Michael Unser

List of Publications by Citations

Source: https://exaly.com/author-pdf/7778413/michael-unser-publications-by-citations.pdf

Version: 2024-04-19

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

 271
 10,521
 50
 96

 papers
 citations
 h-index
 g-index

 306
 13,069
 4.9
 6.81

 ext. papers
 ext. citations
 avg, IF
 L-index

#	Paper	IF	Citations
271	Deep Convolutional Neural Network for Inverse Problems in Imaging. <i>IEEE Transactions on Image Processing</i> , 2017 , 26, 4509-4522	8.7	933
270	A new SURE approach to image denoising: interscale orthonormal wavelet thresholding. <i>IEEE Transactions on Image Processing</i> , 2007 , 16, 593-606	8.7	364
269	Automatic tracking of individual fluorescence particles: application to the study of chromosome dynamics. <i>IEEE Transactions on Image Processing</i> , 2005 , 14, 1372-83	8.7	326
268	Convolutional Neural Networks for Inverse Problems in Imaging: A Review. <i>IEEE Signal Processing Magazine</i> , 2017 , 34, 85-95	9.4	320
267	Design of steerable filters for feature detection using canny-like criteria. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2004 , 26, 1007-19	13.3	280
266	Complex wavelets for extended depth-of-field: a new method for the fusion of multichannel microscopy images. <i>Microscopy Research and Technique</i> , 2004 , 65, 33-42	2.8	265
265	Quantitative evaluation of software packages for single-molecule localization microscopy. <i>Nature Methods</i> , 2015 , 12, 717-24	21.6	247
264	Image denoising in mixed Poisson-Gaussian noise. <i>IEEE Transactions on Image Processing</i> , 2011 , 20, 696-	7 8 .8⁄	241
263	Fractional Splines and Wavelets. <i>SIAM Review</i> , 2000 , 42, 43-67	7.4	240
262	DeconvolutionLab2: An open-source software for deconvolution microscopy. <i>Methods</i> , 2017 , 115, 28-41	l 4.6	239
261	Learning approach to optical tomography. <i>Optica</i> , 2015 , 2, 517	8.6	219
260	Elastic registration of biological images using vector-spline regularization. <i>IEEE Transactions on Biomedical Engineering</i> , 2005 , 52, 652-63	5	219
259	A new resolution criterion based on spectral signal-to-noise ratios. <i>Ultramicroscopy</i> , 1987 , 23, 39-51	3.1	213
258	Monte-Carlo sure: a black-box optimization of regularization parameters for general denoising algorithms. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 1540-54	8.7	194
257	Transforms and Operators for Directional Bioimage Analysis: A Survey. <i>Advances in Anatomy, Embryology and Cell Biology</i> , 2016 , 219, 69-93	1.2	190
256	CNN-Based Projected Gradient Descent for Consistent CT Image Reconstruction. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 1440-1453	11.7	181
255	Sampling procedures in function spaces and asymptotic equivalence with shannon's sampling theory. <i>Numerical Functional Analysis and Optimization</i> , 1994 , 15, 1-21	1	162

254	Hessian-based norm regularization for image restoration with biomedical applications. <i>IEEE Transactions on Image Processing</i> , 2012 , 21, 983-95	8.7	155
253	Phosphorylation does not prompt, nor prevent, the formation of alpha-synuclein toxic species in a rat model of Parkinson's disease. <i>Human Molecular Genetics</i> , 2009 , 18, 872-87	5.6	154
252	Imaging cellular ultrastructures using expansion microscopy (U-ExM). <i>Nature Methods</i> , 2019 , 16, 71-74	21.6	153
251	A fast thresholded landweber algorithm for wavelet-regularized multidimensional deconvolution. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 539-49	8.7	146
250	Fast interscale wavelet denoising of Poisson-corrupted images. Signal Processing, 2010, 90, 415-427	4.4	141
249	Multiresolution monogenic signal analysis using the Riesz-Laplace wavelet transform. <i>IEEE Transactions on Image Processing</i> , 2009 , 18, 2402-18	8.7	131
248	Efficient energies and algorithms for parametric snakes. <i>IEEE Transactions on Image Processing</i> , 2004 , 13, 1231-44	8.7	128
247	Super-resolution fight club: assessment of 2D and 3D single-molecule localization microscopy software. <i>Nature Methods</i> , 2019 , 16, 387-395	21.6	123
246	. IEEE Transactions on Signal Processing, 2007 , 55, 4415-4429	4.8	111
245	A chemostat array enables the spatio-temporal analysis of the yeast proteome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 15842-7	11.5	103
244	Hessian Schatten-norm regularization for linear inverse problems. <i>IEEE Transactions on Image Processing</i> , 2013 , 22, 1873-88	8.7	102
243	Model-based 2.5-d deconvolution for extended depth of field in brightfield microscopy. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 1144-53	8.7	102
242	Fresnelets: new multiresolution wavelet bases for digital holography. <i>IEEE Transactions on Image Processing</i> , 2003 , 12, 29-43	8.7	102
241	An Introduction to Sparse Stochastic Processes 2014 ,		95
240	Optical Tomographic Image Reconstruction Based on Beam Propagation and Sparse Regularization. <i>IEEE Transactions on Computational Imaging</i> , 2016 , 2, 59-70	4.5	93
239	FALCON: fast and unbiased reconstruction of high-density super-resolution microscopy data. <i>Scientific Reports</i> , 2014 , 4, 4577	4.9	90
238	Mathematical properties of the JPEG2000 wavelet filters. <i>IEEE Transactions on Image Processing</i> , 2003 , 12, 1080-90	8.7	89
237	Families of multiresolution and wavelet spaces with optimal properties. <i>Numerical Functional Analysis and Optimization</i> , 1993 , 14, 417-446	1	85

