

Michael Unser

List of Publications by Year in descending order

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298
papers

14,912
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29994

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112
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306
all docs

306
docs citations

306
times ranked

13886
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep Convolutional Neural Network for Inverse Problems in Imaging. IEEE Transactions on Image Processing, 2017, 26, 4509-4522.	6.0	1,540
2	A New SURE Approach to Image Denoising: Interscale Orthonormal Wavelet Thresholding. IEEE Transactions on Image Processing, 2007, 16, 593-606.	6.0	507
3	Convolutional Neural Networks for Inverse Problems in Imaging: A Review. IEEE Signal Processing Magazine, 2017, 34, 85-95.	4.6	496
4	DeconvolutionLab2: An open-source software for deconvolution microscopy. Methods, 2017, 115, 28-41.	1.9	417
5	Automatic tracking of individual fluorescence particles: application to the study of chromosome dynamics. IEEE Transactions on Image Processing, 2005, 14, 1372-1383.	6.0	391
6	Image Denoising in Mixed Poisson-Gaussian Noise. IEEE Transactions on Image Processing, 2011, 20, 696-708.	6.0	354
7	Quantitative evaluation of software packages for single-molecule localization microscopy. Nature Methods, 2015, 12, 717-724.	9.0	347
8	Design of steerable filters for feature detection using canny-like criteria. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2004, 26, 1007-1019.	9.7	338
9	Imaging cellular ultrastructures using expansion microscopy (U-ExM). Nature Methods, 2019, 16, 71-74.	9.0	335
10	Complex wavelets for extended depth-of-field: A new method for the fusion of multichannel microscopy images. Microscopy Research and Technique, 2004, 65, 33-42.	1.2	332
11	Learning approach to optical tomography. Optica, 2015, 2, 517.	4.8	332
12	Fractional Splines and Wavelets. SIAM Review, 2000, 42, 43-67.	4.2	322
13	Transforms and Operators for Directional Bioimage Analysis: A Survey. Advances in Anatomy, Embryology and Cell Biology, 2016, 219, 69-93.	1.0	322
14	CNN-Based Projected Gradient Descent for Consistent CT Image Reconstruction. IEEE Transactions on Medical Imaging, 2018, 37, 1440-1453.	5.4	291
15	Monte-Carlo Sure: A Black-Box Optimization of Regularization Parameters for General Denoising Algorithms. IEEE Transactions on Image Processing, 2008, 17, 1540-1554.	6.0	275
16	Elastic Registration of Biological Images Using Vector-Spline Regularization. IEEE Transactions on Biomedical Engineering, 2005, 52, 652-663.	2.5	263
17	Super-resolution fight club: assessment of 2D and 3D single-molecule localization microscopy software. Nature Methods, 2019, 16, 387-395.	9.0	251
18	A new resolution criterion based on spectral signal-to-noise ratios. Ultramicroscopy, 1987, 23, 39-51.	0.8	238

