

# Michael C Gastpar

## List of Publications by Year in descending order

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112  
papers

3,666  
citations

331259

21  
h-index

149479

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g-index

112  
all docs

112  
docs citations

112  
times ranked

2032  
citing authors

#	ARTICLE	IF	CITATIONS
1	Compute-and-Forward: Harnessing Interference Through Structured Codes. IEEE Transactions on Information Theory, 2011, 57, 6463-6486.	1.5	828
2	Computation Over Multiple-Access Channels. IEEE Transactions on Information Theory, 2007, 53, 3498-3516.	1.5	494
3	On Capacity Under Receive and Spatial Spectrum-Sharing Constraints. IEEE Transactions on Information Theory, 2007, 53, 471-487.	1.5	366
4	Uncoded Transmission Is Exactly Optimal for a Simple Gaussian "Sensor" Network. IEEE Transactions on Information Theory, 2008, 54, 5247-5251.	1.5	235
5	The Distributed Karhunen-Lo"ve Transform. IEEE Transactions on Information Theory, 2006, 52, 5177-5196.	1.5	148
6	Integer-Forcing Linear Receivers. IEEE Transactions on Information Theory, 2014, 60, 7661-7685.	1.5	131
7	Ergodic Interference Alignment. IEEE Transactions on Information Theory, 2012, 58, 6355-6371.	1.5	105
8	Quantifying high-order interdependencies via multivariate extensions of the mutual information. Physical Review E, 2019, 100, 032305.	0.8	86
9	The Sampling Rate-Distortion Tradeoff for Sparsity Pattern Recovery in Compressed Sensing. IEEE Transactions on Information Theory, 2012, 58, 3065-3092.	1.5	77
10	Sampling bounds for sparse support recovery in the presence of noise. , 2008, , .		59
11	The case for structured random codes in network capacity theorems. European Transactions on Telecommunications, 2008, 19, 455-474.	1.2	57
12	Approximate Sparsity Pattern Recovery: Information-Theoretic Lower Bounds. IEEE Transactions on Information Theory, 2013, 59, 3451-3465.	1.5	54
13	Computing over Multiple-Access Channels with Connections to Wireless Network Coding. , 2006, , .		47
14	A new converse bound for coded caching. , 2016, , .		40
15	Single-server Multi-message Private Information Retrieval with Side Information. , 2018, , .		40
16	Deterministic algorithm for the cooperative data exchange problem. , 2011, , .		39
17	On the Broadcast Capacity of Wireless Networks With Cooperative Relays. IEEE Transactions on Information Theory, 2010, 56, 3847-3861.	1.5	37
18	Random Access With Physical-Layer Network Coding. IEEE Transactions on Information Theory, 2015, 61, 3670-3681.	1.5	29

#	ARTICLE	IF	CITATIONS
19	Gaussian Multiple Access via Compute-and-Forward. IEEE Transactions on Information Theory, 2017, 63, 2678-2695.	1.5	29
20	A Survey on Interference Networks: Interference Alignment and Neutralization. Entropy, 2012, 14, 1842-1863.	1.1	28
21	Information-Theoretic Caching: Sequential Coding for Computing. IEEE Transactions on Information Theory, 2016, 62, 6393-6406.	1.5	27
22	Private Retrieval, Computing, and Learning: Recent Progress and Future Challenges. IEEE Journal on Selected Areas in Communications, 2022, 40, 729-748.	9.7	26
23	Cognitive Radio Through Primary Control Feedback. IEEE Journal on Selected Areas in Communications, 2011, 29, 384-393.	9.7	24
24	Efficient Algorithms for the Data Exchange Problem. IEEE Transactions on Information Theory, 2016, 62, 1878-1896.	1.5	24
25	Recursive Implementation of the Distributed Karhunen-Loève Transform. IEEE Transactions on Signal Processing, 2010, 58, 5320-5330.	3.2	23
26	Local Interference Can Accelerate Gossip Algorithms. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 876-887.	7.3	23
27	Selective and Efficient Neural Coding of Communication Signals Depends on Early Acoustic and Social Environment. PLoS ONE, 2013, 8, e61417.	1.1	23
28	Redundant information encoding in primary motor cortex during natural and prosthetic motor control. Journal of Computational Neuroscience, 2012, 32, 555-561.	0.6	21
29	Compute-and-Forward: Finding the best equation. , 2014, , .		21
30	Information-Theoretic Caching: The Multi-User Case. IEEE Transactions on Information Theory, 2017, 63, 7018-7037.	1.5	21
31	A compressed sensing wire-tap channel. , 2011, , .		20
32	Computation Over Gaussian Networks With Orthogonal Components. IEEE Transactions on Information Theory, 2014, 60, 7841-7861.	1.5	20
33	Generalization Error Bounds via Rényi- $\alpha$ -Divergences and Maximal Leakage. IEEE Transactions on Information Theory, 2021, 67, 4986-5004.	1.5	20
34	Introduction to the Special Issue on Models, Theory, and Codes for Relaying and Cooperation in Communication Networks [Guest Editorial]. IEEE Transactions on Information Theory, 2007, 53, 3297-3301.	1.5	19
35	Coding Schemes and Asymptotic Capacity for the Gaussian Broadcast and Interference Channels With Feedback. IEEE Transactions on Information Theory, 2014, 60, 54-71.	1.5	16
36	List-Decoding for the Arbitrarily Varying Channel Under State Constraints. IEEE Transactions on Information Theory, 2012, 58, 1372-1384.	1.5	15

