

Christos H Papadimitriou

List of Publications by Year in descending order

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107
papers

14,245
citations

30070

54
h-index

33894

99
g-index

111
all docs

111
docs citations

111
times ranked

5744
citing authors

#	ARTICLE	IF	CITATIONS
1	The Complexity of Markov Decision Processes. Mathematics of Operations Research, 1987, 12, 441-450.	1.3	858
2	The serializability of concurrent database updates. Journal of the ACM, 1979, 26, 631-653.	2.2	751
3	The Euclidean travelling salesman problem is NP-complete. Theoretical Computer Science, 1977, 4, 237-244.	0.9	602
4	On generating all maximal independent sets. Information Processing Letters, 1988, 27, 119-123.	0.6	583
5	The Complexity of Computing a Nash Equilibrium. SIAM Journal on Computing, 2009, 39, 195-259.	1.0	543
6	The Discrete Geodesic Problem. SIAM Journal on Computing, 1987, 16, 647-668.	1.0	532
7	On the complexity of the parity argument and other inefficient proofs of existence. Journal of Computer and System Sciences, 1994, 48, 498-532.	1.2	531
8	How easy is local search?. Journal of Computer and System Sciences, 1988, 37, 79-100.	1.2	514
9	On the Complexity of Cooperative Solution Concepts. Mathematics of Operations Research, 1994, 19, 257-266.	1.3	451
10	Hamilton Paths in Grid Graphs. SIAM Journal on Computing, 1982, 11, 676-686.	1.0	385
11	On the complexity of integer programming. Journal of the ACM, 1981, 28, 765-768.	2.2	362
12	The Complexity of Optimal Queuing Network Control. Mathematics of Operations Research, 1999, 24, 293-305.	1.3	345
13	The Traveling Salesman Problem with Distances One and Two. Mathematics of Operations Research, 1993, 18, 1-11.	1.3	332
14	The Geometry of Grasping. International Journal of Robotics Research, 1990, 9, 61-74.	8.5	330
15	Shortest paths without a map. Theoretical Computer Science, 1991, 84, 127-150.	0.9	325
16	Towards an Architecture-Independent Analysis of Parallel Algorithms. SIAM Journal on Computing, 1990, 19, 322-328.	1.0	320
17	The complexity of computing a Nash equilibrium. , 2006, , .		284
18	Searching and pebbling. Theoretical Computer Science, 1986, 47, 205-218.	0.9	234

#	ARTICLE	IF	CITATIONS
19	The weighted region problem. <i>Journal of the ACM</i> , 1991, 38, 18-73.	2.2	232
20	On total functions, existence theorems and computational complexity. <i>Theoretical Computer Science</i> , 1991, 81, 317-324.	0.9	211
21	On the k -server conjecture. <i>Journal of the ACM</i> , 1995, 42, 971-983.	2.2	204
22	Inferring Tree Models for Oncogenesis from Comparative Genome Hybridization Data. <i>Journal of Computational Biology</i> , 1999, 6, 37-51.	1.6	202
23	Flowshop scheduling with limited temporary storage. <i>Journal of the ACM</i> , 1980, 27, 533-549.	2.2	197
24	Games against nature. <i>Journal of Computer and System Sciences</i> , 1985, 31, 288-301.	1.2	189
25	On the complexity of reconfiguration problems. <i>Theoretical Computer Science</i> , 2011, 412, 1054-1065.	0.9	182
26	Inclusion dependencies and their interaction with functional dependencies. <i>Journal of Computer and System Sciences</i> , 1984, 28, 29-59.	1.2	179
27	An algorithm for shortest-path motion in three dimensions. <i>Information Processing Letters</i> , 1985, 20, 259-263.	0.6	164
28	On Limited Nondeterminism and the Complexity of the V-C Dimension. <i>Journal of Computer and System Sciences</i> , 1996, 53, 161-170.	1.2	154
29	Market equilibrium via a primal-dual algorithm for a convex program. <i>Journal of the ACM</i> , 2008, 55, 1-18.	2.2	151
30	Optimum Grip of a Polygon. <i>International Journal of Robotics Research</i> , 1989, 8, 17-29.	8.5	148
31	A note on succinct representations of graphs. <i>Information and Control</i> , 1986, 71, 181-185.	1.1	141
32	Beyond Competitive Analysis. <i>SIAM Journal on Computing</i> , 2000, 30, 300-317.	1.0	138
33	Probabilistic satisfiability. <i>Journal of Complexity</i> , 1988, 4, 1-11.	1.3	132
34	On the complexity of edge traversing. <i>Journal of the ACM</i> , 1976, 23, 544-554.	2.2	131
35	On The Approximability Of The Traveling Salesman Problem. <i>Combinatorica</i> , 2006, 26, 101-120.	1.2	127
36	On Linear Characterizations of Combinatorial Optimization Problems. <i>SIAM Journal on Computing</i> , 1982, 11, 620-632.	1.0	125