236	Super-resolution orientation estimation and localization of fluorescent dipoles using 3-D steerable filters. <i>Optics Express</i> , 2009 , 17, 6829-48	3.3	76
235	Structure Tensor Total Variation. SIAM Journal on Imaging Sciences, 2015, 8, 1090-1122	1.9	75
234	Wavelet steerability and the higher-order Riesz transform. <i>IEEE Transactions on Image Processing</i> , 2010 , 19, 636-52	8.7	74
233	Approximation Error for Quasi-Interpolators and (Multi-)Wavelet Expansions. <i>Applied and Computational Harmonic Analysis</i> , 1999 , 6, 219-251	3.1	74
232	Isotropic polyharmonic B-splines: scaling functions and wavelets. <i>IEEE Transactions on Image Processing</i> , 2005 , 14, 1798-813	8.7	73
231	A maximum-likelihood formalism for sub-resolution axial localization of fluorescent nanoparticles. <i>Optics Express</i> , 2005 , 13, 10503-22	3.3	71
230	Joint image reconstruction and segmentation using the Potts model. <i>Inverse Problems</i> , 2015 , 31, 02500	32.3	68
229	Stressed mycobacteria use the chaperone ClpB to sequester irreversibly oxidized proteins asymmetrically within and between cells. <i>Cell Host and Microbe</i> , 2015 , 17, 178-90	23.4	66
228	Steerable pyramids and tight wavelet frames in L2(R(d)). <i>IEEE Transactions on Image Processing</i> , 2011 , 20, 2705-21	8.7	66
227	Hex-splines: a novel spline family for hexagonal lattices. <i>IEEE Transactions on Image Processing</i> , 2004 , 13, 758-72	8.7	55
226	A fast multilevel algorithm for wavelet-regularized image restoration. <i>IEEE Transactions on Image Processing</i> , 2009 , 18, 509-23	8.7	54
225	Integrated wavelet processing and spatial statistical testing of fMRI data. NeuroImage, 2004, 23, 1472-	85 7.9	54
224	A Unifying Parametric Framework for 2D Steerable Wavelet Transforms. <i>SIAM Journal on Imaging Sciences</i> , 2013 , 6, 102-135	1.9	53
223	Pancreatic Hand Etellular clocks have distinct molecular properties and impact on islet hormone secretion and gene expression. <i>Genes and Development</i> , 2017 , 31, 383-398	12.6	52
222	Snakes on a Plane: A perfect snap for bioimage analysis. <i>IEEE Signal Processing Magazine</i> , 2015 , 32, 41-4	189.4	50
221	Poisson image reconstruction with Hessian Schatten-norm regularization. <i>IEEE Transactions on Image Processing</i> , 2013 , 22, 4314-27	8.7	50
220	Sparse stochastic processes and discretization of linear inverse problems. <i>IEEE Transactions on Image Processing</i> , 2013 , 22, 2699-710	8.7	46
219	One-Bit Measurements With Adaptive Thresholds. <i>IEEE Signal Processing Letters</i> , 2012 , 19, 607-610	3.2	46

(2007-2008)

218	Dynamic PET reconstruction using wavelet regularization with adapted basis functions. <i>IEEE Transactions on Medical Imaging</i> , 2008 , 27, 943-59	11.7	46
217	Snakes with an ellipse-reproducing property. <i>IEEE Transactions on Image Processing</i> , 2012 , 21, 1258-71	8.7	43
216	Splines Are Universal Solutions of Linear Inverse Problems with Generalized TV Regularization. <i>SIAM Review</i> , 2017 , 59, 769-793	7.4	43
215	A Guided Tour of Selected Image Processing and Analysis Methods for Fluorescence and Electron Microscopy. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2016 , 10, 6-30	7.5	42
214	Construction of Hilbert Transform Pairs of Wavelet Bases and Gabor-Like Transforms. <i>IEEE Transactions on Signal Processing</i> , 2009 , 57, 3411-3425	4.8	42
213	. IEEE Transactions on Signal Processing, 2011 , 59, 989-1006	4.8	39
212	Activelets: Wavelets for sparse representation of hemodynamic responses. <i>Signal Processing</i> , 2011 , 91, 2810-2821	4.4	38
211	The ovuscule. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2011 , 33, 382-93	13.3	37
210	Imaging neural activity in the ventral nerve cord of behaving adult Drosophila. <i>Nature Communications</i> , 2018 , 9, 4390	17.4	37
209	Discretization of the radon transform and of its inverse by spline convolutions. <i>IEEE Transactions on Medical Imaging</i> , 2002 , 21, 363-76	11.7	36
208	On the approximation of the discrete Karhunen-Loeve transform for stationary processes. <i>Signal Processing</i> , 1984 , 7, 231-249	4.4	36
207	Trigonometric Interpolation Kernel to Construct Deformable Shapes for User-Interactive Applications. <i>IEEE Signal Processing Letters</i> , 2015 , 22, 2097-2101	3.2	35
206	. IEEE Transactions on Information Theory, 2014 , 60, 2969-2985	2.8	35
205	. IEEE Transactions on Signal Processing, 2010 , 58, 221-232	4.8	34
204	Snakuscules. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 585-93	8.7	31
203	WSPM: wavelet-based statistical parametric mapping. <i>NeuroImage</i> , 2007 , 37, 1205-17	7.9	31
202	Ellipse-preserving Hermite interpolation and subdivision. <i>Journal of Mathematical Analysis and Applications</i> , 2015 , 426, 211-227	1.1	30
201	. IEEE Transactions on Signal Processing, 2007 , 55, 1352-1363	4.8	30

