

Zhao Zhang

List of Publications by Year in descending order

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144
papers

1,646
citations

331259

21
h-index

433756

31
g-index

147
all docs

147
docs citations

147
times ranked

857
citing authors

#	ARTICLE	IF	CITATIONS
1	A kind of conditional vertex connectivity of star graphs. Applied Mathematics Letters, 2009, 22, 264-267.	1.5	90
2	A better constant-factor approximation for weighted dominating set in unit disk graph. Journal of Combinatorial Optimization, 2009, 18, 179-194.	0.8	72
3	A proof of an inequality concerning k -restricted edge connectivity. Discrete Mathematics, 2005, 304, 128-134.	0.4	59
4	A Better Approximation Algorithm for Computing Connected Dominating Sets in Unit Ball Graphs. IEEE Transactions on Mobile Computing, 2010, 9, 1108-1118.	3.9	53
5	A PTAS for minimum connected dominating set in 3-dimensional Wireless sensor networks. Journal of Global Optimization, 2009, 45, 451-458.	1.1	46
6	A kind of conditional fault tolerance of alternating group graphs. Information Processing Letters, 2010, 110, 998-1002.	0.4	44
7	A New Constant Factor Approximation for Computing 3-Connected m -Dominating Sets in Homogeneous Wireless Networks. , 2010, , .		39
8	On Construction of Quality Fault-Tolerant Virtual Backbone in Wireless Networks. IEEE/ACM Transactions on Networking, 2013, 21, 1499-1510.	2.6	37
9	Approximating Maximum Lifetime k -Coverage Through Minimizing Weighted k -Cover in Homogeneous Wireless Sensor Networks. IEEE/ACM Transactions on Networking, 2016, 24, 3620-3633.	2.6	37
10	A kind of conditional vertex connectivity of Cayley graphs generated by 2-trees. Information Sciences, 2011, 181, 4300-4308.	4.0	34
11	A kind of conditional connectivity of Cayley graphs generated by unicyclic graphs. Information Sciences, 2013, 243, 86-94.	4.0	34
12	A greedy algorithm for the fault-tolerant connected dominating set in a general graph. Journal of Combinatorial Optimization, 2014, 28, 310-319.	0.8	32
13	Minimum cost seed set for competitive social influence. , 2016, , .		32
14	Reliability Evaluation of Network Systems with Dependent Propagated Failures Using Decision Diagrams. IEEE Transactions on Dependable and Secure Computing, 2016, 13, 672-683.	3.7	32
15	Approximation Algorithm for Minimum Weight Fault-Tolerant Virtual Backbone in Unit Disk Graphs. IEEE/ACM Transactions on Networking, 2017, 25, 925-933.	2.6	30
16	Algorithms for connected set cover problem and fault-tolerant connected set cover problem. Theoretical Computer Science, 2009, 410, 812-817.	0.5	29
17	A greedy algorithm for the minimum 2 -connected m -fold dominating set problem. Journal of Combinatorial Optimization, 2016, 31, 136-151.	0.8	27
18	Approximation algorithm for partial positive influence problem in social network. Journal of Combinatorial Optimization, 2017, 33, 791-802.	0.8	27

