, 62, 982-1006	1.6	5
103	Self-Assignment Flows for Unsupervised Data Labeling on Graphs. *SIAM Journal on Imaging Sciences* , **2020**, 13, 1113-1156	1.9	5
102	Geometric numerical integration of the assignment flow. *Inverse Problems*, **2020**, 36, 034003	2.3	15
101	Sum-product graphical models. *Machine Learning*, **2020**, 109, 135-173	4	3
100	Fast multivariate log-concave density estimation. *Computational Statistics and Data Analysis*, **2019**, 140, 41-58	1.6	2

99	Globally optimal segmentation of cell nuclei in fluorescence microscopy images using shape and intensity information. *Medical Image Analysis*, **2019**, 58, 101536	15.4	6
98	Segmentation of OCT Scans Using Probabilistic Graphical Models **2019**, 105-130		
97	Unsupervised Label Learning on Manifolds by Spatially Regularized Geometric Assignment. *Lecture Notes in Computer Science*, **2019**, 698-713	0.9	4
96	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. *Lecture Notes in Computer Science*, **2019**, 393-405	0.9	3
95	Unsupervised Labeling by Geometric and Spatially Regularized Self-assignment. *Lecture Notes in Computer Science*, **2019**, 432-444	0.9	3
94	A Variational Perspective on the Assignment Flow. *Lecture Notes in Computer Science*, **2019**, 547-558	0.9	2
93	Spatially Regularized Geometric Assignment for Unsupervised Label Learning on Manifolds. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900258	0.2	1
92	Riemannian Structure and Flows for Smooth Geometric Image Labeling. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900218	0.2	
91	Exponential Integration of the Linear Assignment Flow. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900434	0.2	1
90	Image Labeling Based on Graphical Models Using Wasserstein Messages and Geometric Assignment. *SIAM Journal on Imaging Sciences*, **2018**, 11, 1317-1362	1.9	9
89	Geometric Image Labeling with Global Convex Labeling Constraints. *Lecture Notes in Computer Science*, **2018**, 533-547	0.9	
88	Second-Order Recursive Filtering on the Rigid-Motion Lie Group ({text {SE}}_{3}) Based on Nonlinear Observations. *Journal of Mathematical Imaging and Vision*, **2017**, 58, 102-129	1.6	2
87	Image Labeling by Assignment. *Journal of Mathematical Imaging and Vision*, **2017**, 58, 211-238	1.6	35
86	Image Reconstruction by Multilabel Propagation. *Lecture Notes in Computer Science*, **2017**, 247-259	0.9	2
85	MAP Image Labeling Using Wasserstein Messages and Geometric Assignment. *Lecture Notes in Computer Science*, **2017**, 373-385	0.9	2
84	A geometric approach for color image regularization. *Computer Vision and Image Understanding*, **2017**, 165, 43-59	4.3	4
83	Segmentation of cell structures using Model-Based Set Covering with iterative reweighting **2017**,		2
82	Numerical Integration of Riemannian Gradient Flows for Image Labeling. *Lecture Notes in Computer Science*, **2017**, 361-372	0.9	5

81	Compressed Motion Sensing. *Lecture Notes in Computer Science*, **2017**, 602-613	0.9	3
80	Locally Adaptive Probabilistic Models for Global Segmentation of Pathological OCT Scans. *Lecture Notes in Computer Science*, **2017**, 177-184	0.9	10
79	Gradient Flows on a Riemannian Submanifold for Discrete Tomography. *Lecture Notes in Computer Science*, **2017**, 294-305	0.9	
78	A Local Spatio-Temporal Approach to Plane Wave Ultrasound Particle Image Velocimetry. *Lecture Notes in Computer Science*, **2017**, 138-149	0.9	
77	Partial Optimality by Pruning for MAP-Inference with General Graphical Models. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2016**, 38, 1370-82	13.3	5
76	Approximate variational inference based on a finite sample of Gaussian latent variables. *Pattern Analysis and Applications*, **2016**, 19, 475-485	2.3	2
75	Discrete Tomography by Continuous Multilabeling Subject to Projection Constraints. *Lecture Notes in Computer Science*, **2016**, 261-272	0.9	6
74	Plane Wave Acoustic Superposition for fast ultrasound imaging **2016**,		4
73	Non-Binary Discrete Tomography by Continuous Non-Convex Optimization. *IEEE Transactions on Computational Imaging*, **2016**, 2, 335-347	4.5	4
72	Multicuts and Perturb & MAP for Probabilistic Graph Clustering. *Journal of Mathematical Imaging and Vision*, **2016**, 56, 221-237	1.6	1
71	Higher-order segmentation via multicuts. *Computer Vision and Image Understanding*, **2016**, 143, 104-119	4.3	18
70	Variational Methods **2016**,		6
69	A Geometric Approach to Image Labeling. *Lecture Notes in Computer Science*, **2016**, 139-154	0.9	1
68	Parametric Dictionary-Based Velocimetry for Echo PIV. *Lecture Notes in Computer Science*, **2016**, 332-343	0.9	1
67	Double-Opponent Vectorial Total Variation. *Lecture Notes in Computer Science*, **2016**, 644-659	0.9	
66	Joint Recursive Monocular Filtering of Camera Motion and Disparity Map. *Lecture Notes in Computer Science*, **2016**, 233-244	0.9	
65	The Assignment Manifold: A Smooth Model for Image Labeling **2016**,		1
64	Optical Flow **2015**, 1945-2004		7

