Vincent Y F Tan

List of Publications by Year
in descending order

155 papers	2,380 citations	304743 22 h-index	243625 44 g-index
157 all docs	157 docs citations	157 times ranked	2713 citing authors

#	Article	IF	Citations
1	On Smooth RÃ©nyi Entropies: A Novel Information Measure, One-Shot Coding Theorems, and Asymptotic Expansions. IEEE Transactions on Information Theory, 2022, 68, 1496-1531.	2.4	3
2	Asymptotics of Sequential Composite Hypothesis Testing Under Probabilistic Constraints. IEEE Transactions on Information Theory, 2022, 68, 4998-5012.	2.4	1
3	Mc2g: An Efficient Algorithm for Matrix Completion With Social and Item Similarity Graphs. IEEE Transactions on Signal Processing, 2022, 70, 2681-2697.	5.3	2
4	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. Communications in Mathematical Physics, 2022, 392, 993-1027.	2.2	5
5	On the Capacity of Channels With Deletions and States. IEEE Transactions on Information Theory, 2021, 67, 2663-2679.	2.4	4
6	Adversarially-Trained Nonnegative Matrix Factorization. IEEE Signal Processing Letters, 2021, 28, 1415-1419.	3.6	3
7	Positive Semidefinite Matrix Factorization: A Connection With Phase Retrieval and Affine Rank Minimization. IEEE Transactions on Signal Processing, 2021, 69, 3059-3074.	5.3	2
8	Distributionally Robust and Multi-Objective Nonnegative Matrix Factorization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	13.9	3
9	On Non-Interactive Simulation of Binary Random Variables. IEEE Transactions on Information Theory, 2021, 67, 2528-2538.	2.4	5
10	Sequential Classification With Empirically Observed Statistics. IEEE Transactions on Information Theory, 2021, 67, 3095-3113.	2.4	7
11	Analysis of Optimization Algorithms via Sum-of-Squares. Journal of Optimization Theory and Applications, 2021, 190, 56-81.	1.5	1
12	Asymptotics of Sequential Composite Hypothesis Testing under Probabilistic Constraints. , 2021, , .		2
13	On the Feed-Forward Rate-Distortion Function for Stationary and Ergodic Sources. , 2021, , .		0
14	Covert Identification Over Binary-Input Discrete Memoryless Channels. IEEE Transactions on Information Theory, 2021, 67, 5387-5403.	2.4	4
15	State Masking Over a Two-State Compound Channel. IEEE Transactions on Information Theory, 2021, 67, 5651-5673.	2.4	1
16	Optimal Change-Point Detection With Training Sequences in the Large and Moderate Deviations Regimes. IEEE Transactions on Information Theory, 2021, 67, 6758-6784.	2.4	4
17	Community Detection and Matrix Completion With Social and Item Similarity Graphs. IEEE Transactions on Signal Processing, 2021, 69, 917-931.	5.3	10
18	Third-Order Asymptotics of Variable-Length Compression Allowing Errors. IEEE Transactions on Information Theory, 2021, 67, 7708-7722.	2.4	2

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19	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. , 2021, , .		3
20	Distributed Sequential Hypothesis Testing With Zero-Rate Compression. , 2021, , .		5
21	Exact Error and Erasure Exponents for the Asymmetric Broadcast Channel. IEEE Transactions on Information Theory, 2020, 66, 865-885.	2.4	1
22	Exact Channel Synthesis. IEEE Transactions on Information Theory, 2020, 66, 2799-2818.	2.4	5
23	Throughput Scaling of Covert Communication Over Wireless Adhoc Networks. IEEE Transactions on Information Theory, 2020, 66, 7684-7701.	2.4	9
24	The Bee-Identification Error Exponent With Absentee Bees. IEEE Transactions on Information Theory, 2020, 66, 7602-7614.	2.4	4
25	Variable-Length Source Dispersions Differ Under Maximum and Average Error Criteria. IEEE Transactions on Information Theory, 2020, 66, 7565-7587.	2.4	6
26	Second- and Third-Order Asymptotics of the Continuous-Time Poisson Channel. IEEE Transactions on Information Theory, 2020, 66, 4742-4760.	2.4	2
27	On the Second- and Third-Order Asymptotics of Smooth RÃ©nyi Entropy and Their Applications. , 2020, , .		0
28	Second-Order Asymptotics of Sequential Hypothesis Testing. , 2020, , .		2
29	Bee-Identification Error Exponent with Absentee Bees. , 2020, , .		0
30	On Exact and âˆž-RÃ©nyi Common Informations. IEEE Transactions on Information Theory, 2020, 66, 3366-3406.	2.4	9
31	Second-Order Asymptotics of Sequential Hypothesis Testing. IEEE Transactions on Information Theory, 2020, 66, 7222-7230.	2.4	9
32	Distributed Detection With Empirically Observed Statistics. IEEE Transactions on Information Theory, 2020, 66, 4349-4367.	2.4	10
33	Corrections to â€œWynerâ€™s Common Information Under RÃ©nyi Divergence Measuresâ€•[May 18 3616-3632]. IEEE Transactions on Information Theory, 2020, 66, 2599-2608.	2.4	2
34	On the Capacity of Deletion Channels with States. , 2020, , .		1
35	Exact Asymptotics for Learning Tree-Structured Graphical Models With Side Information: Noiseless and Noisy Samples. IEEE Journal on Selected Areas in Information Theory, 2020, 1, 760-776.	2.5	3
36	Asymptotic Coupling and Its Applications in Information Theory. IEEE Transactions on Information Theory, 2019, 65, 1321-1344.	2.4	8