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19	Game-Theoretic Design of Optimal Two-Sided Rating Protocols for Service Exchange Dilemma in Crowdsourcing. IEEE Transactions on Information Forensics and Security, 2018, 13, 2801-2815.	4.5	27
20	TWO ALGORITHMS FOR CONNECTED r -HOP k -DOMINATING SET. Discrete Mathematics, Algorithms and Applications, 2009, 01, 485-498.	0.4	26
21	On minimum submodular cover with submodular cost. Journal of Global Optimization, 2011, 50, 229-234.	1.1	24
22	Set Function Optimization. Journal of the Operations Research Society of China, 2019, 7, 183-193.	0.9	24
23	Local ratio method on partial set multi-cover. Journal of Combinatorial Optimization, 2017, 34, 302-313.	0.8	23
24	Breach-Free Sleep-Wakeup Scheduling for Barrier Coverage With Heterogeneous Wireless Sensors. IEEE/ACM Transactions on Networking, 2018, 26, 2404-2413.	2.6	21
25	Edge fault tolerance of graphs with respect to super edge connectivity. Discrete Applied Mathematics, 2012, 160, 579-587.	0.5	18
26	The Size of Maximally Irregular Graphs and Maximally Irregular Triangle-Free Graphs. Graphs and Combinatorics, 2014, 30, 699-705.	0.2	18
27	Approximation algorithms for minimum (weight) connected k -path vertex cover. Discrete Applied Mathematics, 2016, 205, 101-108.	0.5	18
28	A novel approach for detecting multiple rumor sources in networks with partial observations. Journal of Combinatorial Optimization, 2017, 33, 132-146.	0.8	18
29	Fault-Tolerant Virtual Backbone in Heterogeneous Wireless Sensor Network. IEEE/ACM Transactions on Networking, 2017, 25, 3487-3499.	2.6	18
30	Approximation algorithms for distance constraint sweep coverage with base stations. Journal of Combinatorial Optimization, 2019, 37, 1111-1125.	0.8	18
31	Solution of Bharathi-Kempe-Salek conjecture for influence maximization on arborescence. Journal of Combinatorial Optimization, 2017, 33, 803-808.	0.8	17
32	A primal-dual algorithm for the minimum partial set multi-cover problem. Journal of Combinatorial Optimization, 2020, 39, 725-746.	0.8	17
33	A PTAS for minimum d -hop connected dominating set in growth-bounded graphs. Optimization Letters, 2010, 4, 321-333.	0.9	16
34	A NEW PROOF FOR ZASSENHAUS-GROEMER-OLER INEQUALITY. Discrete Mathematics, Algorithms and Applications, 2012, 04, 1250014.	0.4	16
35	Incentive Mechanism for Macrotasking Crowdsourcing: A Zero-Determinant Strategy Approach. IEEE Internet of Things Journal, 2019, 6, 8589-8601.	5.5	16
36	Performance-guaranteed approximation algorithm for fault-tolerant connected dominating set in wireless networks. , 2016, , .		15

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37	A PTAS for minimum weighted connected vertex cover P_3 problem in 3-dimensional wireless sensor networks. Journal of Combinatorial Optimization, 2017, 33, 106-122.	0.8	15
38	Super cyclically edge connected transitive graphs. Journal of Combinatorial Optimization, 2011, 22, 549-562.	0.8	14
39	Approximation algorithm for minimum power partial multi-coverage in wireless sensor networks. Journal of Global Optimization, 2021, 80, 661-671.	1.1	14
40	On optimally \mathbb{Z} -connected r -hop dominating set. Information Processing Letters, 2010, 110, 986-991.	0.5	13
41	Two algorithms for minimum \mathbb{Z} -connected r -hop dominating set. Information Processing Letters, 2010, 110, 986-991.	0.4	13
42	Algorithm for constraint partial inverse matroid problem with weight increase forbidden. Theoretical Computer Science, 2016, 640, 119-124.	0.5	13
43	PTAS for minimum k -path vertex cover in ball graph. Information Processing Letters, 2017, 119, 9-13.	0.4	13
44	FAST INFORMATION PROPAGATION IN SOCIAL NETWORKS. Discrete Mathematics, Algorithms and Applications, 2010, 02, 125-141.	0.4	12
45	Approximation algorithm for the minimum weight connected k -subgraph cover problem. Theoretical Computer Science, 2014, 535, 54-58.	0.5	12
46	On strongly \mathbb{Z} -connected r -hop dominating set. Discrete Applied Mathematics, 2014, 174, 73-80.	0.5	12
47	A primal-dual algorithm for the minimum power partial cover problem. Journal of Combinatorial Optimization, 2022, 44, 1913-1923.	0.8	12
48	Minimum power partial multi-cover on a line. Theoretical Computer Science, 2021, 864, 118-128.	0.5	12
49	Fault-tolerant coverage with maximum lifetime in wireless sensor networks. , 2015, , .		11
50	Algorithms for the partial inverse matroid problem in which weights can only be increased. Journal of Global Optimization, 2016, 65, 801-811.	1.1	11
51	Partial inverse maximum spanning tree in which weight can only be decreased under l_p -norm. Journal of Global Optimization, 2018, 70, 677-685.	1.1	11
52	Approximation algorithms for minimum weight connected 3-path vertex cover. Applied Mathematics and Computation, 2019, 347, 723-733.	1.4	11
53	Reliability Analysis of IoT Networks with Community Structures. IEEE Transactions on Network Science and Engineering, 2020, 7, 304-315.	4.1	11
54	Optimal Coverage in Wireless Sensor Networks. Springer Optimization and Its Applications, 2020, , .	0.6	11

