Sergio VerdÃo

List of Publications by Year in descending order

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109321 110387 8,352 128 35 64 citations g-index h-index papers 128 128 128 4113 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Optimal Universal Lossless Compression with Side Information. IEEE Transactions on Information Theory, 2024, , 1 -1.	2.4	O
2	Error Exponents and α-Mutual Information. Entropy, 2021, 23, 199.	2.2	5
3	The Error Probability of Generalized Perfect Codes via the Meta-Converse. IEEE Transactions on Information Theory, 2019, 65, 5705-5717.	2.4	4
4	Sharp Bounds for Mutual Covering. IEEE Transactions on Information Theory, 2019, 65, 8067-8083.	2.4	1
5	Conditional Rényi Divergence Saddlepoint and the Maximization of α-Mutual Information. Entropy, 2019, 21, 969.	2.2	11
6	Arimoto–Rényi Conditional Entropy and Bayesian \$M\$ -Ary Hypothesis Testing. IEEE Transactions on Information Theory, 2018, 64, 4-25.	2.4	49
7	Improved Bounds on Lossless Source Coding and Guessing Moments via Rényi Measures. IEEE Transactions on Information Theory, 2018, 64, 4323-4346.	2.4	45
8	Minimax RÃ@nyi Redundancy. IEEE Transactions on Information Theory, 2018, 64, 3715-3733.	2.4	4
9	A Single-Shot Approach to Lossy Source Coding Under Logarithmic Loss. IEEE Transactions on Information Theory, 2018, 64, 129-147.	2.4	15
10	Universal Compression, List Decoding, and Logarithmic Loss. , 2018, , .		2
11	Non-Asymptotic Bounds for Optimal Fixed-to-Variable Lossless Compression without Prefix Constraints. , 2018, , .		0
12	A Coding Theorem for f-Separable Distortion Measures. Entropy, 2018, 20, 111.	2.2	4
13	A Forward-Reverse Brascamp-Lieb Inequality: Entropic Duality and Gaussian Optimality. Entropy, 2018, 20, 418.	2.2	12
14	Improved Bounds on Guessing Moments via Rényi Measures. , 2018, , .		0
15	Universal lossy compression under logarithmic loss. , 2017, , .		13
16	Secret Key Generation With Limited Interaction. IEEE Transactions on Information Theory, 2017, 63, 7358-7381.	2.4	23
17	On α-decodability and α-likelihood decoder. , 2017, , .		15
18	Arimoto-Rényi conditional entropy and Bayesian hypothesis testing. , 2017, , .		О

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19	Smoothing Brascamp-Lieb inequalities and strong converses for common randomness generation. , 2016, , .		8
20	Estimation of entropy rate and Rényi entropy rate for Markov chains. , 2016, , .		4
21	Energy efficiency of wireless cooperation., 2016,,.		1
22	f-Divergence inequalities via functional domination. , 2016, , .		0
23	\$f\$ -Divergence Inequalities. IEEE Transactions on Information Theory, 2016, 62, 5973-6006.	2.4	171
24	Brascamp-Lieb inequality and its reverse: An information theoretic view. , $2016, , .$		14
25	Convexity/concavity of renyi entropy and α-mutual information. , 2015, , .		25
26	α-mutual information. , 2015, , .		39
27	Upper bounds on the relative entropy and RÃ @nyi divergence as a function of total variation distance for finite alphabets. , 2015, , .		7
28	Information Dimension and the Degrees of Freedom of the Interference Channel. IEEE Transactions on Information Theory, 2015, 61, 256-279.	2.4	26
29	Approaching the DT Bound Using Linear Codes in the Short Blocklength Regime. IEEE Communications Letters, 2015, 19, 123-126.	4.1	2
30	Channels With Cost Constraints: Strong Converse and Dispersion. IEEE Transactions on Information Theory, 2015, 61, 2415-2429.	2.4	18
31	Variable-Length Compression Allowing Errors. IEEE Transactions on Information Theory, 2015, 61, 4316-4330.	2.4	31
32	Cumulant generating function of codeword lengths in optimal lossless compression. , 2014, , .		29
33	Optimal Lossless Data Compression: Non-Asymptotics and Asymptotics. IEEE Transactions on Information Theory, 2014, 60, 777-795.	2.4	90
34	Empirical Distribution of Good Channel Codes With Nonvanishing Error Probability. IEEE Transactions on Information Theory, 2014, 60, 5-21.	2.4	33
35	Total variation distance and the distribution of relative information. , 2014, , .		21
36	Variable-length lossy compression and channel coding: Non-asymptotic converses via cumulant generating functions. , 2014 , , .		10

