Elchanan Mossel

List of Publications by Year
in descending order

148 papers	4,795 citations	117625 34 h-index	123424 61 g-index
149 all docs	149 docs citations	149 times ranked	2219 citing authors

#	Article	IF	Citations
1	Inference in Opinion Dynamics Under Social Pressure. IEEE Transactions on Automatic Control, 2023, 68, 3377-3392.	5.7	3
2	Shotgun assembly of ErdÅ's-RÃ©nyi random graphs. Electronic Communications in Probability, 2022, 27, .	0.4	2
3	A stochastic Farris transform for genetic data under the multispecies coalescent with applications to data requirements. Journal of Mathematical Biology, 2022, 84, 36.	1.9	1
4	Probabilistic view of voting, paradoxes, and manipulation. Bulletin of the American Mathematical Society, 2022, 59, 297-330.	1.5	2
5	Seeding with Costly Network Information. Operations Research, 2022, 70, 2318-2348.	1.9	3
6	Broadcasting on Two-Dimensional Regular Grids. IEEE Transactions on Information Theory, 2022, , 1-1.	2.4	1
7	Approximate polymorphisms. , 2022, , .		1
8	Bayesian Decision Making in Groups is Hard. Operations Research, 2021, 69, 632-654.	1.9	15
9	Reconstruction on 2D Regular Grids. , 2021, , .		1
10	Broadcasting on Random Directed Acyclic Graphs. IEEE Transactions on Information Theory, 2020, 66, 780-812.	2.4	6
11	Gaussian bounds for noise correlation of resilient functions. Israel Journal of Mathematics, 2020, 235, 111-137.	0.8	2
12	How Many Subpopulations Is Too Many? Exponential Lower Bounds for Inferring Population Histories. Journal of Computational Biology, 2020, 27, 613-625.	1.6	6
13	The probability of intransitivity in dice and close elections. Probability Theory and Related Fields, 2020, 178, 951-1009.	1.8	4
14	Seeded graph matching via large neighborhood statistics. Random Structures and Algorithms, 2020, 57, 570-611.	1.1	12
15	Social Learning Equilibria. Econometrica, 2020, 88, 1235-1267.	4.2	13
16	Shotgun assembly of random jigsaw puzzles. Random Structures and Algorithms, 2020, 56, 998-1015.	1.1	5
17	AND testing and robust judgement aggregation. , 2020, , .		1
18	Harmonicity and invariance on slices of the Boolean cube. Probability Theory and Related Fields, 2019, 175, 721-782.	1.8	9

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19	How Many Subpopulations Is Too Many? Exponential Lower Bounds for Inferring Population Histories. Lecture Notes in Computer Science, 2019, , 136-157.	1.3	2
20	On the Impossibility of Learning the Missing Mass. Entropy, 2019, 21, 28.	2.2	11
21	Broadcasting on Random Networks. , 2019, , .		4
22	A Proof of the Block Model Threshold Conjecture. Combinatorica, 2018, 38, 665-708.	1.2	73
23	Non interactive simulation of correlated distributions is decidable. , 2018, , 2728-2746.		5
24	Invariance Principle on the Slice. ACM Transactions on Computation Theory, 2018, 10, 1-37.	0.7	6
25	Competing first passage percolation on random regular graphs. Random Structures and Algorithms, 2017, 50, 534-583.	1.1	5
26	Distance-based species tree estimation under the coalescent: Information-theoretic trade-off between number of loci and sequence length. Annals of Applied Probability, 2017, 27, .	1.3	5
27	Quickest online selection of an increasing subsequence of specified size. Random Structures and Algorithms, 2016, 49, 235-252.	1.1	5
28	Efficient Bayesian Learning in Social Networks with Gaussian Estimators. , 2016, , .		16
29	Global and Local Information in Clustering Labeled Block Models. IEEE Transactions on Information Theory, 2016, 62, 5906-5917.	2.4	7
30	On the correlation of increasing families. Journal of Combinatorial Theory - Series A, 2016, 144, 250-276.	0.8	3
31	Local Algorithms for Block Models with Side Information. , 2016, , .		22
32	Belief propagation, robust reconstruction and optimal recovery of block models. Annals of Applied Probability, 2016, 26, .	1.3	31
33	Standard simplices and pluralities are not the most noise stable. Israel Journal of Mathematics, 2016, 213, 33-53.	0.8	3
34	Robust dimension free isoperimetry in Gaussian space. Annals of Probability, 2015, 43, .	1.8	22
35	Can one hear the shape of a population history?. Theoretical Population Biology, 2015, 100, 26-38.	1.1	26
36	On the Influence of the Seed Graph in the Preferential Attachment Model. IEEE Transactions on Network Science and Engineering, 2015, 2, 30-39.	6.4	33

