

Richard M Karp

List of Publications by Year in descending order

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80
papers

19,642
citations

94433

37
h-index

91884

69
g-index

81
all docs

81
docs citations

81
times ranked

10127
citing authors

#	ARTICLE	IF	CITATIONS
1	Reducibility among Combinatorial Problems. , 1972, , 85-103.		6,481
2	Theoretical Improvements in Algorithmic Efficiency for Network Flow Problems. Journal of the ACM, 1972, 19, 248-264.	2.2	1,922
3	The Traveling-Salesman Problem and Minimum Spanning Trees. Operations Research, 1970, 18, 1138-1162.	1.9	1,056
4	Efficient randomized pattern-matching algorithms. IBM Journal of Research and Development, 1987, 31, 249-260.	3.1	899
5	The traveling-salesman problem and minimum spanning trees: Part II. Mathematical Programming, 1971, 1, 6-25.	2.4	843
6	A Dynamic Programming Approach to Sequencing Problems. Journal of the Society for Industrial and Applied Mathematics, 1962, 10, 196-210.	0.5	787
7	Parallel program schemata. Journal of Computer and System Sciences, 1969, 3, 147-195.	1.2	768
8	Conserved patterns of protein interaction in multiple species. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1974-1979.	7.1	714
9	The Organization of Computations for Uniform Recurrence Equations. Journal of the ACM, 1967, 14, 563-590.	2.2	470
10	Conserved pathways within bacteria and yeast as revealed by global protein network alignment. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 11394-11399.	7.1	466
11	Random walks, universal traversal sequences, and the complexity of maze problems. , 1979, , .		462
12	Competitive paging algorithms. Journal of Algorithms, 1991, 12, 685-699.	0.9	356
13	Properties of a Model for Parallel Computations: Determinacy, Termination, Queueing. SIAM Journal on Applied Mathematics, 1966, 14, 1390-1411.	1.8	318
14	Parallel Algorithms for Shared-Memory Machines. , 1990, , 869-941.		279
15	Monte-Carlo approximation algorithms for enumeration problems. Journal of Algorithms, 1989, 10, 429-448.	0.9	242
16	Algorithms for graph partitioning on the planted partition model. Random Structures and Algorithms, 2001, 18, 116-140.	1.1	240
17	A Graph-Theoretic Game and Its Application to the k-Server Problem. SIAM Journal on Computing, 1995, 24, 78-100.	1.0	235
18	LogP. Communications of the ACM, 1996, 39, 78-85.	4.5	226

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19	Efficient Algorithms for Detecting Signaling Pathways in Protein Interaction Networks. Journal of Computational Biology, 2006, 13, 133-144.	1.6	225
20	The transitive closure of a random digraph. Random Structures and Algorithms, 1990, 1, 73-93.	1.1	163
21	Identification of Protein Complexes by Comparative Analysis of Yeast and Bacterial Protein Interaction Data. Journal of Computational Biology, 2005, 12, 835-846.	1.6	161
22	A Patching Algorithm for the Nonsymmetric Traveling-Salesman Problem. SIAM Journal on Computing, 1979, 8, 561-573.	1.0	146
23	Assembly-Line Balancing—Dynamic Programming with Precedence Constraints. Operations Research, 1963, 11, 442-459.	1.9	136
24	Finite-State Processes and Dynamic Programming. SIAM Journal on Applied Mathematics, 1967, 15, 693-718.	1.8	128
25	eQED: an efficient method for interpreting eQTL associations using protein networks. Molecular Systems Biology, 2008, 4, 162.	7.2	117
26	DISCOVERY OF REGULATORY INTERACTIONS THROUGH PERTURBATION: INFERENCE AND EXPERIMENTAL DESIGN. , 1999, , 305-16.		111
27	EFFICIENT RECONSTRUCTION OF HAPLOTYPE STRUCTURE VIA PERFECT PHYLOGENY. Journal of Bioinformatics and Computational Biology, 2003, 01, 1-20.	0.8	100
28	Topology-Free Querying of Protein Interaction Networks. Journal of Computational Biology, 2010, 17, 237-252.	1.6	99
29	Dynamic programming meets the principle of inclusion and exclusion. Operations Research Letters, 1982, 1, 49-51.	0.7	95
30	CREME: a framework for identifying cis-regulatory modules in human-mouse conserved segments. Bioinformatics, 2003, 19, i283-i291.	4.1	94
31	An introduction to randomized algorithms. Discrete Applied Mathematics, 1991, 34, 165-201.	0.9	74
32	The complexity of parallel search. Journal of Computer and System Sciences, 1988, 36, 225-253.	1.2	71
33	An algorithm to solve them \tilde{A} -n assignment problem in expected time $O(mn \log n)$. Networks, 1980, 10, 143-152.	2.7	64
34	Comparing Protein Interaction Networks via a Graph Match-and-Split Algorithm. Journal of Computational Biology, 2007, 14, 892-907.	1.6	61
35	Searching for an optimal path in a tree with random costs. Artificial Intelligence, 1983, 21, 99-116.	5.8	58
36	Monte-Carlo algorithms for the planar multiterminal network reliability problem. Journal of Complexity, 1985, 1, 45-64.	1.3	57

