

Zhongzhi Zhang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

154
papers

3,387
citations

34
h-index

47
g-index

166
ext. papers

3,807
ext. citations

2.6
avg, IF

5.61
L-index

#	Paper	IF	Citations
154	Spectra, Hitting Times and Resistance Distances of q -Subdivision Graphs. <i>Computer Journal</i> , 2021 , 64, 76-92	1.3	1
153	Real-World Networks Are Not Always Fast Mixing. <i>Computer Journal</i> , 2021 , 64, 236-244	1.3	0
152	Discriminating Power of Centrality Measures in Complex Networks. <i>IEEE Transactions on Cybernetics</i> , 2021 , PP,	10.2	1
151	. <i>IEEE Transactions on Control of Network Systems</i> , 2021 , 1-1	4	2
150	Hitting Times for Random Walks on Sierpiński Graphs and Hierarchical Graphs. <i>Computer Journal</i> , 2020 , 63, 1385-1396	1.3	4
149	Fast Approximation of Coherence for Second-Order Noisy Consensus Networks. <i>IEEE Transactions on Cybernetics</i> , 2020 , PP,	10.2	1
148	Opinion Dynamics Incorporating Higher-Order Interactions 2020 ,		1
147	Power-Law Graphs Have Minimal Scaling of Kemeny Constant for Random Walks 2020 ,		1
146	Scale-Free Loopy Structure is Resistant to Noise in Consensus Dynamics in Complex Networks. <i>IEEE Transactions on Cybernetics</i> , 2020 , 50, 190-200	10.2	12
145	Maximizing the Number of Spanning Trees in a Connected Graph. <i>IEEE Transactions on Information Theory</i> , 2020 , 66, 1248-1260	2.8	1
144	Low-Mean Hitting Time for Random Walks on Heterogeneous Networks. <i>IEEE Transactions on Information Theory</i> , 2019 , 65, 6898-6910	2.8	5
143	Combinatorial properties of Farey graphs. <i>Theoretical Computer Science</i> , 2019 , 796, 70-89	1.1	1
142	. <i>IEEE Transactions on Control of Network Systems</i> , 2019 , 6, 191-201	4	7
141	Current Flow Group Closeness Centrality for Complex Networks? 2019 ,		8
140	Forest Distance Closeness Centrality in Disconnected Graphs 2019 ,		4
139	Topological and Spectral Properties of Small-World Hierarchical Graphs. <i>Computer Journal</i> , 2019 , 62, 769-784	1.3	5
138	Non-Backtracking Centrality Based Random Walk on Networks. <i>Computer Journal</i> , 2019 , 62, 63-80	1.3	7

137	Consensus in Self-Similar Hierarchical Graphs and Sierpiński Graphs: Convergence Speed, Delay Robustness, and Coherence. <i>IEEE Transactions on Cybernetics</i> , 2019 , 49, 592-603	10.2	12
136	Spectral Properties of Extended Sierpiński Graphs and Their Applications. <i>IEEE Transactions on Network Science and Engineering</i> , 2019 , 6, 512-522	4.9	6
135	Exact evaluation of the causal spectrum and localization properties of electronic states on a scale-free network. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018 , 502, 40-48	3.3	2
134	Independence number and the number of maximum independent sets in pseudofractal scale-free web and Sierpiński gasket. <i>Theoretical Computer Science</i> , 2018 , 720, 47-54	1.1	6
133	Biharmonic Distance Related Centrality for Edges in Weighted Networks 2018 ,		1
132	2018 ,		2
131	Effects of Edge Centrality on Random Walks on Graphs. <i>Computer Journal</i> , 2018 ,	1.3	1
130	Kirchhoff Index as a Measure of Edge Centrality in Weighted Networks: Nearly Linear Time Algorithms 2018 , 2377-2396		6
129	2018 ,		5
128	Extended Corona Product as an Exactly Tractable Model for Weighted Heterogeneous Networks. <i>Computer Journal</i> , 2018 , 61, 745-760	1.3	11
127	A New Method for Extracting the Hierarchical Organization of Networks. <i>International Journal of Information Technology and Decision Making</i> , 2017 , 16, 1359-1385	2.8	
126	. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 342-350	4.8	20
125	Maximum matchings in scale-free networks with identical degree distribution. <i>Theoretical Computer Science</i> , 2017 , 675, 64-81	1.1	8
124	Assessing Percolation Threshold Based on High-Order Non-Backtracking Matrices 2017 ,		1
123	Domination number and minimum dominating sets in pseudofractal scale-free web and Sierpiński graph. <i>Theoretical Computer Science</i> , 2017 , 677, 12-30	1.1	12
122	Maximum matchings and minimum dominating sets in Apollonian networks and extended Tower of Hanoi graphs. <i>Theoretical Computer Science</i> , 2017 , 703, 37-54	1.1	10
121	Effects of heterogeneity in site-site couplings for tight-binding models on scale-invariant structures. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2017 , 381, 3773-3778	2.3	2
120	Dynamics of comb-of-comb networks. <i>Physical Review E</i> , 2016 , 93, 032502	2.4	7

