Laurent Condat

List of Publications by Year in descending order

76 papers	2,190 citations	623574 14 h-index	434063 31 g-index
76 all docs	76 docs citations	76 times ranked	1765 citing authors

#	Article	IF	Citations
1	A Primalâ€“Dual Splitting Method for Convex Optimization Involving Lipschitzian, Proximable and Linear Composite Terms. Journal of Optimization Theory and Applications, 2013, 158, 460-479.	0.8	628
2	A Direct Algorithm for 1-D Total Variation Denoising. IEEE Signal Processing Letters, 2013, 20, 1054-1057.	2.1	233
3	Indusion: Fusion of Multispectral and Panchromatic Images Using the Induction Scaling Technique. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 98-102.	1.4	189
4	Fast projection onto the simplex and the $$pmb {l}_mathbf {1}$$ l 1 ball. Mathematical Programming, 2016, 158, 575-585.	1.6	187
5	A New Pansharpening Method Based on Spatial and Spectral Sparsity Priors. IEEE Transactions on Image Processing, 2014, 23, 4160-4174.	6.0	140
6	Discrete Total Variation: New Definition and Minimization. SIAM Journal on Imaging Sciences, 2017, 10, 1258-1290.	1.3	92
7	A Generic Proximal Algorithm for Convex Optimizationâ€”Application to Total Variation Minimization. IEEE Signal Processing Letters, 2014, 21, 985-989.	2.1	80
8	Cadzow Denoising Upgraded: A New Projection Method for the Recovery of Dirac Pulses from Noisy Linear Measurements. Sampling Theory in Signal and Information Processing, 2015, 14, 17-47.	0.2	53
9	Fusion of hyperspectral and panchromatic images using multiresolution analysis and nonlinear PCA band reduction. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.0	52
10	A forward-backward view of some primal-dual optimization methods in image recovery. , 2014, , .		48
11	Joint demosaicking and denoising by total variation minimization. , 2012, , .		40
12	A New Color Filter Array With Optimal Properties for Noiseless and Noisy Color Image Acquisition. IEEE Transactions on Image Processing, 2011, 20, 2200-2210.	6.0	34
13	A generic variational approach for demosaicking from an arbitrary color filter array. , 2009, , .		33
14	Quasi-Interpolating Spline Models for Hexagonally-Sampled Data. IEEE Transactions on Image Processing, 2007, 16, 1195-1206.	6.0	27
15	A simple, fast and efficient approach to denoisaicking: Joint demosaicking and denoising. , 2010, , .		23
16	Color filter array design using random patterns with blue noise chromatic spectra. Image and Vision Computing, 2010, 28, 1196-1202.	2.7	19
17	Beyond interpolation: optimal reconstruction by quasi-interpolation. , 2005, , .		18
18	Three-directional box-splines: characterization and efficient evaluation. IEEE Signal Processing Letters, 2006, 13, 417-420.	2.1	16

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19	Reversible, Fast, and High-Quality Grid Conversions. IEEE Transactions on Image Processing, 2008, 17, 679-693.	6.0	16
20	Proximity Operator of a Sum of Functions; Application to Depth Map Estimation. IEEE Signal Processing Letters, 2017, 24, 1827-1831.	2.1	15
21	Hexagonal versus orthogonal lattices: a new comparison using approximation theory. , 2005, , .		13
22	Semi-Linearized Proximal Alternating Minimization for a Discrete Mumfordâ€“Shah Model. IEEE Transactions on Image Processing, 2020, 29, 2176-2189.	6.0	13
23	A new random color filter array with good spectral properties. , 2009, , .		12
24	2D Prony-Huang Transform: A New Tool for 2D Spectral Analysis. IEEE Transactions on Image Processing, 2014, 23, 5233-5248.	6.0	12
25	Nonsmooth convex optimization for structured illumination microscopy image reconstruction. Inverse Problems, 2018, 34, 095004.	1.0	12
26	Gradient Estimation Revitalized. IEEE Transactions on Visualization and Computer Graphics, 2010, 16, 1495-1504.	2.9	11
27	A new color filter array with optimal sensing properties. , 2009, , .		10
28	Fusion of Hyperspectral and panchromatic images using multiresolution analysis and nonlinear PCA band reduction. , 2011, , .		9
29	Hyperspectral image inpainting based on collaborative total variation. , 2017, , .		9
30	Pansharpening using total variation regularization. , 2012, , .		7
31	Non-smooth convex optimization for an efficient reconstruction in structured illumination microscopy. , 2014, , .		7
32	A 2-D spectral analysis method to estimate the modulation parameters in structured illumination microscopy. , 2014, , .		7
33	On-The-Fly Approximation of Multivariate Total Variation Minimization. IEEE Transactions on Signal Processing, 2016, 64, 2355-2364.	3.2	7
34	A Framework for Image Magnification: Induction Revisited. , 0, , .		6
35	Recovery of nonuniformdirac pulses from noisy linear measurements. , 2013, , .		6
36	Real-Time Dual-Wavelength Time-Resolved Diffuse Optical Tomography System for Functional Brain Imaging Based on Probe-Hosted Silicon Photomultipliers. Sensors, 2020, 20, 2815.	2.1	6

