

Christoph Schnorr

List of Publications by Citations

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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	Lucas/Kanade Meets Horn/Schunck: Combining Local and Global Optic Flow Methods. <i>International Journal of Computer Vision</i> , 2005 , 61, 1-21	10.6	738
115	Diffusion Snakes: Introducing Statistical Shape Knowledge into the Mumford-Shah Functional. <i>International Journal of Computer Vision</i> , 2002 , 50, 295-313	10.6	218
114	A Theoretical Framework for Convex Regularizers in PDE-Based Computation of Image Motion. <i>International Journal of Computer Vision</i> , 2001 , 45, 245-264	10.6	186
113	Variational Optic Flow Computation with a Spatio-Temporal Smoothness Constraint 2001 , 14, 245-255		171
112	Combined SVM-Based Feature Selection and Classification. <i>Machine Learning</i> , 2005 , 61, 129-150	4	168
111	A Multigrid Platform for Real-Time Motion Computation with Discontinuity-Preserving Variational Methods. <i>International Journal of Computer Vision</i> , 2006 , 70, 257-277	10.6	117
110	Variational fluid flow measurements from image sequences: synopsis and perspectives. <i>Experiments in Fluids</i> , 2010 , 48, 369-393	2.5	112
109	A Comparative Study of Modern Inference Techniques for Structured Discrete Energy Minimization Problems. <i>International Journal of Computer Vision</i> , 2015 , 115, 155-184	10.6	93
108	A Study of Parts-Based Object Class Detection Using Complete Graphs. <i>International Journal of Computer Vision</i> , 2010 , 87, 93-117	10.6	85
107	Spectral clustering of linear subspaces for motion segmentation 2009 ,		81
106	Spine detection and labeling using a parts-based graphical model. <i>Lecture Notes in Computer Science</i> , 2007 , 20, 122-33	0.9	78
105	A Multiphase Dynamic Labeling Model for Variational Recognition-driven Image Segmentation. <i>International Journal of Computer Vision</i> , 2006 , 66, 67-81	10.6	76
104	A Comparative Study of Modern Inference Techniques for Discrete Energy Minimization Problems 2013 ,		72
103	Discrete Orthogonal Decomposition and Variational Fluid Flow Estimation. <i>Journal of Mathematical Imaging and Vision</i> , 2007 , 28, 67-80	1.6	69
102	Pedestrian Detection and Tracking Using a Mixture of View-Based ShapeTexture Models. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2008 , 9, 333-343	6.1	68
101	Optical Stokes flow estimation: an imaging-based control approach. <i>Experiments in Fluids</i> , 2006 , 42, 61-78	8.5	65
100	The Benefits of Dense Stereo for Pedestrian Detection. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2011 , 12, 1096-1106	6.1	59

99	Variational estimation of experimental fluid flows with physics-based spatio-temporal regularization. <i>Measurement Science and Technology</i> , 2007 , 18, 755-763	2	46
98	Median and related local filters for tensor-valued images. <i>Signal Processing</i> , 2007 , 87, 291-308	4.4	42
97	Average case recovery analysis of tomographic compressive sensing. <i>Linear Algebra and Its Applications</i> , 2014 , 441, 168-198	0.9	40
96	Natural Image Statistics for Natural Image Segmentation. <i>International Journal of Computer Vision</i> , 2005 , 63, 5-19	10.6	40
95	Image Labeling by Assignment. <i>Journal of Mathematical Imaging and Vision</i> , 2017 , 58, 211-238	1.6	35
94	Phase Transitions and Cospase Tomographic Recovery of Compound Solid Bodies from Few Projections. <i>Fundamenta Informaticae</i> , 2014 , 135, 73-102	1	35
93	Probabilistic intra-retinal layer segmentation in 3-D OCT images using global shape regularization. <i>Medical Image Analysis</i> , 2014 , 18, 781-94	15.4	31
92	A bundle approach to efficient MAP-inference by Lagrangian relaxation 2012 ,		23
91	A class of quasi-variational inequalities for adaptive image denoising and decomposition. <i>Computational Optimization and Applications</i> , 2013 , 54, 371-398	1.4	21
90	Higher-order segmentation via multicuts. <i>Computer Vision and Image Understanding</i> , 2016 , 143, 104-119	4.3	18
89	Variational adaptive correlation method for flow estimation. <i>IEEE Transactions on Image Processing</i> , 2012 , 21, 3053-65	8.7	18
88	Convex Hodge Decomposition and Regularization of Image Flows. <i>Journal of Mathematical Imaging and Vision</i> , 2009 , 33, 169-177	1.6	18
87	3D Tomography from Few Projections in Experimental Fluid Dynamics. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2009 , 63-72	0.3	17
86	Total-Variation Based Piecewise Affine Regularization. <i>Lecture Notes in Computer Science</i> , 2009 , 552-564	0.9	15
85	Geometric numerical integration of the assignment flow. <i>Inverse Problems</i> , 2020 , 36, 034003	2.3	15
84	Towards Efficient and Exact MAP-Inference for Large Scale Discrete Computer Vision Problems via Combinatorial Optimization 2013 ,		14
83	Model-Based Multiple Rigid Object Detection and Registration in Unstructured Range Data. <i>International Journal of Computer Vision</i> , 2011 , 92, 32-52	10.6	14
82	Discrete and Continuous Models for Partitioning Problems. <i>International Journal of Computer Vision</i> , 2013 , 104, 241-269	10.6	12