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19	Sampling procedures in function spaces and asymptotic equivalence with shannon's sampling theory. Numerical Functional Analysis and Optimization, 1994, 15, 1-21.	0.6	199
20	Fast interscale wavelet denoising of Poisson-corrupted images. Signal Processing, 2010, 90, 415-427.	2.1	191
21	Hessian-Based Norm Regularization for Image Restoration With Biomedical Applications. IEEE Transactions on Image Processing, 2012, 21, 983-995.	6.0	188
22	A Fast Thresholded Landweber Algorithm for Wavelet-Regularized Multidimensional Deconvolution. IEEE Transactions on Image Processing, 2008, 17, 539-549.	6.0	174
23	Phosphorylation Does Not Prompt, Nor Prevent, the Formation of \hat{A} -synuclein Toxic Species in a Rat Model of Parkinson's Disease. Human Molecular Genetics, 2009, 18, 872-87.	1.4	172
24	Multiresolution Monogenic Signal Analysis Using the Riesz-Laplace Wavelet Transform. IEEE Transactions on Image Processing, 2009, 18, 2402-2418.	6.0	168
25	Efficient Energies and Algorithms for Parametric Snakes. IEEE Transactions on Image Processing, 2004, 13, 1231-1244.	6.0	164
26	Generalized Daubechies Wavelet Families. IEEE Transactions on Signal Processing, 2007, 55, 4415-4429.	3.2	159
27	Fresnelets: new multiresolution wavelet bases for digital holography. IEEE Transactions on Image Processing, 2003, 12, 29-43.	6.0	146
28	Optical Tomographic Image Reconstruction Based on Beam Propagation and Sparse Regularization. IEEE Transactions on Computational Imaging, 2016, 2, 59-70.	2.6	140
29	Hessian Schatten-Norm Regularization for Linear Inverse Problems. IEEE Transactions on Image Processing, 2013, 22, 1873-1888.	6.0	138
30	Mathematical properties of the jpeg2000 wavelet filters. IEEE Transactions on Image Processing, 2003, 12, 1080-1090.	6.0	132
31	Model-Based 2.5-D Deconvolution for Extended Depth of Field in Brightfield Microscopy. IEEE Transactions on Image Processing, 2008, 17, 1144-1153.	6.0	130
32	FALCON: fast and unbiased reconstruction of high-density super-resolution microscopy data. Scientific Reports, 2014, 4, 4577.	1.6	125
33	A chemostat array enables the spatio-temporal analysis of the yeast proteome. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15842-15847.	3.3	123
34	Families of multiresolution and wavelet spaces with optimal properties. Numerical Functional Analysis and Optimization, 1993, 14, 417-446.	0.6	111
35	Stressed Mycobacteria Use the Chaperone ClpB to Sequester Irreversibly Oxidized Proteins Asymmetrically Within and Between Cells. Cell Host and Microbe, 2015, 17, 178-190.	5.1	104
36	Structure Tensor Total Variation. SIAM Journal on Imaging Sciences, 2015, 8, 1090-1122.	1.3	102

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37	Isotropic polyharmonic B-splines: scaling functions and wavelets. IEEE Transactions on Image Processing, 2005, 14, 1798-1813.	6.0	95
38	Super-resolution orientation estimation and localization of fluorescent dipoles using 3-D steerable filters. Optics Express, 2009, 17, 6829.	1.7	95
39	Approximation Error for Quasi-Interpolators and (Multi-)Wavelet Expansions. Applied and Computational Harmonic Analysis, 1999, 6, 219-251.	1.1	90
40	Wavelet Steerability and the Higher-Order Riesz Transform. IEEE Transactions on Image Processing, 2010, 19, 636-652.	6.0	89
41	Joint image reconstruction and segmentation using the Potts model. Inverse Problems, 2015, 31, 025003.	1.0	88
42	Pancreatic $\hat{1}\pm$ - and $\hat{1}^2$ -cellular clocks have distinct molecular properties and impact on islet hormone secretion and gene expression. Genes and Development, 2017, 31, 383-398.	2.7	84
43	A maximum-likelihood formalism for sub-resolution axial localization of fluorescent nanoparticles. Optics Express, 2005, 13, 10503.	1.7	81
44	Steerable Pyramids and Tight Wavelet Frames in $L_2(\mathbb{B}R^d)$. IEEE Transactions on Image Processing, 2011, 20, 2705-2721.	6.0	79
45	Sparse Stochastic Processes and Discretization of Linear Inverse Problems. IEEE Transactions on Image Processing, 2013, 22, 2699-2710.	6.0	78
46	Hex-Splines: A Novel Spline Family for Hexagonal Lattices. IEEE Transactions on Image Processing, 2004, 13, 758-772.	6.0	69
47	Integrated wavelet processing and spatial statistical testing of fMRI data. NeuroImage, 2004, 23, 1472-1485.	2.1	67
48	A Unifying Parametric Framework for 2D Steerable Wavelet Transforms. SIAM Journal on Imaging Sciences, 2013, 6, 102-135.	1.3	67
49	A Fast Multilevel Algorithm for Wavelet-Regularized Image Restoration. IEEE Transactions on Image Processing, 2009, 18, 509-523.	6.0	65
50	Poisson Image Reconstruction With Hessian Schatten-Norm Regularization. IEEE Transactions on Image Processing, 2013, 22, 4314-4327.	6.0	65
51	Trigonometric Interpolation Kernel to Construct Deformable Shapes for User-Interactive Applications. IEEE Signal Processing Letters, 2015, 22, 2097-2101.	2.1	65
52	Splines Are Universal Solutions of Linear Inverse Problems with Generalized TV Regularization. SIAM Review, 2017, 59, 769-793.	4.2	64
53	Snakes on a Plane: A perfect snap for bioimage analysis. IEEE Signal Processing Magazine, 2015, 32, 41-48.	4.6	63
54	Imaging neural activity in the ventral nerve cord of behaving adult Drosophila. Nature Communications, 2018, 9, 4390.	5.8	62

