

# Alexander K Hartmann

## List of Publications by Year in descending order

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113  
papers

2,729  
citations

186265

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129  
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129  
docs citations

129  
times ranked

1193  
citing authors

#	ARTICLE	IF	CITATIONS
1	Large deviations of a susceptible-infected-recovered model around the epidemic threshold. Physical Review E, 2022, 105, 034313.	2.1	3
2	Critical behavior of the Anderson model on the Bethe lattice via a large-deviation approach. Physical Review B, 2022, 105, .	3.2	6
3	Ordering behavior of the two-dimensional Ising spin glass with long-range correlated disorder. Physical Review E, 2021, 103, 042117.	2.1	3
4	Similarity of extremely rare nonequilibrium processes to equilibrium processes. Physical Review E, 2021, 104, 034407.	2.1	3
5	Phase transition for parameter learning of hidden Markov models. Physical Review E, 2021, 104, 044105.	2.1	1
6	Observing symmetry-broken optimal paths of the stationary Kardar-Parisi-Zhang interface via a large-deviation sampling of directed polymers in random media. Physical Review E, 2021, 104, 054125.	2.1	10
7	Phase transition in the bipartite z-matching. European Physical Journal B, 2021, 94, 1.	1.5	1
8	Percolation of Fortuin-Kasteleyn clusters for the random-bond Ising model. Physical Review E, 2020, 102, 012131.	2.1	5
9	Number of longest increasing subsequences. Physical Review E, 2020, 101, 062109.	2.1	5
10	Asymptotic behavior of the length of the longest increasing subsequences of random walks. Physical Review E, 2020, 101, 032102.	2.1	4
11	Probing large deviations of the Kardar-Parisi-Zhang equation at short times with an importance sampling of directed polymers in random media. Physical Review E, 2020, 101, 012134.	2.1	10
12	The convex hull of the run-and-tumble particle in a plane. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 053401.	2.3	28
13	Large deviations of a random walk model with emerging territories. Physical Review E, 2020, 102, 062141.	2.1	2
14	Large deviations of connected components in the stochastic block model. Physical Review E, 2020, 102, 052108.	2.1	0
15	Large deviations of the length of the longest increasing subsequence of random permutations and random walks. Physical Review E, 2019, 99, 042104.	2.1	8
16	Directed negative-weight percolation. Physical Review E, 2019, 100, 022113.	2.1	2
17	Large-deviations of the basin stability of power grids. Chaos, 2019, 29, 113103.	2.5	18
18	Large-deviation properties of the largest biconnected component for random graphs. European Physical Journal B, 2019, 92, 1.	1.5	13

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19	From Spin Glasses to Negative-Weight Percolation. <i>Entropy</i> , 2019, 21, 193.	2.2	0
20	Large Deviations of Convex Hulls of the $\epsilon$ -Self-Avoiding Random Walk. <i>Journal of Physics: Conference Series</i> , 2019, 1290, 012029.	0.4	5
21	Replica symmetry and replica symmetry breaking for the traveling salesperson problem. <i>Physical Review E</i> , 2019, 100, 032135.	2.1	2
22	Rare-event properties of the Nagel-Schreckenberg model. <i>Physical Review E</i> , 2019, 100, 062301.	2.1	9
23	Optimal paths of nonequilibrium stochastic fields: The Kardar-Parisi-Zhang interface as a test case. <i>Physical Review Research</i> , 2019, 1, .	3.6	15
24	miR-96 is required for normal development of the auditory hindbrain. <i>Human Molecular Genetics</i> , 2018, 27, 860-874.	2.9	31
25	Distribution of diameters for Erdős-Rényi random graphs. <i>Physical Review E</i> , 2018, 97, 032128.	2.1	28
26	Estimating causal effects using triplet orderings: scale free graphs and dependence on the node order. <i>Journal of Physics: Conference Series</i> , 2018, 1036, 012002.	0.4	0
27	Ground-state energy of noninteracting fermions with a random energy spectrum. <i>Europhysics Letters</i> , 2018, 124, 40005.	2.0	6
28	High-precision simulation of the height distribution for the KPZ equation. <i>Europhysics Letters</i> , 2018, 121, 67004.	2.0	33
29	Large deviations of convex hulls of self-avoiding random walks. <i>Physical Review E</i> , 2018, 97, 062159.	2.1	15
30	Distribution of shortest path lengths in subcritical Erdős-Rényi networks. <i>Physical Review E</i> , 2018, 98, 012301.	2.1	15
31	Exact ground states of the Kaya-Berker model. <i>Physical Review E</i> , 2018, 98, 012108.	2.1	1
32	Aging in the three-dimensional random-field Ising model. <i>Physical Review E</i> , 2017, 96, 013315.	2.1	6
33	Convex hulls of random walks in higher dimensions: A large-deviation study. <i>Physical Review E</i> , 2017, 96, 062101.	2.1	12
34	Large-deviation properties of the largest 2-core component for random graphs. <i>European Physical Journal: Special Topics</i> , 2017, 226, 567-579.	2.6	8
35	Using Triplet Ordering Preferences for Estimating Causal Effects in the Analysis of Gene Expression Data. <i>PLoS ONE</i> , 2017, 12, e0170514.	2.5	2
36	Fragmentation properties of two-dimensional proximity graphs considering random failures and targeted attacks. <i>Physical Review E</i> , 2016, 94, 062125.	2.1	7