200	Wavelet-based multi-resolution statistics for optical imaging signals: Application to automated detection of odour activated glomeruli in the mouse olfactory bulb. <i>NeuroImage</i> , 2007 , 34, 1020-35	7.9	30
199	An improved least squares Laplacian pyramid for image compression. Signal Processing, 1992, 27, 187-	204.4	30
198	Versatile reconstruction framework for diffraction tomography with intensity measurements and multiple scattering. <i>Optics Express</i> , 2018 , 26, 2749-2763	3.3	29
197	A Unified Formulation of Gaussian Versus Sparse Stochastic Processes P art I: Continuous-Domain Theory. <i>IEEE Transactions on Information Theory</i> , 2014 , 60, 1945-1962	2.8	29
196	Variational Justification of Cycle Spinning for Wavelet-Based Solutions of Inverse Problems. <i>IEEE Signal Processing Letters</i> , 2014 , 21, 1326-1330	3.2	29
195	Efficient inversion of multiple-scattering model for optical diffraction tomography. <i>Optics Express</i> , 2017 , 25, 21786-21800	3.3	29
194	3D high-density localization microscopy using hybrid astigmatic/ biplane imaging and sparse image reconstruction. <i>Biomedical Optics Express</i> , 2014 , 5, 3935-48	3.5	29
193	Wavelet Shrinkage With Consistent Cycle Spinning Generalizes Total Variation Denoising. <i>IEEE Signal Processing Letters</i> , 2012 , 19, 187-190	3.2	29
192	Fast iterative reconstruction of differential phase contrast X-ray tomograms. <i>Optics Express</i> , 2013 , 21, 5511-28	3.3	28
191	Complex wavelet bases, steerability, and the marr-like pyramid. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 2063-80	8.7	28
190	FlyLimbTracker: An active contour based approach for leg segment tracking in unmarked, freely behaving Drosophila. <i>PLoS ONE</i> , 2017 , 12, e0173433	3.7	28
189	3D steerable wavelets in practice. <i>IEEE Transactions on Image Processing</i> , 2012 , 21, 4522-33	8.7	26
188	. IEEE Transactions on Signal Processing, 2007 , 55, 1364-1378	4.8	26
187	Halton Sampling for Image Registration Based on Mutual Information. <i>Sampling Theory in Signal and Information Processing</i> , 2008 , 7, 141-171	0.5	26
186	Surfing the brain. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2006 , 25, 65-78		25
185	Spline-based deforming ellipsoids for interactive 3D bioimage segmentation. <i>IEEE Transactions on Image Processing</i> , 2013 , 22, 3926-40	8.7	24
184	Convex Generalizations of Total Variation Based on the Structure Tensor with Applications to Inverse Problems. <i>Lecture Notes in Computer Science</i> , 2013 , 48-60	0.9	24
183	Representer Theorems for Sparsity-Promoting \$ell _{1}\$ Regularization. <i>IEEE Transactions on Information Theory</i> , 2016 , 62, 5167-5180	2.8	23

