

Demetrio Labate

List of Publications by Year in descending order

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100
papers

4,327
citations

218592

26
h-index

118793

62
g-index

101
all docs

101
docs citations

101
times ranked

1913
citing authors

#	ARTICLE	IF	CITATIONS
1	Sparse directional image representations using the discrete shearlet transform. Applied and Computational Harmonic Analysis, 2008, 25, 25-46.	1.1	924
2	Optimally Sparse Multidimensional Representation Using Shearlets. SIAM Journal on Mathematical Analysis, 2007, 39, 298-318.	0.9	619
3	A Shearlet Approach to Edge Analysis and Detection. IEEE Transactions on Image Processing, 2009, 18, 929-941.	6.0	279
4	Sparse multidimensional representation using shearlets. , 2005, , .		233
5	Resolution of the wavefront set using continuous shearlets. Transactions of the American Mathematical Society, 2009, 361, 2719-2754.	0.5	212
6	Shearlet-Based Total Variation Diffusion for Denoising. IEEE Transactions on Image Processing, 2009, 18, 260-268.	6.0	188
7	Wavelets with composite dilations and their MRA properties. Applied and Computational Harmonic Analysis, 2006, 20, 202-236.	1.1	172
8	Edge analysis and identification using the continuous shearlet transform. Applied and Computational Harmonic Analysis, 2009, 27, 24-46.	1.1	123
9	A unified characterization of reproducing systems generated by a finite family, II. Journal of Geometric Analysis, 2002, 12, 615-662.	0.5	110
10	Wavelets with composite dilations. Electronic Research Announcements in Mathematical Sciences, 2004, 10, 78-87.	0.7	92
11	Characterization and Analysis of Edges Using the Continuous Shearlet Transform. SIAM Journal on Imaging Sciences, 2009, 2, 959-986.	1.3	86
12	3-D Discrete Shearlet Transform and Video Processing. IEEE Transactions on Image Processing, 2012, 21, 2944-2954.	6.0	69
13	Radon transform inversion using the shearlet representation. Applied and Computational Harmonic Analysis, 2010, 29, 232-250.	1.1	65
14	The Construction of Smooth Parseval Frames of Shearlets. Mathematical Modelling of Natural Phenomena, 2013, 8, 82-105.	0.9	62
15	The Theory of Wavelets with Composite Dilations. , 2006, , 231-250.		59
16	Introduction to Shearlets. Applied and Numerical Harmonic Analysis, 2012, , 1-38.	0.1	56
17	Oversampling, quasi-affine frames, and wave packets. Applied and Computational Harmonic Analysis, 2004, 16, 111-147.	1.1	48
18	Pseudodifferential Operators on Modulation Spaces. Journal of Mathematical Analysis and Applications, 2001, 262, 242-255.	0.5	47

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19	Analysis and detection of surface discontinuities using the 3D continuous shearlet transform. Applied and Computational Harmonic Analysis, 2011, 30, 231-242.	1.1	43
20	Representation of Fourier Integral Operators Using Shearlets. Journal of Fourier Analysis and Applications, 2008, 14, 327-371.	0.5	41
21	Optimally Sparse Representations of 3D Data with C^2 Surface Singularities Using Parseval Frames of Shearlets. SIAM Journal on Mathematical Analysis, 2012, 44, 851-886.	0.9	36
22	Optimally Sparse Image Representations using Shearlets. , 2006, , .		35
23	A unified characterization of reproducing systems generated by a finite family. Journal of Geometric Analysis, 2002, 12, 469-491.	0.5	33
24	Shearlet Smoothness Spaces. Journal of Fourier Analysis and Applications, 2013, 19, 577-611.	0.5	33
25	The Nav1.2 channel is regulated by GSK3. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 832-844.	1.1	33
26	A Multiscale Deep Learning Approach for High-Resolution Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 167-171.	1.4	31
27	Characterization of Piecewise-Smooth Surfaces Using the 3D Continuous Shearlet Transform. Journal of Fourier Analysis and Applications, 2012, 18, 488-516.	0.5	30
28	Improved detection of soma location and morphology in fluorescence microscopy images of neurons. Journal of Neuroscience Methods, 2016, 274, 61-70.	1.3	28
29	Automated Detection of Soma Location and Morphology in Neuronal Network Cultures. PLoS ONE, 2015, 10, e0121886.	1.1	27
30	Discrete shearlet transform on GPU with applications in anomaly detection and denoising. Eurasip Journal on Advances in Signal Processing, 2014, 2014, .	1.0	25
31	Time-Frequency Analysis of Pseudodifferential Operators. Monatshefte Fur Mathematik, 2001, 133, 143-156.	0.5	23
32	The theory of reproducing systems on locally compact abelian groups. Colloquium Mathematicum, 2006, 106, 197-220.	0.2	22
33	Genetic deletion of fibroblast growth factor 14 recapitulates phenotypic alterations underlying cognitive impairment associated with schizophrenia. Translational Psychiatry, 2016, 6, e806-e806.	2.4	21
34	A multistep deep learning framework for the automated detection and segmentation of astrocytes in fluorescent images of brain tissue. Scientific Reports, 2020, 10, 5137.	1.6	21
35	Image Processing Using Shearlets. , 2012, , 283-325.		20
36	Morphologically Decoupled Structured Sparsity for Rotation-Invariant Hyperspectral Image Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 4355-4366.	2.7	20

