

# Bernhard Haeupler

## List of Publications by Year in descending order

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93  
papers

2,406  
citations

566801

15  
h-index

288905

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g-index

93  
all docs

93  
docs citations

93  
times ranked

1848  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hop-constrained expander decompositions, oblivious routing, and distributed universal optimality. , 2022, , .		5
2	Undirected $(1 + \epsilon)$ -shortest paths via minor-aggregates: near-optimal deterministic parallel and distributed algorithms. , 2022, , .		7
3	Low-Congestion shortcuts without embedding. Distributed Computing, 2021, 34, 79-90.	0.7	1
4	Hop-constrained oblivious routing. , 2021, , .		5
5	Synchronization Strings and Codes for Insertions and Deletions—A Survey. IEEE Transactions on Information Theory, 2021, 67, 3190-3206.	1.5	19
6	Tree embeddings for hop-constrained network design. , 2021, , .		4
7	Universally-optimal distributed algorithms for known topologies. , 2021, , .		11
8	Low-Congestion Shortcuts for Graphs Excluding Dense Minors. , 2021, , .		7
9	Synchronization Strings: Codes for Insertions and Deletions Approaching the Singleton Bound. Journal of the ACM, 2021, 68, 1-39.	1.8	8
10	Optimally Resilient Codes for List-Decoding from Insertions and Deletions. IEEE Transactions on Information Theory, 2021, , 1-1.	1.5	2
11	Optimally resilient codes for list-decoding from insertions and deletions. , 2020, , .		17
12	Network Coding Gaps for Completion Times of Multiple Unicasts. , 2020, , .		4
13	Making asynchronous distributed computations robust to noise. Distributed Computing, 2019, 32, 405-421.	0.7	8
14	Optimal Document Exchange and New Codes for Insertions and Deletions. , 2019, , .		27
15	Reliable communication over highly connected noisy networks. Distributed Computing, 2019, 32, 505-515.	0.7	8
16	Synchronization Strings: Highly Efficient Deterministic Constructions over Small Alphabets. , 2019, , 2185-2204.		13
17	Explicit Capacity Approaching Coding for Interactive Communication. IEEE Transactions on Information Theory, 2018, 64, 6546-6560.	1.5	10
18	Synchronization strings: explicit constructions, local decoding, and applications. , 2018, , .		23

#	ARTICLE	IF	CITATIONS
19	Explicit binary tree codes with polylogarithmic size alphabet. , 2018, , .		5
20	Constant-Rate Coding for Multiparty Interactive Communication Is Impossible. Journal of the ACM, 2018, 65, 1-41.	1.8	11
21	Round- and Message-Optimal Distributed Graph Algorithms. , 2018, , .		20
22	Optimal Gossip Algorithms for Exact and Approximate Quantile Computations. , 2018, , .		5
23	Minor Excluded Network Families Admit Fast Distributed Algorithms. , 2018, , .		16
24	Breathe before speaking: efficient information dissemination despite noisy, limited and anonymous communication. Distributed Computing, 2017, 30, 339-355.	0.7	10
25	Rumor Spreading with No Dependence on Conductance. SIAM Journal on Computing, 2017, 46, 58-79.	0.8	3
26	Broadcasting in Noisy Radio Networks. , 2017, , .		7
27	Capacity of Interactive Communication over Erasure Channels and Channels with Feedback. SIAM Journal on Computing, 2017, 46, 1449-1472.	0.8	12
28	Parallel Algorithms and Concentration Bounds for the LovÁsz Local Lemma via Witness DAGs. ACM Transactions on Algorithms, 2017, 13, 1-25.	0.9	5
29	Synchronization strings. , 2017, , .		38
30	Towards Optimal Deterministic Coding for Interactive Communication. , 2016, , .		13
31	Discovery Through Gossip. Random Structures and Algorithms, 2016, 48, 565-587.	0.6	3
32	Constant-rate coding for multiparty interactive communication is impossible. , 2016, , .		8
33	Near-Optimal BFS-Tree Construction in Radio Networks. IEEE Communications Letters, 2016, 20, 1172-1174.	2.5	1
34	Maximal Noise in Interactive Communication Over Erasure Channels and Channels With Feedback. IEEE Transactions on Information Theory, 2016, 62, 4575-4588.	1.5	22
35	A Faster Distributed Radio Broadcast Primitive. , 2016, , .		8
36	Analyzing Network Coding (Gossip) Made Easy. Journal of the ACM, 2016, 63, 1-22.	1.8	9