#	ARTICLE	IF	CITATIONS
37	A Joint Typicality Approach to Compute-Forward. IEEE Transactions on Information Theory, 2018, 64, 7657-7685.	1.5	15
38	Rateless Codes for AVC Models. IEEE Transactions on Information Theory, 2010, 56, 3105-3114.	1.5	14
39	Linear Function Computation in Networks: Duality and Constant Gap Results. IEEE Journal on Selected Areas in Communications, 2013, 31, 620-638.	9.7	14
40	Achievable rates for conferencing multiway channels. , 2008, , .		13
41	Remote Source Coding Under Gaussian Noise: Dueling Roles of Power and Entropy Power. IEEE Transactions on Information Theory, 2019, 65, 4486-4498.	1.5	12
42	Single-server Multi-message Private Information Retrieval with Side Information: the General Cases. , 2020, , .		12
43	Polynomially Solvable Instances of the Shortest and Closest Vector Problems With Applications to Compute-and-Forward. IEEE Transactions on Information Theory, 2017, 63, 7780-7792.	1.5	11
44	Computation over Gaussian Multiple-Access Channels. , 2007, , .		10
45	Function Identification in Neuron Populations via Information Bottleneck. Entropy, 2013, 15, 1587-1608.	1.1	10
46	Approximate Ergodic Capacity of a Class of Fading Two-User Two-Hop Networks. IEEE Transactions on Information Theory, 2014, 60, 866-880.	1.5	10
47	Caching Gaussians: Minimizing total correlation on the Gray-Wyner network. , 2016, , .		10
48	Using zero-rate feedback on binary additive channels with individual noise sequences. , 2007, , .		9
49	Reduced-Dimension Linear Transform Coding of Correlated Signals in Networks. IEEE Transactions on Signal Processing, 2012, 60, 3174-3187.	3.2	9
50	Secure Transmission on the Two-Hop Relay Channel With Scaled Compute-and-Forward. IEEE Transactions on Information Theory, 2017, 63, 7753-7769.	1.5	9
51	Computable Bounds on the Exploration Bias. , 2018, , .		9
52	Compute-Forward Multiple Access (CFMA): Practical Implementations. IEEE Transactions on Communications, 2019, 67, 1133-1147.	4.9	9
53	Compute-Forward for DMCs: Simultaneous Decoding of Multiple Combinations. IEEE Transactions on Information Theory, 2020, 66, 6242-6255.	1.5	9
54	Channels with nosy "noise". , 2007, , .		8

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55	Total correlation of Gaussian vector sources on the Gray-Wyner network. , 2016, , .		8
56	The Optimal Memory-Rate Trade-Off for the Non-Uniform Centralized Caching Problem With Two Files Under Uncoded Placement. IEEE Transactions on Information Theory, 2019, 65, 7756-7770.	1.5	8
57	Arbitrarily dirty paper coding and applications. , 2008, , .		7
58	Maximum Throughput Gain of Compute-and-Forward for Multiple Unicast. IEEE Communications Letters, 2014, 18, 1111-1114.	2.5	7
59	Sum-Rate Capacity for Symmetric Gaussian Multiple Access Channels With Feedback. IEEE Transactions on Information Theory, 2020, 66, 2860-2871.	1.5	7
60	Some observations on limited feedback for multiaccess channels. , 2009, , .		6
61	Anthropic Correction of Information Estimates and Its Application to Neural Coding. IEEE Transactions on Information Theory, 2010, 56, 890-900.	1.5	6
62	Introduction to the Issue on Gossiping Algorithms Design and Applications. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 645-648.	7.3	6
63	Line and Lattice Networks Under Deterministic Interference Models. IEEE Transactions on Information Theory, 2011, 57, 3080-3099.	1.5	6
64	Approximate feedback capacity of the Gaussian multicast channel. , 2012, , .		6
65	Approximate ergodic capacity of a class of fading 2-user 2-hop networks. , 2012, , .		6
66	Capacity Scaling of Cognitive Networks: Beyond Interference-Limited Communication. IEEE Transactions on Information Theory, 2014, 60, 7824-7840.	1.5	6
67	Lattice Codes for Many-to-One Interference Channels With and Without Cognitive Messages. IEEE Transactions on Information Theory, 2015, 61, 1309-1324.	1.5	6
68	Gaussian (dirty) multiple access channels: A compute-and-forward perspective. , 2014, , .		5
69	Compute-and-forward using nested linear codes for the Gaussian MAC. , 2015, , .		5
70	Interactive Computation of Type-Threshold Functions in Collocated Gaussian Networks. IEEE Transactions on Information Theory, 2015, 61, 4765-4775.	1.5	5
71	Towards an Algebraic Network Information Theory: Distributed Lossy Computation of Linear Functions. , 2019, , .		5
72	Robust Generalization via $\hat{f}^{\wedge}$ -Mutual Information. , 2020, , .		5

