Zhongzhi Zhang

List of Publications by Year
in descending order

164	4,150	101543	168389
papers	citations	36 h-index	53 g-index

166	166	166	1166
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Attack vulnerability of scale-free networks due to cascading failures. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 6671-6678.	2.6	181
2	Exact solution for mean first-passage time on a pseudofractal scale-free web. Physical Review E, 2009, 79, 021127.	2.1	108
3	A deterministic small-world network created by edge iterations. Physica A: Statistical Mechanics and Its Applications, 2006, 363, 567-572.	2.6	105
4	Random walks on weighted networks. Physical Review E, 2013, 87, 012112.	2.1	91
5	Standard random walks and trapping on the Koch network with scale-free behavior and small-world effect. Physical Review E, 2009, 79, 061113.	2.1	88
6	Maximal planar scale-free Sierpinski networks with small-world effect and power law strength-degree correlation. Europhysics Letters, 2007, 79, 38007.	2.0	79
7	Epidemic spreading with nonlinear infectivity in weighted scale-free networks. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 471-481.	2.6	73
8	High-dimensional Apollonian networks. Journal of Physics A, 2006, 39, 1811-1818.	1.6	72
9	Self-similarity, small-world, scale-free scaling, disassortativity, and robustness in hierarchical lattices. European Physical Journal B, 2007, 56, 259-271.	1.5	70
10	Determining mean first-passage time on a class of treelike regular fractals. Physical Review E, 2010, 82, 031140.	2.1	67
11	Determining global mean-first-passage time of random walks on Vicsek fractals using eigenvalues of Laplacian matrices. Physical Review E, 2010, 81, 031118.	2.1	64
12	On the spectrum of the normalized Laplacian of iterated triangulations of graphs. Applied Mathematics and Computation, 2016, 273, 1123-1129.	2.2	64
13	High-dimensional random Apollonian networks. Physica A: Statistical Mechanics and Its Applications, 2006, 364, 610-618.	2.6	63
14	The exact solution of the mean geodesic distance for Vicsek fractals. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 485102.	2.1	62
15	Mean first-passage time for random walks on undirected networks. European Physical Journal B, 2011, 84, 691-697.	1.5	62
16	A general geometric growth model for pseudofractal scale-free web. Physica A: Statistical Mechanics and Its Applications, 2007, 377, 329-339.	2.6	61
17	Evolving Apollonian networks with small-world scale-free topologies. Physical Review E, 2006, 74, 046105.	2.1	58
18	Random walks in weighted networks with a perfect trap: An application of Laplacian spectra. Physical Review E, 2013, 87, 062140.	2.1	58

#	ARTICLE	IF	CITATIONS
19	Enumeration of spanning trees in a pseudofractal scale-free web. Europhysics Letters, 2010, 90, 68002.	2.0	57
20	Spanning trees in a fractal scale-free lattice. Physical Review E, 2011, 83, 016116.	2.1	56
21	Eigenvalues of normalized Laplacian matrices of fractal trees and dendrimers: Analytical results and applications. Journal of Chemical Physics, 2013, 138, 204116.	3.0	55
22	Analytical solution of average path length for Apollonian networks. Physical Review E, 2008, 77, 017102.	2.1	53
23	Random walks on the Apollonian network with a single trap. Europhysics Letters, 2009, 86, 10006.	2.0	52
24	Explicit determination of mean first-passage time for random walks on deterministic uniform recursive trees. Physical Review E, 2010, 81, 016114.	2.1	52
25	Trapping in dendrimers and regular hyperbranched polymers. Journal of Chemical Physics, 2012, 137, 044903.	3.0	52
26	The number of spanning trees in Apollonian networks. Discrete Applied Mathematics, 2014, 169, 206-213.	0.9	47
27	Mapping Koch curves into scale-free small-world networks. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 395101.	2.1	46
28	Laplacian spectra of recursive treelike small-world polymer networks: Analytical solutions and applications. Journal of Chemical Physics, 2013, 138, 114904.	3.0	46
29	Farey graphs as models for complex networks. Theoretical Computer Science, 2011, 412, 865-875.	0.9	45
30	Random Sierpinski network with scale-free small-world and modular structure. European Physical Journal B, 2008, 65, 141-147.	1.5	44
31	Distinct scalings for mean first-passage time of random walks on scale-free networks with the same degree sequence. Physical Review E, 2009, 80, 061111.	2.1	41
32	The normalized Laplacian spectrum of subdivisions of a graph. Applied Mathematics and Computation, 2016, 286, 250-256.	2.2	41
33	Trapping in scale-free networks with hierarchical organization of modularity. Physical Review E, 2009, 80, 051120.	2.1	40
34	Evolving pseudofractal networks. European Physical Journal B, 2007, 58, 337-344.	1.5	39
35	Counting spanning trees in a small-world Farey graph. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 3342-3349.	2.6	39
36	Epidemic spreading in weighted scale-free networks with community structure. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P07043.	2.3	38