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37	On the Throughput of Channels That Wear Out. IEEE Transactions on Communications, 2019, 67, 5311-5320.	7.8	2
38	The Dispersion of Mismatched Joint Source-Channel Coding for Arbitrary Sources and Additive Channels. IEEE Transactions on Information Theory, 2019, 65, 2234-2251.	2.4	6
39	The Informativeness of k -Means for Learning Mixture Models. IEEE Transactions on Information Theory, 2019, 65, 7460-7479.	2.4	0
40	Moderate Deviation Asymptotics for Variable-Length Codes With Feedback. IEEE Transactions on Information Theory, 2019, 65, 4364-4386.	2.4	1
41	On Exact and âˆž-RÃ©nyi Common Informations. , 2019, , .		0
42	The Reliability Function of Variable-Length Lossy Joint Source-Channel Coding With Feedback. IEEE Transactions on Information Theory, 2019, 65, 5028-5042.	2.4	3
43	The Bee-Identification Problem: Bounds on the Error Exponent. IEEE Transactions on Communications, 2019, 67, 7405-7416.	7.8	12
44	Fundamental Limits of Communication Over State-Dependent Channels With Feedback. IEEE Transactions on Communications, 2019, 67, 3182-3191.	7.8	0
45	Time-Division is Optimal for Covert Communication Over Some Broadcast Channels. IEEE Transactions on Information Forensics and Security, 2019, 14, 1377-1389.	6.9	35
46	Distributed Hypothesis Testing with Privacy Constraints. Entropy, 2019, 21, 478.	2.2	15
47	RÃ©nyi Resolvability and Its Applications to the Wiretap Channel. IEEE Transactions on Information Theory, 2019, 65, 1862-1897.	2.4	18
48	A Strong Converse Theorem for Hypothesis Testing Against Independence over a Two-Hop Network. Entropy, 2019, 21, 1171.	2.2	5
49	Distributed Detection with Empirically Observed Statistics. , 2019, , .		1
50	Strong Converse for Hypothesis Testing Against Independence over a Two-Hop Network. , 2019, , .		4
51	Covert Communication Over a Compound Discrete Memoryless Channel. , 2019, , .		6
52	Throughput Scaling of Covert Communication over Wireless Adhoc Networks. , 2019, , .		6
53	Second-Order Asymptotically Optimal Statistical Classification. , 2019, , .		5
54	Exact Channel Synthesis. , 2019, , .		1