81	Variational Recursive Joint Estimation of Dense Scene Structure and Camera Motion from Monocular High Speed Traffic Sequences. <i>International Journal of Computer Vision</i> , 2013 , 105, 269-297	10.6	11
80	Convex Variational Image Restoration with Histogram Priors. <i>SIAM Journal on Imaging Sciences</i> , 2013 , 6, 1719-1735	1.9	11
79	Robust 3D object registration without explicit correspondence using geometric integration. <i>Machine Vision and Applications</i> , 2010 , 21, 601-611	2.8	11
78	Assignment Flows 2020 , 235-260		11
77	Locally Adaptive Probabilistic Models for Global Segmentation of Pathological OCT Scans. <i>Lecture Notes in Computer Science</i> , 2017 , 177-184	0.9	10
76	Image Labeling Based on Graphical Models Using Wasserstein Messages and Geometric Assignment. <i>SIAM Journal on Imaging Sciences</i> , 2018 , 11, 1317-1362	1.9	9
75	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. <i>Journal of Mathematical Imaging and Vision</i> , 2013 , 47, 239-257	1.6	8
74	Learning of Graphical Models and Efficient Inference for Object Class Recognition. <i>Lecture Notes in Computer Science</i> , 2006 , 273-283	0.9	8
73	Optical Flow 2015 , 1945-2004		7
72	Partial Optimality by Pruning for MAP-Inference with General Graphical Models 2014 ,		7
71	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. <i>Journal of Mathematical Imaging and Vision</i> , 2021 , 63, 186-215	1.6	7
70	Globally Optimal Joint Image Segmentation and Shape Matching Based on Wasserstein Modes. <i>Journal of Mathematical Imaging and Vision</i> , 2015 , 52, 436-458	1.6	6
69	Discrete Tomography by Continuous Multilabeling Subject to Projection Constraints. <i>Lecture Notes in Computer Science</i> , 2016 , 261-272	0.9	6
68	Globally optimal segmentation of cell nuclei in fluorescence microscopy images using shape and intensity information. <i>Medical Image Analysis</i> , 2019 , 58, 101536	15.4	6
67	Variational Methods 2016 ,		6
66	Probabilistic Correlation Clustering and Image Partitioning Using Perturbed Multicuts. <i>Lecture Notes in Computer Science</i> , 2015 , 231-242	0.9	6
65	Partial Optimality by Pruning for MAP-Inference with General Graphical Models. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2016 , 38, 1370-82	13.3	5
64	A general extending and constraining procedure for linear iterative methods. <i>International Journal of Computer Mathematics</i> , 2012 , 89, 231-253	1.2	5