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55	Construction of Hilbert Transform Pairs of Wavelet Bases and Gabor-Like Transforms. IEEE Transactions on Signal Processing, 2009, 57, 3411-3425.	3.2	56
56	Activelets: Wavelets for sparse representation of hemodynamic responses. Signal Processing, 2011, 91, 2810-2821.	2.1	56
57	One-Bit Measurements With Adaptive Thresholds. IEEE Signal Processing Letters, 2012, 19, 607-610.	2.1	56
58	Dynamic PET Reconstruction Using Wavelet Regularization With Adapted Basis Functions. IEEE Transactions on Medical Imaging, 2008, 27, 943-959.	5.4	54
59	Variational Justification of Cycle Spinning for Wavelet-Based Solutions of Inverse Problems. IEEE Signal Processing Letters, 2014, 21, 1326-1330.	2.1	54
60	Stochastic Models for Sparse and Piecewise-Smooth Signals. IEEE Transactions on Signal Processing, 2011, 59, 989-1006.	3.2	52
61	A Guided Tour of Selected Image Processing and Analysis Methods for Fluorescence and Electron Microscopy. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 6-30.	7.3	52
62	Snakes With an Ellipse-Reproducing Property. IEEE Transactions on Image Processing, 2012, 21, 1258-1271.	6.0	51
63	Time-Dependent Deep Image Prior for Dynamic MRI. IEEE Transactions on Medical Imaging, 2021, 40, 3337-3348.	5.4	51
64	On the approximation of the discrete Karhunen-Loeve transform for stationary processes. Signal Processing, 1984, 7, 231-249.	2.1	49
65	Discretization of the radon transform and of its inverse by spline convolutions. IEEE Transactions on Medical Imaging, 2002, 21, 363-376.	5.4	45
66	On the Shiftability of Dual-Tree Complex Wavelet Transforms. IEEE Transactions on Signal Processing, 2010, 58, 221-232.	3.2	45
67	Approximate Message Passing With Consistent Parameter Estimation and Applications to Sparse Learning. IEEE Transactions on Information Theory, 2014, 60, 2969-2985.	1.5	44
68	The Oviscule. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 382-393.	9.7	43
69	Self-Similarity: Part I—Splines and Operators. IEEE Transactions on Signal Processing, 2007, 55, 1352-1363.	3.2	42
70	Efficient inversion of multiple-scattering model for optical diffraction tomography. Optics Express, 2017, 25, 21786.	1.7	42
71	Ellipse-preserving Hermite interpolation and subdivision. Journal of Mathematical Analysis and Applications, 2015, 426, 211-227.	0.5	40
72	A Unified Formulation of Gaussian Versus Sparse Stochastic Processes—Part I: Continuous-Domain Theory. IEEE Transactions on Information Theory, 2014, 60, 1945-1962.	1.5	39

