

Ding-Xuan Zhou

List of Publications by Year in descending order

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143
papers

4,815
citations

117625

34
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106344

65
g-index

145
all docs

145
docs citations

145
times ranked

1431
citing authors

#	ARTICLE	IF	CITATIONS
1	Learning Theory Estimates via Integral Operators and Their Approximations. Constructive Approximation, 2007, 26, 153-172.	3.0	353
2	Universality of deep convolutional neural networks. Applied and Computational Harmonic Analysis, 2020, 48, 787-794.	2.2	258
3	The covering number in learning theory. Journal of Complexity, 2002, 18, 739-767.	1.3	213
4	Learning Rates of Least-Square Regularized Regression. Foundations of Computational Mathematics, 2006, 6, 171-192.	2.5	202
5	Capacity of reproducing kernel spaces in learning theory. IEEE Transactions on Information Theory, 2003, 49, 1743-1752.	2.4	181
6	Shannon sampling and function reconstruction from point values. Bulletin of the American Mathematical Society, 2004, 41, 279-306.	1.5	176
7	ESTIMATING THE APPROXIMATION ERROR IN LEARNING THEORY. Analysis and Applications, 2003, 01, 17-41.	2.2	160
8	Shannon sampling II: Connections to learning theory. Applied and Computational Harmonic Analysis, 2005, 19, 285-302.	2.2	142
9	SVM Soft Margin Classifiers: Linear Programming versus Quadratic Programming. Neural Computation, 2005, 17, 1160-1187.	2.2	140
10	Multi-kernel regularized classifiers. Journal of Complexity, 2007, 23, 108-134.	1.3	134
11	Theory of deep convolutional neural networks: Downsampling. Neural Networks, 2020, 124, 319-327.	5.9	111
12	ONLINE LEARNING WITH MARKOV SAMPLING. Analysis and Applications, 2009, 07, 87-113.	2.2	109
13	Deep distributed convolutional neural networks: Universality. Analysis and Applications, 2018, 16, 895-919.	2.2	104
14	Concentration estimates for learning with $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mi} \rangle \hat{\alpha}, \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle$ -regularized and data dependent hypothesis spaces. Applied and Computational Harmonic Analysis, 2011, 31, 286-302.	2.2	102
15	Approximation with polynomial kernels and SVM classifiers. Advances in Computational Mathematics, 2006, 25, 323-344.	1.6	98
16	Vector subdivision schemes and multiple wavelets. Mathematics of Computation, 1998, 67, 1533-1564.	2.1	86
17	Learning with sample dependent hypothesis spaces. Computers and Mathematics With Applications, 2008, 56, 2896-2907.	2.7	84
18	Derivative reproducing properties for kernel methods in learning theory. Journal of Computational and Applied Mathematics, 2008, 220, 456-463.	2.0	74

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19	Smoothness of Multiple Refinable Functions and Multiple Wavelets. SIAM Journal on Matrix Analysis and Applications, 1999, 21, 1-28.	1.4	70
20	Online Regularized Classification Algorithms. IEEE Transactions on Information Theory, 2006, 52, 4775-4788.	2.4	69
21	Geometry on Probability Spaces. Constructive Approximation, 2009, 30, 311-323.	3.0	58
22	Regularization schemes for minimum error entropy principle. Analysis and Applications, 2015, 13, 437-455.	2.2	58
23	Modeling Language Evolution. Foundations of Computational Mathematics, 2004, 4, 315.	2.5	57
24	Learning theory of distributed spectral algorithms. Inverse Problems, 2017, 33, 074009.	2.0	54
25	Order of linear approximation from shift-invariant spaces. Constructive Approximation, 1995, 11, 423-438.	3.0	52
26	Compactly supported wavelet bases for Sobolev spaces. Applied and Computational Harmonic Analysis, 2003, 15, 224-241.	2.2	52
27	LEARNING BY NONSYMMETRIC KERNELS WITH DATA DEPENDENT SPACES AND. Taiwanese Journal of Mathematics, 2010, 14, .	0.4	49
28	Distributed Kernel-Based Gradient Descent Algorithms. Constructive Approximation, 2018, 47, 249-276.	3.0	47
29	The p -norm joint spectral radius for even integers. Methods and Applications of Analysis, 1998, 5, 39-54.	0.5	46
30	Optimal learning rates for least squares regularized regression with unbounded sampling. Journal of Complexity, 2011, 27, 55-67.	1.3	45
31	Consistency analysis of an empirical minimum error entropy algorithm. Applied and Computational Harmonic Analysis, 2016, 41, 164-189.	2.2	42
32	Approximation by Multiple Refinable Functions. Canadian Journal of Mathematics, 1997, 49, 944-962.	0.6	41
33	Interpolatory orthogonal multiwavelets and refinable functions. IEEE Transactions on Signal Processing, 2002, 50, 520-527.	5.3	39
34	Thresholded spectral algorithms for sparse approximations. Analysis and Applications, 2017, 15, 433-455.	2.2	37
35	L_p solutions of refinement equations. Journal of Fourier Analysis and Applications, 2001, 7, 143-167.	1.0	33
36	Online Pairwise Learning Algorithms. Neural Computation, 2016, 28, 743-777.	2.2	33