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37	Probabilistic analysis of optimum partitioning. Journal of Applied Probability, 1986, 23, 626-645.	0.7	54
38	Genome-Wide Association Data Reveal a Global Map of Genetic Interactions among Protein Complexes. PLoS Genetics, 2009, 5, e1000782.	3.5	52
39	Probabilistic Analysis of Linear Programming Decoding. IEEE Transactions on Information Theory, 2008, 54, 3565-3578.	2.4	50
40	A Randomization Test for Controlling Population Stratification in Whole-Genome Association Studies. American Journal of Human Genetics, 2007, 81, 895-905.	6.2	48
41	Probabilistic recurrence relations. Journal of the ACM, 1994, 41, 1136-1150.	2.2	47

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#	ARTICLE	IF	CITATIONS
55	Parallel program schemata: A mathematical model for parallel computation. , 1967, , .		21
56	Average Case Analysis of a Heuristic for the Assignment Problem. Mathematics of Operations Research, 1994, 19, 513-522.	1.3	20
57	Understanding Science Through the Computational Lens. Journal of Computer Science and Technology, 2011, 26, 569-577.	1.5	20
58	Identification of protein complexes by comparative analysis of yeast and bacterial protein interaction data. , 2004, , .		19
59	Heuristic algorithms in computational molecular biology. Journal of Computer and System Sciences, 2011, 77, 122-128.	1.2	17
60	The Restriction Scaffold Problem. Journal of Computational Biology, 2003, 10, 385-398.	1.6	16
61	Topology-Free Querying of Protein Interaction Networks. Lecture Notes in Computer Science, 2009, , 74-89.	1.3	15
62	Efficient Algorithms for Detecting Signaling Pathways in Protein Interaction Networks. Lecture Notes in Computer Science, 2005, , 1-13.	1.3	14
63	Comparing Pedigree Graphs. Journal of Computational Biology, 2012, 19, 998-1014.	1.6	12
64	When Is the Assignment Bound Tight for the Asymmetric Traveling-Salesman Problem?. SIAM Journal on Computing, 1995, 24, 484-493.	1.0	11
65	Association Mapping and Significance Estimation via the Coalescent. American Journal of Human Genetics, 2008, 83, 675-683.	6.2	11
66	Probabilistic Analysis of Network Flow Algorithms. Mathematics of Operations Research, 1993, 18, 71-97.	1.3	10
67	Bounded branching process and and/or tree evaluation. Random Structures and Algorithms, 1995, 7, 97-116.	1.1	10
68	Algorithms to Detect Multiprotein Modularity Conserved during Evolution. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2012, 9, 1046-1058.	3.0	9
69	George Dantzigâ€™s impact on the theory of computation. Discrete Optimization, 2008, 5, 174-185.	0.9	7
70	Haplotype Inference in Complex Pedigrees. Journal of Computational Biology, 2010, 17, 269-280.	1.6	7
71	Error Checking and Graphical Representation of Multipleâ€™Completeâ€™Digest (MCD) Restriction-Fragment Maps. Genome Research, 1999, 9, 79-90.	5.5	7
72	The complexity of parallel computation on matroids. , 1985, , .		5

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73	Optimization criteria and biological process enrichment in homologous multiprotein modules. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10872-10877.	7.1	5
74	An algorithmic approach to multiple complete digest mapping. , 1997, , .		4
75	Error-resilient DNA computation. Random Structures and Algorithms, 1999, 15, 450-466.	1.1	4
76	Parallel Sorting with Limited Bandwidth. SIAM Journal on Computing, 2000, 29, 1997-2015.	1.0	2
77	Recent advances in the probabilistic analysis of graph-theoretic algorithms. Lecture Notes in Computer Science, 1979, , 338-339.	1.3	2
78	On the Price of Heterogeneity in Parallel Systems. Theory of Computing Systems, 2009, 45, 280-301.	1.1	1
79	Haplotype Inference in Complex Pedigrees. Lecture Notes in Computer Science, 2009, , 108-120.	1.3	1
80	The restriction scaffold problem. , 2002, , .		0