

# Cristopher Moore

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3383049/publications.pdf>

Version: 2024-02-01

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	Finding community structure in very large networks. <i>Physical Review E</i> , 2004, 70, 066111.	2.1	5,083
2	Hierarchical structure and the prediction of missing links in networks. <i>Nature</i> , 2008, 453, 98-101.	27.8	1,674
3	Epidemics and percolation in small-world networks. <i>Physical Review E</i> , 2000, 61, 5678-5682.	2.1	741
4	Asymptotic analysis of the stochastic block model for modular networks and its algorithmic applications. <i>Physical Review E</i> , 2011, 84, 066106.	2.1	427
5	Mean-Field Solution of the Small-World Network Model. <i>Physical Review Letters</i> , 2000, 84, 3201-3204.	7.8	396
6	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
7	Stability analysis of financial contagion due to overlapping portfolios. <i>Journal of Banking and Finance</i> , 2014, 46, 233-245.	2.9	302
8	Unpredictability and undecidability in dynamical systems. <i>Physical Review Letters</i> , 1990, 64, 2354-2357.	7.8	291
9	Quantum automata and quantum grammars. <i>Theoretical Computer Science</i> , 2000, 237, 275-306.	0.9	285
10	Inference and Phase Transitions in the Detection of Modules in Sparse Networks. <i>Physical Review Letters</i> , 2011, 107, 065701.	7.8	248
11	Braids in classical dynamics. <i>Physical Review Letters</i> , 1993, 70, 3675-3679.	7.8	213
12	Generalized shifts: unpredictability and undecidability in dynamical systems. <i>Nonlinearity</i> , 1991, 4, 199-230.	1.4	205
13	Continuum percolation thresholds in two dimensions. <i>Physical Review E</i> , 2012, 86, 061109.	2.1	157
14	Exact solution of site and bond percolation on small-world networks. <i>Physical Review E</i> , 2000, 62, 7059-7064.	2.1	151
15	Random k-SAT: Two Moments Suffice to Cross a Sharp Threshold. <i>SIAM Journal on Computing</i> , 2006, 36, 740-762.	1.0	144
16	Community detection, link prediction, and layer interdependence in multilayer networks. <i>Physical Review E</i> , 2017, 95, 042317.	2.1	130
17	Scale invariance in road networks. <i>Physical Review E</i> , 2006, 73, 026130.	2.1	119
18	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

#	ARTICLE	IF	CITATIONS
19	Hard Tiling Problems with Simple Tiles. <i>Discrete and Computational Geometry</i> , 2001, 26, 573-590.	0.6	114
20	Recursion theory on the reals and continuous-time computation. <i>Theoretical Computer Science</i> , 1996, 162, 23-44.	0.9	113
21	Complexity of Two-Dimensional Patterns. <i>Journal of Statistical Physics</i> , 1998, 91, 909-951.	1.2	107
22	On the bias of traceroute sampling. , 2005, , .		106
23	Quantum Walks on the Hypercube. <i>Lecture Notes in Computer Science</i> , 2002, , 164-178.	1.3	104
24	Exact solutions for models of evolving networks with addition and deletion of nodes. <i>Physical Review E</i> , 2006, 74, 036121.	2.1	100
25	Parallel Quantum Computation and Quantum Codes. <i>SIAM Journal on Computing</i> , 2001, 31, 799-815.	1.0	95
26	Glassy dynamics and aging in an exactly solvable spin model. <i>Physical Review E</i> , 1999, 60, 5068-5072.	2.1	87
27	Accuracy and Scaling Phenomena in Internet Mapping. <i>Physical Review Letters</i> , 2005, 94, 018701.	7.8	80
28	Random graph models for dynamic networks. <i>European Physical Journal B</i> , 2017, 90, 1.	1.5	77
29	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
30	Automatic filters for the detection of coherent structure in spatiotemporal systems. <i>Physical Review E</i> , 2006, 73, 036104.	2.1	72
31	Model selection for degree-corrected block models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P05007.	2.3	69
32	Structural Inference of Hierarchies in Networks. , 2006, , 1-13.		66
33	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
34	Message-passing approach for recurrent-state epidemic models on networks. <i>Physical Review E</i> , 2015, 92, 022821.	2.1	55
35	Quantum algorithms for Simon's problem over nonabelian groups. <i>ACM Transactions on Algorithms</i> , 2009, 6, 1-15.	1.0	53
36	The Computational Complexity of Sandpiles. <i>Journal of Statistical Physics</i> , 1999, 96, 205-224.	1.2	52

