

Helmut Boelcskei

List of Publications by Year in descending order

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47
papers

2,985
citations

331538

21
h-index

276775

41
g-index

48
all docs

48
docs citations

48
times ranked

2445
citing authors

#	ARTICLE	IF	CITATIONS
1	Neural Network Identifiability for a Family of Sigmoidal Nonlinearities. <i>Constructive Approximation</i> , 2022, 55, 173-224.	1.8	3
2	Canonical Conditions for $K/2$ Degrees of Freedom. <i>IEEE Transactions on Information Theory</i> , 2022, 68, 1716-1730.	1.5	1
3	Affine symmetries and neural network identifiability. <i>Advances in Mathematics</i> , 2021, 376, 107485.	0.5	3
4	Deep Neural Network Approximation Theory. <i>IEEE Transactions on Information Theory</i> , 2021, 67, 2581-2623.	1.5	67
5	High-dimensional distribution generation through deep neural networks. <i>SN Partial Differential Equations and Applications</i> , 2021, 2, 1.	0.3	1
6	Metric entropy limits on recurrent neural network learning of linear dynamical systems. <i>Applied and Computational Harmonic Analysis</i> , 2021, , .	1.1	1
7	Lossless Analog Compression. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 7480-7513.	1.5	8
8	Optimal Approximation with Sparsely Connected Deep Neural Networks. <i>SIAM Journal on Mathematics of Data Science</i> , 2019, 1, 8-45.	1.0	129
9	Vandermonde matrices with nodes in the unit disk and the large sieve. <i>Applied and Computational Harmonic Analysis</i> , 2019, 47, 53-86.	1.1	20
10	Energy Propagation in Deep Convolutional Neural Networks. <i>IEEE Transactions on Information Theory</i> , 2018, 64, 4819-4842.	1.5	10
11	A Mathematical Theory of Deep Convolutional Neural Networks for Feature Extraction. <i>IEEE Transactions on Information Theory</i> , 2018, 64, 1845-1866.	1.5	212
12	Noisy Subspace Clustering via Matching Pursuits. <i>IEEE Transactions on Information Theory</i> , 2018, 64, 4081-4104.	1.5	16
13	A Theory of Super-Resolution from Short-Time Fourier Transform Measurements. <i>Journal of Fourier Analysis and Applications</i> , 2018, 24, 45-107.	0.5	14
14	Robust Nonparametric Nearest Neighbor Random Process Clustering. <i>IEEE Transactions on Signal Processing</i> , 2017, 65, 6009-6023.	3.2	3
15	Almost Lossless Analog Signal Separation and Probabilistic Uncertainty Relations. <i>IEEE Transactions on Information Theory</i> , 2017, 63, 5445-5460.	1.5	8
16	Dimensionality-reduced subspace clustering. <i>Information and Inference</i> , 2017, 6, 246-283.	0.9	25
17	Characterizing Degrees of Freedom Through Additive Combinatorics. <i>IEEE Transactions on Information Theory</i> , 2016, 62, 6423-6435.	1.5	3
18	Lossless linear analog compression. , 2016, , .		2

#	ARTICLE	IF	CITATIONS
19	Deep convolutional neural networks on cartoon functions. , 2016, , .		8
20	Degrees of Freedom in Vector Interference Channels. IEEE Transactions on Information Theory, 2016, 62, 4172-4197.	1.5	13
21	Deep convolutional neural networks based on semi-discrete frames. , 2015, , .		12
22	Information-theoretic limits of matrix completion. , 2015, , .		12
23	Robust Subspace Clustering via Thresholding. IEEE Transactions on Information Theory, 2015, 61, 6320-6342.	1.5	100
24	Time-Frequency Foundations of Communications: Concepts and Tools. IEEE Signal Processing Magazine, 2013, 30, 87-96.	4.6	71
25	Capacity Pre-Log of Noncoherent SIMO Channels Via Hironaka's Theorem. IEEE Transactions on Information Theory, 2013, 59, 4213-4229.	1.5	31
26	Identification of Sparse Linear Operators. IEEE Transactions on Information Theory, 2013, 59, 7985-8000.	1.5	30
27	On the Sensitivity of Continuous-Time Noncoherent Fading Channel Capacity. IEEE Transactions on Information Theory, 2012, 58, 6372-6391.	1.5	78
28	Diversity-Multiplexing Tradeoff in Two-User Fading Interference Channels. IEEE Transactions on Information Theory, 2012, 58, 4462-4480.	1.5	7
29	Uncertainty Relations and Sparse Signal Recovery for Pairs of General Signal Sets. IEEE Transactions on Information Theory, 2012, 58, 263-277.	1.5	30
30	Recovery of Sparsely Corrupted Signals. IEEE Transactions on Information Theory, 2012, 58, 3115-3130.	1.5	167
31	Algorithms for Interpolation-Based QR Decomposition in MIMO-OFDM Systems. IEEE Transactions on Signal Processing, 2011, 59, 1719-1733.	3.2	22
32	On the Complexity Distribution of Sphere Decoding. IEEE Transactions on Information Theory, 2011, 57, 5754-5768.	1.5	40
33	Information-Theoretic Analysis of MIMO Channel Sounding. IEEE Transactions on Information Theory, 2011, 57, 7555-7577.	1.5	13
34	Sparse signal recovery from sparsely corrupted measurements. , 2011, , .		6
35	Compressive identification of linear operators. , 2011, , .		5
36	Performance and Complexity Analysis of Infinity-Norm Sphere-Decoding. IEEE Transactions on Information Theory, 2010, 56, 1085-1105.	1.5	27

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37	QR Decomposition of Laurent Polynomial Matrices Sampled on the Unit Circle. IEEE Transactions on Information Theory, 2010, 56, 4754-4761.	1.5	17
38	Soft-Input Soft-Output Single Tree-Search Sphere Decoding. IEEE Transactions on Information Theory, 2010, 56, 4827-4842.	1.5	172
39	Block-Sparse Signals: Uncertainty Relations and Efficient Recovery. IEEE Transactions on Signal Processing, 2010, 58, 3042-3054.	3.2	1,009
40	Capacity bounds for peak-constrained multiantenna wideband channels. IEEE Transactions on Communications, 2009, 57, 2686-2696.	4.9	9
41	Soft-output sphere decoding: algorithms and VLSI implementation. IEEE Journal on Selected Areas in Communications, 2008, 26, 290-300.	9.7	297
42	Ultrawideband Channel Modeling on the Basis of Information-Theoretic Criteria. IEEE Transactions on Wireless Communications, 2007, 6, 2464-2475.	6.1	95
43	Crystallization in Large Wireless Networks. IEEE Transactions on Information Theory, 2007, 53, 3319-3349.	1.5	82
44	Orthogonalization of OFDM/OQAM pulse shaping filters using the discrete Zak transform. Signal Processing, 2003, 83, 1379-1391.	2.1	44
45	Title is missing!. Wireless Personal Communications, 2002, 23, 31-44.	1.8	5
46	Gabor frames, unimodularity, and window decay. Journal of Fourier Analysis and Applications, 2000, 6, 255-276.	0.5	38
47	A necessary and sufficient condition for dual Weyl-Heisenberg frames to be compactly supported. Journal of Fourier Analysis and Applications, 1999, 5, 409-419.	0.5	19