Ding-Xuan Zhou

List of Publications by Year
in descending order

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143 papers	4,815 citations	117625 34 h-index	106344 65 g-index
145 all docs	145 docs citations	145 times ranked	1431 citing authors

#	Article	IF	Citations
1	Generalization Analysis of CNNs for Classification on Spheres. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 6200-6213.	11.3	6
2	Realization of Spatial Sparseness by Deep ReLU Nets With Massive Data. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 229-243.	11.3	14
3	Depth Selection for Deep ReLU Nets in Feature Extraction and Generalization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 1853-1868.	13.9	16
4	Universal Consistency of Deep Convolutional Neural Networks. IEEE Transactions on Information Theory, 2022, 68, 4610-4617.	2.4	7
5	Moreau Envelope Augmented Lagrangian Method for Nonconvex Optimization with Linear Constraints. Journal of Scientific Computing, 2022, 91, .	2.3	7
6	CNN models for readability of Chinese texts. Mathematical Foundations of Computing, 2022, 5, 351.	1.1	18
7	Distributed Filtered Hyperinterpolation for Noisy Data on the Sphere. SIAM Journal on Numerical Analysis, 2021, 59, 634-659.	2.3	5
8	Kernel gradient descent algorithm for information theoretic learning. Journal of Approximation Theory, 2021, 263, 105518.	0.8	4
9	Distributed regularized least squares with flexible Gaussian kernels. Applied and Computational Harmonic Analysis, 2021, 53, 349-377.	2.2	3
10	Robust kernel-based distribution regression. Inverse Problems, 2021, 37, 105014.	2.0	5
11	Theory of deep convolutional neural networks III: Approximating radial functions. Neural Networks, 2021, 144, 778-790.	5.9	15
12	Distributed kernel gradient descent algorithm for minimum error entropy principle. Applied and Computational Harmonic Analysis, 2020, 49, 229-256.	2.2	23
13	Universality of deep convolutional neural networks. Applied and Computational Harmonic Analysis, 2020, 48, 787-794.	2.2	258
14	Convergence of online mirror descent. Applied and Computational Harmonic Analysis, 2020, 48, 343-373.	2.2	11
15	Optimal learning rates for distribution regression. Journal of Complexity, 2020, 56, 101426.	1.3	9
16	Theory of deep convolutional neural networks II: Spherical analysis. Neural Networks, 2020, 131, 154-162.	5.9	18
17	Theory of deep convolutional neural networks: Downsampling. Neural Networks, 2020, 124, 319-327.	5.9	111
18	Preface to the special issue on analysis in machine learning and data science. Communications on Pure and Applied Analysis, 2020, 19, i-iii.	0.8	0

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19	Analysis of Singular Value Thresholding Algorithm for Matrix Completion. Journal of Fourier Analysis and Applications, 2019, 25, 2957-2972.	1.0	3
20	Deep Net Tree Structure for Balance of Capacity and Approximation Ability. Frontiers in Applied Mathematics and Statistics, 2019, 5, .	1.3	4
21	Deep neural networks for rotation-invariance approximation and learning. Analysis and Applications, 2019, 17, 737-772.	2.2	23
22	Data-Dependent Generalization Bounds for Multi-Class Classification. IEEE Transactions on Information Theory, 2019, 65, 2995-3021.	2.4	18
23	Learning Theory of Randomized Sparse Kaczmarz Method. SIAM Journal on Imaging Sciences, 2018, 11, 547-574.	2.2	7
24	Total stability of kernel methods. Neurocomputing, 2018, 289, 101-118.	5.9	7
25	Online Learning Algorithms Can Converge Comparably Fast as Batch Learning. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 2367-2378.	11.3	19
26	Distributed Kernel-Based Gradient Descent Algorithms. Constructive Approximation, 2018, 47, 249-276.	3.0	47
27	Optimal Learning Rates for Kernel Partial Least Squares. Journal of Fourier Analysis and Applications, 2018, 24, 908-933.	1.0	5
28	Modified FejÃ©r sequences and applications. Computational Optimization and Applications, 2018, 71, 95-113.	1.6	5
29	Deep distributed convolutional neural networks: Universality. Analysis and Applications, 2018, 16, 895-919.	2.2	104
30	Construction of Neural Networks for Realization of Localized Deep Learning. Frontiers in Applied Mathematics and Statistics, 2018, 4, .	1.3	17
31	Learning Theory and Approximation. Oberwolfach Reports, 2017, 13, 1875-1941.	0.0	1
32	Unregularized online learning algorithms with general loss functions. Applied and Computational Harmonic Analysis, 2017, 42, 224-244.	2.2	30
33	Online regularized learning with pairwise loss functions. Advances in Computational Mathematics, 2017, 43, 127-150.	1.6	17
34	Analysis of Online Composite Mirror Descent Algorithm. Neural Computation, 2017, 29, 825-860.	2.2	8
35	Online pairwise learning algorithms with convex loss functions. Information Sciences, 2017, 406-407, 57-70.	6.9	13
36	Learning theory of distributed spectral algorithms. Inverse Problems, 2017, 33, 074009.	2.0	54