#	ARTICLE	IF	CITATIONS
37	Limitations of quantum coset states for graph isomorphism. , 2006, , .		52
38	On the bias of traceroute sampling. Journal of the ACM, 2009, 56, 1-28.	2.2	51
39	Detectability Thresholds and Optimal Algorithms for Community Structure in Dynamic Networks. Physical Review X, 2016, 6, .	8.9	51
40	Dynamical recognizers: real-time language recognition by analog computers. Theoretical Computer Science, 1998, 201, 99-136.	0.9	49
41	Transdisciplinary electric power grid science. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12159-12159.	7.1	49
42	Generic quantum Fourier transforms. ACM Transactions on Algorithms, 2006, 2, 707-723.	1.0	48
43	Almost all graphs with average degree 4 are 3-colorable. Journal of Computer and System Sciences, 2003, 67, 441-471.	1.2	47
44	Title is missing!. Journal of Statistical Physics, 2000, 99, 629-660.	1.2	46
45	McEliece and Niederreiter Cryptosystems That Resist Quantum Fourier Sampling Attacks. Lecture Notes in Computer Science, 2011, , 761-779.	1.3	46
46	Majority-Vote Cellular Automata, Ising Dynamics, and P-Completeness. Journal of Statistical Physics, 1997, 88, 795-805.	1.2	43
47	Vortex dynamics and entropic forces in antiferromagnets and antiferromagnetic Potts models. Physical Review E, 1999, 60, 5344-5351.	2.1	41
48	A physical model for efficient ranking in networks. Science Advances, 2018, 4, eaar8260.	10.3	41
49	The resolution complexity of random graph k-colorability. Discrete Applied Mathematics, 2005, 153, 25-47.	0.9	40
50	Community detection in networks with unequal groups. Physical Review E, 2016, 93, 012303.	2.1	40
51	Scalable text and link analysis with mixed-topic link models. , 2013, , .		38
52	Iteration, Inequalities, and Differentiability in Analog Computers. Journal of Complexity, 2000, 16, 642-660.	1.3	37
53	On the impossibility of a quantum sieve algorithm for graph isomorphism. , 2007, , .		37
54	Message-passing approach for threshold models of behavior in networks. Physical Review E, 2014, 89, 022805.	2.1	37

#	ARTICLE	IF	CITATIONS
55	Phase transitions in semisupervised clustering of sparse networks. <i>Physical Review E</i> , 2014, 90, 052802.	2.1	37
56	On the computational power of probabilistic and quantum branching program. <i>Information and Computation</i> , 2005, 203, 145-162.	0.7	36
57	An Analog Characterization of the Grzegorzczuk Hierarchy. <i>Journal of Complexity</i> , 2002, 18, 977-1000.	1.3	35
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	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
60	Predicting nonlinear cellular automata quickly by decomposing them into linear ones. <i>Physica D: Nonlinear Phenomena</i> , 1998, 111, 27-41.	2.8	33
61	Rectangles and Squares Recognized by Two-Dimensional Automata. <i>Lecture Notes in Computer Science</i> , 2004, , 134-144.	1.3	29
62	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
63	Percolation thresholds and Fisher exponents in hypercubic lattices. <i>Physical Review E</i> , 2018, 98, 022120.	2.1	28
64	Sampling Grid Colorings with Fewer Colors. <i>Lecture Notes in Computer Science</i> , 2004, , 80-89.	1.3	26
65	Active learning for node classification in assortative and disassortative networks. , 2011, , .		25
66	The power of choice in growing trees. <i>European Physical Journal B</i> , 2007, 59, 535-543.	1.5	24
67	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
68	Internal Diffusion-Limited Aggregation: Parallel Algorithms and Complexity. <i>Journal of Statistical Physics</i> , 2000, 99, 661-690.	1.2	23
69	Dynamic Networks from Hierarchical Bayesian Graph Clustering. <i>PLoS ONE</i> , 2010, 5, e8118.	2.5	23
70	Quasilinear cellular automata. <i>Physica D: Nonlinear Phenomena</i> , 1997, 103, 100-132.	2.8	22
71	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
72	Generalized one-sided shifts and maps of the interval. <i>Nonlinearity</i> , 1991, 4, 727-745.	1.4	20

#	ARTICLE	IF	CITATIONS
73	Comment on "Space-time as a causal set". Physical Review Letters, 1988, 60, 655-655.	7.8	18
74	Oriented and degree-generated block models: generating and inferring communities with inhomogeneous degree distributions. Journal of Complex Networks, 2014, 2, 1-18.	1.8	18
75	Counting connected graphs and hypergraphs via the probabilistic method. Random Structures and Algorithms, 2007, 31, 288-329.	1.1	17
76	On the 2-Colorability of Random Hypergraphs. Lecture Notes in Computer Science, 2002, , 78-90.	1.3	17
77	The Chromatic Number of Random Regular Graphs. Lecture Notes in Computer Science, 2004, , 219-228.	1.3	17
78	MAXk-CUT and approximating the chromatic number of random graphs. Random Structures and Algorithms, 2006, 28, 289-322.	1.1	16
79	The Symmetric Group Defies Strong Fourier Sampling. SIAM Journal on Computing, 2008, 37, 1842-1864.	1.0	16
80	Tree codes and a conjecture on exponential sums. , 2014, , .		16
81	The Kikuchi Hierarchy and Tensor PCA. , 2019, , .		16
82	Limitations of quantum coset states for graph isomorphism. Journal of the ACM, 2010, 57, 1-33.	2.2	15
83	Topological phase transition in a network model with preferential attachment and node removal. European Physical Journal B, 2011, 83, 519-524.	1.5	15
84	Minimum Circuit Size, Graph Isomorphism, and Related Problems. SIAM Journal on Computing, 2018, 47, 1339-1372.	1.0	14
85	New Periodic Orbits for the n-Body Problem. Journal of Computational and Nonlinear Dynamics, 2006, 1, 307-311.	1.2	13
86	Series expansion of the percolation threshold on hypercubic lattices. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 475001.	2.1	11
87	MAX k-CUT and Approximating the Chromatic Number of Random Graphs. Lecture Notes in Computer Science, 2003, , 200-211.	1.3	11
88	Small-Bias Sets for Nonabelian Groups. Lecture Notes in Computer Science, 2013, , 436-451.	1.3	11
89	Queues, stacks, and transcendentalty at the transition to chaos. Physica D: Nonlinear Phenomena, 2000, 135, 24-40.	2.8	10
90	Percolation thresholds in hyperbolic lattices. Physical Review E, 2017, 96, 042116.	2.1	10