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37	Convex hulls of multiple random walks: A large-deviation study. <i>Physical Review E</i> , 2016, 94, 052120.	2.1	10
38	Monodominance in tropical forests: modelling reveals emerging clusters and phase transitions. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160123.	3.4	11
39	Revisiting the scaling of the specific heat of the three-dimensional random-field Ising model. <i>European Physical Journal B</i> , 2016, 89, 1.	1.5	3
40	Phase transitions of Traveling Salesperson problems solved with linear programming and cutting planes. <i>Europhysics Letters</i> , 2016, 113, 30004.	2.0	11
41	Convex hulls of random walks: Large-deviation properties. <i>Physical Review E</i> , 2015, 91, 052104.	2.1	27
42	Large-deviation properties of resilience of power grids. <i>New Journal of Physics</i> , 2015, 17, 015005.	2.9	26
43	Analysis of the phase transition in the two-dimensional Ising ferromagnet using a Lempel-Ziv string-parsing scheme and black-box data-compression utilities. <i>Physical Review E</i> , 2015, 91, 023306.	2.1	15
44	Nonequilibrium evolution of window overlaps in spin glasses. <i>Physical Review B</i> , 2015, 91, .	3.2	10
45	Matrix-power energy-landscape transformation for finding NP-hard spin-glass ground states. <i>Journal of Global Optimization</i> , 2015, 61, 183-192.	1.8	2
46	Exact ground states of one-dimensional long-range random-field Ising magnets. <i>Physical Review B</i> , 2014, 90, .	3.2	6
47	Large-deviation properties of resilience of transportation networks. <i>European Physical Journal B</i> , 2014, 87, 1.	1.5	18
48	High-precision work distributions for extreme nonequilibrium processes in large systems. <i>Physical Review E</i> , 2014, 89, 052103.	2.1	36
49	Typical and large-deviation properties of minimum-energy paths on disordered hierarchical lattices. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	10
50	Information-theoretic approach to ground-state phase transitions for two- and three-dimensional frustrated spin systems. <i>Physical Review E</i> , 2013, 87, 022107.	2.1	9
51	Biased and greedy random walks on two-dimensional lattices with quenched randomness: The greedy ant within a disordered environment. <i>Physical Review E</i> , 2013, 88, 062101.	2.1	4
52	Sampling fractional Brownian motion in presence of absorption: A Markov chain method. <i>Physical Review E</i> , 2013, 88, 022119.	2.1	14
53	Diluted antiferromagnets in a field seem to be in a different universality class than the random-field Ising model. <i>Physical Review B</i> , 2013, 88, .	3.2	14
54	Paths in the minimally weighted path model are incompatible with Schramm-Loewner evolution. <i>Physical Review E</i> , 2013, 87, .	2.1	5