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37	On the Complexity of Database Queries. Journal of Computer and System Sciences, 1999, 58, 407-427.	1.2	125
38	The Connectivity of Boolean Satisfiability: Computational and Structural Dichotomies. SIAM Journal on Computing, 2009, 38, 2330-2355.	1.0	121
39	Exponential lower bounds for finding Brouwer fix points. Journal of Complexity, 1989, 5, 379-416.	1.3	120
40	Worst-Case and Probabilistic Analysis of a Geometric Location Problem. SIAM Journal on Computing, 1981, 10, 542-557.	1.0	118
41	Exploring an unknown graph. Journal of Graph Theory, 1999, 32, 265-297.	0.9	118
42	Interval graphs and searching. Discrete Mathematics, 1985, 55, 181-184.	0.7	111
43	Intractable Problems in Control Theory. SIAM Journal on Control and Optimization, 1986, 24, 639-654.	2.1	109
44	On two geometric problems related to the travelling salesman problem. Journal of Algorithms, 1984, 5, 231-246.	0.9	106
45	The complexity of computing a Nash equilibrium. Communications of the ACM, 2009, 52, 89-97.	4.5	99
46	Distance-Based Reconstruction of Tree Models for Oncogenesis. Journal of Computational Biology, 2000, 7, 789-803.	1.6	96
47	On the Complexity of Local Search for the Traveling Salesman Problem. SIAM Journal on Computing, 1977, 6, 76-83.	1.0	90
48	On Concurrency Control by Multiple Versions. ACM Transactions on Database Systems, 1984, 9, 89-99.	2.8	90
49	A Communication-Time Tradeoff. SIAM Journal on Computing, 1987, 16, 639-646.	1.0	76
50	The adjacency relation on the traveling salesman polytope is NP-Complete. Mathematical Programming, 1978, 14, 312-324.	2.4	73
51	On the complexity of unique solutions. Journal of the ACM, 1984, 31, 392-400.	2.2	72
52	Reducibility among equilibrium problems. , 2006, , .		69
53	The Complexity of the Linâ€“Kernighan Heuristic for the Traveling Salesman Problem. SIAM Journal on Computing, 1992, 21, 450-465.	1.0	66
54	Why not negation by fixpoint?. Journal of Computer and System Sciences, 1991, 43, 125-144.	1.2	63

#	ARTICLE	IF	CITATIONS
55	On complexity as bounded rationality (extended abstract)., 1994, , .		61
56	Algebraic dependencies. Journal of Computer and System Sciences, 1982, 25, 2-41.	1.2	60
57	Approximate Nash equilibria in anonymous games. Journal of Economic Theory, 2015, 156, 207-245.	1.1	56
58	Map graphs. Journal of the ACM, 2002, 49, 127-138.	2.2	55
59	The 1-steiner tree problem. Journal of Algorithms, 1987, 8, 122-130.	0.9	52
60	The even-path problem for graphs and digraphs. Networks, 1984, 14, 507-513.	2.7	50
61	A linear programming approach to reasoning about probabilities. Annals of Mathematics and Artificial Intelligence, 1990, 1, 189-205.	1.3	50
62	On platers with a bounded number of states. Games and Economic Behavior, 1992, 4, 122-131.	0.8	47
63	Chromosome abnormalities in ovarian adenocarcinoma: III. Using breakpoint data to infer and test mathematical models for oncogenesis. Genes Chromosomes and Cancer, 2000, 28, 106-120.	2.8	45
64	The Complexity of Finding Nash Equilibria. , 2007, , 29-52.		45
65	A fast algorithm for testing for safety and detecting deadlocks in locked transaction systems. Journal of Algorithms, 1981, 2, 211-226.	0.9	44
66	On Horn envelopes and hypergraph transversals. Lecture Notes in Computer Science, 1993, , 399-405.	1.3	43
67	Brain computation by assemblies of neurons. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14464-14472.	7.1	41
68	Congestion games with malicious players. , 2007, , .		35
69	Concurrency Control by Locking. SIAM Journal on Computing, 1983, 12, 215-226.	1.0	31
70	NP-completeness: A retrospective. Lecture Notes in Computer Science, 1997, , 2-6.	1.3	30
71	The Traveling Salesman Problem with Many Visits to Few Cities. SIAM Journal on Computing, 1984, 13, 99-108.	1.0	27
72	On the complexity of designing distributed protocols. Information and Control, 1982, 53, 211-218.	1.1	26