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37	Thresholded spectral algorithms for sparse approximations. Analysis and Applications, 2017, 15, 433-455.	2.2	37
38	Approximation on variable exponent spaces by linear integral operators. Journal of Approximation Theory, 2017, 223, 29-51.	0.8	3
39	Learning rates for the risk of kernel-based quantile regression estimators in additive models. Analysis and Applications, 2016, 14, 449-477.	2.2	22
40	Error bounds for learning the kernel. Analysis and Applications, 2016, 14, 849-868.	2.2	11
41	On the robustness of regularized pairwise learning methods based on kernels. Journal of Complexity, 2016, 37, 1-33.	1.3	14
42	Convergence of Gradient Descent for Minimum Error Entropy Principle in Linear Regression. IEEE Transactions on Signal Processing, 2016, 64, 6571-6579.	5.3	21
43	Minimax optimal rates of estimation in high dimensional additive models. Annals of Statistics, 2016, 44, .	2.6	22
44	Consistency analysis of an empirical minimum error entropy algorithm. Applied and Computational Harmonic Analysis, 2016, 41, 164-189.	2.2	42
45	Online Pairwise Learning Algorithms. Neural Computation, 2016, 28, 743-777.	2.2	33
46	Machine Learning Algorithms. , 2015, , 839-841.		2
47	Regularization schemes for minimum error entropy principle. Analysis and Applications, 2015, 13, 437-455.	2.2	58
48	Learning Theory Approach to a System Identification Problem Involving Atomic Norm. Journal of Fourier Analysis and Applications, 2015, 21, 734-753.	1.0	4
49	Asymptotic Behaviour of Extinction Probability of Interacting Branching Collision Processes. Journal of Applied Probability, 2014, 51, 219-234.	0.7	1
50	Learning Theory. Abstract and Applied Analysis, 2014, 2014, 1-2.	0.7	1
51	Analysis of Approximation by Linear Operators on VariableLÏp(Â·)Spaces and Applications in Learning Theory. Abstract and Applied Analysis, 2014, 2014, 1-10.	0.7	4
52	Asymptotic Behaviour of Extinction Probability of Interacting Branching Collision Processes. Journal of Applied Probability, 2014, 51, 219-234.	0.7	0
53	On grouping effect of elastic net. Statistics and Probability Letters, 2013, 83, 2108-2112.	0.7	32
54	Concentration estimates for learning with unbounded sampling. Advances in Computational Mathematics, 2013, 38, 207-223.	1.6	32