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73	Snakuscles. IEEE Transactions on Image Processing, 2008, 17, 585-593.	6.0	38
74	Wavelet Shrinkage With Consistent Cycle Spinning Generalizes Total Variation Denoising. IEEE Signal Processing Letters, 2012, 19, 187-190.	2.1	38
75	WSPM: Wavelet-based statistical parametric mapping. NeuroImage, 2007, 37, 1205-1217.	2.1	37
76	Self-Similarity: Part II—Optimal Estimation of Fractal Processes. IEEE Transactions on Signal Processing, 2007, 55, 1364-1378.	3.2	37
77	An improved least squares Laplacian pyramid for image compression. Signal Processing, 1992, 27, 187-203.	2.1	36
78	Fast iterative reconstruction of differential phase contrast X-ray tomograms. Optics Express, 2013, 21, 5511.	1.7	36
79	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM Via Deep Adversarial Learning. IEEE Transactions on Computational Imaging, 2021, 7, 759-774.	2.6	36
80	3D high-density localization microscopy using hybrid astigmatic/ biplane imaging and sparse image reconstruction. Biomedical Optics Express, 2014, 5, 3935.	1.5	35
81	Versatile reconstruction framework for diffraction tomography with intensity measurements and multiple scattering. Optics Express, 2018, 26, 2749.	1.7	35
82	Three-Dimensional Optical Diffraction Tomography With Lippmann-Schwinger Model. IEEE Transactions on Computational Imaging, 2020, 6, 727-738.	2.6	35
83	FlyLimbTracker: An active contour based approach for leg segment tracking in unmarked, freely behaving Drosophila. PLoS ONE, 2017, 12, e0173433.	1.1	35
84	Halton Sampling for Image Registration Based on Mutual Information. Sampling Theory in Signal and Information Processing, 2008, 7, 141-171.	0.2	34
85	Complex Wavelet Bases, Steerability, and the Marr-Like Pyramid. IEEE Transactions on Image Processing, 2008, 17, 2063-2080.	6.0	33
86	Pocket guide to solve inverse problems with GlobalBioIm. Inverse Problems, 2019, 35, 104006.	1.0	33
87	3D Steerable Wavelets in Practice. IEEE Transactions on Image Processing, 2012, 21, 4522-4533.	6.0	32
88	Complex B-splines. Applied and Computational Harmonic Analysis, 2006, 20, 261-282.	1.1	31
89	Wavelet-based multi-resolution statistics for optical imaging signals: Application to automated detection of odour activated glomeruli in the mouse olfactory bulb. NeuroImage, 2007, 34, 1020-1035.	2.1	31
90	Surfing the brain. IEEE Engineering in Medicine and Biology Magazine, 2006, 25, 65-78.	1.1	30

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91	Proximity operators for phase retrieval. Applied Optics, 2016, 55, 7412.	2.1	30
92	Representer Theorems for Sparsity-Promoting ℓ_1 Regularization. IEEE Transactions on Information Theory, 2016, 62, 5167-5180.	1.5	30
93	Robust Phase Unwrapping via Deep Image Prior for Quantitative Phase Imaging. IEEE Transactions on Image Processing, 2021, 30, 7025-7037.	6.0	30
94	Convex Generalizations of Total Variation Based on the Structure Tensor with Applications to Inverse Problems. Lecture Notes in Computer Science, 2013, , 48-60.	1.0	30
95	Spline-Based Deforming Ellipsoids for Interactive 3D Bioimage Segmentation. IEEE Transactions on Image Processing, 2013, 22, 3926-3940.	6.0	29
96	Variational Phase Imaging Using the Transport-of-Intensity Equation. IEEE Transactions on Image Processing, 2016, 25, 807-817.	6.0	28
97	Steerable Wavelet Machines (SWM): Learning Moving Frames for Texture Classification. IEEE Transactions on Image Processing, 2017, 26, 1626-1636.	6.0	28
98	A Unified Formulation of Gaussian Versus Sparse Stochastic Processes – Part II: Discrete-Domain Theory. IEEE Transactions on Information Theory, 2014, 60, 3036-3051.	1.5	27
99	Continuous-Domain Solutions of Linear Inverse Problems With Tikhonov Versus Generalized TV Regularization. IEEE Transactions on Signal Processing, 2018, 66, 4670-4684.	3.2	27
100	Multiframe sure-let denoising of timelapse fluorescence microscopy images. , 2008, , .		25
101	A Unifying Representer Theorem for Inverse Problems and Machine Learning. Foundations of Computational Mathematics, 2021, 21, 941-960.	1.5	25
102	A Box Spline Calculus for the Discretization of Computed Tomography Reconstruction Problems. IEEE Transactions on Medical Imaging, 2012, 31, 1532-1541.	5.4	24
103	Fast 3D reconstruction method for differential phase contrast X-ray CT. Optics Express, 2016, 24, 14564.	1.7	24
104	Compressed sensing for STEM tomography. Ultramicroscopy, 2017, 179, 47-56.	0.8	24
105	The Pairing of a Wavelet Basis With a Mildly Redundant Analysis via Subband Regression. IEEE Transactions on Image Processing, 2008, 17, 2040-2052.	6.0	23
106	Invariances, Laplacian-Like Wavelet Bases, and the Whitening of Fractal Processes. IEEE Transactions on Image Processing, 2009, 18, 689-702.	6.0	23
107	Optimized Kaiser-Bessel Window Functions for Computed Tomography. IEEE Transactions on Image Processing, 2015, 24, 3826-3833.	6.0	23
108	A Sampling Theory Approach for Continuous ARMA Identification. IEEE Transactions on Signal Processing, 2011, 59, 4620-4634.	3.2	22