63	Variational recursive joint estimation of dense scene structure and camera motion from monocular high speed traffic sequences 2011 ,		5
62	TomoGC: Binary Tomography by Constrained GraphCuts. <i>Lecture Notes in Computer Science</i> , 2015 , 262-273		5
61	Numerical Integration of Riemannian Gradient Flows for Image Labeling. <i>Lecture Notes in Computer Science</i> , 2017 , 361-372	0.9	5
60	MAP-Inference for Highly-Connected Graphs with DC-Programming. <i>Lecture Notes in Computer Science</i> , 2008 , 1-10	0.9	5
59	Unsupervised Assignment Flow: Label Learning on Feature Manifolds by Spatially Regularized Geometric Assignment. <i>Journal of Mathematical Imaging and Vision</i> , 2020 , 62, 982-1006	1.6	5
58	Self-Assignment Flows for Unsupervised Data Labeling on Graphs. <i>SIAM Journal on Imaging Sciences</i> , 2020 , 13, 1113-1156	1.9	5
57	A geometric approach for color image regularization. <i>Computer Vision and Image Understanding</i> , 2017 , 165, 43-59	4.3	4
56	Plane Wave Acoustic Superposition for fast ultrasound imaging 2016 ,		4
55	Non-Binary Discrete Tomography by Continuous Non-Convex Optimization. <i>IEEE Transactions on Computational Imaging</i> , 2016 , 2, 335-347	4.5	4
54	TomoPIV Meets Compressed Sensing 2010 ,		4
53	Continuous graph cuts for prior-based object segmentation 2008 ,		4
52	Unsupervised Label Learning on Manifolds by Spatially Regularized Geometric Assignment. <i>Lecture Notes in Computer Science</i> , 2019 , 698-713	0.9	4
51	Second Order Minimum Energy Filtering on $\{\text{SE}\}_3$ with Nonlinear Measurement Equations. <i>Lecture Notes in Computer Science</i> , 2015 , 397-409	0.9	4
50	Assignment flows for data labeling on graphs: convergence and stability. <i>Information Geometry</i> , 1	1.2	3
49	Learning Adaptive Regularization for Image Labeling Using Geometric Assignment. <i>Lecture Notes in Computer Science</i> , 2019 , 393-405	0.9	3
48	Unsupervised Labeling by Geometric and Spatially Regularized Self-assignment. <i>Lecture Notes in Computer Science</i> , 2019 , 432-444	0.9	3
47	Adaptive Dictionary-Based Spatio-temporal Flow Estimation for Echo PIV. <i>Lecture Notes in Computer Science</i> , 2015 , 378-391	0.9	3
46	Compressed Motion Sensing. <i>Lecture Notes in Computer Science</i> , 2017 , 602-613	0.9	3

45	Variational Approaches to Image Fluid Flow Estimation with Physical Priors. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2009 , 247-256	0.3	3
44	Optimality Bounds for a Variational Relaxation of the Image Partitioning Problem. <i>Lecture Notes in Computer Science</i> , 2011 , 132-146	0.9	3
43	Estimating Vehicle Ego-Motion and Piecewise Planar Scene Structure from Optical Flow in a Continuous Framework. <i>Lecture Notes in Computer Science</i> , 2015 , 41-52	0.9	3
42	Sum-product graphical models. <i>Machine Learning</i> , 2020 , 109, 135-173	4	3
41	Assignment Flow for Order-Constrained OCT Segmentation. <i>International Journal of Computer Vision</i> , 2021 , 129, 3088	10.6	3
40	Learning Linear Assignment Flows for Image Labeling via Exponential Integration. <i>Lecture Notes in Computer Science</i> , 2021 , 385-397	0.9	3
39	Approximate variational inference based on a finite sample of Gaussian latent variables. <i>Pattern Analysis and Applications</i> , 2016 , 19, 475-485	2.3	2
38	Second-Order Recursive Filtering on the Rigid-Motion Lie Group ($SE(3)$) Based on Nonlinear Observations. <i>Journal of Mathematical Imaging and Vision</i> , 2017 , 58, 102-129	1.6	2
37	Image Reconstruction by Multilabel Propagation. <i>Lecture Notes in Computer Science</i> , 2017 , 247-259	0.9	2
36	MAP Image Labeling Using Wasserstein Messages and Geometric Assignment. <i>Lecture Notes in Computer Science</i> , 2017 , 373-385	0.9	2
35	Fast multivariate log-concave density estimation. <i>Computational Statistics and Data Analysis</i> , 2019 , 140, 41-58	1.6	2
34	Segmentation of cell structures using Model-Based Set Covering with iterative reweighting 2017 ,		2
33	On coupled regularization for non-convex variational image enhancement 2015 ,		2
32	3D segmentation of vessels by incremental implicit polynomial fitting and convex optimization 2015 ,		2
31	A Variational Perspective on the Assignment Flow. <i>Lecture Notes in Computer Science</i> , 2019 , 547-558	0.9	2
30	Assignment Flow for Order-Constrained OCT Segmentation. <i>Lecture Notes in Computer Science</i> , 2021 , 58-71	0.9	2
29	Multicuts and Perturb & MAP for Probabilistic Graph Clustering. <i>Journal of Mathematical Imaging and Vision</i> , 2016 , 56, 221-237	1.6	1
28	COAL: a generic modelling and prototyping framework for convex optimization problems of variational image analysis. <i>Optimization Methods and Software</i> , 2013 , 28, 1081-1094	1.3	1