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37	Influence of trap location on the efficiency of trapping in dendrimers and regular hyperbranched polymers. Journal of Chemical Physics, 2013, 138, 094905.	3.0	38
38	Mean first-passage time for random walks on the T-graph. New Journal of Physics, 2009, 11, 103043.	2.9	37
39	An empirical study of Chinese language networks. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3039-3047.	2.6	36
40	MODELLING COLLABORATION NETWORKS BASED ON NONLINEAR PREFERENTIAL ATTACHMENT. International Journal of Modern Physics C, 2007, 18, 297-314.	1.7	35
41	Effect of trap position on the efficiency of trapping in treelike scale-free networks. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 075102.	2.1	34
42	Rumor evolution in social networks. Physical Review E, 2013, 87, .	2.1	34
43	Role of fractal dimension in random walks on scale-free networks. European Physical Journal B, 2011, 84, 331-338.	1.5	33
44	Counting spanning trees in self-similar networks by evaluating determinants. Journal of Mathematical Physics, 2011, 52, 113303.	1.1	33
45	Exact calculations of first-passage properties on the pseudofractal scale-free web. Chaos, 2015, 25, 073118.	2.5	33
46	Robustness of First- and Second-Order Consensus Algorithms for a Noisy Scale-Free Small-World Koch Network. IEEE Transactions on Control Systems Technology, 2017, 25, 342-350.	5.2	33
47	Scale-Free Loopy Structure is Resistant to Noise in Consensus Dynamics in Complex Networks. IEEE Transactions on Cybernetics, 2020, 50, 190-200.	9.5	33
48	Optimal and suboptimal networks for efficient navigation measured by mean-first passage time of random walks. Chaos, 2012, 22, 043129.	2.5	32
49	Evolutionary method for finding communities in bipartite networks. Physical Review E, 2011, 83, 066120.	2.1	31
50	Random walks in modular scale-free networks with multiple traps. Physical Review E, 2012, 85, 011106.	2.1	31
51	Mean first-passage time for maximal-entropy random walks in complex networks. Scientific Reports, 2014, 4, 5365.	3.3	31
52	Laplacian spectra of a class of small-world networks and their applications. Scientific Reports, 2015, 5, 9024.	3.3	31
53	Anomalous behavior of trapping on a fractal scale-free network. Europhysics Letters, 2009, 88, 10001.	2.0	30
54	Incompatibility networks as models of scale-free small-world graphs. European Physical Journal B, 2007, 60, 259-264.	1.5	29

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55	Random walks on dual Sierpinski gaskets. European Physical Journal B, 2011, 82, 91-96.	1.5	29
56	Mean first-passage time for random walks in general graphs with a deep trap. Journal of Chemical Physics, 2012, 137, 124104.	3.0	29
57	Consensus in Self-Similar Hierarchical Graphs and SierpiÅ„ski Graphs: Convergence Speed, Delay Robustness, and Coherence. IEEE Transactions on Cybernetics, 2019, 49, 592-603.	9.5	29
58	Topologies and Laplacian spectra of a deterministic uniform recursive tree. European Physical Journal B, 2008, 63, 507-513.	1.5	27
59	Local-world evolving networks with tunable clustering. Physica A: Statistical Mechanics and Its Applications, 2007, 380, 639-650.	2.6	26
60	Fractal scale-free networks resistant to disease spread. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P09008.	2.3	26
61	Small-World Topology Can Significantly Improve the Performance of Noisy Consensus in a Complex Network. Computer Journal, 2015, 58, 3242-3254.	2.4	26
62	Correlations in random Apollonian network. Physica A: Statistical Mechanics and Its Applications, 2007, 380, 621-628.	2.6	25
63	The number of spanning trees of an infinite family of outerplanar, small-world and self-similar graphs. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 2803-2806.	2.6	25
64	Average distance in a hierarchical scale-free network: an exact solution. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P10022.	2.3	24
65	A unified model for Sierpinski networks with scale-free scaling and small-world effect. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 2571-2578.	2.6	24
66	Impact of degree heterogeneity on the behavior of trapping in Koch networks. Chaos, 2010, 20, 043112.	2.5	24
67	Different thresholds of bond percolation in scale-free networks with identical degree sequence. Physical Review E, 2009, 79, 031110.	2.1	23
68	Complete spectrum of the stochastic master equation for random walks on treelike fractals. Europhysics Letters, 2011, 96, 40009.	2.0	23
69	Recursive solutions for Laplacian spectra and eigenvectors of a class of growing treelike networks. Physical Review E, 2009, 80, 016104.	2.1	22
70	Recursive weighted treelike networks. European Physical Journal B, 2007, 59, 99-107.	1.5	21
71	A geometric growth model interpolating between regular and small-world networks. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 11863-11876.	2.1	20
72	Transition from fractal to non-fractal scalings in growing scale-free networks. European Physical Journal B, 2008, 64, 277-283.	1.5	20