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55	Approximation theory approach to learning with <mml:math altimg="si1.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd"	0.8	13
56	Simultaneous approximation by Bernstein operators in HÃ¶lder norms. Mathematische Nachrichten, 2013, 286, 349-359.	0.8	4
57	Density Problem and Approximation Error in Learning Theory. Abstract and Applied Analysis, 2013, 2013, 1-13.	0.7	24
58	Approximation Analysis of Learning Algorithms for Support Vector Regression and Quantile Regression. Journal of Applied Mathematics, 2012, 2012, 1-17.	0.9	16
59	Online learning for quantile regression and support vector regression. Journal of Statistical Planning and Inference, 2012, 142, 3107-3122.	0.6	11
60	Extinction Probability of Interacting Branching Collision Processes. Advances in Applied Probability, 2012, 44, 226-259.	0.7	7
61	An empirical feature-based learning algorithm producing sparse approximations. Applied and Computational Harmonic Analysis, 2012, 32, 389-400.	2.2	19
62	Convergence of spectral clustering with a general similarity function. Scientia Sinica Mathematica, 2012, 42, 985-994.	0.2	2
63	Non-uniform Randomized Sampling for Multivariate Approximation by High Order Parzen Windows. Canadian Mathematical Bulletin, 2011, 54, 566-576.	0.5	0
64	Optimal learning rates for least squares regularized regression with unbounded sampling. Journal of Complexity, 2011, 27, 55-67.	1.3	45
65	Learning with varying insensitive loss. Applied Mathematics Letters, 2011, 24, 2107-2109.	2.7	8
66	Normal estimation on manifolds by gradient learning. Numerical Linear Algebra With Applications, 2011, 18, 249-259.	1.6	0
67	Concentration estimates for learning with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msup><mml:mi>â„“</mml:mi><mml:mn>1</mml:mn></mml:msup></mml:math>-regularizer and data dependent hypothesis spaces. Applied and Computational Harmonic Analysis, 2011, 31, 286-302.	2.2	102
68	Learning gradients on manifolds. Bernoulli, 2010, 16, .	1.3	28
69	LEARNING BY NONSYMMETRIC KERNELS WITH DATA DEPENDENT SPACES AND. Taiwanese Journal of Mathematics, 2010, 14, .	0.4	49
70	Moving least-square method in learning theory. Journal of Approximation Theory, 2010, 162, 599-614.	0.8	12
71	Hermite learning with gradient data. Journal of Computational and Applied Mathematics, 2010, 233, 3046-3059.	2.0	6
72	Online Classification with Varying Gaussians. Studies in Applied Mathematics, 2010, 124, 65-83.	2.4	1

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73	SVM LEARNING AND L^p APPROXIMATION BY GAUSSIANS ON RIEMANNIAN MANIFOLDS. Analysis and Applications, 2009, 07, 309-339.	2.2	11
74	High order Parzen windows and randomized sampling. Advances in Computational Mathematics, 2009, 31, 349-368.	1.6	11
75	Geometry on Probability Spaces. Constructive Approximation, 2009, 30, 311-323.	3.0	58
76	Gradient learning in a classification setting by gradient descent. Journal of Approximation Theory, 2009, 161, 674-692.	0.8	9
77	ONLINE LEARNING WITH MARKOV SAMPLING. Analysis and Applications, 2009, 07, 87-113.	2.2	109
78	Reproducing Kernel Hilbert Spaces Associated with Analytic Translation-Invariant Mercer Kernels. Journal of Fourier Analysis and Applications, 2008, 14, 89-101.	1.0	20
79	Learning and approximation by Gaussians on Riemannian manifolds. Advances in Computational Mathematics, 2008, 29, 291-310.	1.6	28
80	Parzen windows for multi-class classification. Journal of Complexity, 2008, 24, 606-618.	1.3	15
81	Learning gradients by a gradient descent algorithm. Journal of Mathematical Analysis and Applications, 2008, 341, 1018-1027.	1.0	23
82	Derivative reproducing properties for kernel methods in learning theory. Journal of Computational and Applied Mathematics, 2008, 220, 456-463.	2.0	74
83	Learning with sample dependent hypothesis spaces. Computers and Mathematics With Applications, 2008, 56, 2896-2907.	2.7	84
84	Fully online classification by regularization. Applied and Computational Harmonic Analysis, 2007, 23, 198-214.	2.2	26
85	Learning Theory Estimates via Integral Operators and Their Approximations. Constructive Approximation, 2007, 26, 153-172.	3.0	353
86	Multi-kernel regularized classifiers. Journal of Complexity, 2007, 23, 108-134.	1.3	134
87	Learning Theory: From Regression to Classification. Studies in Computational Mathematics, 2006, , 257-290.	0.2	6
88	Approximation with polynomial kernels and SVM classifiers. Advances in Computational Mathematics, 2006, 25, 323-344.	1.6	98
89	Learning Rates of Least-Square Regularized Regression. Foundations of Computational Mathematics, 2006, 6, 171-192.	2.5	202
90	Online Regularized Classification Algorithms. IEEE Transactions on Information Theory, 2006, 52, 4775-4788.	2.4	69