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37	A Convex Approach to K-Means Clustering and Image Segmentation. Lecture Notes in Computer Science, 2018, , 220-234.	1.0	6
38	H2O: Reversible Hexagonal-Orthogonal Grid Conversion by 1-D Filtering. , 2007, , .		5
39	A new family of rotation-covariant wavelets on the hexagonal lattice. , 2007, , .		5
40	Fully reversible image rotation by 1-D filtering. , 2008, , .		5
41	Quantitative Error Analysis for the Reconstruction of Derivatives. IEEE Transactions on Signal Processing, 2011, 59, 2965-2969.	3.2	5
42	Reconstruction from non-uniform samples: A direct, variational approach in shift-invariant spaces. , 2013, 23, 1277-1287.		5
43	A Convex Approach to Superresolution and Regularization of Lines in Images. SIAM Journal on Imaging Sciences, 2019, 12, 211-258.	1.3	5
44	A Convex Lifting Approach to Image Phase Unwrapping. , 2019, , .		5
45	Improving Localization of Deep Inclusions in Time-Resolved Diffuse Optical Tomography. Applied Sciences (Switzerland), 2019, 9, 5468.	1.3	5
46	Robust linear unmixing with enhanced sparsity. , 2017, , .		4
47	A New Proximal Method for Joint Image Restoration and Edge Detection with the Mumford-Shah Model. , 2018, , .		4
48	Sampling Signals with Finite Rate of Innovation and Recovery by Maximum Likelihood Estimation. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2013, E96.A, 1972-1979.	0.2	4
49	Distributed Proximal Splitting Algorithms with Rates and Acceleration. Frontiers in Signal Processing, 2022, 1, .	1.2	4
50	Efficient Reconstruction of Hexagonally Sampled Data using Three-Directional Box-Splines. , 2006, , .		3
51	New optimized spline functions for interpolation on the hexagonal lattice. , 2008, , .		3
52	Sampling and recovery of continuous sparse signals by maximum likelihood estimation. , 2013, , .		3
53	Pixel enlargement in high-speed camera image acquisition based on 3D sparse representations. , 2015, , .		3
54	Collaborative total variation for hyperspectral pansharpening. , 2017, , .		3

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55	Dualize, Split, Randomize: Toward Fast Nonsmooth Optimization Algorithms. Journal of Optimization Theory and Applications, 2022, 195, 102-130.	0.8	3
56	Texture modeling by Gaussian fields with prescribed local orientation. , 2014, , .		2
57	Super-resolution of positive spikes by Toeplitz low-rank approximation. , 2015, , .		2
58	Multifractal-based texture segmentation using variational procedure. , 2016, , .		2
59	Distributed Projection on the Simplex and $ell _1$ Ball via ADMM and Gossip. IEEE Signal Processing Letters, 2018, 25, 1650-1654.	2.1	2
60	Image Fusion and Reconstruction of Compressed Data: A Joint Approach. , 2018, , .		2
61	One-dimensional Edge-preserving Spline Smoothing for Estimation of Piecewise Smooth Functions. , 2019, , .		2
62	Atomic norm minimization for decomposition into complex exponentials and optimal transport in Fourier domain. Journal of Approximation Theory, 2020, 258, 105456.	0.5	2
63	A Compact Image Magnification Method with Preservation of Preferential Components. , 2007, , .		1
64	MAP recovery of polynomial splines from compressive samples and its application to vehicular signals. , 2013, , .		1
65	Hyperspectral pansharpening using convex optimization and collaborative total variation regularization. , 2016, , .		1
66	Sequential image completion for high-speed large-pixel number sensing. , 2016, , .		1
67	Pansharpening of images acquired with color filter arrays. , 2018, , .		1
68	Tikhonov Regularization of Circle-Valued Signals. IEEE Transactions on Signal Processing, 2022, 70, 2775-2782.	3.2	1
69	Pan-sharpening using induction. , 2007, , .		0
70	Improvement of pixel enhancement algorithm for high-speed camera imaging using 3D sparsity. , 2015, , .		0
71	Convex super-resolution detection of lines in images. , 2016, , .		0
72	Performance evaluation of time-domain multispectral diffuse optical tomography in the reflection geometry. , 2017, , .		0

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73	Riesz-based orientation of localizable Gaussian fields. Applied and Computational Harmonic Analysis, 2021, 50, 353-385.	1.1	0
74	Computational Performance of Time-Resolved Diffuse Optical Tomography in a Two-Layer Brain Model. , 2018, , .		0
75	The BitMap dataset: an open dataset on performance assessment of diffuse optics instruments. , 2019, , .		0
76	Time-resolved diffuse optical tomography: a novel method to compute datatypes allows better absorption quantification. , 2019, , .		0