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37	Robust optimality of Gaussian noise stability. Journal of the European Mathematical Society, 2015, 17, 433-482.	1.4	17
38	A quantitative Gibbard-Satterthwaite theorem without neutrality. Combinatorica, 2015, 35, 317-387.	1.2	7
39	Reconstruction and estimation in the planted partition model. Probability Theory and Related Fields, 2015, 162, 431-461.	1.8	161
40	Strategic Learning and the Topology of Social Networks. Econometrica, 2015, 83, 1755-1794.	4.2	74
41	Majority rule has transition ratio 4 on Yule trees under a 2-state symmetric model. Journal of Theoretical Biology, 2014, 360, 315-318.	1.7	9
42	Majority dynamics and aggregation of information in social networks. Autonomous Agents and Multi-Agent Systems, 2014, 28, 408-429.	2.1	67
43	On Extracting Common Random Bits From Correlated Sources on Large Alphabets. IEEE Transactions on Information Theory, 2014, 60, 1630-1637.	2.4	6
44	Asymptotic learning on Bayesian social networks. Probability Theory and Related Fields, 2014, 158, 127-157.	1.8	54
45	Geometric influences II: Correlation inequalities and noise sensitivity. Annales De L'institut Henri Poincare (B) Probability and Statistics, 2014, 50, .	1.1	8
46	Mixing under monotone censoring. Electronic Communications in Probability, 2014, 19, .	0.4	1
47	Scaling Limits for Width Two Partially Ordered Sets: The Incomparability Window. Order, 2013, 30, 289-311.	0.5	0
48	Identifiability and inference of non-parametric rates-across-sites models on large-scale phylogenies. Journal of Mathematical Biology, 2013, 67, 767-797.	1.9	6
49	Robust Estimation of Latent Tree Graphical Models: Inferring Hidden States With Inexact Parameters. IEEE Transactions on Information Theory, 2013, 59, 4357-4373.	2.4	10
50	Reconstruction of Markov Random Fields from Samples: Some Observations and Algorithms. SIAM Journal on Computing, 2013, 42, 563-578.	1.0	36
51	Noise correlation bounds for uniform low degree functions. Arkiv for Matematik, 2013, 51, 29-52.	0.5	2
52	On Reverse Hypercontractivity. Geometric and Functional Analysis, 2013, 23, 1062-1097.	1.8	42
53	Majority is stablest. , 2013, , .		7
54	Making Consensus Tractable. ACM Transactions on Economics and Computation, 2013, 1, 1-19.	1.1	10