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73	Effects of accelerating growth on the evolution of weighted complex networks. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 225-232.	2.6	20
74	Controlling the efficiency of trapping in treelike fractals. Journal of Chemical Physics, 2013, 139, 024106.	3.0	20
75	Properties and applications of Laplacian spectra for Koch networks. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 025102.	2.1	19
76	Extended Corona Product as an Exactly Tractable Model for Weighted Heterogeneous Networks. Computer Journal, 2018, 61, 745-760.	2.4	19
77	The prisoner's dilemma in structured scale-free networks. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 245002.	2.1	18
78	Scaling of mean first-passage time as efficiency measure of nodes sending information on scale-free Koch networks. European Physical Journal B, 2011, 80, 209-216.	1.5	18
79	Spectra of weighted scale-free networks. Scientific Reports, 2015, 5, 17469.	3.3	18
80	The number and degree distribution of spanning trees in the Tower of Hanoi graph. Theoretical Computer Science, 2016, 609, 443-455.	0.9	18
81	Influences of degree inhomogeneity on average path length and random walks in disassortative scale-free networks. Journal of Mathematical Physics, 2009, 50, 033514.	1.1	17
82	Full eigenvalues of the Markov matrix for scale-free polymer networks. Physical Review E, 2014, 90, 022816.	2.1	17
83	Pfaffian orientations and perfect matchings of scale-free networks. Theoretical Computer Science, 2015, 570, 55-69.	0.9	17
84	Spectrum of walk matrix for Koch network and its application. Journal of Chemical Physics, 2015, 142, 224106.	3.0	17
85	Domination number and minimum dominating sets in pseudofractal scale-free web and SierpiÅ„ski graph. Theoretical Computer Science, 2017, 677, 12-30.	0.9	17
86	EVOLVING SCALE-FREE NETWORK MODEL WITH TUNABLE CLUSTERING. International Journal of Modern Physics B, 2005, 19, 3951-3959.	2.0	16
87	Planar unclustered scale-free graphs as models for technological and biological networks. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 1955-1964.	2.6	16
88	Deterministic weighted scale-free small-world networks. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3316-3324.	2.6	16
89	Eigenvalues for the transition matrix of a small-world scale-free network: Explicit expressions and applications. Physical Review E, 2015, 91, 062808.	2.1	16
90	From regular to growing small-world networks. Physica A: Statistical Mechanics and Its Applications, 2007, 385, 765-772.	2.6	15