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109	Bayesian Estimation for Continuous-Time Sparse Stochastic Processes. IEEE Transactions on Signal Processing, 2013, 61, 907-920.	3.2	22
110	Exponential Hermite splines for the analysis of biomedical images. , 2014, , .		22
111	Multiresolution Subdivision Snakes. IEEE Transactions on Image Processing, 2017, 26, 1188-1201.	6.0	22
112	Normalization procedures and factorial representations for classification of correlation-aligned images: A comparative study. Ultramicroscopy, 1989, 30, 299-310.	0.8	21
113	MMSE Estimation of Sparse L ¹ Processes. IEEE Transactions on Signal Processing, 2013, 61, 137-147.	3.2	21
114	On the Unique Identification of Continuous-Time Autoregressive Models From Sampled Data. IEEE Transactions on Signal Processing, 2014, 62, 1361-1376.	3.2	21
115	A software solution for recording circadian oscillator features in time-lapse live cell microscopy. Cell Division, 2010, 5, 17.	1.1	20
116	On the Hilbert Transform of Wavelets. IEEE Transactions on Signal Processing, 2011, 59, 1890-1894.	3.2	20
117	Hermite Snakes With Control of Tangents. IEEE Transactions on Image Processing, 2016, 25, 2803-2816.	6.0	20
118	A sampling theory for non-decaying signals. Applied and Computational Harmonic Analysis, 2017, 43, 76-93.	1.1	20
119	A non-stationary subdivision scheme for the construction of deformable models with sphere-like topology. Graphical Models, 2017, 94, 38-51.	1.1	20
120	Learning Tomography Assessed Using Mie Theory. Physical Review Applied, 2018, 9, .	1.5	20
121	Local demodulation of holograms using the Riesz transform with application to microscopy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 2118.	0.8	19
122	Bayesian Denoising: From MAP to MMSE Using Consistent Cycle Spinning. IEEE Signal Processing Letters, 2013, 20, 249-252.	2.1	19
123	Learning Activation Functions in Deep (Spline) Neural Networks. IEEE Open Journal of Signal Processing, 2020, 1, 295-309.	2.3	19
124	Deep-learning projector for optical diffraction tomography. Optics Express, 2020, 28, 3905.	1.7	19
125	Fast Space-Variant Elliptical Filtering Using Box Splines. IEEE Transactions on Image Processing, 2010, 19, 2290-2306.	6.0	18
126	Spline-based framework for interactive segmentation in biomedical imaging. Irbm, 2013, 34, 235-243.	3.7	18

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127	On the Continuity of Characteristic Functionals and Sparse Stochastic Modeling. Journal of Fourier Analysis and Applications, 2014, 20, 1179-1211.	0.5	18
128	Sparsity and Infinite Divisibility. IEEE Transactions on Information Theory, 2014, 60, 2346-2358.	1.5	18
129	Multi-CryoGAN: Reconstruction of Continuous Conformations in Cryo-EM Using Generative Adversarial Networks. Lecture Notes in Computer Science, 2020, , 429-444.	1.0	18
130	Fast Haar-wavelet denoising of multidimensional fluorescence microscopy data. , 2009, , .		17
131	B-Spline-Based Exact Discretization of Continuous-Domain Inverse Problems With Generalized TV Regularization. IEEE Transactions on Information Theory, 2019, 65, 4457-4470.	1.5	17
132	Computerized cataract detection and classification. Current Eye Research, 1990, 9, 517-524.	0.7	16
133	Shift-invariant spaces from rotation-covariant functions. Applied and Computational Harmonic Analysis, 2008, 25, 240-265.	1.1	16
134	Left-inverses of fractional Laplacian and sparse stochastic processes. Advances in Computational Mathematics, 2012, 36, 399-441.	0.8	16
135	Optimized steerable wavelets for texture analysis of lung tissue in 3-D CT: Classification of usual interstitial pneumonia. , 2015, , .		16
136	Interior Tomography Using 1D Generalized Total Variation. Part I: Mathematical Foundation. SIAM Journal on Imaging Sciences, 2015, 8, 226-247.	1.3	16
137	Compact in-line lensfree digital holographic microscope. Methods, 2018, 136, 17-23.	1.9	16
138	Deep Neural Networks With Trainable Activations and Controlled Lipschitz Constant. IEEE Transactions on Signal Processing, 2020, 68, 4688-4699.	3.2	16
139	Harmonic singular integrals and steerable wavelets in \mathbb{R}^n . http://www.w3.org/1998/Math/MathML altimg= "st1.gif" overflow="scroll">$\int_{\mathbb{R}^n} \frac{1}{ x ^{n-1}} \delta(x) dx$</td><td></td></tr>		