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55	Explicit Optimal Hardness via Gaussian Stability Results. ACM Transactions on Computation Theory, 2013, 5, 1-26.	0.7	7
56	Spectral redemption in clustering sparse networks. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20935-20940.	7.1	392
57	Exact thresholds for Ising–Gibbs samplers on general graphs. Annals of Probability, 2013, 41, .	1.8	52
58	A quantitative gibbard-satterthwaite theorem without neutrality. , 2012, , .		15
59	Election manipulation. , 2012, 11, 22-24.		2
60	Phylogenetic mixtures: Concentration of measure in the large-tree limit. Annals of Applied Probability, 2012, 22, .	1.3	6
61	Exit time tails from pairwise decorrelation in hidden Markov chains, with applications to dynamical percolation. Electronic Journal of Probability, 2012, 17, .	1.0	3
62	A quantitative Arrow theorem. Probability Theory and Related Fields, 2012, 154, 49-88.	1.8	25
63	A note on the Entropy/Influence conjecture. Discrete Mathematics, 2012, 312, 3364-3372.	0.7	6
64	Geometric influences. Annals of Probability, 2012, 40, .	1.8	12
65	Maximally stable Gaussian partitions with discrete applications. Israel Journal of Mathematics, 2012, 189, 347-396.	0.8	28
66	Complete characterization of functions satisfying the conditions of Arrow's theorem. Social Choice and Welfare, 2012, 39, 127-140.	0.8	5
67	The geometry of manipulation â€" A quantitative proof of the Gibbard-Satterthwaite theorem. Combinatorica, 2012, 32, 221-250.	1.2	19
68	VC bounds on the cardinality of nearly orthogonal function classes. Discrete Mathematics, 2012, 312, 1766-1775.	0.7	3
69	The weak limit of Ising models on locally tree-like graphs. Probability Theory and Related Fields, 2012, 152, 31-51.	1.8	27
70	Co-evolution Is Incompatible with the Markov Assumption in Phylogenetics. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2011, 8, 1667-1670.	3.0	4
71	Sorting and Selection in Posets. SIAM Journal on Computing, 2011, 40, 597-622.	1.0	27
72	Phylogenies without Branch Bounds: Contracting the Short, Pruning the Deep. SIAM Journal on Discrete Mathematics, 2011, 25, 872-893.	0.8	16

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73	Connectivity and equilibrium in random games. Annals of Applied Probability, 2011, 21, .	1.3	8
74	On Extracting Common Random Bits From Correlated Sources. IEEE Transactions on Information Theory, 2011, 57, 6351-6355.	2.4	25
75	Evolutionary trees and the Ising model on the Bethe lattice: a proof of Steel's conjecture. Probability Theory and Related Fields, 2011, 149, 149-189.	1.8	35
76	On the Inference of Large Phylogenies with Long Branches: How Long Is Too Long?. Bulletin of Mathematical Biology, 2011, 73, 1627-1644.	1.9	11
77	The Computational Complexity of Estimating MCMC Convergence Time. Lecture Notes in Computer Science, 2011, , 424-435.	1.3	9
78	Branching Process Approach for 2-Sat Thresholds. Journal of Applied Probability, 2010, 47, 796-810.	0.7	0
79	Gaussian Bounds for Noise Correlation of Functions. Geometric and Functional Analysis, 2010, 19, 1713-1756.	1.8	63
80	Gibbs rapidly samples colorings of G(n, d/n). Probability Theory and Related Fields, 2010, 148, 37-69.	1.8	15
81	Application of a Generalization of Russo's Formula to Learning from Multiple Random Oracles. Combinatorics Probability and Computing, 2010, 19, 183-199.	1.3	2
82	The Geometry of Manipulation: A Quantitative Proof of the Gibbard-Satterthwaite Theorem. , 2010, , .		14
83	Submodularity of Influence in Social Networks: From Local to Global. SIAM Journal on Computing, 2010, 39, 2176-2188.	1.0	77
84	Iterative maximum likelihood on networks. Advances in Applied Mathematics, 2010, 45, 36-49.	0.7	7
85	Incomplete Lineage Sorting: Consistent Phylogeny Estimation from Multiple Loci. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2010, 7, 166-171.	3.0	146
86	Truthful Fair Division. Lecture Notes in Computer Science, 2010, , 288-299.	1.3	29
87	Noise stability of functions with low influences: Invariance and optimality. Annals of Mathematics, 2010, 171, 295-341.	4.2	173
88	Branching Process Approach for 2-Sat Thresholds. Journal of Applied Probability, 2010, 47, 796-810.	0.7	1
89	Iterative maximum likelihood on networks. , 2009, , .		3
90	A Spectral Approach to Analysing Belief Propagation for 3-Colouring. Combinatorics Probability and Computing, 2009, 18, 881-912.	1.3	18

