Stanley Osher

List of Publications by Year in Descending Order

75 papers	14,308 citations	25 h-index	78 g-index
78 ext. papers	17,151 ext. citations	3 avg, IF	6.39 L-index

#	Paper	IF	Citations
75	Energy-Efficient Velocity Control for Massive Numbers of UAVs: A Mean Field Game Approach. *IEEE Transactions on Vehicular Technology*, **2022**, 1-1	6.8	1
74	Opinion Evolution in Social Networks: Connecting Mean Field Games to Generative Adversarial Nets. *IEEE Transactions on Network Science and Engineering*, **2022**, 1-1	4.9	
73	Wasserstein-Based Projections with Applications to Inverse Problems. *SIAM Journal on Mathematics of Data Science*, **2022**, 4, 581-603	3.1	
72	A Neural Network Approach for High-Dimensional Optimal Control Applied to Multiagent Path Finding. *IEEE Transactions on Control Systems Technology*, **2022**, 1-17	4.8	1
71	Scheduled Restart Momentum for Accelerated Stochastic Gradient Descent. *SIAM Journal on Imaging Sciences*, **2022**, 15, 738-761	1.9	2
70	Joint Sensing Task Assignment and Collision-Free Trajectory Optimization for Mobile Vehicle Networks Using Mean-Field Games. *IEEE Internet of Things Journal*, **2021**, 8, 8488-8503	10.7	6
69	Task Selection and Route Planning for Mobile Crowd Sensing Using Multi-Population Mean-Field Games **2021**,		2
68	Task Selection and Collision-Free Route Planning for Mobile Crowd Sensing Using Multi-Population Mean-Field Games. *IEEE Transactions on Green Communications and Networking*, **2021**, 1-1	4	0
67	Room temperature rectification in tapered-channel thermal diodes through nanoscale confinement-induced liquid–solid phase change. *Journal of Applied Physics*, **2021**, 129, 075103	2.5	0
66	Alternating the population and control neural networks to solve high-dimensional stochastic mean-field games. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	9
65	Low Dimensional Manifold Model in Hyperspectral Image Reconstruction. *Advances in Computer Vision and Pattern Recognition*, **2020**, 295-317	1.1	1
64	Blended coarse gradient descent for full quantization of deep neural networks. *Research in Mathematical Sciences*, **2019**, 6, 1	1.5	20
63	Solving Large-Scale Optimization Problems with a Convergence Rate Independent of Grid Size. *SIAM Journal on Numerical Analysis*, **2019**, 57, 1100-1123	2.4	15
62	Algorithm for Hamilton–Jacobi Equations in Density Space Via a Generalized Hopf Formula. *Journal of Scientific Computing*, **2019**, 80, 1195-1239	2.3	8
61	Block Matching Local SVD Operator Based Sparsity and TV Regularization for Image Denoising. *Journal of Scientific Computing*, **2019**, 78, 607-624	2.3	11
60	Generalized Proximal Smoothing for Phase Retrieval. *Microscopy and Microanalysis*, **2019**, 25, 118-119	0.5	
59	Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background. *IEEE Transactions on Signal Processing*, **2019**, 67, 3858-3869	4.8	43

