

Mauro Maggioni

List of Publications by Year in descending order

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69
papers

3,813
citations

331670

21
h-index

302126

39
g-index

69
all docs

69
docs citations

69
times ranked

3584
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometric diffusions as a tool for harmonic analysis and structure definition of data: Diffusion maps. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7426-7431.	7.1	1,314
2	Diffusion wavelets. Applied and Computational Harmonic Analysis, 2006, 21, 53-94.	2.2	527
3	Diffusion Maps, Reduction Coordinates, and Low Dimensional Representation of Stochastic Systems. Multiscale Modeling and Simulation, 2008, 7, 842-864.	1.6	215
4	Determination of reaction coordinates via locally scaled diffusion map. Journal of Chemical Physics, 2011, 134, 124116.	3.0	212
5	Geometric diffusions as a tool for harmonic analysis and structure definition of data: Multiscale methods. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7432-7437.	7.1	179
6	Manifold parametrizations by eigenfunctions of the Laplacian and heat kernels. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1803-1808.	7.1	111
7	Genomic Characterization of Large Heterochromatic Gaps in the Human Genome Assembly. PLoS Computational Biology, 2014, 10, e1003628.	3.2	99
8	Multiscale Approximation With Hierarchical Radial Basis Functions Networks. IEEE Transactions on Neural Networks, 2004, 15, 178-188.	4.2	85
9	Multi-scale geometric methods for data sets II: Geometric Multi-Resolution Analysis. Applied and Computational Harmonic Analysis, 2012, 32, 435-462.	2.2	82
10	Tensor-CUR Decompositions for Tensor-Based Data. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 957-987.	1.4	73
11	Diffusion polynomial frames on metric measure spaces. Applied and Computational Harmonic Analysis, 2008, 24, 329-353.	2.2	71
12	Unsupervised Clustering and Active Learning of Hyperspectral Images With Nonlinear Diffusion. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 1829-1845.	6.3	56
13	Nonparametric inference of interaction laws in systems of agents from trajectory data. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14424-14433.	7.1	53
14	Diffusion wavelet packets. Applied and Computational Harmonic Analysis, 2006, 21, 95-112.	2.2	49
15	Characterization of General Tight Wavelet Frames with Matrix Dilations and Tightness Preserving Oversampling. Journal of Fourier Analysis and Applications, 2002, 8, 173-200.	1.0	48
16	Branched-chain amino acids alter neurobehavioral function in rats. American Journal of Physiology - Endocrinology and Metabolism, 2013, 304, E405-E413.	3.5	45
17	Polymer reversal rate calculated via locally scaled diffusion map. Journal of Chemical Physics, 2011, 134, 144109.	3.0	44
18	Arrhythmic sudden death survival prediction using deep learning analysis of scarring in the heart. , 2022, 1, 334-343.		43

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19	Substrate Spatial Complexity Analysis for the Prediction of Ventricular Arrhythmias in Patients With Ischemic Cardiomyopathy. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2020, 13, e007975.	4.8	33
20	Estimation of intrinsic dimensionality of samples from noisy low-dimensional manifolds in high dimensions with multiscale SVD. , 2009, , .		29
21	Multiscale geometric methods for data sets I: Multiscale SVD, noise and curvature. <i>Applied and Computational Harmonic Analysis</i> , 2017, 43, 504-567.	2.2	28
22	Inferring interaction rules from observations of evolutive systems I: The variational approach. <i>Mathematical Models and Methods in Applied Sciences</i> , 2017, 27, 909-951.	3.3	28
23	Diffusion-driven multiscale analysis on manifolds and graphs: top-down and bottom-up constructions. , 2005, , .		27
24	Research on online social networks. <i>Performance Evaluation Review</i> , 2010, 37, 49-54.	0.6	23
25	Universal local parametrizations via heat kernels and eigenfunctions of the Laplacian. <i>Annales Academiae Scientiarum Fennicae Mathematica</i> , 2010, 35, 131-174.	0.7	22
26	Supervised dimensionality reduction for big data. <i>Nature Communications</i> , 2021, 12, 2872.	12.8	20
27	Biorthogonal diffusion wavelets for multiscale representations on manifolds and graphs. , 2005, , .		19
28	Hyperspectral microscopic analysis of normal, benign and carcinoma microarray tissue sections. , 2006, , .		18
29	Spectralâ€Spatial Diffusion Geometry for Hyperspectral Image Clustering. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2020, 17, 1243-1247.	3.1	18
30	Fast direct policy evaluation using multiscale analysis of Markov diffusion processes. , 2006, , .		16
31	Approximation of points on low-dimensional manifolds via random linear projections. <i>Information and Inference</i> , 2013, 2, 1-31.	1.6	16
32	Discovering and deciphering relationships across disparate data modalities. <i>ELife</i> , 2019, 8, .	6.0	16
33	Geometric diffusions for the analysis of data from sensor networks. <i>Current Opinion in Neurobiology</i> , 2005, 15, 576-584.	4.2	14
34	Anatomically informed deep learning on contrast-enhanced cardiac magnetic resonance imaging for scar segmentation and clinical feature extraction. <i>Cardiovascular Digital Health Journal</i> , 2022, 3, 2-13.	1.3	14
35	Data-driven discovery of emergent behaviors in collective dynamics. <i>Physica D: Nonlinear Phenomena</i> , 2020, 411, 132542.	2.8	12
36	Multiscale geometric wavelets for the analysis of point clouds. , 2010, , .		11