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91	On the hardness of sampling independent sets beyond the tree threshold. Probability Theory and Related Fields, 2009, 143, 401-439.	1.8	66
92	Phylogenetic information complexity: Is testing a tree easier than finding it?. Journal of Theoretical Biology, 2009, 258, 95-102.	1.7	2
93	Approximation Resistant Predicates from Pairwise Independence. Computational Complexity, 2009, 18, 249-271.	0.3	46
94	Rapid mixing of Gibbs sampling on graphs that are sparse on average. Random Structures and Algorithms, 2009, 35, 250-270.	1.1	16
95	Conditional Hardness for Approximate Coloring. SIAM Journal on Computing, 2009, 39, 843-873.	1.0	80
96	Shrinkage Effect in Ancestral Maximum Likelihood. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2009, 6, 126-133.	3.0	4
97	Phylogenies without Branch Bounds: Contracting the Short, Pruning the Deep. Lecture Notes in Computer Science, 2009, , 451-465.	1.3	13
98	Sorting and Selection in Posets. , 2009, , .		10
99	Mixed-up Trees: the Structure of Phylogenetic Mixtures. Bulletin of Mathematical Biology, 2008, 70, 1115-1139.	1.9	25
100	Approximation Resistant Predicates from Pairwise Independence. , 2008, , .		27
101	Mafia: A theoretical study of players and coalitions in a partial information environment. Annals of Applied Probability, 2008, 18, .	1.3	24
102	Smooth compression, Gallager bound and nonlinear sparse-graph codes. , 2008, , .		18
103	Gaussian Bounds for Noise Correlation of Functions and Tight Analysis of Long Codes. , 2008, , .		28
104	The Complexity of Distinguishing Markov Random Fields. Lecture Notes in Computer Science, 2008, , 331-342.	1.3	17
105	Reconstruction of Markov Random Fields from Samples: Some Observations and Algorithms. Lecture Notes in Computer Science, 2008, , 343-356.	1.3	33
106	On the submodularity of influence in social networks. , 2007, , .		138
107	A new look at survey propagation and its generalizations. Journal of the ACM, 2007, 54, 17.	2.2	58
108	Optimal Inapproximability Results for MAXâ€CUT and Other 2â€Variable CSPs?. SIAM Journal on Computing, 2007, 37, 319-357.	1.0	349

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109	Online Conflict‐Free Coloring for Intervals. SIAM Journal on Computing, 2007, 36, 1342-1359.	1.0	38
110	Distorted Metrics on Trees and Phylogenetic Forests. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2007, 4, 108-116.	3.0	31
111	Slow emergence of cooperation for win-stay lose-shift on trees. Machine Learning, 2007, 67, 7-22.	5.4	6
112	The Kesten-Stigum Reconstruction Bound Is Tight for Roughly Symmetric Binary Channels. , 2006, , .		28
113	Learning nonsingular phylogenies and hidden Markov models. Annals of Applied Probability, 2006, 16, 583.	1.3	35
114	Limitations of Markov chain Monte Carlo algorithms for Bayesian inference of phylogeny. Annals of Applied Probability, 2006, 16, 2215.	1.3	36
115	On $\acute{E}$‹-biased generators in NC0. Random Structures and Algorithms, 2006, 29, 56-81.	1.1	29
116	A law of large numbers for weighted majority. Advances in Applied Mathematics, 2006, 37, 112-123.	0.7	6
117	Non-interactive correlation distillation, inhomogeneous Markov chains, and the reverse Bonami-Beckner inequality. Israel Journal of Mathematics, 2006, 154, 299-336.	0.8	67
118	Conditional hardness for approximate coloring. , 2006, , .		30
119	Optimal phylogenetic reconstruction. , 2006, , .		38
120	Complete Convergence of Message Passing Algorithms for Some Satisfiability Problems. Lecture Notes in Computer Science, 2006, , 339-350.	1.3	19
121	Mixing times of the biased card shuffling and the asymmetric exclusion process. Transactions of the American Mathematical Society, 2005, 357, 3013-3029.	0.9	43
122	Learning DNF from random walks. Journal of Computer and System Sciences, 2005, 71, 250-265.	1.2	13
123	New Coins From Old: Computing With Unknown Bias. Combinatorica, 2005, 25, 707-724.	1.2	17
124	Glauber dynamics on trees and hyperbolic graphs. Probability Theory and Related Fields, 2005, 131, 311-340.	1.8	122
125	Coin flipping from a cosmic source: On error correction of truly random bits. Random Structures and Algorithms, 2005, 26, 418-436.	1.1	20
126	Phylogenetic MCMC Algorithms Are Misleading on Mixtures of Trees. Science, 2005, 309, 2207-2209.	12.6	160