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55	On the Maximum Size of Block Codes Subject to a Distance Criterion. IEEE Transactions on Information Theory, 2019, 65, 3751-3757.	2.4	1
56	Refined Asymptotics for Rate-Distortion Using Gaussian Codebooks for Arbitrary Sources. IEEE Transactions on Information Theory, 2019, 65, 3145-3159.	2.4	6
57	Simulation of Random Variables Under RÃ©nyi Divergence Measures of All Orders. IEEE Transactions on Information Theory, 2019, 65, 3349-3383.	2.4	10
58	On Achievable Rates of AWGN Energy-Harvesting Channels With Block Energy Arrival and Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2018, 64, 2038-2064.	2.4	9
59	Wynerâ€™s Common Information Under RÃ©nyi Divergence Measures. IEEE Transactions on Information Theory, 2018, 64, 3616-3632.	2.4	18
60	Analysis of Remaining Uncertainties and Exponents Under Various Conditional RÃ©nyi Entropies. IEEE Transactions on Information Theory, 2018, 64, 3734-3755.	2.4	9
61	Stochastic L-BFGS: Improved Convergence Rates and Practical Acceleration Strategies. IEEE Transactions on Signal Processing, 2018, 66, 1155-1169.	5.3	21
62	Hypothesis Testing Under Mutual Information Privacy Constraints in the High Privacy Regime. IEEE Transactions on Information Forensics and Security, 2018, 13, 1058-1071.	6.9	32
63	Minimum Rates of Approximate Sufficient Statistics. IEEE Transactions on Information Theory, 2018, 64, 875-888.	2.4	4
64	Achievable Moderate Deviations Asymptotics for Streaming Compression of Correlated Sources. IEEE Transactions on Information Theory, 2018, 64, 3756-3780.	2.4	1
65	A Unified Convergence Analysis of the Multiplicative Update Algorithm for Regularized Nonnegative Matrix Factorization. IEEE Transactions on Signal Processing, 2018, 66, 129-138.	5.3	19
66	Distributed Hypothesis Testing with Privacy Constraints. , 2018, , .		1
67	Simulation of Random Variables under RÃ©nyi Divergence Measures of All Orders. , 2018, , .		0
68	Minimax Lower Bounds for Nonnegative Matrix Factorization. , 2018, , .		1
69	Exponential Strong Converse for Content Identification With Lossy Recovery. IEEE Transactions on Information Theory, 2018, 64, 5879-5897.	2.4	10
70	The Reliability Function of Lossy Source-Channel Coding of Variable-Length Codes with Feedback. , 2018, , .		0
71	Inference Algorithms for the Multiplicative Mixture Mallows Model. , 2018, , .		0
72	Asymptotically Optimal Codes Correcting Fixed-Length Duplication Errors in DNA Storage Systems. IEEE Communications Letters, 2018, 22, 2194-2197.	4.1	39

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73	Lower Bounds on the Bayes Risk of the Bayesian BTL Model With Applications to Comparison Graphs. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 975-988.	10.8	2
74	Codes in the Space of Multisetsâ€"Coding for Permutation Channels With Impairments. IEEE Transactions on Information Theory, 2018, 64, 5156-5169.	2.4	44
75	Second-Order Asymptotics of Rate-Distortion using Gaussian Codebooks for Arbitrary Sources. , 2018, , .		1
76	On Gaussian MACs With Variable-Length Feedback and Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2018, 64, 2333-2346.	2.4	10
77	Equivocations, Exponents, and Second-Order Coding Rates Under Various RÃ©nyi Information Measures. IEEE Transactions on Information Theory, 2017, 63, 975-1005.	2.4	21
78	Polar Coding for the Binary Erasure Channel With Deletions. IEEE Communications Letters, 2017, 21, 710-713.	4.1	28
79	On Gaussian Channels With Feedback Under Expected Power Constraints and With Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2017, 63, 1746-1765.	2.4	15
80	Exact Moderate Deviation Asymptotics in Streaming Data Transmission. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	3
81	The Dispersion of Nearest-Neighbor Decoding for Additive Non-Gaussian Channels. IEEE Transactions on Information Theory, 2017, 63, 81-92.	2.4	52
82	Achievable Rates for Gaussian Degraded Relay Channels With Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2017, 63, 4183-4201.	2.4	5
83	Adversarial Top- K Ranking. IEEE Transactions on Information Theory, 2017, 63, 2201-2225.	2.4	11
84	Discrete Lossy Grayâ€"Wyner Revisited: Second-Order Asymptotics, Large and Moderate Deviations. IEEE Transactions on Information Theory, 2017, 63, 1766-1791.	2.4	15
85	Improved Bounds on Sidon Sets via Lattice Packings of Simplices. SIAM Journal on Discrete Mathematics, 2017, 31, 2269-2278.	0.8	6
86	Communication over a channel that wears out. , 2017, , .		3
87	Strong converse for content identification with lossy recovery. , 2017, , .		1
88	Exact moderate deviation asymptotics in streaming data transmission. , 2017, , .		3
89	Moderate Deviation Analysis for Classical Communication over Quantum Channels. Communications in Mathematical Physics, 2017, 355, 1283-1315.	2.2	29
90	Rank-One NMF-Based Initialization for NMF and Relative Error Bounds Under a Geometric Assumption. IEEE Transactions on Signal Processing, 2017, 65, 4717-4731.	5.3	9