119	Extended Vicsek fractals: Laplacian spectra and their applications. <i>Physical Review E</i> , 2016 , 94, 052501	2.4	8
118	The normalized Laplacian spectrum of subdivisions of a graph. <i>Applied Mathematics and Computation</i> , 2016 , 286, 250-256	2.7	35
117	On the spectrum of the normalized Laplacian of iterated triangulations of graphs. <i>Applied Mathematics and Computation</i> , 2016 , 273, 1123-1129	2.7	52
116	Exactly solvable tight-binding model on two scale-free networks with identical degree distribution. <i>Europhysics Letters</i> , 2016 , 116, 38002	1.6	3
115	The number and degree distribution of spanning trees in the Tower of Hanoi graph. <i>Theoretical Computer Science</i> , 2016 , 609, 443-455	1.1	15
114	Small-World Topology Can Significantly Improve the Performance of Noisy Consensus in a Complex Network. <i>Computer Journal</i> , 2015 , 58, 3242-3254	1.3	21
113	Eigenvalues for the transition matrix of a small-world scale-free network: Explicit expressions and applications. <i>Physical Review E</i> , 2015 , 91, 062808	2.4	12
112	Laplacian spectra of a class of small-world networks and their applications. <i>Scientific Reports</i> , 2015 , 5, 9024	4.9	27
111	Photoinduced Spin Precession and Ultrafast Demagnetization in Co ₂ FeAl Films With Crossover From In-Plane to Perpendicular Magnetic Easy Axis. <i>IEEE Magnetics Letters</i> , 2015 , 6, 1-4	1.6	4
110	Spectrum of walk matrix for Koch network and its application. <i>Journal of Chemical Physics</i> , 2015 , 142, 224106	3.9	11
109	Exact calculations of first-passage properties on the pseudofractal scale-free web. <i>Chaos</i> , 2015 , 25, 073118	3.8	25
108	Anomalous behavior of trapping in extended dendrimers with a perfect trap. <i>Journal of Chemical Physics</i> , 2015 , 143, 064901	3.9	4
107	Corona graphs as a model of small-world networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015 , 2015, P11024	1.9	10
106	Mixed random walks with a trap in scale-free networks including nearest-neighbor and next-nearest-neighbor jumps. <i>Journal of Chemical Physics</i> , 2015 , 143, 134101	3.9	9
105	Spectra of weighted scale-free networks. <i>Scientific Reports</i> , 2015 , 5, 17469	4.9	18
104	Unfavorable Individuals in Social Gaming Networks. <i>Scientific Reports</i> , 2015 , 5, 17481	4.9	3
103	Pfaffian orientations and perfect matchings of scale-free networks. <i>Theoretical Computer Science</i> , 2015 , 570, 55-69	1.1	14
102	Full eigenvalues of the Markov matrix for scale-free polymer networks. <i>Physical Review E</i> , 2014 , 90, 022816	1.6	16

