

Cristopher Moore

List of Publications by Year in descending order

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122
papers

14,488
citations

66343

42
h-index

26613

107
g-index

127
all docs

127
docs citations

127
times ranked

11220
citing authors

#	ARTICLE	IF	CITATIONS
1	Belief propagation for permutations, rankings, and partial orders. <i>Physical Review E</i> , 2022, 105, .	2.1	2
2	The Kikuchi Hierarchy and Tensor PCA. , 2019, , .		16
3	The Lovász Theta Function for Random Regular Graphs and Community Detection in the Hard Regime. <i>SIAM Journal on Computing</i> , 2019, 48, 1098-1119.	1.0	4
4	Percolation Is Odd. <i>Physical Review Letters</i> , 2019, 123, 230605.	7.8	4
5	Information-Theoretic Bounds and Phase Transitions in Clustering, Sparse PCA, and Submatrix Localization. <i>IEEE Transactions on Information Theory</i> , 2018, 64, 4872-4894.	2.4	24
6	Series expansion of the percolation threshold on hypercubic lattices. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 475001.	2.1	11
7	Percolation thresholds and Fisher exponents in hypercubic lattices. <i>Physical Review E</i> , 2018, 98, 022120.	2.1	28
8	Minimum Circuit Size, Graph Isomorphism, and Related Problems. <i>SIAM Journal on Computing</i> , 2018, 47, 1339-1372.	1.0	14
9	A physical model for efficient ranking in networks. <i>Science Advances</i> , 2018, 4, eaar8260.	10.3	41
10	Percolation thresholds in hyperbolic lattices. <i>Physical Review E</i> , 2017, 96, 042116.	2.1	10
11	Random graph models for dynamic networks. <i>European Physical Journal B</i> , 2017, 90, 1.	1.5	77
12	Community detection, link prediction, and layer interdependence in multilayer networks. <i>Physical Review E</i> , 2017, 95, 042317.	2.1	130
13	Information-theoretic bounds and phase transitions in clustering, sparse PCA, and submatrix localization. , 2017, , .		7
14	Detectability Thresholds and Optimal Algorithms for Community Structure in Dynamic Networks. <i>Physical Review X</i> , 2016, 6, .	8.9	51
15	Accurate and scalable social recommendation using mixed-membership stochastic block models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14207-14212.	7.1	35
16	Community detection in networks with unequal groups. <i>Physical Review E</i> , 2016, 93, 012303.	2.1	40
17	Codes, lower bounds, and phase transitions in the symmetric rendezvous problem. <i>Random Structures and Algorithms</i> , 2016, 49, 742-765.	1.1	3
18	On the universal structure of human lexical semantics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1766-1771.	7.1	73

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19	The phase transition in random regular exact cover. <i>Annales De L'Institut Henri Poincare (D) Combinatorics, Physics and Their Interactions</i> , 2016, 3, 349-362.	1.1	6
20	Message-passing approach for recurrent-state epidemic models on networks. <i>Physical Review E</i> , 2015, 92, 022821.	2.1	55
21	Optimal ϵ -Biased Sets with Just a Little Randomness. <i>SIAM Journal on Discrete Mathematics</i> , 2015, 29, 1303-1311.	0.8	0
22	Group representations that resist random sampling. <i>Random Structures and Algorithms</i> , 2015, 47, 605-614.	1.1	1
23	Approximate Representations, Approximate Homomorphisms, and Low-Dimensional Embeddings of Groups. <i>SIAM Journal on Discrete Mathematics</i> , 2015, 29, 182-197.	0.8	9
24	Model selection for degree-corrected block models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P05007.	2.3	69
25	An Entropic Proof of Chang's Inequality. <i>SIAM Journal on Discrete Mathematics</i> , 2014, 28, 173-176.	0.8	7
26	Tree codes and a conjecture on exponential sums. , 2014, , .		16
27	Oriented and degree-generated block models: generating and inferring communities with inhomogeneous degree distributions. <i>Journal of Complex Networks</i> , 2014, 2, 1-18.	1.8	18
28	Message-passing approach for threshold models of behavior in networks. <i>Physical Review E</i> , 2014, 89, 022805.	2.1	37
29	Phase transitions in semisupervised clustering of sparse networks. <i>Physical Review E</i> , 2014, 90, 052802.	2.1	37
30	Scalable detection of statistically significant communities and hierarchies, using message passing for modularity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 18144-18149.	7.1	119
31	Phase transitions in community detection: A solvable toy model. <i>Europhysics Letters</i> , 2014, 106, 48004.	2.0	8
32	Stability analysis of financial contagion due to overlapping portfolios. <i>Journal of Banking and Finance</i> , 2014, 46, 233-245.	2.9	302
33	Scalable text and link analysis with mixed-topic link models. , 2013, , .		38
34	Spectral redemption in clustering sparse networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 20935-20940.	7.1	392
35	Transdisciplinary electric power grid science. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 12159-12159.	7.1	49
36	Small-Bias Sets for Nonabelian Groups. <i>Lecture Notes in Computer Science</i> , 2013, , 436-451.	1.3	11