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91	A unified convergence analysis of the multiplicative update algorithm for nonnegative matrix factorization. , 2017, , .		4
92	Online Nonnegative Matrix Factorization With Outliers. IEEE Transactions on Signal Processing, 2017, 65, 555-570.	5.3	22
93	Second-Order and Moderate Deviation Asymptotics for Successive Refinement. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	29
94	A Tight Upper Bound on the Second-Order Coding Rate of the Parallel Gaussian Channel With Feedback. IEEE Transactions on Information Theory, 2017, 63, 6474-6486.	2.4	3
95	On achievable rates of AWGN energy-harvesting channels with block energy arrival and non-vanishing error probabilities. , 2017, , .		2
96	Achievable moderate deviations asymptotics for streaming Slepian-Wolf coding. , 2017, , .		1
97	Moderate deviation analysis for classical communication over quantum channels. , 2017, , .		4
98	Coding for the permutation channel with insertions, deletions, substitutions, and erasures. , 2017, , .		2
99	On the Gaussian MAC with stop-feedback. , 2017, , .		3
100	Minimum rates of approximate sufficient statistics. , 2017, , .		1
101	A tight upper bound on the second-order coding rate of parallel Gaussian channels with feedback. , 2017, , .		0
102	Robust decoding schemes for polar coding over compound channels. , 2017, , .		0
103	On the Gaussian MAC with degraded message sets and long-term power constraints. , 2017, , .		0
104	Error exponent for covert communications over discrete memoryless channels. , 2017, , .		9
105	Delay scaling laws of random wireless networks: Impact of blocklength. , 2017, , .		1
106	A Proof of the Strong Converse Theorem for Gaussian Broadcast Channels via the Gaussian Poincaré Inequality. IEEE Transactions on Information Theory, 2017, 63, 7737-7746.	2.4	9
107	Zero-Error Capacity of $ P $ -ary Shift Channels and FIFO Queues. IEEE Transactions on Information Theory, 2017, 63, 7698-7707.	2.4	7
108	Strong converse theorems for discrete memoryless networks with tight cut-set bound. , 2017, , .		2

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109	Scaling Exponent and Moderate Deviations Asymptotics of Polar Codes for the AWGN Channel. Entropy, 2017, 19, 364.	2.2	6
110	RÃ©nyi Resolvability and Its Applications to the Wiretap Channel. Lecture Notes in Computer Science, 2017, , 208-233.	1.3	12
111	A proof of the strong converse theorem for Gaussian broadcast channels via the Gaussian PoincarÃ© inequality. , 2016, , .		0
112	Impact of pre-adapted HIV transmission. Nature Medicine, 2016, 22, 606-613.	30.7	87
113	Streaming data transmission in the moderate deviations and central limit regimes. , 2016, , .		2
114	Strong Converse Theorems for Classes of Multimessage Multicast Networks: A RÃ©nyi Divergence Approach. IEEE Transactions on Information Theory, 2016, 62, 4953-4967.	2.4	10
115	The âˆ¶-capacity region of AWGN multiple access channels with feedback. , 2016, , .		0
116	Online nonnegative matrix factorization with outliers. , 2016, , .		8
117	Non-Asymptotic Achievable Rates for Energy-Harvesting Channels Using Save-and-Transmit. IEEE Journal on Selected Areas in Communications, 2016, 34, 3499-3511.	14.0	15
118	Streaming Data Transmission in the Moderate Deviations and Central Limit Regimes. IEEE Transactions on Information Theory, 2016, 62, 6816-6830.	2.4	11
119	On the Scaling Exponent of Polar Codes for Binary-Input Energy-Harvesting Channels. IEEE Journal on Selected Areas in Communications, 2016, 34, 3540-3551.	14.0	6
120	A non-asymptotic achievable rate for the AWGN energy-harvesting channel using save-and-transmit. , 2016, , .		2
121	A Proof of the Strong Converse Theorem for Gaussian Multiple Access Channels. IEEE Transactions on Information Theory, 2016, 62, 4376-4394.	2.4	19
122	A Numerical Study on the Wiretap Network With a Simple Network Topology. IEEE Transactions on Information Theory, 2016, 62, 2481-2492.	2.4	9
123	Equivocations and exponents under various Rényi information measures. , 2015, , .		2
124	Second-order coding rate for m-class source-channel codes. , 2015, , .		1
125	Nonasymptotic and Second-Order Achievability Bounds for Coding With Side-Information. IEEE Transactions on Information Theory, 2015, 61, 1574-1605.	2.4	49
126	Second-Order Asymptotics for the Classical Capacity of Image-Additive Quantum Channels. Communications in Mathematical Physics, 2015, 338, 103-137.	2.2	48