101	The number of spanning trees in Apollonian networks. <i>Discrete Applied Mathematics</i> , 2014 , 169, 206-213	3.1	34
100	Dynamics of semiflexible recursive small-world polymer networks. <i>Scientific Reports</i> , 2014 , 4, 7576	4.9	6
99	Controlling the efficiency of trapping in a scale-free small-world network. <i>Scientific Reports</i> , 2014 , 4, 6274	4.9	11
98	Effects of reciprocity on random walks in weighted networks. <i>Scientific Reports</i> , 2014 , 4, 7460	4.9	9
97	Mean first-passage time for maximal-entropy random walks in complex networks. <i>Scientific Reports</i> , 2014 , 4, 5365	4.9	25
96	Maximal entropy random walk improves efficiency of trapping in dendrimers. <i>Journal of Chemical Physics</i> , 2014 , 140, 234104	3.9	12
95	Controlling the efficiency of trapping in treelike fractals. <i>Journal of Chemical Physics</i> , 2013 , 139, 024106	3.9	18
94	Eigenvalues of normalized Laplacian matrices of fractal trees and dendrimers: analytical results and applications. <i>Journal of Chemical Physics</i> , 2013 , 138, 204116	3.9	44
93	The different cooperative behaviors on a kind of scale-free networks with identical degree sequence. <i>Chaos, Solitons and Fractals</i> , 2013 , 56, 91-95	9.3	14
92	The number of spanning trees of an infinite family of outerplanar, small-world and self-similar graphs. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013 , 392, 2803-2806	3.3	18
91	Rumor evolution in social networks. <i>Physical Review E</i> , 2013 , 87,	2.4	26
90	Random walks in unweighted and weighted modular scale-free networks with a perfect trap. <i>Journal of Chemical Physics</i> , 2013 , 139, 234106	3.9	7
89	Laplacian spectra of recursive treelike small-world polymer networks: analytical solutions and applications. <i>Journal of Chemical Physics</i> , 2013 , 138, 114904	3.9	39
88	Influence of trap location on the efficiency of trapping in dendrimers and regular hyperbranched polymers. <i>Journal of Chemical Physics</i> , 2013 , 138, 094905	3.9	36
87	Random walks on weighted networks. <i>Physical Review E</i> , 2013 , 87, 012112	2.4	75
86	Random walks in weighted networks with a perfect trap: an application of Laplacian spectra. <i>Physical Review E</i> , 2013 , 87, 062140	2.4	51
85	Optimal scale-free network with a minimum scaling of transport efficiency for random walks with a perfect trap. <i>Journal of Chemical Physics</i> , 2013 , 138, 034101	3.9	8
84	Monomer-dimer model on a scale-free small-world network. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2012 , 391, 828-833	3.3	9

83	Counting spanning trees in a small-world Farey graph. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2012 , 391, 3342-3349	3.3	31
82	Traffic Fluctuations on Weighted Networks. <i>IEEE Circuits and Systems Magazine</i> , 2012 , 12, 33-44	3.2	9
81	Trapping in dendrimers and regular hyperbranched polymers. <i>Journal of Chemical Physics</i> , 2012 , 137, 044903	3.9	50
80	Exact eigenvalue spectrum of a class of fractal scale-free networks. <i>Europhysics Letters</i> , 2012 , 99, 10007	1.6	11
79	Continuous-time quantum walks on nonorientable surfaces: analytical solutions for Möbius strips and Klein bottles. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012 , 45, 285301	2	2
78	Properties and applications of Laplacian spectra for Koch networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012 , 45, 025102	2	13
77	Eigenvalue spectrum of transition matrix of dual Sierpinski gaskets and its applications. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012 , 45, 345101	2	10
76	Mean first-passage time for random walks in general graphs with a deep trap. <i>Journal of Chemical Physics</i> , 2012 , 137, 124104	3.9	25
75	Optimal and suboptimal networks for efficient navigation measured by mean-first passage time of random walks. <i>Chaos</i> , 2012 , 22, 043129	3.3	28
74	Random walks in modular scale-free networks with multiple traps. <i>Physical Review E</i> , 2012 , 85, 011106	2.4	30
73	Spanning trees in a fractal scale-free lattice. <i>Physical Review E</i> , 2011 , 83, 016116	2.4	46
72	Complete spectrum of the stochastic master equation for random walks on treelike fractals. <i>Europhysics Letters</i> , 2011 , 96, 40009	1.6	21
71	Scaling of mean first-passage time as efficiency measure of nodes sending information on scale-free Koch networks. <i>European Physical Journal B</i> , 2011 , 80, 209-216	1.2	17
70	Random walks on dual Sierpinski gaskets. <i>European Physical Journal B</i> , 2011 , 82, 91-96	1.2	24
69	Role of fractal dimension in random walks on scale-free networks. <i>European Physical Journal B</i> , 2011 , 84, 331-338	1.2	30
68	Mean first-passage time for random walks on undirected networks. <i>European Physical Journal B</i> , 2011 , 84, 691-697	1.2	56
67	Farey graphs as models for complex networks. <i>Theoretical Computer Science</i> , 2011 , 412, 865-875	1.1	38
66	Epidemic spreading with nonlinear infectivity in weighted scale-free networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011 , 390, 471-481	3.3	63