58	Optimal human navigation in steep terrain: a Hamilton–Jacobi–Bellman approach. *Communications in Mathematical Sciences*, **2019**, 17, 227-242	1	3
57	Time-Optimal Collaborative Guidance Using the Generalized Hopf Formula **2018**, 2, 201-206		12
56	Scientific data interpolation with low dimensional manifold model. *Journal of Computational Physics* , **2018**, 352, 213-245	4.1	6
55	Generalization of the Weighted Nonlocal Laplacian in Low Dimensional Manifold Model. *Journal of Scientific Computing*, **2018**, 75, 638-656	2.3	11
54	Algorithm for overcoming the curse of dimensionality for certain non-convex Hamilton–Jacobi equations, projections and differential games. *Annals of Mathematical Sciences and Applications*, **2018**, 3, 369-403	1.3	7
53	Unbalanced and Partial (L_1) Monge–Kantorovich Problem: A Scalable Parallel First-Order Method. *Journal of Scientific Computing*, **2018**, 75, 1596-1613	2.3	6
52	A Parallel Method for Earth Mover's Distance. *Journal of Scientific Computing*, **2018**, 75, 182-197	2.3	32
51	A Primal-Dual Method for Optimal Control and Trajectory Generation in High-Dimensional Systems **2018**,		4
50	Scalable Low Dimensional Manifold Model In The Reconstruction Of Noisy And Incomplete Hyperspectral Images **2018**,		2
49	Stochastic Backward Euler: An Implicit Gradient Descent Algorithm for k-Means Clustering. *Journal of Scientific Computing*, **2018**, 77, 1133-1146	2.3	5
48	Unsupervised Classification in Hyperspectral Imagery With Nonlocal Total Variation and Primal-Dual Hybrid Gradient Algorithm. *IEEE Transactions on Geoscience and Remote Sensing*, **2017**, 55, 2786-2798	8.1	33
47	Weighted Nonlocal Laplacian on Interpolation from Sparse Data. *Journal of Scientific Computing*, **2017**, 73, 1164-1177	2.3	18
46	Algorithm for Overcoming the Curse of Dimensionality For Time-Dependent Non-convex Hamilton–Jacobi Equations Arising From Optimal Control and Differential Games Problems. *Journal of Scientific Computing*, **2017**, 73, 617-643	2.3	15
45	Noise attenuation in a low-dimensional manifold. *Geophysics*, **2017**, 82, V321-V334	3.1	10
44	Low Dimensional Manifold Model for Image Processing. *SIAM Journal on Imaging Sciences*, **2017**, 10, 1669-1690	1.9	51
43	Accelerated high-resolution EEG source imaging **2017**,		1
42	Partial differential equations for training deep neural networks **2017**,		7
41	Monte Carlo data-driven tight frame for seismic data recovery. *Geophysics*, **2016**, 81, V327-V340	3.1	45

40	On a mathematical theory of coded exposure. *Research in Mathematical Sciences*, **2016**, 3, 1	1.5	7
39	A Multiphase Image Segmentation Based on Fuzzy Membership Functions and L1-Norm Fidelity. *Journal of Scientific Computing*, **2016**, 69, 82-106	2.3	17
38	s-SMOOTH: Sparsity and Smoothness Enhanced EEG Brain Tomography. *Frontiers in Neuroscience*, **2016**, 10, 543	5.1	7
37	Sparse recovery via differential inclusions. *Applied and Computational Harmonic Analysis*, **2016**, 41, 436-469	3.1	20
36	Algorithms for overcoming the curse of dimensionality for certain Hamilton–Jacobi equations arising in control theory and elsewhere. *Research in Mathematical Sciences*, **2016**, 3, 1	1.5	50
35	Nonlocal Structure Tensor Functionals for Image Regularization. *IEEE Transactions on Computational Imaging*, **2015**, 1, 16-29	4.5	33
34	Sparse Recovery via ell_1 and L_1 Optimization. *Notices of the International Congress of Chinese Mathematicians*, **2015**, 3, 4-10	0.2	
33	A Splitting Method for Orthogonality Constrained Problems. *Journal of Scientific Computing*, **2014**, 58, 431-449	2.3	88
32	Exact Low-Rank Matrix Completion from Sparsely Corrupted Entries Via Adaptive Outlier Pursuit. *Journal of Scientific Computing*, **2013**, 56, 433-449	2.3	12
31	A Simple Compressive Sensing Algorithm for Parallel Many-Core Architectures. *Journal of Signal Processing Systems*, **2013**, 71, 1-20	1.4	13
30	Bregmanized Domain Decomposition for Image Restoration. *Journal of Scientific Computing*, **2013**, 54, 549-576	2.3	13
29	Error Forgetting of Bregman Iteration. *Journal of Scientific Computing*, **2013**, 54, 684-695	2.3	42
28	Fast singular value thresholding without singular value decomposition. *Methods and Applications of Analysis*, **2013**, 20, 335-352	0.3	27
27	Multi-Channel l_{1} Regularized Convex Speech Enhancement Model and Fast Computation by the Split Bregman Method. *IEEE Transactions on Audio Speech and Language Processing*, **2012**, 20, 661-675		8
26	Robust 1-bit Compressive Sensing Using Adaptive Outlier Pursuit. *IEEE Transactions on Signal Processing*, **2012**, 60, 3868-3875	4.8	111
25	An adaptive inverse scale space method for compressed sensing. *Mathematics of Computation*, **2012**, 82, 269-299	1.6	53
24	A convex model and L1 minimization for musical noise reduction in blind source separation. *Communications in Mathematical Sciences*, **2012**, 10, 223-238	1	1
23	A Unified Primal-Dual Algorithm Framework Based on Bregman Iteration. *Journal of Scientific Computing*, **2011**, 46, 20-46	2.3	258

