

# Vincent Y F Tan

## List of Publications by Year in descending order

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155  
papers

2,380  
citations

304368

22  
h-index

243296

44  
g-index

157  
all docs

157  
docs citations

157  
times ranked

2713  
citing authors

#	ARTICLE	IF	CITATIONS
1	Beyond Atopy. American Journal of Respiratory and Critical Care Medicine, 2010, 181, 1200-1206.	2.5	364
2	Automatic Relevance Determination in Nonnegative Matrix Factorization with the $\beta$ -Divergence. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1592-1605.	9.7	228
3	Widespread Impact of HLA Restriction on Immune Control and Escape Pathways of HIV-1. Journal of Virology, 2012, 86, 5230-5243.	1.5	114
4	Asymptotic Estimates in Information Theory with Non-Vanishing Error Probabilities. Foundations and Trends in Communications and Information Theory, 2014, 11, 1-184.	2.4	94
5	Impact of pre-adapted HIV transmission. Nature Medicine, 2016, 22, 606-613.	15.2	87
6	On the Dispersions of Three Network Information Theory Problems. IEEE Transactions on Information Theory, 2014, 60, 881-903.	1.5	75
7	High-dimensional structure estimation in Ising models: Local separation criterion. Annals of Statistics, 2012, 40, .	1.4	72
8	A Tight Upper Bound for the Third-Order Asymptotics for Most Discrete Memoryless Channels. IEEE Transactions on Information Theory, 2013, 59, 7041-7051.	1.5	61
9	The Dispersion of Nearest-Neighbor Decoding for Additive Non-Gaussian Channels. IEEE Transactions on Information Theory, 2017, 63, 81-92.	1.5	52
10	Nonasymptotic and Second-Order Achievability Bounds for Coding With Side-Information. IEEE Transactions on Information Theory, 2015, 61, 1574-1605.	1.5	49
11	Second-Order Asymptotics for the Classical Capacity of Image-Additive Quantum Channels. Communications in Mathematical Physics, 2015, 338, 103-137.	1.0	48
12	Codes in the Space of Multisetsâ€”Coding for Permutation Channels With Impairments. IEEE Transactions on Information Theory, 2018, 64, 5156-5169.	1.5	44
13	A Large-Deviation Analysis of the Maximum-Likelihood Learning of Markov Tree Structures. IEEE Transactions on Information Theory, 2011, 57, 1714-1735.	1.5	40
14	Asymptotically Optimal Codes Correcting Fixed-Length Duplication Errors in DNA Storage Systems. IEEE Communications Letters, 2018, 22, 2194-2197.	2.5	39
15	Second-Order Coding Rates for Channels With State. IEEE Transactions on Information Theory, 2014, 60, 4427-4448.	1.5	38
16	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.	7.2	35
17	Time-Division is Optimal for Covert Communication Over Some Broadcast Channels. IEEE Transactions on Information Forensics and Security, 2019, 14, 1377-1389.	4.5	35
18	Learning Gaussian Tree Models: Analysis of Error Exponents and Extremal Structures. IEEE Transactions on Signal Processing, 2010, 58, 2701-2714.	3.2	32