182	Complex B-splines. Applied and Computational Harmonic Analysis, 2006, 20, 261-282	3.1	23
181	Three-Dimensional Optical Diffraction Tomography With Lippmann-Schwinger Model. <i>IEEE Transactions on Computational Imaging</i> , 2020 , 6, 727-738	4.5	22
180	Continuous-Domain Solutions of Linear Inverse Problems With Tikhonov Versus Generalized TV Regularization. <i>IEEE Transactions on Signal Processing</i> , 2018 , 66, 4670-4684	4.8	22
179	Steerable Wavelet Machines (SWM): Learning Moving Frames for Texture Classification. <i>IEEE Transactions on Image Processing</i> , 2017 , 26, 1626-1636	8.7	21
178	Pocket guide to solve inverse problems with GlobalBiolm. <i>Inverse Problems</i> , 2019 , 35, 104006	2.3	21
177	. IEEE Transactions on Information Theory, 2014 , 60, 3036-3051	2.8	20
176	Multiframe sure-let denoising of timelapse fluorescence microscopy images 2008,		20
175	A software solution for recording circadian oscillator features in time-lapse live cell microscopy. <i>Cell Division</i> , 2010 , 5, 17	2.8	19
174	The pairing of a wavelet basis with a mildly redundant analysis via subband regression. <i>IEEE Transactions on Image Processing</i> , 2008 , 17, 2040-52	8.7	19
173	Multiresolution Subdivision Snakes. <i>IEEE Transactions on Image Processing</i> , 2017 , 26, 1188-1201	8.7	18
172	. IEEE Transactions on Signal Processing, 2014 , 62, 1361-1376	4.8	17
171	On the Hilbert Transform of Wavelets. <i>IEEE Transactions on Signal Processing</i> , 2011 , 59, 1890-1894	4.8	17
170	Variational Phase Imaging Using the Transport-of-Intensity Equation. <i>IEEE Transactions on Image Processing</i> , 2016 , 25, 807-17	8.7	16
169	Exponential Hermite splines for the analysis of biomedical images 2014,		16
168	Bayesian Denoising: From MAP to MMSE Using Consistent Cycle Spinning. <i>IEEE Signal Processing Letters</i> , 2013 , 20, 249-252	3.2	16
167	Normalization procedures and factorial representations for classification of correlation-aligned images: a comparative study. <i>Ultramicroscopy</i> , 1989 , 30, 299-310	3.1	16
166	Computerized cataract detection and classification. Current Eye Research, 1990, 9, 517-24	2.9	16
165	Fast 3D reconstruction method for differential phase contrast X-ray CT. <i>Optics Express</i> , 2016 , 24, 14564	1-8:13	16

164	Hermite Snakes With Control of Tangents. <i>IEEE Transactions on Image Processing</i> , 2016 , 25, 2803-2816	8.7	16
163	Proximity operators for phase retrieval. <i>Applied Optics</i> , 2016 , 55, 7412-21	0.2	16
162	A sampling theory for non-decaying signals. Applied and Computational Harmonic Analysis, 2017, 43, 76-	93.1	15
161	On the Continuity of Characteristic Functionals and Sparse Stochastic Modeling. <i>Journal of Fourier Analysis and Applications</i> , 2014 , 20, 1179-1211	1.1	15
160	A box spline calculus for the discretization of computed tomography reconstruction problems. <i>IEEE Transactions on Medical Imaging</i> , 2012 , 31, 1532-41	11.7	15
159	. IEEE Transactions on Signal Processing, 2013 , 61, 137-147	4.8	15
158	. IEEE Transactions on Signal Processing, 2011 , 59, 4620-4634	4.8	15
157	Invariances, Laplacian-like wavelet bases, and the whitening of fractal processes. <i>IEEE Transactions on Image Processing</i> , 2009 , 18, 689-702	8.7	15
156	Compressed sensing for STEM tomography. <i>Ultramicroscopy</i> , 2017 , 179, 47-56	3.1	14
155	Efficient Shape Priors for Spline-Based Snakes. <i>IEEE Transactions on Image Processing</i> , 2015 , 24, 3915-26	5 8. ₇	14
154	Optimized Kaiser-Bessel Window Functions for Computed Tomography. <i>IEEE Transactions on Image Processing</i> , 2015 , 24, 3826-33	8.7	14
153	Harmonic singular integrals and steerable wavelets inL2(Rd). <i>Applied and Computational Harmonic Analysis</i> , 2014 , 36, 183-197	3.1	14
152	Spline-based framework for interactive segmentation in biomedical imaging. <i>Irbm</i> , 2013 , 34, 235-243	4.8	14
151	Optimized steerable wavelets for texture analysis of lung tissue in 3-D CT: Classification of usual interstitial pneumonia 2015 ,		14
150	Fast space-variant elliptical filtering using box splines. <i>IEEE Transactions on Image Processing</i> , 2010 , 19, 2290-306	8.7	14
149	Local demodulation of holograms using the Riesz transform with application to microscopy. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012 , 29, 2118-29	1.8	14
148	Exact Algorithms for \$L^1\$-TV Regularization of Real-Valued or Circle-Valued Signals. <i>SIAM Journal of Scientific Computing</i> , 2016 , 38, A614-A630	2.6	14
147	B-Spline-Based Exact Discretization of Continuous-Domain Inverse Problems With Generalized TV Regularization. <i>IEEE Transactions on Information Theory</i> , 2019 , 65, 4457-4470	2.8	13