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55	On cyclic vertex-connectivity of Cartesian product digraphs. <i>Journal of Combinatorial Optimization</i> , 2012, 24, 379-388.	0.8	10
56	A PTAS for the minimum weight connected vertex cover P3 problem on unit disk graphs. <i>Theoretical Computer Science</i> , 2015, 571, 58-66.	0.5	10
57	Solving the degree-concentrated fault-tolerant spanning subgraph problem by DC programming. <i>Mathematical Programming</i> , 2018, 169, 255-275.	1.6	10
58	Toward Fairness-Aware Time-Sensitive Asynchronous Federated Learning for Critical Energy Infrastructure. <i>IEEE Transactions on Industrial Informatics</i> , 2022, 18, 3462-3472.	7.2	10
59	Cyclic arc-connectivity in a Cartesian product digraph. <i>Applied Mathematics Letters</i> , 2010, 23, 796-800.	1.5	9
60	iGreen: green scheduling for peak demand minimization. <i>Journal of Global Optimization</i> , 2017, 69, 45-67.	1.1	9
61	Supporting user authorization queries in RBAC systems by role-à€“permission reassignment. <i>Future Generation Computer Systems</i> , 2018, 88, 707-717.	4.9	9
62	Computing Minimum k-Connected m-Fold Dominating Set in General Graphs. <i>INFORMS Journal on Computing</i> , 2018, 30, 217-224.	1.0	9
63	Performability Analysis of Large-Scale Multi-State Computing Systems. <i>IEEE Transactions on Computers</i> , 2018, 67, 59-72.	2.4	9
64	Nowhere-zero flows in tensor product of graphs. <i>Journal of Graph Theory</i> , 2007, 54, 284-292.	0.5	8
65	PTAS for connected vertex cover in unit disk graphs. <i>Theoretical Computer Science</i> , 2009, 410, 5398-5402.	0.5	8
66	Constant-approximation for optimal data aggregation with physical interference. <i>Journal of Global Optimization</i> , 2013, 56, 1653-1666.	1.1	8
67	Viral marketing with positive influence. , 2017, , .		8
68	A simpler PTAS for connected k-path vertex cover in homogeneous wireless sensor network. <i>Journal of Combinatorial Optimization</i> , 2018, 36, 35-43.	0.8	8
69	Approximation algorithm for the partial set multi-cover problem. <i>Journal of Global Optimization</i> , 2019, 75, 1133-1146.	1.1	8
70	Extortion and Cooperation in Rating Protocol Design for Competitive Crowdsourcing. <i>IEEE Transactions on Computational Social Systems</i> , 2021, 8, 246-259.	3.2	8
71	Super-Connectivity and Hyper-Connectivity of Vertex Transitive Bipartite Graphs. <i>Graphs and Combinatorics</i> , 2007, 23, 309-314.	0.2	7
72	A bicriteria algorithm for the minimum submodular cost partial set multi-cover problem. <i>Theoretical Computer Science</i> , 2020, 803, 1-9.	0.5	7