65	Diffusion-annihilation processes in weighted scale-free networks with an identical degree sequence. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011 , 2011, P10001	1.9	12
64	Random walks in small-world exponential treelike networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011 , 2011, P08013	1.9	14
63	Evolutionary method for finding communities in bipartite networks. <i>Physical Review E</i> , 2011 , 83, 066120	2.4	28
62	Effect of trap position on the efficiency of trapping in treelike scale-free networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011 , 44, 075102	2	32
61	Counting spanning trees in self-similar networks by evaluating determinants. <i>Journal of Mathematical Physics</i> , 2011 , 52, 113303	1.2	31
60	Dissimilar behaviors of coherent exciton transport on scale-free networks with identical degree sequence. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011 , 44, 445001	2	3
59	Mapping Koch curves into scale-free small-world networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010 , 43, 395101	2	38
58	Impact of degree heterogeneity on the behavior of trapping in Koch networks. <i>Chaos</i> , 2010 , 20, 043112	3.3	21
57	Determining global mean-first-passage time of random walks on Vicsek fractals using eigenvalues of Laplacian matrices. <i>Physical Review E</i> , 2010 , 81, 031118	2.4	57
56	Explicit determination of mean first-passage time for random walks on deterministic uniform recursive trees. <i>Physical Review E</i> , 2010 , 81, 016114	2.4	43
55	Enumeration of spanning trees in a pseudofractal scale-free web. <i>Europhysics Letters</i> , 2010 , 90, 68002	1.6	47
54	Different behaviors of epidemic spreading in scale-free networks with identical degree sequence. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010 , 43, 065001	2	4
53	An analytic derivation of clustering coefficients for weighted networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010 , 2010, P03013	1.9	1
52	An alternative approach to determining average distance in a class of scale-free modular networks. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010 , 2010, P12017	1.9	8
51	Determining mean first-passage time on a class of treelike regular fractals. <i>Physical Review E</i> , 2010 , 82, 031140	2.4	63
50	Planar unclustered scale-free graphs as models for technological and biological networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 1955-1964	3.3	12
49	Deterministic weighted scale-free small-world networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 3316-3324	3.3	14
48	Standard random walks and trapping on the Koch network with scale-free behavior and small-world effect. <i>Physical Review E</i> , 2009 , 79, 061113	2.4	78

47	Different thresholds of bond percolation in scale-free networks with identical degree sequence. <i>Physical Review E</i> , 2009 , 79, 031110	2.4	19
46	Recursive solutions for Laplacian spectra and eigenvectors of a class of growing treelike networks. <i>Physical Review E</i> , 2009 , 80, 016104	2.4	20
45	Exact solution for mean first-passage time on a pseudofractal scale-free web. <i>Physical Review E</i> , 2009 , 79, 021127	2.4	103
44	Trapping in scale-free networks with hierarchical organization of modularity. <i>Physical Review E</i> , 2009 , 80, 051120	2.4	39
43	Distinct scalings for mean first-passage time of random walks on scale-free networks with the same degree sequence. <i>Physical Review E</i> , 2009 , 80, 061111	2.4	38
42	Influences of degree inhomogeneity on average path length and random walks in disassortative scale-free networks. <i>Journal of Mathematical Physics</i> , 2009 , 50, 033514	1.2	16
41	Mean first-passage time for random walks on the T-graph. <i>New Journal of Physics</i> , 2009 , 11, 103043	2.9	34
40	Contact graphs of disk packings as a model of spatial planar networks. <i>New Journal of Physics</i> , 2009 , 11, 083007	2.9	7
39	Epidemic spreading in weighted scale-free networks with community structure. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009 , 2009, P07043	1.9	30
38	Average distance in a hierarchical scale-free network: an exact solution. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009 , 2009, P10022	1.9	20
37	Structural and spectral properties of a family of deterministic recursive trees: rigorous solutions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009 , 42, 165103	2	7
36	Self-similar non-clustered planar graphs as models for complex networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009 , 42, 045103	2	5
35	The rigorous solution for the average distance of a Sierpinski network. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009 , 2009, P02034	1.9	5
34	The prisoner's dilemma in structured scale-free networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009 , 42, 245002	2	18
33	Effects of accelerating growth on the evolution of weighted complex networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009 , 388, 225-232	3.3	17
32	A unified model for Sierpinski networks with scale-free scaling and small-world effect. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009 , 388, 2571-2578	3.3	19
31	Anomalous behavior of trapping on a fractal scale-free network. <i>Europhysics Letters</i> , 2009 , 88, 10001	1.6	29
30	Random walks on the Apollonian network with a single trap. <i>Europhysics Letters</i> , 2009 , 86, 10006	1.6	49