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37	Wavelets. Notices of the American Mathematical Society, 2013, 60, 66.	0.1	17
38	Efficient Processing of Fluorescence Images Using Directional Multiscale Representations. Mathematical Modelling of Natural Phenomena, 2014, 9, 177-193.	0.9	16
39	Improved Automatic Centerline Tracing for Dendritic and Axonal Structures. Neuroinformatics, 2015, 13, 227-244.	1.5	15
40	Directional Multiscale Processing of Images Using Wavelets with Composite Dilations. Journal of Mathematical Imaging and Vision, 2014, 48, 13-34.	0.8	14
41	Coorbit Spaces with Voice in a Fr�chet Space. Journal of Fourier Analysis and Applications, 2017, 23, 141-206.	0.5	14
42	Shearlet Network-based Sparse Coding Augmented by Facial Texture Features for Face Recognition. Lecture Notes in Computer Science, 2013, , 611-620.	1.0	14
43	Regularized Shearlet Network for face recognition using single sample per person. , 2014, , .		13
44	A two-stage shearlet-based approach for the removal of random-valued impulse noise in images. Journal of Visual Communication and Image Representation, 2015, 32, 83-94.	1.7	13
45	Automated sorting of neuronal trees in fluorescent images of neuronal networks using NeuroTreeTracer. Scientific Reports, 2018, 8, 6450.	1.6	12
46	Critically Sampled Wavelets With Composite Dilations. IEEE Transactions on Image Processing, 2012, 21, 550-561.	6.0	11
47	Sparse multi-stage regularized feature learning for robust face recognition. Expert Systems With Applications, 2015, 42, 269-279.	4.4	11
48	Edge detection and processing using shearlets. , 2008, , .		10
49	Detection of Singularities by Discrete Multiscale Directional Representations. Journal of Geometric Analysis, 2018, 28, 2102-2128.	0.5	10
50	Affine, Quasi-Affine and Co-Affine Wavelets. Studies in Computational Mathematics, 2003, 10, 215-223.	0.2	9
51	Characterization and analysis of edges in piecewise smooth functions. Applied and Computational Harmonic Analysis, 2016, 41, 139-163.	1.1	9
52	Automated 3-D Detection of Dendritic Spines from In Vivo Two-Photon Image Stacks. Neuroinformatics, 2017, 15, 303-319.	1.5	9
53	Optimal recovery of 3D X-ray tomographic data via shearlet decomposition. Advances in Computational Mathematics, 2013, 39, 227-255.	0.8	8
54	Geometric Separation of Singularities Using Combined Multiscale Dictionaries. Journal of Fourier Analysis and Applications, 2015, 21, 667-693.	0.5	7

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55	Analysis and Identification of Multidimensional Singularities Using the Continuous Shearlet Transform. Applied and Numerical Harmonic Analysis, 2012, , 69-103.	0.1	7
56	Improved automatic centerline tracing for dendritic structures. , 2013, , .		6
57	Improved radon based imaging using the shearlet transform. Proceedings of SPIE, 2009, , .	0.8	5
58	ShearFace: Efficient Extraction of Anisotropic Features for Face Recognition. , 2014, , .		5
59	Detection of boundary curves on the piecewise smooth boundary surface of three dimensional solids. Applied and Computational Harmonic Analysis, 2016, 40, 137-171.	1.1	5
60	Image inpainting using sparse multiscale representations: Image recovery performance guarantees. Applied and Computational Harmonic Analysis, 2020, 49, 343-380.	1.1	5
61	Optimally sparse 3D approximations using shearlet representations. Electronic Research Announcements in Mathematical Sciences, 2010, 17, 125-137.	0.6	5
62	Structured receptive field networks and applications to hyperspectral image classification. , 2019, , .		5
63	3D discrete shearlet transform and video denoising. , 2011, , .		4
64	Directional and non-directional representations for the characterization of neuronal morphology. , 2013, , .		4
65	Regularized directional feature learning for face recognition. Multimedia Tools and Applications, 2015, 74, 11281-11295.	2.6	4
66	Multiscale Analysis of Neurite Orientation and Spatial Organization in Neuronal Images. Neuroinformatics, 2016, 14, 465-477.	1.5	4
67	Statistical binary patterns and post-competitive representation for pattern recognition. International Journal of Machine Learning and Cybernetics, 2018, 9, 1023-1038.	2.3	4
68	Directional multiscale representations and applications in digital neuron reconstruction. Journal of Computational and Applied Mathematics, 2019, 349, 482-493.	1.1	4
69	Smooth projections and the construction of smooth Parseval frames of shearlets. Advances in Computational Mathematics, 2019, 45, 3241-3264.	0.8	4
70	Face, gender and race classification using multi-regularized features learning. , 2014, , .		3
71	Sparse Multi-regularized Shearlet-Network Using Convex Relaxation for Face Recognition. , 2014, , .		3
72	Directional analysis of 3D tubular structures via isotropic well-localized atoms. Applied and Computational Harmonic Analysis, 2016, 40, 588-599.	1.1	3