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91	Approximation algorithms for the dynamic k -level facility location problems. Theoretical Computer Science, 2021, 853, 43-56.	0.5	4
92	Semi-hyper-connected edge transitive graphs. Discrete Mathematics, 2006, 306, 705-710.	0.4	3
93	The existence and upper bound for two types of restricted connectivity. Discrete Applied Mathematics, 2010, 158, 516-521.	0.5	3
94	Approximation for minimum strongly connected dominating and absorbing set with routing-cost constraint in disk digraphs. Optimization Letters, 2016, 10, 1393-1401.	0.9	3
95	Approximation algorithms for minimum weight partial connected set cover problem. Journal of Combinatorial Optimization, 2016, 31, 696-712.	0.8	3
96	Approximation algorithm for the balanced 2-connected k -partition problem. Theoretical Computer Science, 2016, 609, 627-638.	0.5	3
97	A simple approximation algorithm for minimum weight partial connected set cover. Journal of Combinatorial Optimization, 2017, 34, 956-963.	0.8	3
98	Breaking the $O(n \ln n)$ Barrier: An Enhanced Approximation Algorithm for Fault-Tolerant Minimum Weight Connected Dominating Set. INFORMS Journal on Computing, 2018, 30, 225-235.	1.0	3
99	Primal Dual Algorithm for Partial Set Multi-cover. Lecture Notes in Computer Science, 2018, , 372-385.	1.0	3
100	Multi-Level Two-Sided Rating Protocol Design for Service Exchange Contest Dilemma in Crowdsensing. IEEE Access, 2019, 7, 78391-78405.	2.6	3
101	What can AI learn from bionic algorithms?. Physics of Life Reviews, 2019, 29, 41-43.	1.5	3
102	Approximation algorithm for a generalized Roman domination problem in unit ball graphs. Journal of Combinatorial Optimization, 2020, 39, 138-148.	0.8	3
103	Approximation algorithm for minimum weight connected- k -subgraph cover. Theoretical Computer Science, 2020, 838, 160-167.	0.5	3
104	Sufficient conditions for a graph to be $\hat{\rho}_k$ -optimal with given girth and diameter. Networks, 2010, 55, 119-124.	1.6	2
105	Algorithms for the minimum weight k -fold (connected) dominating set problem. Journal of Combinatorial Optimization, 2012, 23, 528-540.	0.8	2
106	Primal dual based algorithm for degree-balanced spanning tree problem. Applied Mathematics and Computation, 2018, 316, 167-173.	1.4	2
107	Algorithm for Online 3-Path Vertex Cover. Theory of Computing Systems, 2020, 64, 327-338.	0.7	2
108	Breaking the r_{\max} Barrier: Enhanced Approximation Algorithms for Partial Set Multicover Problem. INFORMS Journal on Computing, 2020, , .	1.0	2

