Jean Barbier

List of Publications by Year
in descending order

35 papers	**684** citations	840776 **11** h-index	996975 **15** g-index
36 all docs	**36** docs citations	**36** times ranked	**229** citing authors

#	Article	IF	Citations
1	Strong Replica Symmetry in High-Dimensional Optimal Bayesian Inference. Communications in Mathematical Physics, 2022, 393, 1199-1239.	2.2	4
2	Information theoretic limits of learning a sparse rule. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 044001.	2.3	0
3	Mutual information for low-rank even-order symmetric tensor estimation. Information and Inference, 2021, 10, 1167-1207.	1.6	4
4	Overlap matrix concentration in optimal Bayesian inference. Information and Inference, 2021, 10, 597-623.	1.6	13
5	Adaptive Path Interpolation Method for Sparse Systems: Application to a Censored Block Model. IEEE Transactions on Information Theory, 2021, 67, 2093-2114.	2.4	0
6	Concentration of Multi-overlaps for Random Dilute Ferromagnetic Spin Models. Journal of Statistical Physics, 2020, 180, 534-557.	1.2	5
7	Information-theoretic limits of a multiview low-rank symmetric spiked matrix model. , 2020, , .		4
8	High-dimensional rank-one nonsymmetric matrix decomposition: the spherical case. , 2020, , .		12
9	Blind calibration for compressed sensing: state evolution and an online algorithm. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 334004.	2.1	0
10	Mutual Information and Optimality of Approximate Message-Passing in Random Linear Estimation. IEEE Transactions on Information Theory, 2020, 66, 4270-4303.	2.4	34
11	Universal Sparse Superposition Codes With Spatial Coupling and GAMP Decoding. IEEE Transactions on Information Theory, 2019, 65, 5618-5642.	2.4	17
12	The adaptive interpolation method for proving replica formulas. Applications to the Curieâ€"Weiss and Wigner spike models. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 294002.	2.1	32
13	Optimal errors and phase transitions in high-dimensional generalized linear models. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5451-5460.	7.1	88
14	Mutual Information for Low-Rank Even-Order Symmetric Tensor Factorization. , 2019, , .		5
15	Concentration of the Matrix-Valued Minimum Mean-Square Error in Optimal Bayesian Inference. , 2019, , .		1
16	Blind Calibration for Sparse Regression: A State Evolution Analysis. , 2019, , .		0
17	The committee machine: computational to statistical gaps in learning a two-layers neural network. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 124023.	2.3	12
18	Entropy and mutual information in models of deep neural networks*. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 124014.	2.3	34

#	Article	IF	Citations
19	Mutual Information for the Stochastic Block Model by the Adaptive Interpolation Method. , 2019, , .		1
20	The adaptive interpolation method: a simple scheme to prove replica formulas in Bayesian inference. Probability Theory and Related Fields, 2019, 174, 1133-1185.	1.8	58
21	Adaptive Path Interpolation for Sparse Systems: Application to a Simple Censored Block Model. , 2018, , .		6
22	The Mutual Information in Random Linear Estimation Beyond i.i.d. Matrices. , 2018, , .		32
23	Approximate Message-Passing Decoder and Capacity Achieving Sparse Superposition Codes. IEEE Transactions on Information Theory, 2017, 63, 4894-4927.	2.4	72
24	I-MMSE relations in random linear estimation and a sub-extensive interpolation method. , 2017, , .		2
25	Generalized approximate message-passing decoder for universal sparse superposition codes. , 2017, , .		10
26	The layered structure of tensor estimation and its mutual information. , 2017, , .		38
27	Threshold saturation of spatially coupled sparse superposition codes for all memoryless channels. , 2016, , .		16
28	Proof of threshold saturation for spatially coupled sparse superposition codes. , 2016, , .		28
29	The mutual information in random linear estimation. , 2016, , .		52
30	Scampi: a robust approximate message-passing framework for compressive imaging. Journal of Physics: Conference Series, 2016, 699, 012013.	0.4	1
31	Approximate message-passing with spatially coupled structured operators, with applications to compressed sensing and sparse superposition codes. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P05013.	2.3	36
32	Replica analysis and approximate message passing decoder for superposition codes. , 2014, , .		33
33	Robust error correction for real-valued signals via message-passing decoding and spatial coupling. , 2013, , .		4
34	The hard-core model on random graphs revisited. Journal of Physics: Conference Series, 2013, 473, 012021.	0.4	19
35	Compressed sensing of approximately-sparse signals: Phase transitions and optimal reconstruction. , 2012, , .		10