

Nir Sochen

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.

89
papers

4,486
citations

24
h-index

66
g-index

94
ext. papers

5,200
ext. citations

3.6
avg, IF

5.92
L-index

#	Paper	IF	Citations
89	Affine Invariant Flows in the Beltrami Framework. <i>Journal of Mathematical Imaging and Vision</i> , 2004 , 20, 89-97	1.6	1373
88	Image Sharpening by Flows Based on Triple Well Potentials. <i>Journal of Mathematical Imaging and Vision</i> , 2004 , 20, 73-87	1.6	552
87	Free water elimination and mapping from diffusion MRI. <i>Magnetic Resonance in Medicine</i> , 2009 , 62, 717-304	10.4	518
86	Image enhancement and denoising by complex diffusion processes. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2004 , 26, 1020-36	13.3	309
85	Forward-and-backward diffusion processes for adaptive image enhancement and denoising. <i>IEEE Transactions on Image Processing</i> , 2002 , 11, 689-703	8.7	216
84	Variational denoising of partly textured images by spatially varying constraints. <i>IEEE Transactions on Image Processing</i> , 2006 , 15, 2281-9	8.7	116
83	Image Deblurring in the Presence of Impulsive Noise. <i>International Journal of Computer Vision</i> , 2006 , 70, 279-298	10.6	95
82	Deblurring of color images corrupted by impulsive noise. <i>IEEE Transactions on Image Processing</i> , 2007 , 16, 1101-11	8.7	81
81	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
80	Towards Recognition-Based Variational Segmentation Using Shape Priors and Dynamic Labeling. <i>Lecture Notes in Computer Science</i> , 2003 , 388-400	0.9	69
79	Estimation of optimal PDE-based denoising in the SNR sense. <i>IEEE Transactions on Image Processing</i> , 2006 , 15, 2269-80	8.7	68
78	Shape-from-Shading Under Perspective Projection. <i>International Journal of Computer Vision</i> , 2005 , 63, 21-43	10.6	66
77	Orientation Diffusion or How to Comb a Porcupine. <i>Journal of Visual Communication and Image Representation</i> , 2002 , 13, 238-248	2.7	65
76	Semi-blind image restoration via Mumford-Shah regularization. <i>IEEE Transactions on Image Processing</i> , 2006 , 15, 483-93	8.7	57
75	A short- time beltrami kernel for smoothing images and manifolds. <i>IEEE Transactions on Image Processing</i> , 2007 , 16, 1628-36	8.7	54
74	The effect of metric selection on the analysis of diffusion tensor MRI data. <i>NeuroImage</i> , 2010 , 49, 2190-204	10.4	44
73	From high energy physics to low level vision. <i>Lecture Notes in Computer Science</i> , 1997 , 236-247	0.9	43

72	Image Deblurring in the Presence of Salt-and-Pepper Noise. <i>Lecture Notes in Computer Science</i> , 2005 , 107-118	0.9	40
71	Mapping apparent eccentricity and residual ensemble anisotropy in the gray matter using angular double-pulsed-field-gradient MRI. <i>Magnetic Resonance in Medicine</i> , 2012 , 68, 794-806	4.4	39
70	Variational multiple-tensor fitting of fiber-ambiguous diffusion-weighted magnetic resonance imaging voxels. <i>Magnetic Resonance Imaging</i> , 2008 , 26, 1133-44	3.3	36
69	Practical, Unified, Motion and Missing Data Treatment in Degraded Video. <i>Journal of Mathematical Imaging and Vision</i> , 2004 , 20, 121-131	1.6	34
68	Prior-based Segmentation and Shape Registration in the Presence of Perspective Distortion. <i>International Journal of Computer Vision</i> , 2007 , 72, 309-328	10.6	31
67	Unlevel-Sets: Geometry and Prior-Based Segmentation. <i>Lecture Notes in Computer Science</i> , 2004 , 50-61	0.9	27
66	Variational Pairing of Image Segmentation and Blind Restoration. <i>Lecture Notes in Computer Science</i> , 2004 , 166-177	0.9	25
65	Stereo matching with Mumford-Shah regularization and occlusion handling. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2010 , 32, 2071-84	13.3	21
64	The Finite Harmonic Oscillator and Its Applications to Sequences, Communication, and Radar. <i>IEEE Transactions on Information Theory</i> , 2008 , 54, 4239-4253	2.8	21
63	Affine-invariant geodesic geometry of deformable 3D shapes. <i>Computers and Graphics</i> , 2011 , 35, 692-697	1.8	20
62	Restoration of Images with Piecewise Space-Variant Blur 2007 , 533-544		20
61	Shape-Based Mutual Segmentation. <i>International Journal of Computer Vision</i> , 2008 , 79, 231-245	10.6	19
60	Progress in the restoration of image sequences degraded by atmospheric turbulence. <i>Pattern Recognition Letters</i> , 2014 , 48, 8-14	4.7	16
59	Mumford and Shah Model and its Applications to Image Segmentation and Image Restoration 2011 , 1095-1157		16
58	Affine-invariant diffusion geometry for the analysis of deformable 3D shapes 2011 ,		15
57	Variational Stereo Vision with Sharp Discontinuities and Occlusion Handling 2007 ,		14
56	Equi-affine Invariant Geometry for Shape Analysis. <i>Journal of Mathematical Imaging and Vision</i> , 2014 , 50, 144-163	1.6	13
55	On Some Deterministic Dictionaries Supporting Sparsity. <i>Journal of Fourier Analysis and Applications</i> , 2008 , 14, 859-876	1.1	13