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37	On grouping effect of elastic net. <i>Statistics and Probability Letters</i> , 2013, 83, 2108-2112.	0.7	32
38	Concentration estimates for learning with unbounded sampling. <i>Advances in Computational Mathematics</i> , 2013, 38, 207-223.	1.6	32
39	On Smoothness Characterized by Bernstein Type Operators. <i>Journal of Approximation Theory</i> , 1995, 81, 303-315.	0.8	31
40	Unregularized online learning algorithms with general loss functions. <i>Applied and Computational Harmonic Analysis</i> , 2017, 42, 224-244.	2.2	30
41	Multiple Refinable Hermite Interpolants. <i>Journal of Approximation Theory</i> , 2000, 102, 46-71.	0.8	29
42	Inhomogeneous refinement equations. <i>Journal of Fourier Analysis and Applications</i> , 1998, 4, 733-747.	1.0	28
43	Convergence of Subdivision Schemes Associated with Nonnegative Masks. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2000, 21, 418-430.	1.4	28
44	Learning and approximation by Gaussians on Riemannian manifolds. <i>Advances in Computational Mathematics</i> , 2008, 29, 291-310.	1.6	28
45	Learning gradients on manifolds. <i>Bernoulli</i> , 2010, 16, .	1.3	28
46	Existence of multiple refinable distributions.. <i>Michigan Mathematical Journal</i> , 1997, 44, .	0.4	28
47	On a conjecture of Z. Ditzian. <i>Journal of Approximation Theory</i> , 1992, 69, 167-172.	0.8	27
48	Fully online classification by regularization. <i>Applied and Computational Harmonic Analysis</i> , 2007, 23, 198-214.	2.2	26
49	Norms Concerning Subdivision Sequences and Their Applications in Wavelets. <i>Applied and Computational Harmonic Analysis</i> , 2001, 11, 329-346.	2.2	25
50	Density Problem and Approximation Error in Learning Theory. <i>Abstract and Applied Analysis</i> , 2013, 2013, 1-13.	0.7	24
51	Learning gradients by a gradient descent algorithm. <i>Journal of Mathematical Analysis and Applications</i> , 2008, 341, 1018-1027.	1.0	23
52	Deep neural networks for rotation-invariance approximation and learning. <i>Analysis and Applications</i> , 2019, 17, 737-772.	2.2	23
53	Distributed kernel gradient descent algorithm for minimum error entropy principle. <i>Applied and Computational Harmonic Analysis</i> , 2020, 49, 229-256.	2.2	23
54	Learning rates for the risk of kernel-based quantile regression estimators in additive models. <i>Analysis and Applications</i> , 2016, 14, 449-477.	2.2	22