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127	Learning nonsingular phylogenies and hidden Markov models. , 2005, , .		48
128	Random biochemical networks: the probability of self-sustaining autocatalysis. Journal of Theoretical Biology, 2005, 233, 327-336.	1.7	102
129	Robust reconstruction on trees is determined by the second eigenvalue. Annals of Probability, 2004, 32, 2630.	1.8	45
130	Learning functions of k relevant variables. Journal of Computer and System Sciences, 2004, 69, 421-434.	1.2	83
131	A phase transition for a random cluster model on phylogenetic trees. Mathematical Biosciences, 2004, 187, 189-203.	1.9	52
132	Survey: Information flow on trees. DIMACS Series in Discrete Mathematics and Theoretical Computer Science, 2004, , 155-170.	0.0	60
133	On the mixing time of a simple random walk on the super critical percolation cluster. Probability Theory and Related Fields, 2003, 125, 408-420.	1.8	51
134	On the noise sensitivity of monotone functions. Random Structures and Algorithms, 2003, 23, 333-350.	1.1	32
135	On the Impossibility of Reconstructing Ancestral Data and Phylogenies. Journal of Computational Biology, 2003, 10, 669-676.	1.6	57
136	Phase transitions in phylogeny. Transactions of the American Mathematical Society, 2003, 356, 2379-2404.	0.9	74
137	Information flow on trees. Annals of Applied Probability, 2003, 13, .	1.3	110
138	The Minesweeper Game: Percolation and Complexity. Combinatorics Probability and Computing, 2002, 11, 487-499.	1.3	8
139	On the complexity of approximating the VC dimension. Journal of Computer and System Sciences, 2002, 65, 660-671.	1.2	42
140	Reconstruction on Trees: Beating the Second Eigenvalue. Annals of Applied Probability, 2001, 11, 285.	1.3	76
141	Energy of Flows on Percolation Clusters. Potential Analysis, 2001, 14, 375-385.	0.9	8
142	On Random Graph Homomorphisms into Z. Journal of Combinatorial Theory Series B, 2000, 78, 86-114.	1.0	21
143	Recursive reconstruction on periodic trees. Random Structures and Algorithms, 1998, 13, 81-97.	1.1	27
144	Nearest-neighbor walks with low predictability profile and percolation in $2+epsilon$ dimensions. Annals of Probability, 1998, 26, 1212.	1.8	25

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145	Recursive reconstruction on periodic trees. , 1998, 13, 81.		2
146	Bayesian Group Decisions: Algorithms and Complexity. SSRN Electronic Journal, 0, , .	0.4	6
147	Social Learning Equilibria. SSRN Electronic Journal, 0, , .	0.4	2
148	Seeding with Costly Network Information. SSRN Electronic Journal, 0, , .	0.4	3