#	ARTICLE	IF	CITATIONS
73	The Gray-Wyner Network and Wyner's Common Information for Gaussian Sources. IEEE Transactions on Information Theory, 2022, 68, 1369-1384.	1.5	5
74	Achievable Error Exponents in Multiterminal Source Coding. , 2006, , .		4
75	Real-time prediction of fast and slow delivery of mental commands in a motor imagery BCI: An entropy-based approach. , 2012, , .		4
76	Network coding with computation alignment. , 2012, , .		4
77	Capacity scaling of cognitive networks: Beyond interference-limited communication. , 2013, , .		4
78	Coding theorems via linear codes: Joint decoding rate regions. , 2015, , .		4
79	Computation in Multicast Networks: Function Alignment and Converse Theorems. IEEE Transactions on Information Theory, 2016, 62, 1866-1877.	1.5	4
80	Communication Versus Computation: Duality for Multiple-Access Channels and Source Coding. IEEE Transactions on Information Theory, 2019, 65, 292-301.	1.5	4
81	Relaxed Wyner's Common Information. , 2019, , .		4
82	Lower-bounds on the Bayesian Risk in estimation procedures via Sibson's $\alpha$ -Mutual Information. , 2021, , .		4
83	A little feedback can simplify sensor network cooperation. IEEE Journal on Selected Areas in Communications, 2010, 28, 1159-1168.	9.7	3
84	Computation over Gaussian networks with orthogonal components. , 2013, , .		3
85	Multi-round computation of type-threshold functions in collocated Gaussian networks. , 2013, , .		3
86	On lattice codes for Gaussian interference channels. , 2015, , .		3
87	Multi-library coded caching. , 2016, , .		3
88	Learning and Adaptive Data Analysis via Maximal Leakage. , 2019, , .		3
89	The Gaussian lossy Gray-Wyner network. , 2020, , .		3
90	Learning, compression, and leakage: Minimising classification error via meta-universal compression principles. , 2021, , .		3

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91	Information-Theoretic Bounds on Sensor Network Performance. , 0, , 7-41.		3
92	Functional Forwarding of Channel State Information. IEEE Transactions on Information Theory, 2014, 60, 1008-1018.	1.5	2
93	Typical sumsets of linear codes. , 2016, , .		2
94	GDSP: A graphical perspective on the distributed storage systems. , 2017, , .		2
95	Caching (Bivariate) Gaussians. IEEE Transactions on Information Theory, 2020, 66, 6150-6168.	1.5	2
96	Common Information Components Analysis. Entropy, 2021, 23, 151.	1.1	2
97	A Discretization Approach to Computeâ€œForward. , 2021, , .		2
98	Common Information Components Analysis. , 2020, , .		2
99	The Price of Distributed: Rate Loss in the CEO Problem. , 2022, , .		2
100	Approximate ergodic capacity of a class of fading 2 &#x00D7; 2 &#x00D7; 2 Networks. , 2012, , .		1
101	Lattice codes for many-to-one cognitive interference networks. , 2013, , .		1
102	Feedback Communication and Control Over a Single Channel. IEEE Transactions on Information Theory, 2013, 59, 6243-6257.	1.5	1
103	Typical sumsets of lattice points. , 2016, , .		1
104	Successive Refinement to Caching for Dynamic Content. , 2019, , .		1
105	On conditional Sibson's $\alpha$ -Mutual Information. , 2021, , .		1
106	Differential Entropy of the Conditional Expectation under Gaussian Noise. , 2021, , .		1
107	Redundant information encoding in primary motor cortex during motor tasks. , 2011, , .		0
108	On the role of diversity in sparsity estimation. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
109	Successive Refinement to Caching for Dynamic Requests. , 2020, , .		0
110	On Calculating the Minimum Rate for the Cooperative Data Exchange Problem Over Fully Connected Networks. IEEE Transactions on Communications, 2021, 69, 5817-5827.	4.9	0
111	Lower Bounds on the Expected Excess Risk Using Mutual Information. , 2021, , .		0
112	Privacy in Retrieval, Computing, and Learning. IEEE Journal on Selected Areas in Communications, 2022, 40, 725-728.	9.7	0