27	Optical Flow 2014 , 1-54		1
26	Critical Parameter Values and Reconstruction Properties of Discrete Tomography: Application to Experimental Fluid Dynamics. <i>Fundamenta Informaticae</i> , 2013 , 125, 285-312	1	1
25	SPARSE TEMPLATE-BASED VARIATIONAL IMAGE SEGMENTATION. <i>Advances in Adaptive Data Analysis</i> , 2011 , 03, 149-166		1
24	Quantifying Uncertainty of Image Labelings Using Assignment Flows. <i>Lecture Notes in Computer Science</i> , 2021 , 453-466	0.9	1
23	A Geometric Approach to Image Labeling. <i>Lecture Notes in Computer Science</i> , 2016 , 139-154	0.9	1
22	Parametric Dictionary-Based Velocimetry for Echo PIV. <i>Lecture Notes in Computer Science</i> , 2016 , 332-343	0.9	1
21	The Assignment Manifold: A Smooth Model for Image Labeling 2016 ,		1
20	Spatially Regularized Geometric Assignment for Unsupervised Label Learning on Manifolds. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019 , 19, e201900258	0.2	1
19	Exponential Integration of the Linear Assignment Flow. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019 , 19, e201900434	0.2	1
18	Unsupervised Data Labeling on Graphs by Self-Assignment Flows. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021 , 20, e202000156	0.2	1
17	On the Geometric Mechanics of Assignment Flows for Metric Data Labeling. <i>Lecture Notes in Computer Science</i> , 2021 , 398-410	0.9	1
16	Segmentation of OCT Scans Using Probabilistic Graphical Models 2019 , 105-130		
15	A Computational Approach to Log-Concave Density Estimation. <i>Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica</i> , 2015 , 23, 151-166	0.4	
14	Corrections to Variational Adaptive Correlation Method for Flow Estimation [Jun 12 3053-3065]. <i>IEEE Transactions on Image Processing</i> , 2012 , 21, 3813-3814	8.7	
13	Assignment Flows and Nonlocal PDEs on Graphs. <i>Lecture Notes in Computer Science</i> , 2021 , 498-512	0.9	
12	Geometric Image Labeling with Global Convex Labeling Constraints. <i>Lecture Notes in Computer Science</i> , 2018 , 533-547	0.9	
11	MAP-Inference on Large Scale Higher-Order Discrete Graphical Models by Fusion Moves. <i>Lecture Notes in Computer Science</i> , 2015 , 469-484	0.9	
10	A Convex Relaxation Approach to the Affine Subspace Clustering Problem. <i>Lecture Notes in Computer Science</i> , 2015 , 67-78	0.9	

- 9 Double-Opponent Vectorial Total Variation. *Lecture Notes in Computer Science*, **2016**, 644-659 0.9
- 8 Joint Recursive Monocular Filtering of Camera Motion and Disparity Map. *Lecture Notes in Computer Science*, **2016**, 233-244 0.9
- 7 Gradient Flows on a Riemannian Submanifold for Discrete Tomography. *Lecture Notes in Computer Science*, **2017**, 294-305 0.9
- 6 A Local Spatio-Temporal Approach to Plane Wave Ultrasound Particle Image Velocimetry. *Lecture Notes in Computer Science*, **2017**, 138-149 0.9
- 5 An Entropic Perturbation Approach to TV-Minimization for Limited-Data Tomography. *Lecture Notes in Computer Science*, **2014**, 262-274 0.9
- 4 Riemannian Structure and Flows for Smooth Geometric Image Labeling. *Proceedings in Applied Mathematics and Mechanics*, **2019**, 19, e201900218 0.2
- 3 On the Correspondence Between Replicator Dynamics and Assignment Flows. *Lecture Notes in Computer Science*, **2021**, 373-384 0.9
- 2 Characterizing the Role of a Single Coupling Layer in Affine Normalizing Flows. *Lecture Notes in Computer Science*, **2021**, 1-14 0.9
- 1 Multi-view Monocular Depth and Uncertainty Prediction with Deep SfM in Dynamic Environments. *Lecture Notes in Computer Science*, **2022**, 373-385 0.9