#	ARTICLE	IF	CITATIONS
91	Independent Sets in Random Graphs from the Weighted Second Moment Method. Lecture Notes in Computer Science, 2011, , 472-482.	1.3	10
92	Circuits and Expressions with Nonassociative Gates. Journal of Computer and System Sciences, 2000, 60, 368-394.	1.2	9
93	Approximate Representations, Approximate Homomorphisms, and Low-Dimensional Embeddings of Groups. SIAM Journal on Discrete Mathematics, 2015, 29, 182-197.	0.8	9
94	Global connectivity from local geometric constraints for sensor networks with various wireless footprints. , 2006, , .		8
95	Phase transitions in community detection: A solvable toy model. Europhysics Letters, 2014, 106, 48004.	2.0	8
96	Satisfiability of Systems of Equations over Finite Monoids. Lecture Notes in Computer Science, 2001, , 537-547.	1.3	8
97	Rapid mixing for lattice colourings with fewer colours. Journal of Statistical Mechanics: Theory and Experiment, 2005, 2005, P10012-P10012.	2.3	7
98	A complex legacy. Nature Physics, 2011, 7, 828-830.	16.7	7
99	An Entropic Proof of Chang's Inequality. SIAM Journal on Discrete Mathematics, 2014, 28, 173-176.	0.8	7
100	Information-theoretic bounds and phase transitions in clustering, sparse PCA, and submatrix localization. , 2017, , .		7
101	Ribbon Tile Invariants from the Signed Area. Journal of Combinatorial Theory - Series A, 2002, 98, 1-16.	0.8	6
102	The phase transition in random regular exact cover. Annales De L'Institut Henri Poincare (D) Combinatorics, Physics and Their Interactions, 2016, 3, 349-362.	1.1	6
103	A computational approach to animal breeding. Journal of Theoretical Biology, 2007, 244, 433-439.	1.7	4
104	On the Impossibility of a Quantum Sieve Algorithm for Graph Isomorphism. SIAM Journal on Computing, 2010, 39, 2377-2396.	1.0	4
105	The Rigidity Transition in Random Graphs. , 2011, , .		4
106	The Lovász Theta Function for Random Regular Graphs and Community Detection in the Hard Regime. SIAM Journal on Computing, 2019, 48, 1098-1119.	1.0	4
107	Percolation Is Odd. Physical Review Letters, 2019, 123, 230605.	7.8	4
108	Counting Connected Graphs and Hypergraphs via the Probabilistic Method. Lecture Notes in Computer Science, 2004, , 322-333.	1.3	4

#	ARTICLE	IF	CITATIONS
109	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
110	Approximating the Permanent via Nonabelian Determinants. <i>SIAM Journal on Computing</i> , 2012, 41, 332-355.	1.0	3
111	Codes, lower bounds, and phase transitions in the symmetric rendezvous problem. <i>Random Structures and Algorithms</i> , 2016, 49, 742-765.	1.1	3
112	Quantum and Stochastic Branching Programs of Bounded Width. <i>Lecture Notes in Computer Science</i> , 2002, , 343-354.	1.3	3
113	Building the Components for a Biomolecular Computer. <i>Lecture Notes in Computer Science</i> , 2005, , 247-257.	1.3	2
114	Upper and Lower Bounds on Continuous-Time Computation. , 2001, , 135-153.		2
115	Belief propagation for permutations, rankings, and partial orders. <i>Physical Review E</i> , 2022, 105, .	2.1	2
116	Parallel complexity of random Boolean circuits. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P04015.	2.3	1
117	Group representations that resist random sampling. <i>Random Structures and Algorithms</i> , 2015, 47, 605-614.	1.1	1
118	Computational Complexity in Physics. , 2002, , 131-135.		1
119	A Graph Integral Formulation of the Circuit Partition Polynomial. <i>Combinatorics Probability and Computing</i> , 2011, 20, 911-920.	1.3	0
120	Optimal $\epsilon$ -Biased Sets with Just a Little Randomness. <i>SIAM Journal on Discrete Mathematics</i> , 2015, 29, 1303-1311.	0.8	0
121	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
122	The Power of Choice for Random Satisfiability. <i>Lecture Notes in Computer Science</i> , 2013, , 484-496.	1.3	0