

# Stephane Mallat

## List of Publications by Year in descending order

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33  
papers

4,556  
citations

430874

18  
h-index

552781

26  
g-index

33  
all docs

33  
docs citations

33  
times ranked

3191  
citing authors

#	ARTICLE	IF	CITATIONS
1	Invariant Scattering Convolution Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1872-1886.	13.9	991
2	Sparse geometric image representations with bandelets. IEEE Transactions on Image Processing, 2005, 14, 423-438.	9.8	711
3	Group Invariant Scattering. Communications on Pure and Applied Mathematics, 2012, 65, 1331-1398.	3.1	554
4	Deep Scattering Spectrum. IEEE Transactions on Signal Processing, 2014, 62, 4114-4128.	5.3	359
5	Understanding deep convolutional networks. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150203.	3.4	358
6	Super-Resolution With Sparse Mixing Estimators. IEEE Transactions on Image Processing, 2010, 19, 2889-2900.	9.8	251
7	Rotation, Scaling and Deformation Invariant Scattering for Texture Discrimination. , 2013, , .		217
8	The Quijote Simulations. Astrophysical Journal, Supplement Series, 2020, 250, 2.	7.7	149
9	Surface compression with geometric bandelets. ACM Transactions on Graphics, 2005, 24, 601-608.	7.2	133
10	A review of Bandlet methods for geometrical image representation. Numerical Algorithms, 2007, 44, 205-234.	1.9	115
11	Geometrical grouplets. Applied and Computational Harmonic Analysis, 2009, 26, 161-180.	2.2	94
12	Classification with scattering operators. , 2011, , .		76
13	Orthogonal bandelet bases for geometric images approximation. Communications on Pure and Applied Mathematics, 2008, 61, 1173-1212.	3.1	65
14	Wavelet Scattering Regression of Quantum Chemical Energies. Multiscale Modeling and Simulation, 2017, 15, 827-863.	1.6	65
15	Scattering Transform for Intrapartum Fetal Heart Rate Variability Fractal Analysis: A Case-Control Study. IEEE Transactions on Biomedical Engineering, 2014, 61, 1100-1108.	4.2	54
16	Wavelet Foveation. Applied and Computational Harmonic Analysis, 2000, 9, 312-335.	2.2	53
17	Solid harmonic wavelet scattering for predictions of molecule properties. Journal of Chemical Physics, 2018, 148, 241732.	3.0	47
18	Manifold Learning for Latent Variable Inference in Dynamical Systems. IEEE Transactions on Signal Processing, 2015, 63, 3843-3856.	5.3	41

#	ARTICLE	IF	CITATIONS
19	Intermittent process analysis with scattering moments. <i>Annals of Statistics</i> , 2015, 43, .	2.6	34
20	Joint Time-Frequency Scattering. <i>IEEE Transactions on Signal Processing</i> , 2019, 67, 3704-3718.	5.3	29
21	Surface compression with geometric bandelets. , 2005, , .		25
22	Joint time-frequency scattering for audio classification. , 2015, , .		20
23	Multiscale sparse microcanonical models. <i>Mathematical Statistics and Learning</i> , 2019, 1, 257-315.	1.2	18
24	Adaptive Time-Frequency Approximations with Matching Pursuits. <i>Wavelet Analysis and Its Applications</i> , 1994, 5, 271-293.	0.2	15
25	Deep Haar scattering networks. <i>Information and Inference</i> , 2016, 5, 105-133.	1.6	14
26	Phase harmonic correlations and convolutional neural networks. <i>Information and Inference</i> , 2020, 9, 721-747.	1.6	14
27	Foveal detection and approximation for singularities. <i>Applied and Computational Harmonic Analysis</i> , 2003, 14, 133-180.	2.2	13
28	Maximum entropy models from phase harmonic covariances. <i>Applied and Computational Harmonic Analysis</i> , 2021, 53, 199-230.	2.2	13
29	Rigid Motion Model for Audio Source Separation. <i>IEEE Transactions on Signal Processing</i> , 2016, 64, 1822-1831.	5.3	9
30	Machine learning surrogate models for prediction of point defect vibrational entropy. <i>Physical Review Materials</i> , 2020, 4, .	2.4	9
31	Audio source separation with time-frequency velocities. , 2014, , .		6
32	Scattering transform for intrapartum fetal heart rate characterization and acidosis detection. , 2013, 2013, 2898-901.		4
33	Particle gradient descent model for point process generation. <i>Statistics and Computing</i> , 2022, 32, .	1.5	0