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37	Object recognition in art drawings: Transfer of a neural network. , 2016, , .		11
38	ATLAS: A Geometric Approach to Learning High-Dimensional Stochastic Systems Near Manifolds. Multiscale Modeling and Simulation, 2017, 15, 110-156.	1.6	11
39	Some Recent Advances in Multiscale Geometric Analysis of Point Clouds. Applied and Numerical Harmonic Analysis, 2011, , 199-225.	0.3	11
40	A fast multiscale framework for data in high-dimensions: Measure estimation, anomaly detection, and compressive measurements. , 2012, , .		10
41	On the identifiability of interaction functions in systems of interacting particles. Stochastic Processes and Their Applications, 2021, 132, 135-163.	0.9	10
42	Multiscale geometric and spectral analysis of plane arrangements. , 2011, , .		9
43	High-Dimensional Data Modeling Techniques for Detection of Chemical Plumes and Anomalies in Hyperspectral Images and Movies. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 4316-4324.	4.9	9
44	Geometries of sensor outputs, inference, and information processing. , 2006, , .		9
45	Beauty is in the bid of the beholder: An empirical basis for style. Research in Economics, 2016, 70, 388-402.	0.8	8
46	Learning Interaction Kernels in Stochastic Systems of Interacting Particles from Multiple Trajectories. Foundations of Computational Mathematics, 0, , 1.	2.5	8
47	Remarks on the box problem. Mathematical Research Letters, 2002, 9, 515-519.	0.5	7
48	Learning adaptive multiscale approximations to data and functions near low-dimensional sets. , 2016, , .		5
49	Wavelet Frames on Groups and Hypergroups via Discretization of Calderiñ1/2n Formulas. Monatshefte Fur Mathematik, 2004, 143, 299-331.	0.9	4
50	Dictionary Learning and Non-Asymptotic Bounds for Geometric Multi-Resolution Analysis. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 1013-1016.	0.2	4
51	ROFLMAO: Robust Oblique Forests with Linear MATrix Operations. , 2017, , 498-506.		4
52	Iterative active learning with diffusion geometry for hyperspectral images. , 2018, , .		4
53	Diffusion geometric methods for fusion of remotely sensed data. , 2018, , .		4
54	Multi-Resolution Geometric Analysis for Data in High Dimensions. , 2013, , 259-285.		3

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55	Multiscale regression on unknown manifolds. Mathematics in Engineering, 2022, 4, 1-25.	0.9	3
56	M-Band Burt-Adelson Biorthogonal Wavelets. Applied and Computational Harmonic Analysis, 2000, 9, 286-311.	2.2	2
57	Efficient solution of Markov decision problems with multiscale representations. , 2012, , .		2
58	Geometric estimation of probability measures in high-dimensions. , 2013, , .		2
59	Data representation and exploration with Geometric Wavelets. , 2010, , .		1
60	Geometric multiscale reduction for autonomous and controlled nonlinear systems. , 2012, , .		1
61	Unsupervised Discriminative Dimension Reduction for Hyperspectral Chemical Plume Segmentation. , 2019, , .		1
62	Critical Exponent of Short Even Filters and Burt-Adelson Biorthogonal Wavelets. Monatshefte Fur Mathematik, 2000, 131, 49-69.	0.9	0
63	Multiscale dictionaries, transforms, and learning in high-dimensions. Proceedings of SPIE, 2013, , .	0.8	0
64	Multiscale, dictionary-based speckle denoising. , 2013, , .		0
65	Enhanced detection of chemical plumes in hyperspectral images and movies through improved background modeling. , 2015, , .		0
66	Geometric multi-resolution analysis for dictionary learning. , 2015, , .		0
67	Geometry of Data and Biology. Notices of the American Mathematical Society, 2015, 62, 1185-1188.	0.2	0
68	Learning and Exploiting Physics of Degradations. , 2018, , .		0
69	A Biased Kaczmarz Algorithm for Clustered Equations. Springer Proceedings in Mathematics and Statistics, 2019, , 447-456.	0.2	0