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55	Minimax optimal rates of estimation in high dimensional additive models. <i>Annals of Statistics</i> , 2016, 44, .	2.6	22
56	Convergence of Gradient Descent for Minimum Error Entropy Principle in Linear Regression. <i>IEEE Transactions on Signal Processing</i> , 2016, 64, 6571-6579.	5.3	21
57	Reproducing Kernel Hilbert Spaces Associated with Analytic Translation-Invariant Mercer Kernels. <i>Journal of Fourier Analysis and Applications</i> , 2008, 14, 89-101.	1.0	20
58	On a Paper of Mazhar and Totik. <i>Journal of Approximation Theory</i> , 1993, 72, 290-300.	0.8	19
59	Stability of Refinable Functions, Multiresolution Analysis, and Haar Bases. <i>SIAM Journal on Mathematical Analysis</i> , 1996, 27, 891-904.	1.9	19
60	An empirical feature-based learning algorithm producing sparse approximations. <i>Applied and Computational Harmonic Analysis</i> , 2012, 32, 389-400.	2.2	19
61	Online Learning Algorithms Can Converge Comparably Fast as Batch Learning. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2018, 29, 2367-2378.	11.3	19
62	Data-Dependent Generalization Bounds for Multi-Class Classification. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 2995-3021.	2.4	18
63	Theory of deep convolutional neural networks II: Spherical analysis. <i>Neural Networks</i> , 2020, 131, 154-162.	5.9	18
64	CNN models for readability of Chinese texts. <i>Mathematical Foundations of Computing</i> , 2022, 5, 351.	1.1	18
65	Online regularized learning with pairwise loss functions. <i>Advances in Computational Mathematics</i> , 2017, 43, 127-150.	1.6	17
66	Construction of Neural Networks for Realization of Localized Deep Learning. <i>Frontiers in Applied Mathematics and Statistics</i> , 2018, 4, .	1.3	17
67	Inverse theorems for multidimensional Bernstein-Durrmeyer operators in L_p . <i>Journal of Approximation Theory</i> , 1992, 70, 68-93.	0.8	16
68	Approximation Analysis of Learning Algorithms for Support Vector Regression and Quantile Regression. <i>Journal of Applied Mathematics</i> , 2012, 2012, 1-17.	0.9	16
69	Depth Selection for Deep ReLU Nets in Feature Extraction and Generalization. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2022, 44, 1853-1868.	13.9	16
70	Parzen windows for multi-class classification. <i>Journal of Complexity</i> , 2008, 24, 606-618.	1.3	15
71	Theory of deep convolutional neural networks III: Approximating radial functions. <i>Neural Networks</i> , 2021, 144, 778-790.	5.9	15
72	Self-Similar Lattice Tilings and Subdivision Schemes. <i>SIAM Journal on Mathematical Analysis</i> , 2001, 33, 1-15.	1.9	14

#	ARTICLE	IF	CITATIONS
73	On the robustness of regularized pairwise learning methods based on kernels. Journal of Complexity, 2016, 37, 1-33.	1.3	14
74	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
75	Construction of Real-Valued Wavelets by Symmetry. Journal of Approximation Theory, 1995, 81, 323-331.	0.8	13
76	An approximation theory approach to learning with $\langle \mathbb{m}l:\mathbb{m}ath \mathbb{a}l\mathbb{t}i\mathbb{m}g=\text{"si1.gif"} \mathbb{d}i\mathbb{s}p\mathbb{l}a\mathbb{y}=\text{"i\mathbb{n}l\mathbb{i}\mathbb{n}\mathbb{e}"}$ 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/co	0.8	13
77	Online pairwise learning algorithms with convex loss functions. Information Sciences, 2017, 406-407, 57-70.	6.9	13
78	Weighted Approximation by Szász-Mirakjan Operators. Journal of Approximation Theory, 1994, 76, 393-402.	0.8	12
79	Characterization Theorems for the Approximation by a Family of Operators. Journal of Approximation Theory, 1996, 84, 145-161.	0.8	12
80	Moving least-square method in learning theory. Journal of Approximation Theory, 2010, 162, 599-614.	0.8	12
81	SVM LEARNING AND $L_{p,q}$ APPROXIMATION BY GAUSSIANS ON RIEMANNIAN MANIFOLDS. Analysis and Applications, 2009, 07, 309-339.	2.2	11
82	High order Parzen windows and randomized sampling. Advances in Computational Mathematics, 2009, 31, 349-368.	1.6	11
83	Online learning for quantile regression and support vector regression. Journal of Statistical Planning and Inference, 2012, 142, 3107-3122.	0.6	11
84	Error bounds for learning the kernel. Analysis and Applications, 2016, 14, 849-868.	2.2	11
85	Convergence of online mirror descent. Applied and Computational Harmonic Analysis, 2020, 48, 343-373.	2.2	11
86	Converse theorems for multidimensional Kantorovich operators. Analysis Mathematica, 1993, 19, 85-100.	0.5	10
87	On a Problem of Gonska. Results in Mathematics, 1995, 28, 169-183.	0.8	9
88	Gradient learning in a classification setting by gradient descent. Journal of Approximation Theory, 2009, 161, 674-692.	0.8	9
89	Optimal learning rates for distribution regression. Journal of Complexity, 2020, 56, 101426.	1.3	9
90	Learning with varying insensitive loss. Applied Mathematics Letters, 2011, 24, 2107-2109.	2.7	8