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73	Rotation invariance through structured sparsity for robust hyperspectral image classification. , 2017, , .		3
74	Microlocal analysis of edge flatness through directional multiscale representations. Advances in Computational Mathematics, 2017, 43, 295-318.	0.8	3
75	Imaging of the Axon Initial Segment. Current Protocols in Neuroscience, 2019, 89, e78.	2.6	3
76	Inhibition of AKT Signaling Alters \hat{I}^{2IV} Spectrin Distribution at the AIS and Increases Neuronal Excitability. Frontiers in Molecular Neuroscience, 2021, 14, 643860.	1.4	3
77	Continuous and Discrete Reproducing Systems That Arise from Translations. Theory and Applications of Composite Wavelets. Applied and Numerical Harmonic Analysis, 2010, , 87-130.	0.1	3
78	Microlocal Analysis of Singularities from Directional Multiscale Representations. Springer Proceedings in Mathematics and Statistics, 2014, , 173-196.	0.1	3
79	Critically sampled composite wavelets. , 2009, , .		2
80	Optimally sparse shearlet approximations of 3D data. Proceedings of SPIE, 2011, , .	0.8	2
81	Shearlet-based regularized reconstruction in region-of-interest computed tomography. Mathematical Modelling of Natural Phenomena, 2018, 13, 34.	0.9	2
82	ROI reconstruction from truncated cone-beam projections. Inverse Problems and Imaging, 2018, 12, 29-57.	0.6	2
83	Connectivity in the set of Gabor frames. Applied and Computational Harmonic Analysis, 2005, 18, 123-136.	1.1	1
84	Hyperbolic shearlets. , 2012, , .		1
85	Image registration using the shearlet transform. , 2015, , .		1
86	Geometric Separation in \mathbb{R}^3 . Journal of Fourier Analysis and Applications, 2019, 25, 108-130.	0.5	1
87	From Group Representations to Signal Analysis. Applied and Numerical Harmonic Analysis, 2015, , 1-5.	0.1	1
88	Mini-Workshop: Shearlets. Oberwolfach Reports, 2011, 7, 2573-2611.	0.0	1
89	Optical compressive sensing technologies for space applications: instrumental concepts and performance analysis. , 2019, , .		1
90	Robust and stable region-of-interest tomographic reconstruction using a robust width prior. Inverse Problems and Imaging, 2020, 14, 291-316.	0.6	1

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91	A Learning Based Framework for Disease Prediction from Images of Human-Derived Pluripotent Stem Cells of Schizophrenia Patients. <i>Neuroinformatics</i> , 2022, 20, 513-523.	1.5	1
92	Multicomposite wavelet estimation. , 2011, , .		0
93	Optimal restoration of noisy 3D x-ray data via shearlet decompositions. , 2013, , .		0
94	Directional ratio based on parabolic molecules and its application to the analysis of tubular structures. , 2015, , .		0
95	Optimally Sparse Representations of Cartoon-Like Cylindrical Data. <i>Journal of Geometric Analysis</i> , 2021, 31, 8926-8946.	0.5	0
96	Stable recovery of planar regions with algebraic boundaries in Bernstein form. <i>Advances in Computational Mathematics</i> , 2021, 47, 1.	0.8	0
97	Searchlight CT: A new reconstruction method for collimated X-ray tomography. , 2012, , .		0
98	A Harmonic Analysis View on Neuroscience Imaging. , 2013, , 423-450.		0
99	Efficient Analysis and Detection of Edges Through Directional Multiscale Representations. <i>Applied and Numerical Harmonic Analysis</i> , 2015, , 149-197.	0.1	0
100	Quantitative Methods in Ocular Fundus Imaging: Analysis of Retinal Microvasculature. <i>Applied and Numerical Harmonic Analysis</i> , 2020, , 157-174.	0.1	0