22	An L1-based variational model for Retinex theory and its application to medical images **2011**,		14
21	Numerical methods for anisotropic mean curvature flow based on a discrete time variational formulation. *Communications in Mathematical Sciences*, **2011**, 9, 637-662	1	9
20	A split Bregman method for non-negative sparsity penalized least squares with applications to hyperspectral demixing **2010**,		12
19	Image Recovery via Nonlocal Operators. *Journal of Scientific Computing*, **2010**, 42, 185-197	2.3	212
18	Geometric Applications of the Split Bregman Method: Segmentation and Surface Reconstruction. *Journal of Scientific Computing*, **2010**, 45, 272-293	2.3	273
17	A note on the Bregmanized Total Variation and dual forms **2009**,		3
16	Fast nonlocal filtering applied to electron cryomicroscopy **2008**,		106
15	Asymmetric and Symmetric Unbiased Image Registration: Statistical Assessment of Performance. *IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops*, **2008**, 2008,	1.3	11
14	Bregman Iterative Algorithms for ell_1-Minimization with Applications to Compressed Sensing. *SIAM Journal on Imaging Sciences*, **2008**, 1, 143-168	1.9	920
13	Fast Global Minimization of the Active Contour/Snake Model. *Journal of Mathematical Imaging and Vision*, **2007**, 28, 151-167	1.6	613
12	Level Set Based Simulations of Two-Phase Oil Water Flows in Pipes. *Journal of Scientific Computing*, **2007**, 31, 153-184	2.3	6
11	Topology Preserving Log-Unbiased Nonlinear Image Registration: Theory and Implementation **2007** ,		25
10	Multiphase Segmentation of Deformation using Logarithmic Priors **2007**,		3
9	Structure-Texture Image Decomposition Modeling, Algorithms, and Parameter Selection. *International Journal of Computer Vision*, **2006**, 67, 111-136	10.6	407
8	Denoising by BV-duality. *Journal of Scientific Computing*, **2006**, 28, 411-444	2.3	13
7	Nonlinear inverse scale space methods. *Communications in Mathematical Sciences*, **2006**, 4, 179-212	1	95
6	An Iterative Regularization Method for Total Variation-Based Image Restoration. *Multiscale Modeling and Simulation*, **2005**, 4, 460-489	1.8	1124
5	Total variation and level set methods in image science. *Acta Numerica*, **2005**, 14, 509-573	15.1	29

4	A Level Set Approach for the Numerical Simulation of Dendritic Growth. *Journal of Scientific Computing*, **2003**, 19, 183-199	2.3	115
3	The Penultimate Scheme for Systems of Conservation Laws: Finite Difference ENO with Marquina's Flux Splitting **2001**, 49-85		
2	Level-set methods for the simulation of epitaxial phenomena. *Physical Review E*, **1998**, 58, R6927-R6930	2.4	70
1	Nonlinear total variation based noise removal algorithms. *Physica D: Nonlinear Phenomena*, **1992**, 60, 259-268	3.3	9101