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91	Shannon sampling II: Connections to learning theory. Applied and Computational Harmonic Analysis, 2005, 19, 285-302.	2.2	142
92	SVM Soft Margin Classifiers: Linear Programming versus Quadratic Programming. Neural Computation, 2005, 17, 1160-1187.	2.2	140
93	Modeling Language Evolution. Foundations of Computational Mathematics, 2004, 4, 315.	2.5	57
94	Shannon sampling and function reconstruction from point values. Bulletin of the American Mathematical Society, 2004, 41, 279-306.	1.5	176
95	Capacity of reproducing kernel spaces in learning theory. IEEE Transactions on Information Theory, 2003, 49, 1743-1752.	2.4	181
96	Compactly supported wavelet bases for Sobolev spaces. Applied and Computational Harmonic Analysis, 2003, 15, 224-241.	2.2	52
97	Properties of locally linearly independent refinable function vectors. Journal of Approximation Theory, 2003, 122, 24-41.	0.8	3
98	Refinable Functions: Positivity and Interpolation. Analysis and Applications, 2003, 01, 243-264.	2.2	1
99	ESTIMATING THE APPROXIMATION ERROR IN LEARNING THEORY. Analysis and Applications, 2003, 01, 17-41.	2.2	160
100	Interpolatory orthogonal multiwavelets and refinable functions. IEEE Transactions on Signal Processing, 2002, 50, 520-527.	5.3	39
101	The covering number in learning theory. Journal of Complexity, 2002, 18, 739-767.	1.3	213
102	Two-Scale Homogeneous Functions in Wavelet Analysis. Journal of Fourier Analysis and Applications, 2002, 8, 565-580.	1.0	4
103	Mean size of wavelet packets. Applied and Computational Harmonic Analysis, 2002, 13, 22-34.	2.2	5
104	Title is missing!. Advances in Computational Mathematics, 2002, 17, 257-268.	1.6	2
105	Self-Similar Lattice Tilings and Subdivision Schemes. SIAM Journal on Mathematical Analysis, 2001, 33, 1-15.	1.9	14
106	L p solutions of refinement equations. Journal of Fourier Analysis and Applications, 2001, 7, 143-167.	1.0	33
107	Norms Concerning Subdivision Sequences and Their Applications in Wavelets. Applied and Computational Harmonic Analysis, 2001, 11, 329-346.	2.2	25
108	Binomial Matrices. Advances in Computational Mathematics, 2001, 14, 379-391.	1.6	3