146	GlobalBioIm: A Unifying Computational Framework for Solving Inverse Problems 2017,		13
145	A Unifying Representer Theorem for Inverse Problems and Machine Learning. <i>Foundations of Computational Mathematics</i> , 2021 , 21, 941-960	2.7	13
144	A 2D/3D image analysis system to track fluorescently labeled structures in rod-shaped cells: application to measure spindle pole asymmetry during mitosis. <i>Cell Division</i> , 2013 , 8, 6	2.8	12
143	Left-inverses of fractional Laplacian and sparse stochastic processes. <i>Advances in Computational Mathematics</i> , 2012 , 36, 399-441	1.6	12
142	Bayesian Estimation for Continuous-Time Sparse Stochastic Processes. <i>IEEE Transactions on Signal Processing</i> , 2013 , 61, 907-920	4.8	12
141	Fractional Brownian Vector Fields. Multiscale Modeling and Simulation, 2010, 8, 1645-1670	1.8	12
140	Shift-invariant spaces from rotation-covariant functions. <i>Applied and Computational Harmonic Analysis</i> , 2008 , 25, 240-265	3.1	12
139	Quasi-Orthogonality and Quasi-Projections. Applied and Computational Harmonic Analysis, 1996, 3, 201-	23.4	12
138	On the Besov regularity of periodic L\(\mathbb{Q}\)y noises. <i>Applied and Computational Harmonic Analysis</i> , 2017 , 42, 21-36	3.1	11
137	A non-stationary subdivision scheme for the construction of deformable models with sphere-like topology. <i>Graphical Models</i> , 2017 , 94, 38-51	0.9	11
136	Learning Tomography Assessed Using Mie Theory. Physical Review Applied, 2018, 9,	4.3	11
135	Design of Steerable Wavelets to Detect Multifold Junctions. <i>IEEE Transactions on Image Processing</i> , 2016 , 25, 643-57	8.7	11
134	. IEEE Transactions on Information Theory, 2014 , 60, 2346-2358	2.8	11
133	On regularized reconstruction of vector fields. <i>IEEE Transactions on Image Processing</i> , 2011 , 20, 3163-78	8.7	11
132	Fast Haar-wavelet denoising of multidimensional fluorescence microscopy data 2009,		11
131	3D steerable wavelets and monogenic analysis for bioimaging 2011 ,		11
130	Deep-learning projector for optical diffraction tomography. Optics Express, 2020, 28, 3905-3921	3.3	11
129	Time-Dependent Deep Image Prior for Dynamic MRI. <i>IEEE Transactions on Medical Imaging</i> , 2021 , 40, 3337-3348	11.7	11

128	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM Via Deep Adversarial Learning. <i>IEEE Transactions on Computational Imaging</i> , 2021 , 7, 759-774	4.5	11
127	Interior Tomography Using 1D Generalized Total Variation. Part I: Mathematical Foundation. <i>SIAM Journal on Imaging Sciences</i> , 2015 , 8, 226-247	1.9	10
126	Improved Variational Denoising of Flow Fields with Application to Phase-Contrast MRI Data. <i>IEEE Signal Processing Letters</i> , 2015 , 22, 762-766	3.2	10
125	Multidimensional Lty white noise in weighted Besov spaces. <i>Stochastic Processes and Their Applications</i> , 2017 , 127, 1599-1621	1.1	10
124	Deep Neural Networks With Trainable Activations and Controlled Lipschitz Constant. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 4688-4699	4.8	10
123	Compact in-line lensfree digital holographic microscope. <i>Methods</i> , 2018 , 136, 17-23	4.6	10
122	Fast Segmentation From Blurred Data in 3D Fluorescence Microscopy. <i>IEEE Transactions on Image Processing</i> , 2017 , 26, 4856-4870	8.7	9
121	Spline based iterative phase retrieval algorithm for X-ray differential phase contrast radiography. <i>Optics Express</i> , 2015 , 23, 10631-42	3.3	9
120	Learning Convex Regularizers for Optimal Bayesian Denoising. <i>IEEE Transactions on Signal Processing</i> , 2018 , 66, 1093-1105	4.8	9
119	Phase retrieval by using transport-of-intensity equation and differential interference contrast microscopy 2014 ,		9
118	Decay Properties of Riesz Transforms and Steerable Wavelets. <i>SIAM Journal on Imaging Sciences</i> , 2013 , 6, 984-998	1.9	9
117	3-D shape estimation of DNA molecules from stereo cryo-electron micro-graphs using a projection-steerable snake. <i>IEEE Transactions on Image Processing</i> , 2006 , 15, 214-27	8.7	9
116	Polyharmonic smoothing splines and the multidimensional Wiener filtering of fractal-like signals. <i>IEEE Transactions on Image Processing</i> , 2006 , 15, 2616-30	8.7	9
115	Computerized methods for analyzing two-dimensional agarose gel electropherograms. <i>Electrophoresis</i> , 1991 , 12, 39-46	3.6	9
114	Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. <i>IEEE Transactions on Signal Processing</i> , 2019 , 67, 5824-5836	4.8	9
113	Template-free wavelet-based detection of local symmetries. <i>IEEE Transactions on Image Processing</i> , 2015 , 24, 3009-18	8.7	8
112	Wavelet Statistics of Sparse and Self-Similar Images. SIAM Journal on Imaging Sciences, 2015, 8, 2951-2	975 9	8
111	Analysis of S. pombe SIN protein association to the SPB reveals two genetically separable states of the SIN. <i>Journal of Cell Science</i> , 2015 , 128, 741-54	5.3	8

(2016-2013)