63	Globally Optimal Joint Image Segmentation and Shape Matching Based on Wasserstein Modes. *Journal of Mathematical Imaging and Vision*, **2015**, 52, 436-458	1.6	6
62	A Comparative Study of Modern Inference Techniques for Structured Discrete Energy Minimization Problems. *International Journal of Computer Vision*, **2015**, 115, 155-184	10.6	93
61	A Computational Approach to Log-Concave Density Estimation. *Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica*, **2015**, 23, 151-166	0.4	
60	On coupled regularization for non-convex variational image enhancement **2015**,		2
59	3D segmentation of vessels by incremental implicit polynomial fitting and convex optimization **2015**,		2
58	Adaptive Dictionary-Based Spatio-temporal Flow Estimation for Echo PIV. *Lecture Notes in Computer Science*, **2015**, 378-391	0.9	3
57	Probabilistic Correlation Clustering and Image Partitioning Using Perturbed Multicuts. *Lecture Notes in Computer Science*, **2015**, 231-242	0.9	6
56	Second Order Minimum Energy Filtering on ({text {SE}}_{3}) with Nonlinear Measurement Equations. *Lecture Notes in Computer Science*, **2015**, 397-409	0.9	4
55	TomoGC: Binary Tomography by Constrained GraphCuts. *Lecture Notes in Computer Science*, **2015**, 262-273	0.9	5
54	Estimating Vehicle Ego-Motion and Piecewise Planar Scene Structure from Optical Flow in a Continuous Framework. *Lecture Notes in Computer Science*, **2015**, 41-52	0.9	3
53	MAP-Inference on Large Scale Higher-Order Discrete Graphical Models by Fusion Moves. *Lecture Notes in Computer Science*, **2015**, 469-484	0.9	
52	A Convex Relaxation Approach to the Affine Subspace Clustering Problem. *Lecture Notes in Computer Science*, **2015**, 67-78	0.9	
51	Probabilistic intra-retinal layer segmentation in 3-D OCT images using global shape regularization. *Medical Image Analysis*, **2014**, 18, 781-94	15.4	31
50	Optical Flow **2014**, 1-54		1
49	Partial Optimality by Pruning for MAP-Inference with General Graphical Models **2014**,		7
48	Phase Transitions and Cosparse Tomographic Recovery of Compound Solid Bodies from Few Projections. *Fundamenta Informaticae*, **2014**, 135, 73-102	1	35
47	Average case recovery analysis of tomographic compressive sensing. *Linear Algebra and Its Applications*, **2014**, 441, 168-198	0.9	40
46	An Entropic Perturbation Approach to TV-Minimization for Limited-Data Tomography. *Lecture Notes in Computer Science*, **2014**, 262-274	0.9	

45	A class of quasi-variational inequalities for adaptive image denoising and decomposition. *Computational Optimization and Applications*, **2013**, 54, 371-398	1.4	21
44	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. *Journal of Mathematical Imaging and Vision*, **2013**, 47, 239-257	1.6	8
43	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	10.6	11
42	Discrete and Continuous Models for Partitioning Problems. *International Journal of Computer Vision* , **2013**, 104, 241-269	10.6	12
41	COAL: a generic modelling and prototyping framework for convex optimization problems of variational image analysis. *Optimization Methods and Software*, **2013**, 28, 1081-1094	1.3	1
40	Towards Efficient and Exact MAP-Inference for Large Scale Discrete Computer Vision Problems via Combinatorial Optimization **2013**,		14
39	Critical Parameter Values and Reconstruction Properties of Discrete Tomography: Application to Experimental Fluid Dynamics. *Fundamenta Informaticae*, **2013**, 125, 285-312	1	1
38	A Comparative Study of Modern Inference Techniques for Discrete Energy Minimization Problems **2013**,		72
37	Convex Variational Image Restoration with Histogram Priors. *SIAM Journal on Imaging Sciences*, **2013**, 6, 1719-1735	1.9	11
36	A general extending and constraining procedure for linear iterative methods. *International Journal of Computer Mathematics*, **2012**, 89, 231-253	1.2	5
35	A bundle approach to efficient MAP-inference by Lagrangian relaxation **2012**,		23
34	Corrections to "Variational Adaptive Correlation Method for Flow Estimation" [Jun 12 3053-3065]. *IEEE Transactions on Image Processing*, **2012**, 21, 3813-3814	8.7	
33	Variational adaptive correlation method for flow estimation. *IEEE Transactions on Image Processing*, **2012**, 21, 3053-65	8.7	18
32	The Benefits of Dense Stereo for Pedestrian Detection. *IEEE Transactions on Intelligent Transportation Systems*, **2011**, 12, 1096-1106	6.1	59
31	Model-Based Multiple Rigid Object Detection and Registration in Unstructured Range Data. *International Journal of Computer Vision*, **2011**, 92, 32-52	10.6	14
30	SPARSE TEMPLATE-BASED VARIATIONAL IMAGE SEGMENTATION. *Advances in Adaptive Data Analysis*, **2011**, 03, 149-166		1
29	Variational recursive joint estimation of dense scene structure and camera motion from monocular high speed traffic sequences **2011**,		5
28	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. *Lecture Notes in Computer Science*, **2011**, 132-146	0.9	3