#	ARTICLE	IF	CITATIONS
37	Distributed Algorithms for Planar Networks II: Low-Congestion Shortcuts, MST, and Min-Cut. , 2016, , .		34
38	SplayNet: Towards Locally Self-Adjusting Networks. IEEE/ACM Transactions on Networking, 2016, 24, 1421-1433.	2.6	41
39	Near-Optimal Low-Congestion Shortcuts on Bounded Parameter Graphs. Lecture Notes in Computer Science, 2016, , 158-172.	1.0	18
40	Reliable Communication over Highly Connected Noisy Networks. , 2016, , .		13
41	Distributed Algorithms for Planar Networks I. , 2016, , .		18
42	Low-Congestion Shortcuts without Embedding. , 2016, , .		23
43	Bounded-Contention Coding for the additive network model. Distributed Computing, 2015, 28, 297-308.	0.7	4
44	Randomized broadcast in radio networks with collision detection. Distributed Computing, 2015, 28, 407-422.	0.7	17
45	Self-adjusting grid networks to minimize expected path length. Theoretical Computer Science, 2015, 584, 91-102.	0.5	4
46	Rank-Balanced Trees. ACM Transactions on Algorithms, 2015, 11, 1-26.	0.9	15
47	Simple, Fast and Deterministic Gossip and Rumor Spreading. Journal of the ACM, 2015, 62, 1-18.	1.8	18
48	Network Coding Based Information Spreading in Dynamic Networks With Correlated Data. IEEE Journal on Selected Areas in Communications, 2015, 33, 213-224.	9.7	6
49	Maximal Noise in Interactive Communication over Erasure Channels and Channels with Feedback. , 2015, , .		14
50	Distributed Resource Discovery in Sub-Logarithmic Time. , 2015, , .		1
51	Tight Bounds on Vertex Connectivity Under Vertex Sampling. , 2015, , .		3
52	Capacity of Interactive Communication over Erasure Channels and Channels with Feedback. , 2015, , .		5
53	Breathe before speaking. , 2014, , .		12
54	Optimal gossip with direct addressing. , 2014, , .		8

#	ARTICLE	IF	CITATIONS
55	Repeated deletion channels. , 2014, , .		12
56	Optimal Error Rates for Interactive Coding II: Efficiency and List Decoding. , 2014, , .		44
57	Interactive Channel Capacity Revisited. , 2014, , .		51
58	Optimal error rates for interactive coding I. , 2014, , .		42
59	Broadcast Throughput in Radio Networks: Routing vs. Network Coding. , 2014, , .		5
60	Beeping a maximal independent set. Distributed Computing, 2013, 26, 195-208.	0.7	45
61	Locally Self-Adjusting Tree Networks. , 2013, , .		12
62	Deterministic Algorithms for the Lovász Local Lemma. SIAM Journal on Computing, 2013, 42, 2132-2155.	0.8	34
63	Randomized broadcast in radio networks with collision detection. , 2013, , .		22
64	Simple, Fast and Deterministic Gossip and Rumor Spreading. , 2013, , .		14
65	Fast Structuring of Radio Networks Large for Multi-message Communications. Lecture Notes in Computer Science, 2013, , 492-506.	1.0	5
66	Near Optimal Leader Election in Multi-Hop Radio Networks. , 2013, , .		32
67	Testing Simultaneous Planarity when the Common Graph is 2-Connected. Journal of Graph Algorithms and Applications, 2013, 17, 147-171.	0.4	21
68	Self-adjusting Grid Networks to Minimize Expected Path Length. Lecture Notes in Computer Science, 2013, , 36-54.	1.0	3
69	Global computation in a poorly connected world. , 2012, , .		41
70	Incremental Cycle Detection, Topological Ordering, and Strong Component Maintenance. ACM Transactions on Algorithms, 2012, 8, 1-33.	0.9	43
71	Discovery through gossip. , 2012, , .		11
72	Network coded gossip with correlated data. , 2012, , .		4

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73	Tighter Worst-Case Bounds on Algebraic Gossip. IEEE Communications Letters, 2012, 16, 1274-1276.	2.5	6
74	Lower Bounds on Information Dissemination in Dynamic Networks. Lecture Notes in Computer Science, 2012, , 166-180.	1.0	22
75	Bounds on Contention Management in Radio Networks. Lecture Notes in Computer Science, 2012, , 223-237.	1.0	14
76	Bounded-Contention Coding for Wireless Networks in the High SNR Regime. Lecture Notes in Computer Science, 2012, , 91-105.	1.0	9
77	Brief Announcement: SplayNets. Lecture Notes in Computer Science, 2012, , 439-440.	1.0	0
78	Optimality of network coding with buffers. , 2011, , .		13
79	Rank-Pairing Heaps. SIAM Journal on Computing, 2011, 40, 1463-1485.	0.8	16
80	Analyzing network coding gossip made easy. , 2011, , .		66
81	Faster information dissemination in dynamic networks via network coding. , 2011, , .		36
82	One packet suffices - Highly efficient packetized Network Coding With finite memory. , 2011, , .		11
83	New Constructive Aspects of the Lovász Local Lemma. Journal of the ACM, 2011, 58, 1-28.	1.8	993
84	Beeping a Maximal Independent Set. Lecture Notes in Computer Science, 2011, , 32-50.	1.0	22
85	Online Stochastic Weighted Matching: Improved Approximation Algorithms. Lecture Notes in Computer Science, 2011, , 170-181.	1.0	57
86	New Constructive Aspects of the Lovasz Local Lemma. , 2010, , .		14
87	Deterministic Algorithms for the Lovász Local Lemma. , 2010, , .		9
88	Testing Simultaneous Planarity When the Common Graph Is 2-Connected. Lecture Notes in Computer Science, 2010, , 410-421.	1.0	7
89	Rank-Balanced Trees. Lecture Notes in Computer Science, 2009, , 351-362.	1.0	11
90	Rank-Pairing Heaps. Lecture Notes in Computer Science, 2009, , 659-670.	1.0	4

#	ARTICLE	IF	CITATIONS
91	Finding a feasible flow in a strongly connected network. Operations Research Letters, 2008, 36, 397-398.	0.5	1
92	Planarity Algorithms via PQ-Trees (Extended Abstract). Electronic Notes in Discrete Mathematics, 2008, 31, 143-149.	0.4	11
93	Faster Algorithms for Incremental Topological Ordering. Lecture Notes in Computer Science, 2008, , 421-433.	1.0	14