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37	Lossy Joint Source-Channel Coding in the Finite Blocklength Regime. IEEE Transactions on Information Theory, 2013, 59, 2545-2575.	2.4	101
38	Nonasymptotic noisy lossy source coding., 2013,,.		3
39	Support Recovery With Sparsely Sampled Free Random Matrices. IEEE Transactions on Information Theory, 2013, 59, 4243-4271.	2.4	101
40	Optimal lossless compression: Source varentropy and dispersion. , 2013, , .		8
41	Channels with cost constraints: Strong converse and dispersion. , 2013, , .		3
42	Lossless data compression rate: Asymptotics and non-asymptotics. , 2012, , .		9
43	To code or not to code: Revisited. , 2012, , .		4
44	Optimal Phase Transitions in Compressed Sensing. IEEE Transactions on Information Theory, 2012, 58, 6241-6263.	2.4	91
45	A new converse in rate-distortion theory. , 2012, , .		11
46	Functional Properties of Minimum Mean-Square Error and Mutual Information. IEEE Transactions on Information Theory, 2012, 58, 1289-1301.	2.4	97
47	Energy-Distortion Tradeoffs in Gaussian Joint Source-Channel Coding Problems. IEEE Transactions on Information Theory, 2012, 58, 3153-3168.	2.4	42
48	Fixed-Length Lossy Compression in the Finite Blocklength Regime. IEEE Transactions on Information Theory, 2012, 58, 3309-3338.	2.4	165
49	Relative entropy at the channel output of a capacity-achieving code. , 2011, , .		5
50	Fixed-length lossy compression in the finite blocklength regime: Discrete memoryless sources. , $2011,$, .		8
51	Scalar coherent fading channel: Dispersion analysis. , 2011, , .		56
52	Multicasting in Large Wireless Networks: Bounds on the Minimum Energy Per Bit. IEEE Transactions on Information Theory, 2011, 57, 14-32.	2.4	10
53	Estimation in Gaussian Noise: Properties of the Minimum Mean-Square Error. IEEE Transactions on Information Theory, 2011, 57, 2371-2385.	2.4	186
54	Dispersion of the Gilbert-Elliott Channel. IEEE Transactions on Information Theory, 2011, 57, 1829-1848.	2.4	77