54	Multiphase Dynamic Labeling for Variational Recognition-Driven Image Segmentation. <i>Lecture Notes in Computer Science</i> , 2004 , 74-86	0.9	13
53	Measuring small compartments with relatively weak gradients by angular double-pulsed-field-gradient NMR. <i>Magnetic Resonance Imaging</i> , 2013 , 31, 401-7	3.3	12
52	Modeling of the diffusion MR signal in calibrated model systems and nerves. <i>NMR in Biomedicine</i> , 2013 , 26, 1787-95	4.4	12
51	Fast GL(n)-Invariant Framework for Tensors Regularization. <i>International Journal of Computer Vision</i> , 2009 , 85, 211-222	10.6	12
50	Microstructural information from angular double-pulsed-field-gradient NMR: From model systems to nerves. <i>Magnetic Resonance in Medicine</i> , 2015 , 74, 25-32	4.4	11
49	Regularizing Flows over Lie Groups. <i>Journal of Mathematical Imaging and Vision</i> , 2009 , 33, 195-208	1.6	11
48	Do Uncertainty Minimizers Attain Minimal Uncertainty?. <i>Journal of Fourier Analysis and Applications</i> , 2010 , 16, 448-469	1.1	11
47	Fast Invariant Riemannian DT-MRI Regularization 2007 ,		10
46	Single- and double-Diffusion encoding MRI for studying ex vivo apparent axon diameter distribution in spinal cord white matter. <i>NMR in Biomedicine</i> , 2019 , 32, e4170	4.4	8
45	Learning Big (Image) Data via Coresets for Dictionaries. <i>Journal of Mathematical Imaging and Vision</i> , 2013 , 46, 276-291	1.6	8
44	A Class of Generalized Laplacians on Vector Bundles Devoted to Multi-Channel Image Processing. <i>Journal of Mathematical Imaging and Vision</i> , 2014 , 48, 517-543	1.6	8
43	The finite harmonic oscillator and its associated sequences. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 9869-73	11.5	8
42	The Beltrami Flow over Triangulated Manifolds. <i>Lecture Notes in Computer Science</i> , 2004 , 135-144	0.9	8
41	Variational blind deconvolution of multi-channel images. <i>International Journal of Imaging Systems and Technology</i> , 2005 , 15, 56-63	2.5	8
40	From High Definition Image to Low Space Optimization. <i>Lecture Notes in Computer Science</i> , 2012 , 459-470.	0.9	8
39	Efficient Beltrami Flow Using a Short Time Kernel. <i>Lecture Notes in Computer Science</i> , 2003 , 511-522	0.9	8
38	A Geometric Framework and a New Criterion in Optical Flow Modeling. <i>Journal of Mathematical Imaging and Vision</i> , 2009 , 33, 178-194	1.6	7
37	Microscopic interpretation and generalization of the Bloch-Torrey equation for diffusion magnetic resonance. <i>Journal of Magnetic Resonance</i> , 2017 , 277, 95-103	3	6