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91	Analysis of Online Composite Mirror Descent Algorithm. <i>Neural Computation</i> , 2017, 29, 825-860.	2.2	8
92	Spectra of subdivision operators. <i>Proceedings of the American Mathematical Society</i> , 2000, 129, 191-202.	0.8	8
93	Global smoothness preservation and the variation-diminishing property. <i>Journal of Inequalities and Applications</i> , 1999, 1999, 126510.	1.1	8
94	Weighted Approximation by Multidimensional Bernstein Operators. <i>Journal of Approximation Theory</i> , 1994, 76, 403-422.	0.8	7
95	Extinction Probability of Interacting Branching Collision Processes. <i>Advances in Applied Probability</i> , 2012, 44, 226-259.	0.7	7
96	Learning Theory of Randomized Sparse Kaczmarz Method. <i>SIAM Journal on Imaging Sciences</i> , 2018, 11, 547-574.	2.2	7
97	Total stability of kernel methods. <i>Neurocomputing</i> , 2018, 289, 101-118.	5.9	7
98	Universal Consistency of Deep Convolutional Neural Networks. <i>IEEE Transactions on Information Theory</i> , 2022, 68, 4610-4617.	2.4	7
99	Moreau Envelope Augmented Lagrangian Method for Nonconvex Optimization with Linear Constraints. <i>Journal of Scientific Computing</i> , 2022, 91, .	2.3	7
100	The limits of refinable functions. <i>Transactions of the American Mathematical Society</i> , 2001, 353, 1971-1984.	0.9	6
101	Learning Theory: From Regression to Classification. <i>Studies in Computational Mathematics</i> , 2006, , 257-290.	0.2	6
102	Hermite learning with gradient data. <i>Journal of Computational and Applied Mathematics</i> , 2010, 233, 3046-3059.	2.0	6
103	Solvability of linear systems of PDEs with constant coefficients. <i>Proceedings of the American Mathematical Society</i> , 1999, 127, 2013-2017.	0.8	6
104	Generalization Analysis of CNNs for Classification on Spheres. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2023, 34, 6200-6213.	11.3	6
105	Mean size of wavelet packets. <i>Applied and Computational Harmonic Analysis</i> , 2002, 13, 22-34.	2.2	5
106	Optimal Learning Rates for Kernel Partial Least Squares. <i>Journal of Fourier Analysis and Applications</i> , 2018, 24, 908-933.	1.0	5
107	Modified Fejér sequences and applications. <i>Computational Optimization and Applications</i> , 2018, 71, 95-113.	1.6	5
108	Distributed Filtered Hyperinterpolation for Noisy Data on the Sphere. <i>SIAM Journal on Numerical Analysis</i> , 2021, 59, 634-659.	2.3	5