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91	Corona graphs as a model of small-world networks. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P11024.	2.3	15
92	Controlling the efficiency of trapping in a scale-free small-world network. Scientific Reports, 2015, 4, 6274.	3.3	15
93	A Resistance-Distance-Based Approach for Optimal Leader Selection in Noisy Consensus Networks. IEEE Transactions on Control of Network Systems, 2019, 6, 191-201.	3.7	15
94	Random walks in small-world exponential treelike networks. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P08013.	2.3	14
95	Eigenvalue spectrum of transition matrix of dual Sierpinski gaskets and its applications. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 345101.	2.1	14
96	The different cooperative behaviors on a kind of scale-free networks with identical degree sequence. Chaos, Solitons and Fractals, 2013, 56, 91-95.	5.1	14
97	Maximum matchings and minimum dominating sets in Apollonian networks and extended Tower of Hanoi graphs. Theoretical Computer Science, 2017, 703, 37-54.	0.9	14
98	Low-Mean Hitting Time for Random Walks on Heterogeneous Networks. IEEE Transactions on Information Theory, 2019, 65, 6898-6910.	2.4	14
99	Topological and Spectral Properties of Small-World Hierarchical Graphs. Computer Journal, 2019, 62, 769-784.	2.4	14
100	Traffic Fluctuations on Weighted Networks. IEEE Circuits and Systems Magazine, 2012, 12, 33-44.	2.3	13
101	Exact eigenvalue spectrum of a class of fractal scale-free networks. Europhysics Letters, 2012, 99, 10007.	2.0	13
102	Maximal entropy random walk improves efficiency of trapping in dendrimers. Journal of Chemical Physics, 2014, 140, 234104.	3.0	13
103	Mixed random walks with a trap in scale-free networks including nearest-neighbor and next-nearest-neighbor jumps. Journal of Chemical Physics, 2015, 143, 134101.	3.0	13
104	Extended Vicsek fractals: Laplacian spectra and their applications. Physical Review E, 2016, 94, 052501.	2.1	13
105	Non-Backtracking Centrality Based Random Walk on Networks. Computer Journal, 2019, 62, 63-80.	2.4	13
106	Diffusionâ€“annihilation processes in weighted scale-free networks with an identical degree sequence. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10001.	2.3	12
107	Kirchhoff Index as a Measure of Edge Centrality in Weighted Networks: Nearly Linear Time Algorithms. , 2018, , 2377-2396.		12
108	Current Flow Group Closeness Centrality for Complex Networks?. , 2019, , .		12

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109	Contact graphs of disk packings as a model of spatial planar networks. New Journal of Physics, 2009, 11, 083007.	2.9	11
110	Spectral Properties of Extended SierpiÅ„ski Graphs and Their Applications. IEEE Transactions on Network Science and Engineering, 2019, 6, 512-522.	6.4	11
111	Effects of reciprocity on random walks in weighted networks. Scientific Reports, 2015, 4, 7460.	3.3	10
112	Maximum matchings in scale-free networks with identical degree distribution. Theoretical Computer Science, 2017, 675, 64-81.	0.9	10
113	Independence number and the number of maximum independent sets in pseudofractal scale-free web and SierpiÅ„ski gasket. Theoretical Computer Science, 2018, 720, 47-54.	0.9	10
114	Maximizing the Number of Spanning Trees in a Connected Graph. IEEE Transactions on Information Theory, 2020, 66, 1248-1260.	2.4	10
115	Monomerâ€“dimer model on a scale-free small-world network. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 828-833.	2.6	9
116	Random walks in unweighted and weighted modular scale-free networks with a perfect trap. Journal of Chemical Physics, 2013, 139, 234106.	3.0	9
117	The rigorous solution for the average distance of a Sierpinski network. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P02034.	2.3	8
118	An alternative approach to determining average distance in a class of scale-free modular networks. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P12017.	2.3	8
119	Optimal scale-free network with a minimum scaling of transport efficiency for random walks with a perfect trap. Journal of Chemical Physics, 2013, 138, 034101.	3.0	8
120	Dynamics of comb-of-comb networks. Physical Review E, 2016, 93, 032502.	2.1	8
121	Hitting Times for Random Walks on SierpiÅ„ski Graphs and Hierarchical Graphs. Computer Journal, 2020, 63, 1385-1396.	2.4	8
122	Structural and spectral properties of a family of deterministic recursive trees: rigorous solutions. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 165103.	2.1	7
123	Dynamics of semiflexible recursive small-world polymer networks. Scientific Reports, 2015, 4, 7576.	3.3	7
124	Anomalous behavior of trapping in extended dendrimers with a perfect trap. Journal of Chemical Physics, 2015, 143, 064901.	3.0	7
125	Biharmonic Distance and Performance of Second-Order Consensus Networks with Stochastic Disturbances. , 2018, , .		7
126	Forest Distance Closeness Centrality in Disconnected Graphs. , 2019, , .		7