36	Radiometric imaging by double exposure and gain calibration. <i>Applied Optics</i> , 2017 , 56, 5639-5647	1.7	6
35	A spectral framework for NMR signal with restricted diffusion. <i>Concepts in Magnetic Resonance Part A: Bridging Education and Research</i> , 2015 , 44, 16-53	0.6	6
34	A Geometric Approach for Regularization of the Data Term in Stereo-Vision. <i>Journal of Mathematical Imaging and Vision</i> , 2008 , 31, 17-33	1.6	6
33	Convergence of an Iterative Method for Variational Deconvolution and Impulsive Noise Removal. <i>Multiscale Modeling and Simulation</i> , 2007 , 6, 983-994	1.8	6
32	Landmark Matching via Large Deformation Diffeomorphisms on the Sphere. <i>Journal of Mathematical Imaging and Vision</i> , 2004 , 20, 133-146	1.6	6
31	Coordinate-Free Diffusion over Compact Lie-Groups 2007 , 580-591		6
30	Metric Selection and Diffusion Tensor Swelling. <i>Mathematics and Visualization</i> , 2012 , 323-336	0.6	5
29	Joint estimation of unknown radiometric data, gain, and offset from thermal images. <i>Applied Optics</i> , 2018 , 57, 10390-10401	1.7	5
28	Mumford and Shah Model and Its Applications to Image Segmentation and Image Restoration 2014 , 1-52		4
27	Real and Complex PDE-Based Schemes for Image Sharpening and Enhancement. <i>Advances in Imaging and Electron Physics</i> , 2005 , 136, 1-109	0.2	4
26	Diffusion over tensor fields via Lie group PDE flows: Lagrangian action approach. <i>Contemporary Mathematics</i> , 2007 , 59-74	1.6	4
25	Mumford and Shah Model and Its Applications to Image Segmentation and Image Restoration 2015 , 1539-1597		3
24	Square Integrable Group Representations and the Uncertainty Principle. <i>Journal of Fourier Analysis and Applications</i> , 2011 , 17, 916-931	1.1	3
23	Improving the predictive potential of diffusion MRI in schizophrenia using normative models-Towards subject-level classification. <i>Human Brain Mapping</i> , 2021 , 42, 4658-4670	5.9	3
22	Computational end-to-end and super-resolution methods to improve thermal infrared remote sensing for agriculture. <i>Precision Agriculture</i> , 2021 , 22, 452-474	5.6	3
21	Spectral Analysis of a Non-Equilibrium Stochastic Dynamics on a General Network. <i>Scientific Reports</i> , 2018 , 8, 14333	4.9	3
20	Pore sizes and directionality in microcapillaries from angular double-pulsed-field-gradient NMR. <i>Microporous and Mesoporous Materials</i> , 2016 , 225, 105-115	5.3	2
19	The fiber-density-coreset for redundancy reduction in huge fiber-sets. <i>NeuroImage</i> , 2017 , 146, 246-256	7.9	2

18	Image Inpainting via Fluid Equations 2006 ,		2
17	Geometric Filters, Diffusion Flows, and Kernels in Image Processing 2005 , 203-230		2
16	Anisotropic Regularization for Inverse Problems with Application to the Wiener Filter with Gaussian and Impulse Noise. <i>Lecture Notes in Computer Science</i> , 2009 , 319-330	0.9	2
15	Uncertainty principles and optimally sparse wavelet transforms. <i>Applied and Computational Harmonic Analysis</i> , 2020 , 48, 811-867	3.1	2
14	Anisotropic α -Kernels and Associated Flows. <i>SIAM Journal on Imaging Sciences</i> , 2010 , 3, 904-925	1.9	1
13	Efficient anisotropic α -Kernels decompositions and flows 2008 ,		1
12	Regularization of diffusion tensor MRI via local coordinates. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 1011211-1011212	0.2	1
11	Can Born Approximate the Unborn? A New Validity Criterion for the Born Approximation in Microscopic Imaging 2007 ,		1
10	Rapid super resolution for infrared imagery. <i>Optics Express</i> , 2020 , 28, 27196-27209	3.3	1
9	Group Representation Design of Digital Signals and Sequences. <i>Lecture Notes in Computer Science</i> , 2008 , 153-166	0.9	1
8	The Maximum Principle for Beltrami Color Flow. <i>Lecture Notes in Computer Science</i> , 2003 , 196-208	0.9	1
7	Coordinates-Based Diffusion Over the Space of Symmetric Positive-Definite Matrices. <i>Mathematics and Visualization</i> , 2009 , 325-340	0.6	1
6	The Beltrami-Mumford-Shah Functional. <i>Lecture Notes in Computer Science</i> , 2012 , 183-193	0.9	1
5	REPIMPACT - a prospective longitudinal multisite study on the effects of repetitive head impacts in youth soccer. <i>Brain Imaging and Behavior</i> , 2021 , 1	4.1	0
4	Localization phase transition in stochastic dynamics on networks with hub topology. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020 , 554, 124636	3.3	
3	Equi-affine Invariant Geometries of Articulated Objects. <i>Lecture Notes in Computer Science</i> , 2012 , 177-190.9		
2	Shape from Shading 2009 , 2511		
1	SPD Tensors Regularization via Iwasawa Decomposition. <i>Computational Imaging and Vision</i> , 2012 , 83-100		