#	ARTICLE	IF	CITATIONS
19	Hypothesis Testing Under Mutual Information Privacy Constraints in the High Privacy Regime. IEEE Transactions on Information Forensics and Security, 2018, 13, 1058-1071.	4.5	32
20	Moderate Deviation Analysis for Classical Communication over Quantum Channels. Communications in Mathematical Physics, 2017, 355, 1283-1315.	1.0	29
21	Second-Order and Moderate Deviation Asymptotics for Successive Refinement. IEEE Transactions on Information Theory, 2017, , 1-1.	1.5	29
22	Polar Coding for the Binary Erasure Channel With Deletions. IEEE Communications Letters, 2017, 21, 710-713.	2.5	28
23	Moderate-deviations of lossy source coding for discrete and Gaussian sources. , 2012, , .		22
24	Online Nonnegative Matrix Factorization With Outliers. IEEE Transactions on Signal Processing, 2017, 65, 555-570.	3.2	22
25	Unequal Message Protection: Asymptotic and Non-Asymptotic Tradeoffs. IEEE Transactions on Information Theory, 2015, 61, 5396-5416.	1.5	21
26	Equivocations, Exponents, and Second-Order Coding Rates Under Various Rényi Information Measures. IEEE Transactions on Information Theory, 2017, 63, 975-1005.	1.5	21
27	Stochastic L-BFGS: Improved Convergence Rates and Practical Acceleration Strategies. IEEE Transactions on Signal Processing, 2018, 66, 1155-1169.	3.2	21
28	A Proof of the Strong Converse Theorem for Gaussian Multiple Access Channels. IEEE Transactions on Information Theory, 2016, 62, 4376-4394.	1.5	19
29	A Unified Convergence Analysis of the Multiplicative Update Algorithm for Regularized Nonnegative Matrix Factorization. IEEE Transactions on Signal Processing, 2018, 66, 129-138.	3.2	19
30	Second-Order Asymptotics for the Gaussian MAC With Degraded Message Sets. IEEE Transactions on Information Theory, 2015, 61, 6700-6718.	1.5	18
31	Wyner's Common Information Under Rényi Divergence Measures. IEEE Transactions on Information Theory, 2018, 64, 3616-3632.	1.5	18
32	Rényi Resolvability and Its Applications to the Wiretap Channel. IEEE Transactions on Information Theory, 2019, 65, 1862-1897.	1.5	18
33	Non-Asymptotic Achievable Rates for Energy-Harvesting Channels Using Save-and-Transmit. IEEE Journal on Selected Areas in Communications, 2016, 34, 3499-3511.	9.7	15
34	On Gaussian Channels With Feedback Under Expected Power Constraints and With Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2017, 63, 1746-1765.	1.5	15
35	Discrete Lossy Gray's Wyner Revisited: Second-Order Asymptotics, Large and Moderate Deviations. IEEE Transactions on Information Theory, 2017, 63, 1766-1791.	1.5	15
36	Distributed Hypothesis Testing with Privacy Constraints. Entropy, 2019, 21, 478.	1.1	15

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37	Strong Impossibility Results for Sparse Signal Processing. IEEE Signal Processing Letters, 2014, 21, 260-264.	2.1	13
38	Asymmetric Evaluations of Erasure and Undetected Error Probabilities. IEEE Transactions on Information Theory, 2015, 61, 6560-6577.	1.5	13
39	A Case Where Interference Does Not Affect the Channel Dispersion. IEEE Transactions on Information Theory, 2015, 61, 2439-2453.	1.5	13
40	The Bee-Identification Problem: Bounds on the Error Exponent. IEEE Transactions on Communications, 2019, 67, 7405-7416.	4.9	12
41	Rényi Resolvability and Its Applications to the Wiretap Channel. Lecture Notes in Computer Science, 2017, , 208-233.	1.0	12
42	Streaming Data Transmission in the Moderate Deviations and Central Limit Regimes. IEEE Transactions on Information Theory, 2016, 62, 6816-6830.	1.5	11
43	Adversarial Top- $k$ Ranking. IEEE Transactions on Information Theory, 2017, 63, 2201-2225.	1.5	11
44	Strong Converse Theorems for Classes of Multicast Networks: A Rényi Divergence Approach. IEEE Transactions on Information Theory, 2016, 62, 4953-4967.	1.5	10
45	Exponential Strong Converse for Content Identification With Lossy Recovery. IEEE Transactions on Information Theory, 2018, 64, 5879-5897.	1.5	10
46	On Gaussian MACs With Variable-Length Feedback and Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2018, 64, 2333-2346.	1.5	10
47	Simulation of Random Variables Under Rényi Divergence Measures of All Orders. IEEE Transactions on Information Theory, 2019, 65, 3349-3383.	1.5	10
48	Distributed Detection With Empirically Observed Statistics. IEEE Transactions on Information Theory, 2020, 66, 4349-4367.	1.5	10
49	Community Detection and Matrix Completion With Social and Item Similarity Graphs. IEEE Transactions on Signal Processing, 2021, 69, 917-931.	3.2	10
50	A Numerical Study on the Wiretap Network With a Simple Network Topology. IEEE Transactions on Information Theory, 2016, 62, 2481-2492.	1.5	9
51	Rank-One NMF-Based Initialization for NMF and Relative Error Bounds Under a Geometric Assumption. IEEE Transactions on Signal Processing, 2017, 65, 4717-4731.	3.2	9
52	Error exponent for covert communications over discrete memoryless channels. , 2017, , .		9
53	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.	1.5	9
54	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.	1.5	9