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55	Operational Duality Between Lossy Compression and Channel Coding. IEEE Transactions on Information Theory, 2011, 57, 3171-3179.	2.4	23
56	Minimum Expected Length of Fixed-to-Variable Lossless Compression Without Prefix Constraints. IEEE Transactions on Information Theory, 2011, 57, 4017-4025.	2.4	41
57	Feedback in the Non-Asymptotic Regime. IEEE Transactions on Information Theory, 2011, 57, 4903-4925.	2.4	174
58	MMSE Dimension. IEEE Transactions on Information Theory, 2011, 57, 4857-4879.	2.4	81
59	Minimum Energy to Send \$k\$ Bits Through the Gaussian Channel With and Without Feedback. IEEE Transactions on Information Theory, 2011, 57, 4880-4902.	2.4	46
60	Derivative of Mutual Information at Zero SNR: The Gaussian-Noise Case. IEEE Transactions on Information Theory, 2011, 57, 7307-7312.	2.4	4
61	Energy Efficiency of Decode-and-Forward for Wideband Wireless Multicasting. IEEE Transactions on Information Theory, 2011, 57, 7695-7713.	2.4	7
62	Fixed-length lossy compression in the finite blocklength regime: Gaussian source. , $2011, \ldots$		3
63	Witsenhausen's counterexample: A view from optimal transport theory. , 2011, , .		38
64	Degrees of freedom of the interference channel: A general formula. , 2011, , .		33
65	Capacity of Channels With Frequency-Selective and Time-Selective Fading. IEEE Transactions on Information Theory, 2010, 56, 1187-1215.	2.4	95
66	MIMO Gaussian Channels With Arbitrary Inputs: Optimal Precoding and Power Allocation. IEEE Transactions on Information Theory, 2010, 56, 1070-1084.	2.4	188
67	A Universal Scheme for Wyner–Ziv Coding of Discrete Sources. IEEE Transactions on Information Theory, 2010, 56, 1737-1750.	2.4	8
68	Channel Coding Rate in the Finite Blocklength Regime. IEEE Transactions on Information Theory, 2010, 56, 2307-2359.	2.4	2,397
69	Variable-Rate Channel Capacity. IEEE Transactions on Information Theory, 2010, 56, 2651-2667.	2.4	52
70	Mismatched Estimation and Relative Entropy. IEEE Transactions on Information Theory, 2010, 56, 3712-3720.	2.4	67
71	Rényi Information Dimension: Fundamental Limits of Almost Lossless Analog Compression. IEEE Transactions on Information Theory, 2010, 56, 3721-3748.	2.4	130
72	On the Interplay Between Conditional Entropy and Error Probability. IEEE Transactions on Information Theory, 2010, 56, 5930-5942.	2.4	65

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73	Arimoto channel coding converse and Rényi divergence. , 2010, , .		82
74	Channel dispersion and moderate deviations limits for memoryless channels., 2010,,.		50
75	MMSE dimension., 2010,,.		5
76	The impact of constellation cardinality on Gaussian channel capacity. , 2010, , .		48
77	Energy efficient lossy transmission over sensor networks with feedback. , 2010, , .		7
78	Energy-distortion tradeoffs in multiple-access channels with feedback. , 2010, , .		3
79	Functional properties of MMSE., 2010, , .		18
80	Minimum energy to send k bits with and without feedback. , 2010, , .		14
81	Minimum Energy per Bit for Wideband Wireless Multicasting: Performance of Decode-and-Forward., 2010,,.		6
82	Energy-distortion tradeoff with multiple sources and feedback. , 2010, , .		0
83	Variable-length coding with feedback in the non-asymptotic regime. , 2010, , .		9
84	Operational duality between Gelfand-Pinsker and Wyner-Ziv coding. , 2010, , .		3
85	Minimum energy per bit for Gaussian broadcast channels with common message and cooperating receivers., 2009,,.		13
86	Dispersion of Gaussian channels., 2009,,.		74
87	Fundamental limits of almost lossless analog compression. , 2009, , .		5
88	Multicasting in large random wireless networks: Bounds on the minimum energy per bit. , 2009, , .		4
89	Dispersion of the Gilbert-Elliott channel., 2009,,.		10
90	Universal Estimation of Erasure Entropy. IEEE Transactions on Information Theory, 2009, 55, 350-357.	2.4	4