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37	The Power of Choice for Random Satisfiability. Lecture Notes in Computer Science, 2013, , 484-496.	1.3	0
38	Continuum percolation thresholds in two dimensions. Physical Review E, 2012, 86, 061109.	2.1	157
39	Approximating the Permanent via Nonabelian Determinants. SIAM Journal on Computing, 2012, 41, 332-355.	1.0	3
40	Active learning for node classification in assortative and disassortative networks. , 2011, , .		25
41	A Graph Integral Formulation of the Circuit Partition Polynomial. Combinatorics Probability and Computing, 2011, 20, 911-920.	1.3	0
42	McEliece and Niederreiter Cryptosystems That Resist Quantum Fourier Sampling Attacks. Lecture Notes in Computer Science, 2011, , 761-779.	1.3	46
43	Topological phase transition in a network model with preferential attachment and node removal. European Physical Journal B, 2011, 83, 519-524.	1.5	15
44	Parallel complexity of random Boolean circuits. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P04015.	2.3	1
45	Asymptotic analysis of the stochastic block model for modular networks and its algorithmic applications. Physical Review E, 2011, 84, 066106.	2.1	427
46	Inference and Phase Transitions in the Detection of Modules in Sparse Networks. Physical Review Letters, 2011, 107, 065701.	7.8	248
47	The Rigidity Transition in Random Graphs. , 2011, , .		4
48	A complex legacy. Nature Physics, 2011, 7, 828-830.	16.7	7
49	Independent Sets in Random Graphs from the Weighted Second Moment Method. Lecture Notes in Computer Science, 2011, , 472-482.	1.3	10
50	Limitations of quantum coset states for graph isomorphism. Journal of the ACM, 2010, 57, 1-33.	2.2	15
51	On the Impossibility of a Quantum Sieve Algorithm for Graph Isomorphism. SIAM Journal on Computing, 2010, 39, 2377-2396.	1.0	4
52	Dynamic Networks from Hierarchical Bayesian Graph Clustering. PLoS ONE, 2010, 5, e8118.	2.5	23
53	On the bias of traceroute sampling. Journal of the ACM, 2009, 56, 1-28.	2.2	51
54	Quantum algorithms for Simon's problem over nonabelian groups. ACM Transactions on Algorithms, 2009, 6, 1-15.	1.0	53