#	ARTICLE	IF	CITATIONS
55	Analysis of Remaining Uncertainties and Exponents Under Various Conditional Rényi Entropies. IEEE Transactions on Information Theory, 2018, 64, 3734-3755.	1.5	9
56	Throughput Scaling of Covert Communication Over Wireless Adhoc Networks. IEEE Transactions on Information Theory, 2020, 66, 7684-7701.	1.5	9
57	On Exact and Rényi Common Informations. IEEE Transactions on Information Theory, 2020, 66, 3366-3406.	1.5	9
58	Second-Order Asymptotics of Sequential Hypothesis Testing. IEEE Transactions on Information Theory, 2020, 66, 7222-7230.	1.5	9
59	Online nonnegative matrix factorization with outliers. , 2016, , .		8
60	Asymptotic Coupling and Its Applications in Information Theory. IEEE Transactions on Information Theory, 2019, 65, 1321-1344.	1.5	8
61	Information Spectrum Approach to Strong Converse Theorems for Degraded Wiretap Channels. IEEE Transactions on Information Forensics and Security, 2015, 10, 1891-1904.	4.5	7
62	Zero-Error Capacity of $P$ -ary Shift Channels and FIFO Queues. IEEE Transactions on Information Theory, 2017, 63, 7698-7707.	1.5	7
63	Sequential Classification With Empirically Observed Statistics. IEEE Transactions on Information Theory, 2021, 67, 3095-3113.	1.5	7
64	Strong impossibility results for noisy group testing. , 2014, , .		6
65	On the Scaling Exponent of Polar Codes for Binary-Input Energy-Harvesting Channels. IEEE Journal on Selected Areas in Communications, 2016, 34, 3540-3551.	9.7	6
66	Improved Bounds on Sidon Sets via Lattice Packings of Simplices. SIAM Journal on Discrete Mathematics, 2017, 31, 2269-2278.	0.4	6
67	Scaling Exponent and Moderate Deviations Asymptotics of Polar Codes for the AWGN Channel. Entropy, 2017, 19, 364.	1.1	6
68	The Dispersion of Mismatched Joint Source-Channel Coding for Arbitrary Sources and Additive Channels. IEEE Transactions on Information Theory, 2019, 65, 2234-2251.	1.5	6
69	Covert Communication Over a Compound Discrete Memoryless Channel. , 2019, , .		6
70	Throughput Scaling of Covert Communication over Wireless Adhoc Networks. , 2019, , .		6
71	Refined Asymptotics for Rate-Distortion Using Gaussian Codebooks for Arbitrary Sources. IEEE Transactions on Information Theory, 2019, 65, 3145-3159.	1.5	6
72	Variable-Length Source Dispersions Differ Under Maximum and Average Error Criteria. IEEE Transactions on Information Theory, 2020, 66, 7565-7587.	1.5	6

#	ARTICLE	IF	CITATIONS
73	Second-order capacities of erasure and list decoding. , 2014, , .		5
74	Achievable Rates for Gaussian Degraded Relay Channels With Non-Vanishing Error Probabilities. IEEE Transactions on Information Theory, 2017, 63, 4183-4201.	1.5	5
75	A Strong Converse Theorem for Hypothesis Testing Against Independence over a Two-Hop Network. Entropy, 2019, 21, 1171.	1.1	5
76	Second-Order Asymptotically Optimal Statistical Classification. , 2019, , .		5
77	Exact Channel Synthesis. IEEE Transactions on Information Theory, 2020, 66, 2799-2818.	1.5	5
78	On Non-Interactive Simulation of Binary Random Variables. IEEE Transactions on Information Theory, 2021, 67, 2528-2538.	1.5	5
79	Distributed Sequential Hypothesis Testing With Zero-Rate Compression. , 2021, , .		5
80	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. Communications in Mathematical Physics, 2022, 392, 993-1027.	1.0	5
81	Wireless compressive sensing for energy harvesting sensor nodes over fading channels. , 2013, , .		4
82	MOGT: Oversampling with a parsimonious mixture of Gaussian trees model for imbalanced time-series classification. , 2013, , .		4
83	Information spectrum approach to strong converse theorems for degraded wiretap channels. , 2014, , .		4
84	The third-order term in the normal approximation for the AWGN channel. , 2014, , .		4
85	A Formula for the Capacity of the General Gel'fandâ€Pinsker Channel. IEEE Transactions on Communications, 2014, 62, 1857-1870.	4.9	4
86	A unified convergence analysis of the multiplicative update algorithm for nonnegative matrix factorization. , 2017, , .		4
87	Moderate deviation analysis for classical communication over quantum channels. , 2017, , .		4
88	Minimum Rates of Approximate Sufficient Statistics. IEEE Transactions on Information Theory, 2018, 64, 875-888.	1.5	4
89	Strong Converse for Hypothesis Testing Against Independence over a Two-Hop Network. , 2019, , .		4
90	The Bee-Identification Error Exponent With Absentee Bees. IEEE Transactions on Information Theory, 2020, 66, 7602-7614.	1.5	4

