

# Martin Farach-Colton

## List of Publications by Year in descending order

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Version: 2024-02-01

78  
papers

3,621  
citations

394286

19  
h-index

168321

53  
g-index

87  
all docs

87  
docs citations

87  
times ranked

2420  
citing authors

#	ARTICLE	IF	CITATIONS
1	Using advanced data structures to enable responsive security monitoring. Cluster Computing, 2022, 25, 2893-2914.	3.5	1
2	On the optimal time/space tradeoff for hash tables. , 2022, , .		7
3	Copy-on-Abundant-Write for Nimble File System Clones. ACM Transactions on Storage, 2021, 17, 1-27.	1.4	0
4	Vector Quotient Filters. , 2021, , .		11
5	Dynamic Windows Scheduling with Reallocation. Journal of Experimental Algorithmics, 2021, 26, 1-19.	0.7	0
6	Timely Reporting of Heavy Hitters Using External Memory. ACM Transactions on Database Systems, 2021, 46, 1-35.	1.5	0
7	Timely Reporting of Heavy Hitters using External Memory. , 2020, , .		6
8	Achieving optimal backlog in multi-processor cup games. , 2019, , .		12
9	Engineering a high-performance GPU B-Tree. , 2019, , .		25
10	Small Refinements to the DAM Can Have Big Consequences for Data-Structure Design. , 2019, , .		12
11	Optimal Ball Recycling. , 2019, , 2527-2546.		3
12	Bloom Filters, Adaptivity, and the Dictionary Problem. , 2018, , .		19
13	A Dynamic Hash Table for the GPU. , 2018, , .		38
14	Quotient Filters: Approximate Membership Queries on the GPU. , 2018, , .		6
15	GPU LSM: A Dynamic Dictionary Data Structure for the GPU. , 2018, , .		9
16	Efficient Directory Mutations in a Full-Path-Indexed File System. ACM Transactions on Storage, 2018, 14, 1-27.	1.4	5
17	Writes Wrought Right, and Other Adventures in File System Optimization. ACM Transactions on Storage, 2017, 13, 1-26.	1.4	5
18	Cross-Referenced Dictionaries and the Limits of Write Optimization. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
19	Fault-tolerant aggregation: Flow-Updating meets Mass-Distribution. Distributed Computing, 2017, 30, 281-291.	0.7	4
20	Write-Optimized Skip Lists. , 2017, , .		12
21	Cost-Oblivious Storage Reallocation. ACM Transactions on Algorithms, 2017, 13, 1-20.	0.9	9
22	Tight Approximations of Degeneracy in Large Graphs. Lecture Notes in Computer Science, 2016, , 429-440.	1.0	5
23	40 years of suffix trees. Communications of the ACM, 2016, 59, 66-73.	3.3	37
24	Parallel Lookups in String Indexes. Lecture Notes in Computer Science, 2016, , 61-67.	1.0	0
25	Exact Sublinear Binomial Sampling. Algorithmica, 2015, 73, 637-651.	1.0	7
26	Cost-Oblivious Reallocation for Scheduling and Planning. , 2015, , .		1
27	Reallocation Problems in Scheduling. Algorithmica, 2015, 73, 389-409.	1.0	6
28	Initializing Sensor Networks of Non-uniform Density in the Weak Sensor Model. Algorithmica, 2015, 73, 87-114.	1.0	3
29	BetrFS. ACM Transactions on Storage, 2015, 11, 1-29.	1.4	28
30	Cost-oblivious storage reallocation. , 2014, , .		5
31	Dynamic Windows Scheduling with Reallocation. Lecture Notes in Computer Science, 2014, , 99-110.	1.0	4
32	Computing the Degeneracy of Large Graphs. Lecture Notes in Computer Science, 2014, , 250-260.	1.0	11
33	The Batched Predecessor Problem in External Memory. Lecture Notes in Computer Science, 2014, , 112-124.	1.0	2
34	Optimal memory-aware Sensor Network Gossiping (or how to break the Broadcast lower bound). Theoretical Computer Science, 2013, 472, 60-80.	0.5	7
35	Forty Years of Text Indexing. Lecture Notes in Computer Science, 2013, , 1-10.	1.0	3
36	Reallocation problems in scheduling. , 2013, , .		13