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127	Vertex labeling and routing in expanded Apollonian networks. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 035004.	2.1	6
128	Self-similar non-clustered planar graphs as models for complex networks. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 045103.	2.1	6
129	Fast Evaluation for Relevant Quantities of Opinion Dynamics. , 2021, , .		6
130	Degree and component size distributions in the generalized uniform recursive tree. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 185101.	2.1	5
131	Different behaviors of epidemic spreading in scale-free networks with identical degree sequence. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 065001.	2.1	5
132	Photoinduced Spin Precession and Ultrafast Demagnetization in Co2FeAl Films With Crossover From In-Plane to Perpendicular Magnetic Easy Axis. IEEE Magnetics Letters, 2015, 6, 1-4.	1.1	5
133	Exactly solvable tight-binding model on two scale-free networks with identical degree distribution. Europhysics Letters, 2016, 116, 38002.	2.0	5
134	Assessing Percolation Threshold Based on High-Order Non-Backtracking Matrices. , 2017, , .		5
135	Spectra, Hitting Times and Resistance Distances ofq- Subdivision Graphs. Computer Journal, 2021, 64, 76-92.	2.4	5
136	Modeling Higher-Order Interactions in Complex Networks by Edge Product of Graphs. Computer Journal, 2022, 65, 2347-2359.	2.4	5
137	Maximizing Influence of Leaders in Social Networks. , 2021, , .		5
138	Power-Law Graphs Have Minimal Scaling of Kemeny Constant for Random Walks. , 2020, , .		5
139	Deterministic Scale-free Networks Created in a Recursive Manner. , 2006, , .		4
140	An analytic derivation of clustering coefficients for weighted networks. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P03013.	2.3	4
141	Dissimilar behaviors of coherent exciton transport on scale-free networks with identical degree sequence. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 445001.	2.1	4
142	Exact evaluation of the causal spectrum and localization properties of electronic states on a scale-free network. Physica A: Statistical Mechanics and Its Applications, 2018, 502, 40-48.	2.6	4
143	Fast Approximation of Coherence for Second-Order Noisy Consensus Networks. IEEE Transactions on Cybernetics, 2022, 52, 677-686.	9.5	4
144	Nearly Linear Time Algorithm for Mean Hitting Times of Random Walks on a Graph. , 2020, , .		4

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145	Biharmonic Distance Related Centrality for Edges in Weighted Networks. , 2018, , .		4
146	Minimizing Spectral Radius of Non-Backtracking Matrix by Edge Removal. , 2021, , .		4
147	Biharmonic Distance-Based Performance Metric for Second-Order Noisy Consensus Networks. IEEE Transactions on Information Theory, 2022, 68, 1220-1236.	2.4	4
148	Continuous-time quantum walks on nonorientable surfaces: analytical solutions for MÃ¶bius strips and Klein bottles. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 285301.	2.1	3
149	Unfavorable Individuals in Social Gaming Networks. Scientific Reports, 2015, 5, 17481.	3.3	3
150	Effects of heterogeneity in siteâ€“site couplings for tight-binding models on scale-invariant structures. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 3773-3778.	2.1	3
151	Combinatorial properties of Farey graphs. Theoretical Computer Science, 2019, 796, 70-89.	0.9	3
152	Coherence Scaling of Noisy Second-Order Scale-Free Consensus Networks. IEEE Transactions on Cybernetics, 2022, 52, 5923-5934.	9.5	3
153	Convergence Rate of Consensus in a Network of Networks. , 2018, , .		2
154	Effects of Edge Centrality on Random Walks on Graphs. Computer Journal, 2018, , .	2.4	2
155	Discriminating Power of Centrality Measures in Complex Networks. IEEE Transactions on Cybernetics, 2022, 52, 12583-12593.	9.5	2
156	Diffusion and Consensus in a Weakly Coupled Network of Networks. IEEE Transactions on Control of Network Systems, 2021, 8, 1601-1612.	3.7	2
157	EDGE DOMINATION NUMBER AND THE NUMBER OF MINIMUM EDGE DOMINATING SETS IN PSEUDOFRACTAL SCALE-FREE WEB AND SIERPIÅƒSKI GASKET. Fractals, 2021, 29, .	3.7	2
158	Opinion Dynamics Incorporating Higher-Order Interactions. , 2020, , .		2
159	The Discrete-Time SIS Model in Small-World Networks. , 2012, , .		1
160	Real-World Networks Are Not Always Fast Mixing. Computer Journal, 2021, 64, 236-244.	2.4	1
161	Benchmark for Discriminating Power of Edge Centrality Metrics. Computer Journal, 2022, 65, 3141-3155.	2.4	1
162	Complex networks and computing. Frontiers of Computer Science, 2009, 3, 322-323.	0.6	0

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163	A New Method for Extracting the Hierarchical Organization of Networks. International Journal of Information Technology and Decision Making, 2017, 16, 1359-1385.	3.9	0
164	Some Combinatorial Problems in Power-Law Graphs. Computer Journal, 0, , .	2.4	0