110	Constrained regularized reconstruction of X-ray-DPCI tomograms with weighted-norm. <i>Optics Express</i> , 2013 , 21, 32340-8	3.3	8	
109	Multi-CryoGAN: Reconstruction of Continuous Conformations in Cryo-EM Using Generative Adversarial Networks. <i>Lecture Notes in Computer Science</i> , 2020 , 429-444	0.9	8	
108	High-Quality Parallel-Ray X-Ray CT Back Projection Using Optimized Interpolation. <i>IEEE Transactions on Image Processing</i> , 2017 , 26, 4639-4647	8.7	7	
107	. IEEE Transactions on Signal Processing, 2015 , 63, 4827-4837	4.8	7	
106	Isotropic inverse-problem approach for two-dimensional phase unwrapping. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2015 , 32, 1092-100	1.8	7	
105	Interior Tomography Using 1D Generalized Total Variation. Part II: Multiscale Implementation. <i>SIAM Journal on Imaging Sciences</i> , 2015 , 8, 2452-2486	1.9	7	
104	Reconstruction From Multiple Particles for 3D Isotropic Resolution in Fluorescence Microscopy. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 1235-1246	11.7	7	
103	Compact lensless phase imager. <i>Optics Express</i> , 2017 , 25, 4438-4445	3.3	7	
102	VOW: Variance-optimal wavelets for the steerable pyramid 2014 ,		7	
101	Learning Activation Functions in Deep (Spline) Neural Networks. <i>IEEE Open Journal of Signal Processing</i> , 2020 , 1, 295-309	1.2	7	
100	. IEEE Transactions on Signal Processing, 2018 , 66, 6047-6061	4.8	7	
99	Robust Phase Unwrapping via Deep Image Prior for Quantitative Phase Imaging. <i>IEEE Transactions on Image Processing</i> , 2021 , 30, 7025-7037	8.7	7	
98	Fast Piecewise-Affine Motion Estimation Without Segmentation. <i>IEEE Transactions on Image Processing</i> , 2018 ,	8.7	6	
97	Wavelets: on the virtues and applications of the mathematical microscope. <i>Journal of Microscopy</i> , 2014 , 255, 123-7	1.9	6	
96	Divergence-Free Wavelet Frames. IEEE Signal Processing Letters, 2015, 22, 1142-1146	3.2	6	
95	Unsupervised texture segmentation using monogenic curvelets and the Potts model 2014,		6	
94	Can localization microscopy benefit from approximation theory? 2013,		6	
93	Maximally Localized Radial Profiles for Tight Steerable Wavelet Frames. <i>IEEE Transactions on Image Processing</i> , 2016 , 25, 2275-87	8.7	6	

92	Joint Angular Refinement and Reconstruction for Single-Particle Cryo-EM. <i>IEEE Transactions on Image Processing</i> , 2020 ,	8.7	6
91	Fast multiscale reconstruction for Cryo-EM. <i>Journal of Structural Biology</i> , 2018 , 204, 543-554	3.4	6
90	Scaling Limits of Solutions of Linear Stochastic Differential Equations Driven by L\(\mathbb{U}\)y White Noises. Journal of Theoretical Probability, 2019 , 32, 1166-1189	0.5	5
89	. IEEE Transactions on Information Theory, 2013 , 59, 5063-5074	2.8	5
88	A shape-template based two-stage corpus callosum segmentation technique for sagittal plane T1-weighted brain magnetic resonance images 2013 ,		5
87	Generalized Poisson Summation Formulas for Continuous Functions of Polynomial Growth. <i>Journal of Fourier Analysis and Applications</i> , 2017 , 23, 442-461	1.1	5
86	Optimal Isotropic Wavelets for Localized Tight Frame Representations. <i>IEEE Signal Processing Letters</i> , 2015 , 22, 1918-1921	3.2	5
85	Spatio-temporal regularization of flow-fields 2013,		5
84	2009,		5
83	Fast parametric snakes for 3D microscopy 2012 ,		5
83	Fast parametric snakes for 3D microscopy 2012 , CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning		5
		4.8	
82	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning Continuous-Domain Signal Reconstruction Using \$L_{p}\$-Norm Regularization. <i>IEEE Transactions on</i>	4.8	5
82	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning Continuous-Domain Signal Reconstruction Using \$L_{p}\$-Norm Regularization. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 4543-4554 SpotCaliper: fast wavelet-based spot detection with accurate size estimation. <i>Bioinformatics</i> , 2016 ,		5
82 81 80	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning Continuous-Domain Signal Reconstruction Using \$L_{p}\$-Norm Regularization. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 4543-4554 SpotCaliper: fast wavelet-based spot detection with accurate size estimation. <i>Bioinformatics</i> , 2016 , 32, 1278-80 Biomedical Image Reconstruction: From the Foundations to Deep Neural Networks. <i>Foundations</i>	7.2	5 5 5
82 81 80	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning Continuous-Domain Signal Reconstruction Using \$L_{p}\$-Norm Regularization. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 4543-4554 SpotCaliper: fast wavelet-based spot detection with accurate size estimation. <i>Bioinformatics</i> , 2016 , 32, 1278-80 Biomedical Image Reconstruction: From the Foundations to Deep Neural Networks. <i>Foundations and Trends in Signal Processing</i> , 2019 , 13, 283-357 Gaussian and sparse processes are limits of generalized Poisson processes. <i>Applied and</i>	7.2	5555
82 81 80 79 78	CryoGAN: A New Reconstruction Paradigm for Single-Particle Cryo-EM via Deep Adversarial Learning Continuous-Domain Signal Reconstruction Using \$L_{p}\$-Norm Regularization. IEEE Transactions on Signal Processing, 2020, 68, 4543-4554 SpotCaliper: fast wavelet-based spot detection with accurate size estimation. Bioinformatics, 2016, 32, 1278-80 Biomedical Image Reconstruction: From the Foundations to Deep Neural Networks. Foundations and Trends in Signal Processing, 2019, 13, 283-357 Gaussian and sparse processes are limits of generalized Poisson processes. Applied and Computational Harmonic Analysis, 2020, 48, 1045-1065 The (n)-term Approximation of Periodic Generalized Lūy Processes. Journal of Theoretical	7.2 2.7 3.1	55555