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109	Robust kernel-based distribution regression. <i>Inverse Problems</i> , 2021, 37, 105014.	2.0	5
110	Lp-inverse theorems for beta operators. <i>Journal of Approximation Theory</i> , 1991, 66, 279-287.	0.8	4
111	A Note on Derivatives of Bernstein Polynomials. <i>Journal of Approximation Theory</i> , 1994, 78, 147-150.	0.8	4
112	Some Characterizations for Box Spline Wavelets and Linear Diophantine Equations. <i>Rocky Mountain Journal of Mathematics</i> , 1998, 28, 1539.	0.4	4
113	Two-Scale Homogeneous Functions in Wavelet Analysis. <i>Journal of Fourier Analysis and Applications</i> , 2002, 8, 565-580.	1.0	4
114	Simultaneous approximation by Bernstein operators in Hölder norms. <i>Mathematische Nachrichten</i> , 2013, 286, 349-359.	0.8	4
115	Analysis of Approximation by Linear Operators on Variable $L_{p(\cdot)}$ Spaces and Applications in Learning Theory. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-10.	0.7	4
116	Learning Theory Approach to a System Identification Problem Involving Atomic Norm. <i>Journal of Fourier Analysis and Applications</i> , 2015, 21, 734-753.	1.0	4
117	Deep Net Tree Structure for Balance of Capacity and Approximation Ability. <i>Frontiers in Applied Mathematics and Statistics</i> , 2019, 5, .	1.3	4
118	Kernel gradient descent algorithm for information theoretic learning. <i>Journal of Approximation Theory</i> , 2021, 263, 105518.	0.8	4
119	A Class of Operators by Means of Three-Diagonal Matrices. <i>Journal of Approximation Theory</i> , 1994, 78, 239-259.	0.8	3
120	Local smoothness of functions and Bernstein-Durrmeyer operators. <i>Computers and Mathematics With Applications</i> , 1995, 30, 83-101.	2.7	3
121	Box Splines with Rational Directions and Linear Diophantine Equations. <i>Journal of Mathematical Analysis and Applications</i> , 1996, 203, 270-277.	1.0	3
122	Binomial Matrices. <i>Advances in Computational Mathematics</i> , 2001, 14, 379-391.	1.6	3
123	Properties of locally linearly independent refinable function vectors. <i>Journal of Approximation Theory</i> , 2003, 122, 24-41.	0.8	3
124	Approximation on variable exponent spaces by linear integral operators. <i>Journal of Approximation Theory</i> , 2017, 223, 29-51.	0.8	3
125	Analysis of Singular Value Thresholding Algorithm for Matrix Completion. <i>Journal of Fourier Analysis and Applications</i> , 2019, 25, 2957-2972.	1.0	3
126	Distributed regularized least squares with flexible Gaussian kernels. <i>Applied and Computational Harmonic Analysis</i> , 2021, 53, 349-377.	2.2	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	Title is missing!. Advances in Computational Mathematics, 2002, 17, 257-268.	1.6	2
129	Machine Learning Algorithms. , 2015, , 839-841.		2
130	Convergence of spectral clustering with a general similarity function. Scientia Sinica Mathematica, 2012, 42, 985-994.	0.2	2
131	Linear dependence relations in wavelets and tilings. Linear Algebra and Its Applications, 1996, 249, 311-323.	0.9	1
132	Refinable Functions: Positivity and Interpolation. Analysis and Applications, 2003, 01, 243-264.	2.2	1
133	Online Classification with Varying Gaussians. Studies in Applied Mathematics, 2010, 124, 65-83.	2.4	1
134	Asymptotic Behaviour of Extinction Probability of Interacting Branching Collision Processes. Journal of Applied Probability, 2014, 51, 219-234.	0.7	1
135	Learning Theory. Abstract and Applied Analysis, 2014, 2014, 1-2.	0.7	1
136	Learning Theory and Approximation. Oberwolfach Reports, 2017, 13, 1875-1941.	0.0	1
137	On wavelets in L^1 . Acta Mathematicae Applicatae Sinica, 1994, 10, 69-74.	0.7	0
138	Local Approximation by Modified Szász Operators. Journal of Mathematical Analysis and Applications, 1995, 195, 323-334.	1.0	0
139	Extendibility of Rational Matrices. Journal of Approximation Theory, 1997, 88, 272-274.	0.8	0
140	Non-uniform Randomized Sampling for Multivariate Approximation by High Order Parzen Windows. Canadian Mathematical Bulletin, 2011, 54, 566-576.	0.5	0
141	Normal estimation on manifolds by gradient learning. Numerical Linear Algebra With Applications, 2011, 18, 249-259.	1.6	0
142	Asymptotic Behaviour of Extinction Probability of Interacting Branching Collision Processes. Journal of Applied Probability, 2014, 51, 219-234.	0.7	0
143	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