27	TomoPIV Meets Compressed Sensing **2010**,		4
26	Robust 3D object registration without explicit correspondence using geometric integration. *Machine Vision and Applications*, **2010**, 21, 601-611	2.8	11
25	Variational fluid flow measurements from image sequences: synopsis and perspectives. *Experiments in Fluids*, **2010**, 48, 369-393	2.5	112
24	A Study of Parts-Based Object Class Detection Using Complete Graphs. *International Journal of Computer Vision*, **2010**, 87, 93-117	10.6	85
23	3D Tomography from Few Projections in Experimental Fluid Dynamics. *Notes on Numerical Fluid Mechanics and Multidisciplinary Design*, **2009**, 63-72	0.3	17
22	Convex Hodge Decomposition and Regularization of Image Flows. *Journal of Mathematical Imaging and Vision*, **2009**, 33, 169-177	1.6	18
21	Spectral clustering of linear subspaces for motion segmentation **2009**,		81
20	Variational Approaches to Image Fluid Flow Estimation with Physical Priors. *Notes on Numerical Fluid Mechanics and Multidisciplinary Design*, **2009**, 247-256	0.3	3
19	Total-Variation Based Piecewise Affine Regularization. *Lecture Notes in Computer Science*, **2009**, 552-564	0.9	15
18	Pedestrian Detection and Tracking Using a Mixture of View-Based Shape□exture Models. *IEEE Transactions on Intelligent Transportation Systems*, **2008**, 9, 333-343	6.1	68
17	Continuous graph cuts for prior-based object segmentation **2008**,		4
16	MAP-Inference for Highly-Connected Graphs with DC-Programming. *Lecture Notes in Computer Science*, **2008**, 1-10	0.9	5
15	Median and related local filters for tensor-valued images. *Signal Processing*, **2007**, 87, 291-308	4.4	42
14	Discrete Orthogonal Decomposition and Variational Fluid Flow Estimation. *Journal of Mathematical Imaging and Vision*, **2007**, 28, 67-80	1.6	69
13	Variational estimation of experimental fluid flows with physics-based spatio-temporal regularization. *Measurement Science and Technology*, **2007**, 18, 755-763	2	46
12	Spine detection and labeling using a parts-based graphical model. *Lecture Notes in Computer Science*, **2007**, 20, 122-33	0.9	78
11	A Multiphase Dynamic Labeling Model for Variational Recognition-driven Image Segmentation. *International Journal of Computer Vision*, **2006**, 66, 67-81	10.6	76
10	A Multigrid Platform for Real-Time Motion Computation with Discontinuity-Preserving Variational Methods. *International Journal of Computer Vision*, **2006**, 70, 257-277	10.6	117

9	Optical Stokes flow estimation: an imaging-based control approach. *Experiments in Fluids*, **2006**, 42, 61-78	2.5	65
8	Learning of Graphical Models and Efficient Inference for Object Class Recognition. *Lecture Notes in Computer Science*, **2006**, 273-283	0.9	8
7	Lucas/Kanade Meets Horn/Schunck: Combining Local and Global Optic Flow Methods. *International Journal of Computer Vision*, **2005**, 61, 1-21	10.6	738
6	Natural Image Statistics for Natural Image Segmentation. *International Journal of Computer Vision*, **2005**, 63, 5-19	10.6	40
5	Combined SVM-Based Feature Selection and Classification. *Machine Learning*, **2005**, 61, 129-150	4	168
4	Diffusion Snakes: Introducing Statistical Shape Knowledge into the Mumford-Shah Functional. *International Journal of Computer Vision*, **2002**, 50, 295-313	10.6	218
3	Variational Optic Flow Computation with a Spatio-Temporal Smoothness Constraint **2001**, 14, 245-255		171
2	A Theoretical Framework for Convex Regularizers in PDE-Based Computation of Image Motion. *International Journal of Computer Vision*, **2001**, 45, 245-264	10.6	186
1	Assignment flows for data labeling on graphs: convergence and stability. *Information Geometry*,1	1.2	3