Steerable PCA for Rotation-Invariant Image Recognition. SIAM Journal on Imaging Sciences, 2015, 8, 1857£1,873 4 74 Joint absorption and phase retrieval in grating-based x-ray radiography. Optics Express, 2016, 24, 7253-65.3 73 Atlas-free brain segmentation in 3D proton-density-like MRI images 2014, 72 4 Fast live cell imaging at nanometer scale using annihilating filter-based low-rank Hankel matrix approach 2015, Autocalibrated signal reconstruction from linear measurements using adaptive GAMP 2013, 70 4 . IEEE Transactions on Signal Processing, 2010, 58, 6105-6118 4.8 69 4 68 Super-resolution fight club: A broad assessment of 2D & 3D single-molecule localization microscopy software 4 Landmark-Based Shape Encoding and Sparse-Dictionary Learning in the Continuous Domain. IEEE 8.7 67 Transactions on Image Processing, 2018, 27, 365-378 3D BBPConvNet to reconstruct parallel MRI 2018, 66 3 Grid-Free Localization Algorithm Using Low-rank Hankel Matrix for Super-Resolution Microscopy. 8.7 65 IEEE Transactions on Image Processing, 2018, Approximation Properties of Sobolev Splines and the Construction of Compactly Supported 64 1.7 3 Equivalents. SIAM Journal on Mathematical Analysis, 2014, 46, 1843-1858 Smooth shapes with spherical topology: Beyond traditional modeling, efficient deformation, and 63 3.9 interaction. Computational Visual Media, 2017, 3, 199-215 62 New parametric 3D snake for medical segmentation of structures with cylindrical topology 2015, 3 Digital phase reconstruction via iterative solutions of transport-of-intensity equation 2014, 61 Is Uniqueness Lost for Under-Sampled Continuous-Time Auto-Regressive Processes?. IEEE Signal 60 3.2 3 Processing Letters, 2012, 19, 183-186 Reconstruction of biomedical images and sparse stochastic modeling 2012, 59 3 . IEEE Journal on Selected Topics in Signal Processing, 2008, 2, 897-906 58 7.5 3 A constrained method for lensless coherent imaging of thin samples.. Applied Optics, 2022, 61, F34-F46 1.7 57

56	Adaptive Regularization for Three-Dimensional Optical Diffraction Tomography 2020,		3
55	An Inner-Product Calculus for Periodic Functions and Curves. <i>IEEE Signal Processing Letters</i> , 2016 , 23, 878-882	3.2	3
54	Support and approximation properties of Hermite splines. <i>Journal of Computational and Applied Mathematics</i> , 2020 , 368, 112503	2.4	3
53	Multikernel Regression with Sparsity Constraint. <i>SIAM Journal on Mathematics of Data Science</i> , 2021 , 3, 201-224	3.1	3
52	Rotation Invariance and Directional Sensitivity: Spherical Harmonics versus Radiomics Features. <i>Lecture Notes in Computer Science</i> , 2018 , 107-115	0.9	3
51	Convex optimization in sums of Banach spaces. <i>Applied and Computational Harmonic Analysis</i> , 2022 , 56, 1-25	3.1	3
50	Statistical optimality of Hermite splines 2015 ,		2
49	Dictionary Learning for Two-Dimensional Kendall Shapes. <i>SIAM Journal on Imaging Sciences</i> , 2020 , 13, 141-175	1.9	2
48	Reconstruction From Multiple Poses in Fluorescence Imaging: Proof of Concept. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2016 , 10, 61-70	7.5	2
47	Adaptive image resizing based on continuous-domain stochastic modeling. <i>IEEE Transactions on Image Processing</i> , 2014 , 23, 413-23	8.7	2
46	Operator-Like Wavelet Bases of $(L_{2}(mathbb{R}^{d}))$. Journal of Fourier Analysis and Applications, 2013 , 19, 1294-1322	1.1	2
45	3D Poisson microscopy deconvolution with Hessian Schatten-norm regularization 2013,		2
44	Tip-seeking active contours for bioimage segmentation 2015,		2
43	Similarity-based shape priors for 2D spline snakes 2015 ,		2
42	High-performance 3D deconvolution of fluorescence micrographs 2014,		2
41	Detection of symmetric junctions in biological images using 2-D steerable wavelet transforms 2013 ,		2
40	Sparsest piecewise-linear regression of one-dimensional data. <i>Journal of Computational and Applied Mathematics</i> , 2022 , 406, 114044	2.4	2
39	Generating Sparse Stochastic Processes Using Matched Splines. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 4397-4406	4.8	2