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55	Hierarchical structure and the prediction of missing links in networks. <i>Nature</i> , 2008, 453, 98-101.	27.8	1,674
56	The Symmetric Group Defies Strong Fourier Sampling. <i>SIAM Journal on Computing</i> , 2008, 37, 1842-1864.	1.0	16
57	On the impossibility of a quantum sieve algorithm for graph isomorphism. , 2007, , .		37
58	The Power of Strong Fourier Sampling: Quantum Algorithms for Affine Groups and Hidden Shifts. <i>SIAM Journal on Computing</i> , 2007, 37, 938-958.	1.0	35
59	A computational approach to animal breeding. <i>Journal of Theoretical Biology</i> , 2007, 244, 433-439.	1.7	4
60	Counting connected graphs and hypergraphs via the probabilistic method. <i>Random Structures and Algorithms</i> , 2007, 31, 288-329.	1.1	17
61	A continuousâ€“discontinuous second-order transition in the satisfiability of random Horn-SAT formulas. <i>Random Structures and Algorithms</i> , 2007, 31, 173-185.	1.1	3
62	The power of choice in growing trees. <i>European Physical Journal B</i> , 2007, 59, 535-543.	1.5	24
63	Exact solutions for models of evolving networks with addition and deletion of nodes. <i>Physical Review E</i> , 2006, 74, 036121.	2.1	100
64	Random k-SAT: Two Moments Suffice to Cross a Sharp Threshold. <i>SIAM Journal on Computing</i> , 2006, 36, 740-762.	1.0	144
65	Scale invariance in road networks. <i>Physical Review E</i> , 2006, 73, 026130.	2.1	119
66	Generic quantum Fourier transforms. <i>ACM Transactions on Algorithms</i> , 2006, 2, 707-723.	1.0	48
67	New Periodic Orbits for the n-Body Problem. <i>Journal of Computational and Nonlinear Dynamics</i> , 2006, 1, 307-311.	1.2	13
68	MAXk-CUT and approximating the chromatic number of random graphs. <i>Random Structures and Algorithms</i> , 2006, 28, 289-322.	1.1	16
69	Limitations of quantum coset states for graph isomorphism. , 2006, , .		52
70	Global connectivity from local geometric constraints for sensor networks with various wireless footprints. , 2006, , .		8
71	Automatic filters for the detection of coherent structure in spatiotemporal systems. <i>Physical Review E</i> , 2006, 73, 036104.	2.1	72
72	Structural Inference of Hierarchies in Networks. , 2006, , 1-13.		66

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73	The resolution complexity of random graph k -colorability. <i>Discrete Applied Mathematics</i> , 2005, 153, 25-47.	0.9	40
74	On the computational power of probabilistic and quantum branching program. <i>Information and Computation</i> , 2005, 203, 145-162.	0.7	36
75	Building the Components for a Biomolecular Computer. <i>Lecture Notes in Computer Science</i> , 2005, , 247-257.	1.3	2
76	Rapid mixing for lattice colourings with fewer colours. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2005, 2005, P10012-P10012.	2.3	7
77	On the bias of traceroute sampling. , 2005, , .		106
78	Accuracy and Scaling Phenomena in Internet Mapping. <i>Physical Review Letters</i> , 2005, 94, 018701.	7.8	80
79	A Continuous-Discontinuous Second-Order Transition in the Satisfiability of Random Horn-SAT Formulas. <i>Lecture Notes in Computer Science</i> , 2005, , 414-425.	1.3	0
80	Finding community structure in very large networks. <i>Physical Review E</i> , 2004, 70, 066111.	2.1	5,083
81	The physical limits of communication or Why any sufficiently advanced technology is indistinguishable from noise. <i>American Journal of Physics</i> , 2004, 72, 1290-1293.	0.7	22
82	Sampling Grid Colorings with Fewer Colors. <i>Lecture Notes in Computer Science</i> , 2004, , 80-89.	1.3	26
83	Rectangles and Squares Recognized by Two-Dimensional Automata. <i>Lecture Notes in Computer Science</i> , 2004, , 134-144.	1.3	29
84	The Chromatic Number of Random Regular Graphs. <i>Lecture Notes in Computer Science</i> , 2004, , 219-228.	1.3	17
85	Counting Connected Graphs and Hypergraphs via the Probabilistic Method. <i>Lecture Notes in Computer Science</i> , 2004, , 322-333.	1.3	4
86	How Much Backtracking Does It Take to Color Random Graphs? Rigorous Results on Heavy Tails. <i>Lecture Notes in Computer Science</i> , 2004, , 742-746.	1.3	29
87	Almost all graphs with average degree 4 are 3-colorable. <i>Journal of Computer and System Sciences</i> , 2003, 67, 441-471.	1.2	47
88	MAX k -CUT and Approximating the Chromatic Number of Random Graphs. <i>Lecture Notes in Computer Science</i> , 2003, , 200-211.	1.3	11
89	Quantum Walks on the Hypercube. <i>Lecture Notes in Computer Science</i> , 2002, , 164-178.	1.3	104
90	An Analog Characterization of the Grzegorzcyk Hierarchy. <i>Journal of Complexity</i> , 2002, 18, 977-1000.	1.3	35