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127	Second-Order Asymptotics for the Gaussian MAC With Degraded Message Sets. IEEE Transactions on Information Theory, 2015, 61, 6700-6718.	2.4	18
128	Error and erasure exponents for the asymmetric broadcast channel. , 2015, , .		3
129	Asymmetric Evaluations of Erasure and Undetected Error Probabilities. IEEE Transactions on Information Theory, 2015, 61, 6560-6577.	2.4	13
130	Strong converse theorems for classes of multimessage multicast networks: A Ré#x00E9;nyi divergence approach. , 2015, , .		0
131	A Case Where Interference Does Not Affect the Channel Dispersion. IEEE Transactions on Information Theory, 2015, 61, 2439-2453.	2.4	13
132	Unequal Message Protection: Asymptotic and Non-Asymptotic Tradeoffs. IEEE Transactions on Information Theory, 2015, 61, 5396-5416.	2.4	21
133	Information Spectrum Approach to Strong Converse Theorems for Degraded Wiretap Channels. IEEE Transactions on Information Forensics and Security, 2015, 10, 1891-1904.	6.9	7
134	Achievability bounds for unequal message protection at finite block lengths. , 2014, , .		2
135	Second-order capacities of erasure and list decoding. , 2014, , .		5
136	Strong impossibility results for noisy group testing. , 2014, , .		6
137	A Parsimonious Mixture of Gaussian Trees Model for Oversampling in Imbalanced and Multimodal Time-Series Classification. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 2226-2239.	11.3	35
138	Information spectrum approach to strong converse theorems for degraded wiretap channels. , 2014, , .		4
139	The third-order term in the normal approximation for the AWGN channel. , 2014, , .		4
140	On the Dispersions of Three Network Information Theory Problems. IEEE Transactions on Information Theory, 2014, 60, 881-903.	2.4	75
141	Second order refinements for the classical capacity of quantum channels with separable input states. , 2014, , .		0
142	Second-Order Coding Rates for Channels With State. IEEE Transactions on Information Theory, 2014, 60, 4427-4448.	2.4	38
143	A Formula for the Capacity of the General Gel'fandâ€"Pinsker Channel. IEEE Transactions on Communications, 2014, 62, 1857-1870.	7.8	4
144	Strong Impossibility Results for Sparse Signal Processing. IEEE Signal Processing Letters, 2014, 21, 260-264.	3.6	13

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145	Asymptotic Estimates in Information Theory with Non-Vanishing Error Probabilities. Foundations and Trends in Communications and Information Theory, 2014, 11, 1-184.	3.1	94
146	Automatic Relevance Determination in Nonnegative Matrix Factorization with the /spl beta/-Divergence. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1592-1605.	13.9	228
147	A Tight Upper Bound for the Third-Order Asymptotics for Most Discrete Memoryless Channels. IEEE Transactions on Information Theory, 2013, 59, 7041-7051.	2.4	61
148	Wireless compressive sensing for energy harvesting sensor nodes over fading channels. , 2013, , .		4
149	MOGT: Oversampling with a parsimonious mixture of Gaussian trees model for imbalanced time-series classification. , 2013, , .		4
150	Widespread Impact of HLA Restriction on Immune Control and Escape Pathways of HIV-1. Journal of Virology, 2012, 86, 5230-5243.	3.4	114
151	High-dimensional structure estimation in Ising models: Local separation criterion. Annals of Statistics, 2012, 40, .	2.6	72
152	Moderate-deviations of lossy source coding for discrete and Gaussian sources. , 2012, , .		22
153	A Large-Deviation Analysis of the Maximum-Likelihood Learning of Markov Tree Structures. IEEE Transactions on Information Theory, 2011, 57, 1714-1735.	2.4	40
154	Beyond Atopy. American Journal of Respiratory and Critical Care Medicine, 2010, 181, 1200-1206.	5.6	364
155	Learning Gaussian Tree Models: Analysis of Error Exponents and Extremal Structures. IEEE Transactions on Signal Processing, 2010, 58, 2701-2714.	5.3	32