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91	Capacity of Cognitive Interference Channels With and Without Secrecy. IEEE Transactions on Information Theory, 2009, 55, 604-619.	2.4	143
92	Nonlinear Sparse-Graph Codes for Lossy Compression. IEEE Transactions on Information Theory, 2009, 55, 1961-1975.	2.4	37
93	Divergence Estimation for Multidimensional Densities Via \$k\$-Nearest-Neighbor Distances. IEEE Transactions on Information Theory, 2009, 55, 2392-2405.	2.4	205
94	Minimum expected length of fixed-to-variable lossless compression of memoryless sources. , 2009, , .		2
95	Mismatched estimation and relative entropy. , 2009, , .		7
96	Universal Estimation of Information Measures for Analog Sources. Foundations and Trends in Communications and Information Theory, 2009, 5, 265-353.	3.1	37
97	Optimum Power Allocation for Multiuser OFDM with Arbitrary Signal Constellations. IEEE Transactions on Communications, 2008, 56, 828-837.	7.8	59
98	Lautum Information. IEEE Transactions on Information Theory, 2008, 54, 964-975.	2.4	33
99	Universal Lossless Compression of Erased Symbols. IEEE Transactions on Information Theory, 2008, 54, 5563-5574.	2.4	0
100	Universal Algorithms for Channel Decoding of Uncompressed Sources. IEEE Transactions on Information Theory, 2008, 54, 2243-2262.	2.4	17
101	Mutual Information and Conditional Mean Estimation in Poisson Channels. IEEE Transactions on Information Theory, 2008, 54, 1837-1849.	2.4	81
102	Cooperative Multiple-Access Encoding With States Available at One Transmitter. IEEE Transactions on Information Theory, 2008, 54, 4448-4469.	2.4	101
103	The Information Lost in Erasures. IEEE Transactions on Information Theory, 2008, 54, 5030-5058.	2.4	52
104	Rate-distortion in near-linear time. , 2008, , .		28
105	Estimation of non-Gaussian random variables in Gaussian noise: Properties of the MMSE., 2008,,.		38
106	New channel coding achievability bounds. , 2008, , .		17
107	Conditional entropy and error probability. , 2008, , .		3
108	Nonlinear Sparse-Graph Codes for Lossy Compression of Discrete Nonredundant Sources., 2007,,.		11

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109	A Universal Wyner-Ziv Scheme for Discrete Sources. , 2007, , .		5
110	Representation of Mutual Information Via Input Estimates. IEEE Transactions on Information Theory, 2007, 53, 453-470.	2.4	49
111	Fountain Capacity. IEEE Transactions on Information Theory, 2007, 53, 4372-4376.	2.4	22
112	Proof of Entropy Power Inequalities Via MMSE. , 2006, , .		32
113	Erasure Entropy., 2006, , .		12
114	A Nearest-Neighbor Approach to Estimating Divergence between Continuous Random Vectors. , 2006, , .		47
115	Universal Erasure Entropy Estimation. , 2006, , .		6
116	Canonical time-frequency, time-scale, and frequency-scale representations of time-varying channels. Communications in Information and Systems, 2005, 5, 197-226.	0.5	17
117	Random Matrix Theory and Wireless Communications. Foundations and Trends in Communications and Information Theory, 2004, 1, $1-182$.	3.1	1,319
118	A "Small World" Approach to Heterogeneous Networks. Communications in Information and Systems, 2003, 3, 325-348.	0.5	4
119	Multiuser Detection for Out-of-Cell Cochannel Interference Mitigation in the IS–95 Downlink. Journal of Signal Processing Systems, 2002, 30, 217-233.	1.0	O
120	On the transport capacity of a broadcast Gaussian channel. Communications in Information and Systems, 2002, 2, 183-216.	0.5	10
121	Linear Differentially Coherent Multiuser Detection for Multipath Channels. Wireless Personal Communications, 1998, 6, 113-136.	2.7	30
122	Analysis of an Approximate Decorrelating Detector. Wireless Personal Communications, 1998, 6, 97-111.	2.7	27
123	Eavesdropper performance in cellular CDMA. European Transactions on Telecommunications, 1998, 9, 379-389.	1.2	4
124	Capacity of channels with uncoded side information. European Transactions on Telecommunications, 1995, 6, 587-600.	1.2	56
125	Computational complexity of optimum multiuser detection. Algorithmica, 1989, 4, 303-312.	1.3	273
126	Asymptotic efficiency of linear multiuser detectors. , 1986, , .		10

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127	Optimum multi-user detection with point-process observations. , 1985, , .		33
128	Backward, forward and backward-forward dynamic programming models under commutativity conditions. , $1984, \ldots$		9