140 Efficient Shape Priors for Spline-Based Snakes. IEEE Transactions on Image Processing, 2015, 24, 3915-3926.

141 Exact Algorithms for L^1 -TV Regularization of Real-Valued or Circle-Valued Signals. SIAM Journal of Scientific Computing, 2016, 38, A614-A630.

142 Design of Steerable Wavelets to Detect Multifold Junctions. IEEE Transactions on Image Processing, 2016, 25, 643-657.

143 On the Besov regularity of periodic Lévy noises. Applied and Computational Harmonic Analysis, 2017, 42, 21-36.

144 GlobalBioIm: A Unifying Computational Framework for Solving Inverse Problems. , 2017, , .

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145	Reconstruction From Multiple Particles for 3D Isotropic Resolution in Fluorescence Microscopy. IEEE Transactions on Medical Imaging, 2018, 37, 1235-1246.	5.4	15
146	3-D shape estimation of DNA molecules from stereo cryo-electron micro-graphs using a projection-steerable snake. IEEE Transactions on Image Processing, 2006, 15, 214-227.	6.0	14
147	Fractional Brownian Vector Fields. Multiscale Modeling and Simulation, 2010, 8, 1645-1670.	0.6	14
148	On Regularized Reconstruction of Vector Fields. IEEE Transactions on Image Processing, 2011, 20, 3163-3178.	6.0	14
149	Isotropic inverse-problem approach for two-dimensional phase unwrapping. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2015, 32, 1092.	0.8	14
150	Interior Tomography Using 1D Generalized Total Variation. Part II: Multiscale Implementation. SIAM Journal on Imaging Sciences, 2015, 8, 2452-2486.	1.3	14
151	Quasi-Orthogonality and Quasi-Projections. Applied and Computational Harmonic Analysis, 1996, 3, 201-214.	1.1	13
152	3D steerable wavelets and monogenic analysis for bioimaging. , 2011, , .		13
153	A 2D/3D image analysis system to track fluorescently labeled structures in rod-shaped cells: application to measure spindle pole asymmetry during mitosis. Cell Division, 2013, 8, 6.	1.1	13
154	Phase retrieval by using transport-of-intensity equation and differential interference contrast microscopy. , 2014, , .		13
155	High-Quality Parallel-Ray X-Ray CT Back Projection Using Optimized Interpolation. IEEE Transactions on Image Processing, 2017, 26, 4639-4647.	6.0	13
156	Biomedical Image Reconstruction: From the Foundations to Deep Neural Networks. Foundations and Trends in Signal Processing, 2019, 13, 283-357.	12.0	13
157	Analysis of <i>S. pombe</i> SIN protein SPB-association reveals two genetically separable states of the SIN. Journal of Cell Science, 2015, 128, 741-54.	1.2	12
158	Template-Free Wavelet-Based Detection of Local Symmetries. IEEE Transactions on Image Processing, 2015, 24, 3009-3018.	6.0	12
159	Multidimensional Lévy white noise in weighted Besov spaces. Stochastic Processes and Their Applications, 2017, 127, 1599-1621.	0.4	12
160	Fast multiscale reconstruction for Cryo-EM. Journal of Structural Biology, 2018, 204, 543-554.	1.3	12
161	Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. IEEE Transactions on Signal Processing, 2019, 67, 5824-5836.	3.2	12
162	Continuous-Domain Signal Reconstruction Using L_p -Norm Regularization. IEEE Transactions on Signal Processing, 2020, 68, 4543-4554.	3.2	12