#	ARTICLE	IF	CITATIONS
91	On the Capacity of Channels With Deletions and States. IEEE Transactions on Information Theory, 2021, 67, 2663-2679.	1.5	4
92	Covert Identification Over Binary-Input Discrete Memoryless Channels. IEEE Transactions on Information Theory, 2021, 67, 5387-5403.	1.5	4
93	Optimal Change-Point Detection With Training Sequences in the Large and Moderate Deviations Regimes. IEEE Transactions on Information Theory, 2021, 67, 6758-6784.	1.5	4
94	Error and erasure exponents for the asymmetric broadcast channel. , 2015, , .		3
95	Exact Moderate Deviation Asymptotics in Streaming Data Transmission. IEEE Transactions on Information Theory, 2017, , 1-1.	1.5	3
96	Communication over a channel that wears out. , 2017, , .		3
97	Exact moderate deviation asymptotics in streaming data transmission. , 2017, , .		3
98	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.	1.5	3
99	On the Gaussian MAC with stop-feedback. , 2017, , .		3
100	The Reliability Function of Variable-Length Lossy Joint Source-Channel Coding With Feedback. IEEE Transactions on Information Theory, 2019, 65, 5028-5042.	1.5	3
101	Adversarially-Trained Nonnegative Matrix Factorization. IEEE Signal Processing Letters, 2021, 28, 1415-1419.	2.1	3
102	Distributionally Robust and Multi-Objective Nonnegative Matrix Factorization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	9.7	3
103	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. , 2021, , .		3
104	On Smooth Rényi Entropies: A Novel Information Measure, One-Shot Coding Theorems, and Asymptotic Expansions. IEEE Transactions on Information Theory, 2022, 68, 1496-1531.	1.5	3
105	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.	1.9	3
106	Achievability bounds for unequal message protection at finite block lengths. , 2014, , .		2
107	Equivocations and exponents under various Rényi information measures. , 2015, , .		2
108	Streaming data transmission in the moderate deviations and central limit regimes. , 2016, , .		2

#	ARTICLE	IF	CITATIONS
109	A non-asymptotic achievable rate for the AWGN energy-harvesting channel using save-and-transmit. , 2016, , .		2
110	On achievable rates of AWGN energy-harvesting channels with block energy arrival and non-vanishing error probabilities. , 2017, , .		2
111	Coding for the permutation channel with insertions, deletions, substitutions, and erasures. , 2017, , .		2
112	Strong converse theorems for discrete memoryless networks with tight cut-set bound. , 2017, , .		2
113	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.	7.3	2
114	On the Throughput of Channels That Wear Out. IEEE Transactions on Communications, 2019, 67, 5311-5320.	4.9	2
115	Second- and Third-Order Asymptotics of the Continuous-Time Poisson Channel. IEEE Transactions on Information Theory, 2020, 66, 4742-4760.	1.5	2
116	Second-Order Asymptotics of Sequential Hypothesis Testing. , 2020, , .		2
117	Corrections to "Wyner's Common Information Under Rényi Divergence Measures" [May 18 3616-3632]. IEEE Transactions on Information Theory, 2020, 66, 2599-2608.	1.5	2
118	Positive Semidefinite Matrix Factorization: A Connection With Phase Retrieval and Affine Rank Minimization. IEEE Transactions on Signal Processing, 2021, 69, 3059-3074.	3.2	2
119	Asymptotics of Sequential Composite Hypothesis Testing under Probabilistic Constraints. , 2021, , .		2
120	Third-Order Asymptotics of Variable-Length Compression Allowing Errors. IEEE Transactions on Information Theory, 2021, 67, 7708-7722.	1.5	2
121	Mc2g: An Efficient Algorithm for Matrix Completion With Social and Item Similarity Graphs. IEEE Transactions on Signal Processing, 2022, 70, 2681-2697.	3.2	2
122	Second-order coding rate for m-class source-channel codes. , 2015, , .		1
123	Strong converse for content identification with lossy recovery. , 2017, , .		1
124	Achievable moderate deviations asymptotics for streaming Slepian-Wolf coding. , 2017, , .		1
125	Minimum rates of approximate sufficient statistics. , 2017, , .		1
126	Delay scaling laws of random wireless networks: Impact of blocklength. , 2017, , .		1