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109	A game theoretic approach for minimal connected dominating set. Theoretical Computer Science, 2020, 836, 29-36.	0.5	2
110	Approximation algorithm for minimum connected 3-path vertex cover. Discrete Applied Mathematics, 2020, 287, 77-84.	0.5	2
111	Barrier Coverage. Springer Optimization and Its Applications, 2020, , 159-181.	0.6	2
112	Semi-hyper-connected vertex transitive graphs. Discrete Mathematics, 2009, 309, 899-907.	0.4	1
113	Degree sequence realizations with given packing and covering of spanning trees. Discrete Applied Mathematics, 2015, 185, 113-118.	0.5	1
114	The α_1 inverse maximum independent set problem on forests and unicyclic graphs. Discrete Mathematics, Algorithms and Applications, 2016, 08, 1650019.	0.4	1
115	What network topology can tell in election prediction. Discrete Mathematics, Algorithms and Applications, 2018, 10, 1850027.	0.4	1
116	Zero-Determinant Strategies in Winner Takes All Game. , 2019, , .		1
117	Computation and algorithm for the minimum k -edge-connectivity of graphs. Journal of Combinatorial Optimization, 2022, 44, 1741-1752.	0.8	1
118	Approximation algorithm for minimum partial multi-cover under a geometric setting. Optimization Letters, 0, , 1.	0.9	1
119	Parallel approximation for partial set cover. Applied Mathematics and Computation, 2021, 408, 126358.	1.4	1
120	Partition in High Dimensional Spaces. , 2013, , 2585-2624.		1
121	A Bicriteria Approximation Algorithm for Minimum Submodular Cost Partial Multi-Cover Problem. Lecture Notes in Computer Science, 2018, , 62-73.	1.0	1
122	Optimizing Polynomial-Time Solutions to a Network Weighted Vertex Cover Game. IEEE/CAA Journal of Automatica Sinica, 2023, 10, 512-523.	8.5	1
123	Nearly tight approximation algorithm for (connected) Roman dominating set. Optimization Letters, 0, , 1.	0.9	1
124	Approximation algorithm for prize-collecting sweep cover with base stations. Theoretical Computer Science, 2022, 929, 1-10.	0.5	1
125	A Characterization of Graphs without Even Factors. Graphs and Combinatorics, 2006, 22, 497-502.	0.2	0
126	Optimal Placements in Ring Network for Data Replicas in Distributed Database with Majority Voting Protocol. , 2008, , .		0

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127	Approximation algorithm for minimum weight fault-tolerant virtual backbone in homogeneous wireless sensor network. , 2015, , .		0
128	Restricted connectivity of total digraph. Discrete Mathematics, Algorithms and Applications, 2016, 08, 1650022.	0.4	0
129	Editorial for Special Issue: COCOA2014. Journal of Combinatorial Optimization, 2016, 32, 1196-1196.	0.8	0
130	Nonsubmodular Optimization. Springer Optimization and Its Applications, 2019, , 141-152.	0.6	0
131	Approximation algorithm for (connected) bounded-degree deletion problem on unit disk graphs. Theoretical Computer Science, 2020, 836, 59-64.	0.5	0
132	A distributed algorithm for a set cover game. Discrete Mathematics, Algorithms and Applications, 0, , 2150127.	0.4	0
133	A Computational Approach to Optimal Control Problems with Almost Smooth Controls. Asia-Pacific Journal of Operational Research, 0, , 2140034.	0.9	0
134	Approximation Algorithm for the Minimum Connected k -Path Vertex Cover Problem. Lecture Notes in Computer Science, 2014, , 764-771.	1.0	0
135	A Simpler Method to Obtain a PTAS for Connected k -Path Vertex Cover in Unit Disk Graph. Lecture Notes in Computer Science, 2017, , 584-592.	1.0	0
136	Approximation Algorithms for the Minimum Power Partial Cover Problem. Lecture Notes in Computer Science, 2019, , 179-191.	1.0	0
137	Improved Approximation Algorithm for \hat{A} Minimum Weight k -Subgraph Cover \hat{A} Problem. Lecture Notes in Computer Science, 2019, , 352-361.	1.0	0
138	Energy-Harvesting Sensors. Springer Optimization and Its Applications, 2020, , 245-255.	0.6	0
139	Partial Coverage. Springer Optimization and Its Applications, 2020, , 193-202.	0.6	0
140	Heterogeneous Sensors. Springer Optimization and Its Applications, 2020, , 135-151.	0.6	0
141	k -Coverage. Springer Optimization and Its Applications, 2020, , 117-133.	0.6	0
142	Sweep-Coverage. Springer Optimization and Its Applications, 2020, , 183-192.	0.6	0
143	Parallel Algorithm for \hat{A} Minimum Partial Dominating Set in \hat{A} Unit Disk Graph. Lecture Notes in Computer Science, 2021, , 527-537.	1.0	0
144	Constant Approximation for the Lifetime Scheduling Problem of $\langle i \rangle p \langle /i \rangle$ -Percent Coverage. INFORMS Journal on Computing, 2022, 34, 2675-2685.	1.0	0