Martin Farach-Colton

List of Publications by Year
in descending order

78 papers	3,621 citations	394421 19 h-index	168389 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.	5.0	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.	2.1	0
4	Vector Quotient Filters. , 2021, , .		11
5	Dynamic Windows Scheduling with Reallocation. Journal of Experimental Algorithmics, 2021, 26, 1-19.	1.0	0
6	Timely Reporting of Heavy Hitters Using External Memory. ACM Transactions on Database Systems, 2021, 46, 1-35.	2.8	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.	2.1	5
17	Writes Wrought Right, and Other Adventures in File System Optimization. ACM Transactions on Storage, 2017, 13, 1-26.	2.1	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.	0.8	4
20	Write-Optimized Skip Lists. , 2017, , .		12
21	Cost-Oblivious Storage Reallocation. ACM Transactions on Algorithms, 2017, 13, 1-20.	1.0	9
22	Tight Approximations of Degeneracy in Large Graphs. Lecture Notes in Computer Science, 2016, , 429-440.	1.3	5
23	40 years of suffix trees. Communications of the ACM, 2016, 59, 66-73.	4.5	37
24	Parallel Lookups in String Indexes. Lecture Notes in Computer Science, 2016, , 61-67.	1.3	0
25	Exact Sublinear Binomial Sampling. Algorithmica, 2015, 73, 637-651.	1.3	7
26	Cost-Oblivious Reallocation for Scheduling and Planning. , 2015, , .		1
27	Reallocation Problems in Scheduling. Algorithmica, 2015, 73, 389-409.	1.3	6
28	Initializing Sensor Networks of Non-uniform Density in the Weak Sensor Model. Algorithmica, 2015, 73, 87-114.	1.3	3
29	BetrFS. ACM Transactions on Storage, 2015, 11, 1-29.	2.1	28
30	Cost-oblivious storage reallocation. , 2014, , .		5
31	Dynamic Windows Scheduling with ReallocationÂ. Lecture Notes in Computer Science, 2014, , 99-110.	1.3	4
32	Computing the Degeneracy of Large Graphs. Lecture Notes in Computer Science, 2014, , 250-260.	1.3	11
33	The Batched Predecessor Problem in External Memory. Lecture Notes in Computer Science, 2014, , 112-124.	1.3	2
34	Optimal memory-aware Sensor Network Gossiping (or how to break the Broadcast lower bound). Theoretical Computer Science, 2013, 472, 60-80.	0.9	7
35	Forty Years of Text Indexing. Lecture Notes in Computer Science, 2013, , 1-10.	1.3	3
36	Reallocation problems in scheduling. , 2013, , .		13

#	ARTICLE	IF	CITATIONS
37	Exact Sublinear Binomial Sampling. Lecture Notes in Computer Science, 2013, , 240-250.	1.3	1
38	Don't thrash. Proceedings of the VLDB Endowment, 2012, 5, 1627-1637.	3.8	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.	1.3	2
40	Fault-Tolerant Aggregation: Flow-Updating Meets Mass-Distribution. Lecture Notes in Computer Science, 2011, , 513-527.	1.3	8
41	Brief Announcement: Opportunistic Information Dissemination in Mobile Ad-Hoc Networks:. Lecture Notes in Computer Science, 2011, , 202-204.	1.3	0
42	Bootstrapping a hop-optimal network in the weak sensor model. ACM Transactions on Algorithms, 2009, 5, 1-30.	1.0	10
43	Fast and compact regular expression matching. Theoretical Computer Science, 2008, 409, 486-496.	0.9	47
44	Ordinal embeddings of minimum relaxation. ACM Transactions on Algorithms, 2008, 4, 1-21.	1.0	7
45	Introduction to SODA 2002 and 2003 special issue. ACM Transactions on Algorithms, 2007, 3, 36.	1.0	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.	1.2	17
49	Initializing Sensor Networks of Non-uniform Density in the Weak Sensor Model. Lecture Notes in Computer Science, 2007, , 565-576.	1.3	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.	2.2	1
52	Insertion Sort is O(n log n). Theory of Computing Systems, 2006, 39, 391-397.	1.1	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.	1.3	18

#	Article	IF	Citations
55	Lowest common ancestors in trees and directed acyclic graphs. Journal of Algorithms, 2005, 57, 75-94.	0.9	162
56	Adversarial contention resolution for simple channels. , 2005, , .		71
57	Cache-Oblivious B-Trees. SIAM Journal on Computing, 2005, 35, 341-358.	1.0	95
58	Bootstrapping a Hop-Optimal Network in the Weak Sensor Model. Lecture Notes in Computer Science, 2005, , 827-838.	1.3	9
59	Optimal Spaced Seeds for Faster Approximate String Matching. Lecture Notes in Computer Science, 2005, , 1251-1262.	1.3	3
60	Discovering temporal relations in molecular pathways using protein-protein interactions. , 2004, , .		2
61	Finding frequent items in data streams. Theoretical Computer Science, 2004, 312, 3-15.	0.9	417
62	Barnacle: an assembly algorithm for clone-based sequences of whole genomes. Gene, 2003, 320, 165-176.	2.2	9
63	Two Simplified Algorithms for Maintaining Order in a List. Lecture Notes in Computer Science, 2002, , 152-164.	1.3	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. Lecture Notes in Computer Science, 2002, , 165-173.	1.3	14
66	On Local Register Allocation. Journal of Algorithms, 2000, 37, 37-65.	0.9	20
67	The LCA Problem Revisited. Lecture Notes in Computer Science, 2000, , 88-94.	1.3	358
68	NOTUNG: A Program for Dating Gene Duplications and Optimizing Gene Family Trees. Journal of Computational Biology, 2000, 7, 429-447.	1.6	464
69	An O(nlog n) Algorithm for the Maximum Agreement Subtree Problem for Binary Trees. SIAM Journal on Computing, 2000, 30, 1385-1404.	1.0	76
70	On the sorting-complexity of suffix tree construction. Journal of the ACM, 2000, 47, 987-1011.	2.2	175
71	Cofe: A Scalable Method for Feature Extraction from Complex Objects. Lecture Notes in Computer Science, 2000, , 358-371.	1.3	1
72	Evaluation of Algorithms for Local Register Allocation. Lecture Notes in Computer Science, 1999, , 137-152.	1.3	13

#	Article	IF	Citations
73	Optimal Parallel Two Dimensional Text Searching on a CREW PRAM. Information and Computation, 1998, 144, 1-17.	0.7	14
74	String Matching in Lempel–Ziv Compressed Strings. Algorithmica, 1998, 20, 388-404.	1.3	66
75	On the Approximability of Numerical Taxonomy (Fitting Distances by Tree Metrics). SIAM Journal on Computing, 1998, 28, 1073-1085.	1.0	71
76	Let Sleeping Files Lie: Pattern Matching in Z-Compressed Files. Journal of Computer and System Sciences, 1996, 52, 299-307.	1.2	136
77	A robust model for finding optimal evolutionary trees. Algorithmica, 1995, 13, 155-179.	1.3	116
78	Optimal superprimitivity testing for strings. Information Processing Letters, 1991, 39, 17-20.	0.6	83