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55	Phase transition for cutting-plane approach to vertex-cover problem. Physical Review E, 2012, 86, 041128.	2.1	12
56	Bias in generation of random graphs. Physical Review E, 2012, 85, 026101.	2.1	15
57	Excitations in high-dimensional random-field Ising magnets. Physical Review B, 2012, 85, .	3.2	4
58	Analysis of the loop length distribution for the negative-weight percolation problem in dimensions $d=2$ through $d=6$ . Physical Review E, 2012, 86, 056708.	2.1	5
59	Random number generators for massively parallel simulations on GPU. European Physical Journal: Special Topics, 2012, 210, 53-71.	2.6	52
60	Critical behavior of the random-field Ising magnet with long-range correlated disorder. Physical Review B, 2011, 84, .	3.2	17
61	Configurational statistics of densely and fully packed loops in the negative-weight percolation model. European Physical Journal B, 2011, 80, 155-165.	1.5	6
62	Large-deviation properties of largest component for random graphs. European Physical Journal B, 2011, 84, 627-634.	1.5	42
63	Ground States of Two-Dimensional Ising Spin Glasses: Fast Algorithms, Recent Developments and a Ferromagnet-Spin Glass Mixture. Journal of Statistical Physics, 2011, 144, 519-540.	1.2	18
64	Mean-field behavior of the negative-weight percolation model on random regular graphs. Physical Review E, 2011, 84, 041106.	2.1	8
65	Critical behavior of the random-field Ising model at and beyond the upper critical dimension. Physical Review B, 2011, 83, .	3.2	30
66	Upper critical dimension of the negative-weight percolation problem. Physical Review E, 2010, 81, 051108.	2.1	12
67	Minimum-free-energy distribution of RNA secondary structures: Entropic and thermodynamic properties of rare events. Physical Review E, 2010, 82, 021902.	2.1	17
68	Numerical solution-space analysis of satisfiability problems. Physical Review E, 2010, 82, 056702.	2.1	12
69	Scaling behavior of domain walls at the $T=0$ ferromagnet to spin-glass transition. Physical Review B, 2009, 79, .	3.2	13
70	Phase transitions in diluted negative-weight percolation models. Physical Review E, 2009, 79, 031103.	2.1	10
71	Low-energy excitations in the three-dimensional random-field Ising model. European Physical Journal B, 2009, 72, 619-627.	1.5	7
72	First excitations in two- and three-dimensional random-field Ising systems. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P02012.	2.3	14

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73	Negative-weight percolation. <i>New Journal of Physics</i> , 2008, 10, 043039.	2.9	17
74	Droplets in the two-dimensional $\langle \text{mml:mrow} \langle \text{mml:mo} \hat{A} \pm \langle \text{mml:mo} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ Ising spin glass. <i>Physical Review B</i> , 2008, 77, .	3.2	19
75	Solution-space structure of (some) optimization problems. <i>Journal of Physics: Conference Series</i> , 2008, 95, 012011.	0.4	8
76	Ground-state and domain-wall energies in the spin-glass region of the two-dimensional $\hat{A} \pm$ random-bond Ising model. <i>Physical Review B</i> , 2007, 75, .	3.2	6
77	Fractal dimension of domain walls in two-dimensional Ising spin glasses. <i>Physical Review B</i> , 2007, 76, .	3.2	36
78	Local sequence alignments statistics: deviations from Gumbel statistics in the rare-event tail. <i>Algorithms for Molecular Biology</i> , 2007, 2, 9.	1.2	29
79	Probing tails of energy distributions using importance-sampling in the disorder with a guiding function. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P04005-P04005.	2.3	20
80	Determining energy barriers by iterated optimization: The two-dimensional Ising spin glass. <i>Physical Review B</i> , 2006, 73, .	3.2	11
81	Conformal Invariance and Stochastic Loewner Evolution Processes in Two-Dimensional Ising Spin Glasses. <i>Physical Review Letters</i> , 2006, 97, 267202.	7.8	65
82	Calculation of Partition Functions by Measuring Component Distributions. <i>Physical Review Letters</i> , 2005, 94, 050601.	7.8	34
83	Reduction of two-dimensional dilute Ising spin glasses. <i>Physical Review B</i> , 2005, 72, .	3.2	5
84	Dependence of RNA secondary structure on the energy model. <i>Physical Review E</i> , 2005, 71, 021913.	2.1	7
85	Clustering analysis of the ground-state structure of the vertex-cover problem. <i>Physical Review E</i> , 2004, 70, 066120.	2.1	25
86	Domain-wall energies and magnetization of the two-dimensional random-bond Ising model. <i>Physical Review B</i> , 2004, 70, .	3.2	42
87	Energy size effects of two-dimensional Ising spin glasses. <i>Physical Review B</i> , 2004, 70, .	3.2	30
88	Generating droplets in two-dimensional Ising spin glasses using matching algorithms. <i>Physical Review B</i> , 2004, 69, .	3.2	18
89	Low-temperature behavior of two-dimensional Gaussian Ising spin glasses. <i>Physical Review B</i> , 2004, 70, .	3.2	83
90	On Large Deviation Properties of Erdős-Rényi Random Graphs. <i>Journal of Statistical Physics</i> , 2004, 117, 387-426.	1.2	48