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127	Achievable Moderate Deviations Asymptotics for Streaming Compression of Correlated Sources. IEEE Transactions on Information Theory, 2018, 64, 3756-3780.	1.5	1
128	Distributed Hypothesis Testing with Privacy Constraints. , 2018, , .		1
129	Minimax Lower Bounds for Nonnegative Matrix Factorization. , 2018, , .		1
130	Second-Order Asymptotics of Rate-Distortion using Gaussian Codebooks for Arbitrary Sources. , 2018, , .		1
131	Moderate Deviation Asymptotics for Variable-Length Codes With Feedback. IEEE Transactions on Information Theory, 2019, 65, 4364-4386.	1.5	1
132	Distributed Detection with Empirically Observed Statistics. , 2019, , .		1
133	Exact Channel Synthesis. , 2019, , .		1
134	On the Maximum Size of Block Codes Subject to a Distance Criterion. IEEE Transactions on Information Theory, 2019, 65, 3751-3757.	1.5	1
135	Exact Error and Erasure Exponents for the Asymmetric Broadcast Channel. IEEE Transactions on Information Theory, 2020, 66, 865-885.	1.5	1
136	Analysis of Optimization Algorithms via Sum-of-Squares. Journal of Optimization Theory and Applications, 2021, 190, 56-81.	0.8	1
137	State Masking Over a Two-State Compound Channel. IEEE Transactions on Information Theory, 2021, 67, 5651-5673.	1.5	1
138	On the Capacity of Deletion Channels with States. , 2020, , .		1
139	Asymptotics of Sequential Composite Hypothesis Testing Under Probabilistic Constraints. IEEE Transactions on Information Theory, 2022, 68, 4998-5012.	1.5	1
140	Second order refinements for the classical capacity of quantum channels with separable input states. , 2014, , .		0
141	Strong converse theorems for classes of multimessage multicast networks: A R&#x00E9;nyi divergence approach. , 2015, , .		0
142	A proof of the strong converse theorem for Gaussian broadcast channels via the Gaussian Poincaré inequality. , 2016, , .		0
143	The $\hat{\mathcal{S}}$ -capacity region of AWGN multiple access channels with feedback. , 2016, , .		0
144	A tight upper bound on the second-order coding rate of parallel Gaussian channels with feedback. , 2017, , .		0

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145	Robust decoding schemes for polar coding over compound channels. , 2017, , .		0
146	On the Gaussian MAC with degraded message sets and long-term power constraints. , 2017, , .		0
147	Simulation of Random Variables under Rényi Divergence Measures of All Orders. , 2018, , .		0
148	The Reliability Function of Lossy Source-Channel Coding of Variable-Length Codes with Feedback. , 2018, , .		0
149	Inference Algorithms for the Multiplicative Mixture Mallows Model. , 2018, , .		0
150	The Informativeness of $k$ -Means for Learning Mixture Models. IEEE Transactions on Information Theory, 2019, 65, 7460-7479.	1.5	0
151	On Exact and $\hat{\epsilon}$ -Rényi Common Informations. , 2019, , .		0
152	Fundamental Limits of Communication Over State-Dependent Channels With Feedback. IEEE Transactions on Communications, 2019, 67, 3182-3191.	4.9	0
153	On the Second- and Third-Order Asymptotics of Smooth Rényi Entropy and Their Applications. , 2020, , .		0
154	Bee-Identification Error Exponent with Absentee Bees. , 2020, , .		0
155	On the Feed-Forward Rate-Distortion Function for Stationary and Ergodic Sources. , 2021, , .		0