38	Angular Accuracy of Steerable Feature Detectors. SIAM Journal on Imaging Sciences, 2019, 12, 344-371	1.9	2
37	Inner-Loop-Free Admm For Cryo-Em 2019 ,		2
36	Computational Super-Sectioning for Single-Slice Structured-Illumination Microscopy. <i>IEEE Transactions on Computational Imaging</i> , 2019 , 5, 240-250	4.5	2
35	. IEEE Transactions on Information Theory, 2017 , 1-1	2.8	1
34	Closed-Form Expression Of The Fourier Ring-Correlation For Single-Molecule Localization Microscopy 2019 ,		1
33	Solving Continuous-domain Problems Exactly with Multiresolution B-splines 2019,		1
32	A universal formula for generalized cardinal B-splines. <i>Applied and Computational Harmonic Analysis</i> , 2018 , 45, 341-358	3.1	1
31	Sparse stochastic processes150-190		1
30	Benefits of consistency in image denoising with steerable wavelets 2013,		1
29	Continuous localization using sparsity constraints for high-density super-resolution microscopy 2013 ,		1
28	Optical Tomography based on a nonlinear model that handles multiple scattering 2017,		1
27	General surface energy for spinal cord and aorta segmentation 2017,		1
26	Interpretation of continuous-time autoregressive processes as random exponential splines 2015,		1
25	Generalized poisson summation formula for tempered distributions 2015,		1
24	Fast detection and refined scale estimation using complex isotropic wavelets 2015,		1
23	Statistics of wavelet coefficients for sparse self-similar images 2014,		1
22	Design of steerable filters for the detection of micro-particles 2013,		1
21	. IEEE Open Journal of Signal Processing, 2021 , 1-1	1.2	1

20	Imaging neural activity in the ventral nerve cord of behaving adult Drosophila		1
19	FlyLimbTracker: an active contour based approach for leg segment tracking in unmarked, freely behaving Drosophila		1
18	Deep Learning Enables Individual Xenograft Cell Classification in Histological Images by Analysis of Contextual Features. <i>Journal of Mammary Gland Biology and Neoplasia</i> , 2021 , 26, 101-112	2.4	1
17	Beyond Wiener Lemma: Nuclear Convolution Algebras and the Inversion of Digital Filters. <i>Journal of Fourier Analysis and Applications</i> , 2019 , 25, 2037-2063	1.1	1
16	Approximation of Non-decaying Signals from Shift-Invariant Subspaces. <i>Journal of Fourier Analysis and Applications</i> , 2019 , 25, 633-660	1.1	1
15	Principled Design and Implementation of Steerable Detectors. <i>IEEE Transactions on Image Processing</i> , 2021 , 30, 4465-4478	8.7	1
14	DiversePathsJ: diverse shortest paths for bioimage analysis. <i>Bioinformatics</i> , 2018 , 34, 538-540	7.2	1
13	Region of interest X-ray computed tomography via corrected back projection 2018,		1
12	Introduction to the Issue on Advanced Signal Processing in Microscopy and Cell Imaging. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2016 , 10, 3-5	7.5	0
11	A Note on BIBO Stability. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 5904-5913	4.8	O
10	Active Subdivision Surfaces for the Semiautomatic Segmentation of Biomedical Volumes. <i>IEEE Transactions on Image Processing</i> , 2021 , 30, 5739-5753	8.7	0
9	Optical diffraction tomography from single-molecule localization microscopy. <i>Optics Communications</i> , 2021 , 499, 127290	2	O
8	Continuous-Domain Formulation of Inverse Problems for Composite Sparse-Plus-Smooth Signals. <i>IEEE Open Journal of Signal Processing</i> , 2021 , 1-1	1.2	0
7	Jump-penalized least absolute values estimation of scalar or circle-valued signals. <i>Information and Inference</i> , 2017 , iaw022	2.4	
6	Shape Projectors for Landmark-Based Spline Curves. <i>IEEE Signal Processing Letters</i> , 2017 , 24, 1517-1527	1 3.2	
5	Diverse M-Best Solutions by Dynamic Programming. Lecture Notes in Computer Science, 2017, 255-267	0.9	
4	Duality Mapping for Schatten Matrix Norms. Numerical Functional Analysis and Optimization,1-17	1	
3	On the Continuous Steering of the Scale of Tight Wavelet Frames. <i>SIAM Journal on Imaging Sciences</i> , 2016 , 9, 1042-1062	1.9	

LIST OF PUBLICATIONS

_	Shortest-support multi-spline bases for generalized sampling. Journal of Computational and Applied	2.4
2	Mathematics. 2021 , 395, 113610	2.4

Sparsest Univariate Learning Models Under Lipschitz Constraint. *IEEE Open Journal of Signal Processing*, **2022**, 3, 140-154

1.2