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73	On Approximating a Scheduling Problem. <i>Journal of Combinatorial Optimization</i> , 2001, 5, 287-297.	1.3	26
74	A theorem in database concurrency control. <i>Journal of the ACM</i> , 1982, 29, 998-1006.	2.2	22
75	Default theories that always have extensions. <i>Artificial Intelligence</i> , 1994, 69, 347-357.	5.8	21
76	Recognizing Hole-Free 4-Map Graphs in Cubic Time. <i>Algorithmica</i> , 2006, 45, 227-262.	1.3	21
77	The complexity of cubical graphs. <i>Information and Control</i> , 1985, 66, 53-60.	1.1	20
78	Congestion games with malicious players. <i>Games and Economic Behavior</i> , 2009, 67, 22-35.	0.8	20
79	Algorithmic aspects of multiversion concurrency control. <i>Journal of Computer and System Sciences</i> , 1986, 33, 297-310.	1.2	19
80	Optimal piecewise linear motion of an object among obstacles. <i>Algorithmica</i> , 1987, 2, 523-539.	1.3	19
81	The Complexity of the Homotopy Method, Equilibrium Selection, and Lemke-Howson Solutions. <i>ACM Transactions on Economics and Computation</i> , 2013, 1, 1-25.	1.1	19
82	On Inefficient Proofs of Existence and Complexity Classes. <i>Annals of Discrete Mathematics</i> , 1992, 51, 245-250.	1.4	16
83	Reversible simulation of space-bounded computations. <i>Theoretical Computer Science</i> , 1995, 143, 159-165.	0.9	14
84	Towards a unified complexity theory of total functions. <i>Journal of Computer and System Sciences</i> , 2018, 94, 167-192.	1.2	14
85	On kernels, defaults and even graphs. <i>Annals of Mathematics and Artificial Intelligence</i> , 1997, 20, 1-12.	1.3	11
86	On the complexity of circulations. <i>Journal of Algorithms</i> , 1986, 7, 134-145.	0.9	9
87	An impossibility theorem for price-adjustment mechanisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 1854-1859.	7.1	8
88	Polytopes and Complexity. , 1984, , 295-305.		7
89	A Model for Structured Information Representation in Neural Networks of the Brain. <i>ENeuro</i> , 2020, 7, ENEURO.0533-19.2020.	1.9	7
90	On negative cycles in mixed graphs. <i>Operations Research Letters</i> , 1985, 4, 113-116.	0.7	6

#	ARTICLE	IF	CITATIONS
91	Worst-case ration for planar graphs and the method of induction on faces. , 1981, , .		5
92	Is distributed locking harder?. Journal of Computer and System Sciences, 1984, 28, 103-120.	1.2	5
93	The Complexity of the Homotopy Method, Equilibrium Selection, and Lemke-Howson Solutions. , 2011, , .		5
94	The Complexity of Distributed Concurrency Control. SIAM Journal on Computing, 1985, 14, 52-74.	1.0	4
95	The Complexity of Reliable Concurrency Control. SIAM Journal on Computing, 1987, 16, 538-553.	1.0	4
96	Database metatheory. ACM SIGACT News, 1995, 26, 13-30.	0.1	4
97	Economies with non-convex production and complexity equilibria. , 2011, , .		4
98	Bridging the Gap Between Neurons and Cognition Through Assemblies of Neurons. Neural Computation, 2022, 34, 291-306.	2.2	3
99	On minimal Eulerian graphs. Information Processing Letters, 1981, 12, 203-205.	0.6	2
100	Tie-Breaking Semantics and Structural Totality. Journal of Computer and System Sciences, 1997, 54, 48-60.	1.2	2
101	TFNP: An Update. Lecture Notes in Computer Science, 2017, , 3-9.	1.3	2
102	Reductions in PPP. Information Processing Letters, 2019, 145, 48-52.	0.6	2
103	Shortest-path motion. Lecture Notes in Computer Science, 1986, , 144-153.	1.3	2
104	On path lengths modulo three. Journal of Graph Theory, 1991, 15, 267-282.	0.9	1
105	The future of computational complexity theory: part I. ACM SIGACT News, 1996, 27, 6-12.	0.1	1
106	Optimal Coteries on a Network. Annals of Discrete Mathematics, 1992, , 251-253.	1.4	0
107	Computation and Intractability: Echoes of Kurt GÅ¶del. , 0, , 137-150.		0