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109	The limits of refinable functions. Transactions of the American Mathematical Society, 2001, 353, 1971-1984.	0.9	6
110	Multiple Refinable Hermite Interpolants. Journal of Approximation Theory, 2000, 102, 46-71.	0.8	29
111	Convergence of Subdivision Schemes Associated with Nonnegative Masks. SIAM Journal on Matrix Analysis and Applications, 2000, 21, 418-430.	1.4	28
112	Spectra of subdivision operators. Proceedings of the American Mathematical Society, 2000, 129, 191-202.	0.8	8
113	Smoothness of Multiple Refinable Functions and Multiple Wavelets. SIAM Journal on Matrix Analysis and Applications, 1999, 21, 1-28.	1.4	70
114	Solvability of linear systems of PDEâ€™s with constant coefficients. Proceedings of the American Mathematical Society, 1999, 127, 2013-2017.	0.8	6
115	Global smoothness preservation and the variation-diminishing property. Journal of Inequalities and Applications, 1999, 1999, 126510.	1.1	8
116	Inhomogeneous refinement equations. Journal of Fourier Analysis and Applications, 1998, 4, 733-747.	1.0	28
117	Some Characterizations for Box Spline Wavelets and Linear Diophantine Equations. Rocky Mountain Journal of Mathematics, 1998, 28, 1539.	0.4	4
118	Vector subdivision schemes and multiple wavelets. Mathematics of Computation, 1998, 67, 1533-1564.	2.1	86
119	The p-norm joint spectral radius for even integers. Methods and Applications of Analysis, 1998, 5, 39-54.	0.5	46
120	Approximation by Multiple Refinable Functions. Canadian Journal of Mathematics, 1997, 49, 944-962.	0.6	41
121	Extendibility of Rational Matrices. Journal of Approximation Theory, 1997, 88, 272-274.	0.8	0
122	Existence of multiple refinable distributions.. Michigan Mathematical Journal, 1997, 44, .	0.4	28
123	Stability of Refinable Functions, Multiresolution Analysis, and Haar Bases. SIAM Journal on Mathematical Analysis, 1996, 27, 891-904.	1.9	19
124	Linear dependence relations in wavelets and tilings. Linear Algebra and Its Applications, 1996, 249, 311-323.	0.9	1
125	Characterization Theorems for the Approximation by a Family of Operators. Journal of Approximation Theory, 1996, 84, 145-161.	0.8	12
126	Box Splines with Rational Directions and Linear Diophantine Equations. Journal of Mathematical Analysis and Applications, 1996, 203, 270-277.	1.0	3

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127	Characterisation of correctness of cardinal interpolation with shifted three-directional box splines. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1995, 125, 931-937.	1.2	2
128	On Smoothness Characterized by Bernstein Type Operators. Journal of Approximation Theory, 1995, 81, 303-315.	0.8	31
129	Construction of Real-Valued Wavelets by Symmetry. Journal of Approximation Theory, 1995, 81, 323-331.	0.8	13
130	Local Approximation by Modified SzÃ¡sz Operators. Journal of Mathematical Analysis and Applications, 1995, 195, 323-334.	1.0	0
131	Local smoothness of functions and Bernstein-Durrmeyer operators. Computers and Mathematics With Applications, 1995, 30, 83-101.	2.7	3
132	Order of linear approximation from shift-invariant spaces. Constructive Approximation, 1995, 11, 423-438.	3.0	52
133	On a Problem of Gonska. Results in Mathematics, 1995, 28, 169-183.	0.8	9
134	On wavelets inL 1. Acta Mathematicae Applicatae Sinica, 1994, 10, 69-74.	0.7	0
135	Weighted Approximation by SzÃ¡sz-Mirakjan Operators. Journal of Approximation Theory, 1994, 76, 393-402.	0.8	12
136	Weighted Approximation by Multidimensional Bernstein Operators. Journal of Approximation Theory, 1994, 76, 403-422.	0.8	7
137	A Note on Derivatives of Bernstein Polynomials. Journal of Approximation Theory, 1994, 78, 147-150.	0.8	4
138	A Class of Operators by Means of Three-Diagonal Matrices. Journal of Approximation Theory, 1994, 78, 239-259.	0.8	3
139	On a Paper of Mazhar and Totik. Journal of Approximation Theory, 1993, 72, 290-300.	0.8	19
140	Converse theorems for multidimensional Kantorovich operators. Analysis Mathematica, 1993, 19, 85-100.	0.5	10
141	On a conjecture of Z. Ditzian. Journal of Approximation Theory, 1992, 69, 167-172.	0.8	27
142	Inverse theorems for multidimensional Bernstein-Durrmeyer operators in Lp. Journal of Approximation Theory, 1992, 70, 68-93.	0.8	16
143	Lp-inverse theorems for beta operators. Journal of Approximation Theory, 1991, 66, 279-287.	0.8	4