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91	Ribbon Tile Invariants from the Signed Area. Journal of Combinatorial Theory - Series A, 2002, 98, 1-16.	0.8	6
92	Quantum and Stochastic Branching Programs of Bounded Width. Lecture Notes in Computer Science, 2002, , 343-354.	1.3	3
93	On the 2-Colorability of Random Hypergraphs. Lecture Notes in Computer Science, 2002, , 78-90.	1.3	17
94	Computational Complexity in Physics. , 2002, , 131-135.		1
95	Parallel Quantum Computation and Quantum Codes. SIAM Journal on Computing, 2001, 31, 799-815.	1.0	95
96	Hard Tiling Problems with Simple Tiles. Discrete and Computational Geometry, 2001, 26, 573-590.	0.6	114
97	Upper and Lower Bounds on Continuous-Time Computation. , 2001, , 135-153.		2
98	Satisfiability of Systems of Equations over Finite Monoids. Lecture Notes in Computer Science, 2001, , 537-547.	1.3	8
99	Iteration, Inequalities, and Differentiability in Analog Computers. Journal of Complexity, 2000, 16, 642-660.	1.3	37
100	Circuits and Expressions with Nonassociative Gates. Journal of Computer and System Sciences, 2000, 60, 368-394.	1.2	9
101	Quantum automata and quantum grammars. Theoretical Computer Science, 2000, 237, 275-306.	0.9	285
102	Queues, stacks, and transcendentalty at the transition to chaos. Physica D: Nonlinear Phenomena, 2000, 135, 24-40.	2.8	10
103	Internal Diffusion-Limited Aggregation: Parallel Algorithms and Complexity. Journal of Statistical Physics, 2000, 99, 661-690.	1.2	23
104	Title is missing!. Journal of Statistical Physics, 2000, 99, 629-660.	1.2	46
105	Exact solution of site and bond percolation on small-world networks. Physical Review E, 2000, 62, 7059-7064.	2.1	151
106	Epidemics and percolation in small-world networks. Physical Review E, 2000, 61, 5678-5682.	2.1	741
107	Mean-Field Solution of the Small-World Network Model. Physical Review Letters, 2000, 84, 3201-3204.	7.8	396
108	Glassy dynamics and aging in an exactly solvable spin model. Physical Review E, 1999, 60, 5068-5072.	2.1	87

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109	Vortex dynamics and entropic forces in antiferromagnets and antiferromagnetic Potts models. <i>Physical Review E</i> , 1999, 60, 5344-5351.	2.1	41
110	Closed-form analytic maps in one and two dimensions can simulate universal turing machines. <i>Theoretical Computer Science</i> , 1999, 210, 217-223.	0.9	56
111	The Computational Complexity of Sandpiles. <i>Journal of Statistical Physics</i> , 1999, 96, 205-224.	1.2	52
112	Complexity of Two-Dimensional Patterns. <i>Journal of Statistical Physics</i> , 1998, 91, 909-951.	1.2	107
113	Dynamical recognizers: real-time language recognition by analog computers. <i>Theoretical Computer Science</i> , 1998, 201, 99-136.	0.9	49
114	Predicting nonlinear cellular automata quickly by decomposing them into linear ones. <i>Physica D: Nonlinear Phenomena</i> , 1998, 111, 27-41.	2.8	33
115	Majority-Vote Cellular Automata, Ising Dynamics, and P-Completeness. <i>Journal of Statistical Physics</i> , 1997, 88, 795-805.	1.2	43
116	Quasilinear cellular automata. <i>Physica D: Nonlinear Phenomena</i> , 1997, 103, 100-132.	2.8	22
117	Recursion theory on the reals and continuous-time computation. <i>Theoretical Computer Science</i> , 1996, 162, 23-44.	0.9	113
118	Braids in classical dynamics. <i>Physical Review Letters</i> , 1993, 70, 3675-3679.	7.8	213
119	Generalized one-sided shifts and maps of the interval. <i>Nonlinearity</i> , 1991, 4, 727-745.	1.4	20
120	Generalized shifts: unpredictability and undecidability in dynamical systems. <i>Nonlinearity</i> , 1991, 4, 199-230.	1.4	205
121	Unpredictability and undecidability in dynamical systems. <i>Physical Review Letters</i> , 1990, 64, 2354-2357.	7.8	291
122	Comment on "Space-time as a causal set". <i>Physical Review Letters</i> , 1988, 60, 655-655.	7.8	18