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163	Can localization microscopy benefit from approximation theory?. , 2013, , .		11
164	Improved Variational Denoising of Flow Fields with Application to Phase-Contrast MRI Data. IEEE Signal Processing Letters, 2015, 22, 762-766.	2.1	11
165	Joint Angular Refinement and Reconstruction for Single-Particle Cryo-EM. IEEE Transactions on Image Processing, 2020, 29, 6151-6163.	6.0	11
166	Convex optimization in sums of Banach spaces. Applied and Computational Harmonic Analysis, 2022, 56, 1-25.	1.1	11
167	Computerized methods for analyzing two-dimensional agarose gel electropherograms. Electrophoresis, 1991, 12, 39-46.	1.3	10
168	Polyharmonic smoothing splines and the multidimensional Wiener filtering of fractal-like signals. IEEE Transactions on Image Processing, 2006, 15, 2616-2630.	6.0	10
169	Decay Properties of Riesz Transforms and Steerable Wavelets. SIAM Journal on Imaging Sciences, 2013, 6, 984-998.	1.3	10
170	Constrained regularized reconstruction of X-ray-DPCI tomograms with weighted-norm. Optics Express, 2013, 21, 32340.	1.7	10
171	Spline based iterative phase retrieval algorithm for X-ray differential phase contrast radiography. Optics Express, 2015, 23, 10631.	1.7	10
172	Learning Convex Regularizers for Optimal Bayesian Denoising. IEEE Transactions on Signal Processing, 2018, 66, 1093-1105.	3.2	10
173	Fast Piecewise-Affine Motion Estimation Without Segmentation. IEEE Transactions on Image Processing, 2018, 27, 5612-5624.	6.0	10
174	Optimality of Operator-Like Wavelets for Representing Sparse AR(1) Processes. IEEE Transactions on Signal Processing, 2015, 63, 4827-4837.	3.2	9
175	SpotCaliper: fast wavelet-based spot detection with accurate size estimation. Bioinformatics, 2016, 32, 1278-1280.	1.8	9
176	Fast Segmentation From Blurred Data in 3D Fluorescence Microscopy. IEEE Transactions on Image Processing, 2017, 26, 4856-4870.	6.0	9
177	Computational Super-Sectioning for Single-Slice Structured-Illumination Microscopy. IEEE Transactions on Computational Imaging, 2019, 5, 240-250.	2.6	9
178	Sparsest piecewise-linear regression of one-dimensional data. Journal of Computational and Applied Mathematics, 2022, 406, 114044.	1.1	9
179	Higher-order riesz transforms and steerablewavelet frames. , 2009, , .		8
180	Wavelets: on the virtues and applications of the mathematical microscope. Journal of Microscopy, 2014, 255, 123-127.	0.8	8

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181	Wavelet Statistics of Sparse and Self-Similar Images. SIAM Journal on Imaging Sciences, 2015, 8, 2951-2975.	1.3	8
182	Maximally Localized Radial Profiles for Tight Steerable Wavelet Frames. IEEE Transactions on Image Processing, 2016, 25, 2275-2287.	6.0	8
183	Generalized Poisson Summation Formulas for Continuous Functions of Polynomial Growth. Journal of Fourier Analysis and Applications, 2017, 23, 442-461.	0.5	8
184	Compact lensless phase imager. Optics Express, 2017, 25, 4438.	1.7	8
185	Periodic Splines and Gaussian Processes for the Resolution of Linear Inverse Problems. IEEE Transactions on Signal Processing, 2018, 66, 6047-6061.	3.2	8
186	A method for assessing the fidelity of optical diffraction tomography reconstruction methods using structured illumination. Optics Communications, 2020, 454, 124486.	1.0	8
187	Multikernel Regression with Sparsity Constraint. SIAM Journal on Mathematics of Data Science, 2021, 3, 201-224.	1.0	8
188	Analytical Footprints: Compact Representation of Elementary Singularities in Wavelet Bases. IEEE Transactions on Signal Processing, 2010, 58, 6105-6118.	3.2	7
189	Fast parametric snakes for 3D microscopy. , 2012, , .		7
190	On the Linearity of Bayesian Interpolators for Non-Gaussian Continuous-Time AR(1) Processes. IEEE Transactions on Information Theory, 2013, 59, 5063-5074.	1.5	7
191	A shape-template based two-stage corpus callosum segmentation technique for sagittal plane T1-weighted brain magnetic resonance images. , 2013, , .		7
192	VOW: Variance-optimal wavelets for the steerable pyramid. , 2014, , .		7
193	An Inner-Product Calculus for Periodic Functions and Curves. IEEE Signal Processing Letters, 2016, 23, 878-882.	2.1	7
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