29	Fractal scale-free networks resistant to disease spread. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2008 , 2008, P09008	1.9	21
28	Degree and component size distributions in the generalized uniform recursive tree. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008 , 41, 185101	2	5
27	The exact solution of the mean geodesic distance for Vicsek fractals. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008 , 41, 485102	2	42
26	Vertex labeling and routing in expanded Apollonian networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008 , 41, 035004	2	6
25	Analytical solution of average path length for Apollonian networks. <i>Physical Review E</i> , 2008 , 77, 017102	2.4	47
24	An empirical study of Chinese language networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008 , 387, 3039-3047	3.3	27
23	Attack vulnerability of scale-free networks due to cascading failures. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008 , 387, 6671-6678	3.3	148
22	Topologies and Laplacian spectra of a deterministic uniform recursive tree. <i>European Physical Journal B</i> , 2008 , 63, 507-513	1.2	22
21	Transition from fractal to non-fractal scalings in growing scale-free networks. <i>European Physical Journal B</i> , 2008 , 64, 277-283	1.2	18
20	Random Sierpinski network with scale-free small-world and modular structure. <i>European Physical Journal B</i> , 2008 , 65, 141-147	1.2	30
19	MODELLING COLLABORATION NETWORKS BASED ON NONLINEAR PREFERENTIAL ATTACHMENT. <i>International Journal of Modern Physics C</i> , 2007 , 18, 297-314	1.1	32
18	Local-world evolving networks with tunable clustering. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 380, 639-650	3.3	23
17	Correlations in random Apollonian network. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 380, 621-628	3.3	23
16	From regular to growing small-world networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 385, 765-772	3.3	14
15	A general geometric growth model for pseudofractal scale-free web. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 377, 329-339	3.3	53
14	Self-similarity, small-world, scale-free scaling, disassortativity, and robustness in hierarchical lattices. <i>European Physical Journal B</i> , 2007 , 56, 259-271	1.2	59
13	Evolving pseudofractal networks. <i>European Physical Journal B</i> , 2007 , 58, 337-344	1.2	34
12	Recursive weighted treelike networks. <i>European Physical Journal B</i> , 2007 , 59, 99-107	1.2	20

11	Incompatibility networks as models of scale-free small-world graphs. <i>European Physical Journal B</i> , 2007 , 60, 259-264	1.2	26
10	A geometric growth model interpolating between regular and small-world networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007 , 40, 11863-11876	2	19
9	Maximal planar scale-free Sierpinski networks with small-world effect and power law strength-degree correlation. <i>Europhysics Letters</i> , 2007 , 79, 38007	1.6	63
8	High-dimensional Apollonian networks. <i>Journal of Physics A</i> , 2006 , 39, 1811-1818		61
7	Evolving Apollonian networks with small-world scale-free topologies. <i>Physical Review E</i> , 2006 , 74, 046105.4		52
6	2006 ,		3
5	A deterministic small-world network created by edge iterations. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 363, 567-572	3.3	84
4	High-dimensional random Apollonian networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 364, 610-618	3.3	54
3	EVOLVING SCALE-FREE NETWORK MODEL WITH TUNABLE CLUSTERING. <i>International Journal of Modern Physics B</i> , 2005 , 19, 3951-3959	1.1	11
2	Modeling Higher-Order Interactions in Complex Networks by Edge Product of Graphs. <i>Computer Journal</i> ,	1.3	1
1	EDGE DOMINATION NUMBER AND THE NUMBER OF MINIMUM EDGE DOMINATING SETS IN PSEUDOFRACTAL SCALE-FREE WEB AND SIERPIŃSKI GASKET. <i>Fractals</i> , 2150209	3.2	