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91	No spin-glass transition in the mobile-bond model. Physical Review B, 2003, 67, .	3.2	5
92	Corrections to Scaling are Large for Droplets in Two-Dimensional Spin Glasses. Physical Review Letters, 2003, 90, 127201.	7.8	32
93	FINDING LOW-TEMPERATURE STATES WITH PARALLEL TEMPERING, SIMULATED ANNEALING AND SIMPLE MONTE CARLO. International Journal of Modern Physics C, 2003, 14, 285-302.	1.7	59
94	Statistical mechanics of the vertex-cover problem. Journal of Physics A, 2003, 36, 11069-11093.	1.6	27
95	Sampling rare events: Statistics of local sequence alignments. Physical Review E, 2002, 65, 056102.	2.1	71
96	Large-scale low-energy excitations in the two-dimensional Ising spin glass. Physical Review B, 2002, 66, .	3.2	43
97	Stiffness exponent of two-dimensional Ising spin glasses for nonperiodic boundary conditions using aspect-ratio scaling. Physical Review B, 2002, 66, .	3.2	48
98	Critical exponents of four-dimensional random-field Ising systems. Physical Review B, 2002, 65, .	3.2	27
99	Statistical mechanics perspective on the phase transition in vertex covering of finite-connectivity random graphs. Theoretical Computer Science, 2001, 265, 199-225.	0.9	23
100	Typical Solution Time for a Vertex-Covering Algorithm on Finite-Connectivity Random Graphs. Physical Review Letters, 2001, 86, 1658-1661.	7.8	42
101	Spin Domains Generate Hierarchical Ground State Structure in $J=±1$ Spin Glasses. Physical Review Letters, 2001, 86, 3148-3151.	7.8	34
102	Ordered phase in the two-dimensional randomly coupled ferromagnet. Physical Review B, 2001, 63, .	3.2	7
103	Lower critical dimension of Ising spin glasses. Physical Review B, 2001, 64, .	3.2	120
104	Minimal vertex covers on finite-connectivity random graphs: A hard-sphere lattice-gas picture. Physical Review E, 2001, 63, 056127.	2.1	58
105	Specific-heat exponent of random-field systems via ground-state calculations. Physical Review B, 2001, 64, .	3.2	71
106	Number of Guards Needed by a Museum: A Phase Transition in Vertex Covering of Random Graphs. Physical Review Letters, 2000, 84, 6118-6121.	7.8	156
107	Ground-state clusters of two-, three-, and four-dimensional $J=±1$ Ising spin glasses. Physical Review E, 2000, 63, 016106.	2.1	37
108	Calculation of ground states of four-dimensional $J=±1$ Ising spin glasses. Physical Review E, 1999, 60, 5135-5138.	2.1	49

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109	Scaling of stiffness energy for three-dimensional $\pm J$ Ising spin glasses. <i>Physical Review E</i> , 1999, 59, 84-87.	2.1	86
110	Ground-state behavior of the three-dimensional $\pm J$ random-bond Ising model. <i>Physical Review B</i> , 1999, 59, 3617-3623.	3.2	46
111	Ground-state structure of diluted antiferromagnets and random field systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 248, 1-20.	2.6	24
112	Cluster-exact approximation of spin glass groundstates. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996, 224, 480-488.	2.6	39
113	Non-trivial overlaps and ultrametricity for directed polymers in random media. <i>Europhysics Letters</i> , 0, , .	2.0	2