#	ARTICLE	IF	CITATIONS
37	Exact Sublinear Binomial Sampling. Lecture Notes in Computer Science, 2013, , 240-250.	1.0	1
38	Don't thrash. Proceedings of the VLDB Endowment, 2012, 5, 1627-1637.	2.1	129
39	Opportunistic Information Dissemination in Mobile Ad-Hoc Networks: Adaptiveness vs. Obliviousness and Randomization vs. Determinism. Lecture Notes in Computer Science, 2012, , 303-314.	1.0	2
40	Fault-Tolerant Aggregation: Flow-Updating Meets Mass-Distribution. Lecture Notes in Computer Science, 2011, , 513-527.	1.0	8
41	Brief Announcement: Opportunistic Information Dissemination in Mobile Ad-Hoc Networks:. Lecture Notes in Computer Science, 2011, , 202-204.	1.0	0
42	Bootstrapping a hop-optimal network in the weak sensor model. ACM Transactions on Algorithms, 2009, 5, 1-30.	0.9	10
43	Fast and compact regular expression matching. Theoretical Computer Science, 2008, 409, 486-496.	0.5	47
44	Ordinal embeddings of minimum relaxation. ACM Transactions on Algorithms, 2008, 4, 1-21.	0.9	7
45	Introduction to SODA 2002 and 2003 special issue. ACM Transactions on Algorithms, 2007, 3, 36.	0.9	0
46	Cache-oblivious streaming B-trees. , 2007, , .		82
47	Lattice based Clustering of Temporal Gene-Expression Matrices. , 2007, , .		1
48	Optimal spaced seeds for faster approximate string matching. Journal of Computer and System Sciences, 2007, 73, 1035-1044.	0.9	17
49	Initializing Sensor Networks of Non-uniform Density in the Weak Sensor Model. Lecture Notes in Computer Science, 2007, , 565-576.	1.0	7
50	Sensor Network Gossiping or How to Break the Broadcast Lower Bound. , 2007, , 232-243.		8
51	On the Complexity of Ordinal Clustering. Journal of Classification, 2006, 23, 79-102.	1.2	1
52	Insertion Sort is $O(n \log n)$ . Theory of Computing Systems, 2006, 39, 391-397.	0.7	39
53	Cache-oblivious string B-trees. , 2006, , .		54
54	Lower Bounds for Clear Transmissions in Radio Networks. Lecture Notes in Computer Science, 2006, , 447-454.	1.0	18

#	ARTICLE	IF	CITATIONS
55	Lowest common ancestors in trees and directed acyclic graphs. <i>Journal of Algorithms</i> , 2005, 57, 75-94.	0.9	162
56	Adversarial contention resolution for simple channels. , 2005, , .		71
57	Cache-Oblivious B-Trees. <i>SIAM Journal on Computing</i> , 2005, 35, 341-358.	0.8	95
58	Bootstrapping a Hop-Optimal Network in the Weak Sensor Model. <i>Lecture Notes in Computer Science</i> , 2005, , 827-838.	1.0	9
59	Optimal Spaced Seeds for Faster Approximate String Matching. <i>Lecture Notes in Computer Science</i> , 2005, , 1251-1262.	1.0	3
60	Discovering temporal relations in molecular pathways using protein-protein interactions. , 2004, , .		2
61	Finding frequent items in data streams. <i>Theoretical Computer Science</i> , 2004, 312, 3-15.	0.5	417
62	Barnacle: an assembly algorithm for clone-based sequences of whole genomes. <i>Gene</i> , 2003, 320, 165-176.	1.0	9
63	Two Simplified Algorithms for Maintaining Order in a List. <i>Lecture Notes in Computer Science</i> , 2002, , 152-164.	1.0	56
64	Scanning and Traversing: Maintaining Data for Traversals in a Memory Hierarchy. , 2002, , 139-150.		14
65	Efficient Tree Layout in a Multilevel Memory Hierarchy. <i>Lecture Notes in Computer Science</i> , 2002, , 165-173.	1.0	14
66	On Local Register Allocation. <i>Journal of Algorithms</i> , 2000, 37, 37-65.	0.9	20
67	The LCA Problem Revisited. <i>Lecture Notes in Computer Science</i> , 2000, , 88-94.	1.0	358
68	NOTUNG: A Program for Dating Gene Duplications and Optimizing Gene Family Trees. <i>Journal of Computational Biology</i> , 2000, 7, 429-447.	0.8	464
69	An $O(n \log n)$ Algorithm for the Maximum Agreement Subtree Problem for Binary Trees. <i>SIAM Journal on Computing</i> , 2000, 30, 1385-1404.	0.8	76
70	On the sorting-complexity of suffix tree construction. <i>Journal of the ACM</i> , 2000, 47, 987-1011.	1.8	175
71	Cofe: A Scalable Method for Feature Extraction from Complex Objects. <i>Lecture Notes in Computer Science</i> , 2000, , 358-371.	1.0	1
72	Evaluation of Algorithms for Local Register Allocation. <i>Lecture Notes in Computer Science</i> , 1999, , 137-152.	1.0	13

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73	Optimal Parallel Two Dimensional Text Searching on a CREW PRAM. Information and Computation, 1998, 144, 1-17.	0.5	14
74	String Matching in Lempel-Ziv Compressed Strings. Algorithmica, 1998, 20, 388-404.	1.0	66
75	On the Approximability of Numerical Taxonomy (Fitting Distances by Tree Metrics). SIAM Journal on Computing, 1998, 28, 1073-1085.	0.8	71
76	Let Sleeping Files Lie: Pattern Matching in Z-Compressed Files. Journal of Computer and System Sciences, 1996, 52, 299-307.	0.9	136
77	A robust model for finding optimal evolutionary trees. Algorithmica, 1995, 13, 155-179.	1.0	116
78	Optimal superprimitivity testing for strings. Information Processing Letters, 1991, 39, 17-20.	0.4	83