List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Emergence of Scaling in Random Networks. Science, 1999, 286, 509-512.	6.0	28,383
2	Statistical mechanics of complex networks. Reviews of Modern Physics, 2002, 74, 47-97.	16.4	16,492
3	Error and attack tolerance of complex networks. Nature, 2000, 406, 378-382.	13.7	7,006
4	The large-scale organization of metabolic networks. Nature, 2000, 407, 651-654.	13.7	4,262
5	Diameter of the World-Wide Web. Nature, 1999, 401, 130-131.	13.7	3,527
6	Near linear time algorithm to detect community structures in large-scale networks. Physical Review E, 2007, 76, 036106.	0.8	2,431
7	Mean-field theory for scale-free random networks. Physica A: Statistical Mechanics and Its Applications, 1999, 272, 173-187.	1.2	1,861
8	Scale-free characteristics of random networks: the topology of the world-wide web. Physica A: Statistical Mechanics and Its Applications, 2000, 281, 69-77.	1.2	1,062
9	Topology of Evolving Networks: Local Events and Universality. Physical Review Letters, 2000, 85, 5234-5237.	2.9	1,054
10	Structural vulnerability of the North American power grid. Physical Review E, 2004, 69, 025103.	0.8	1,046
11	Scale-free networks in cell biology. Journal of Cell Science, 2005, 118, 4947-4957.	1.2	1,041
12	The topology of the regulatory interactions predicts the expression pattern of the segment polarity genes in Drosophila melanogaster. Journal of Theoretical Biology, 2003, 223, 1-18.	0.8	827
13	Modeling cascading failures in the North American power grid. European Physical Journal B, 2005, 46, 101-107.	0.6	535
14	Predicting Essential Components of Signal Transduction Networks: A Dynamic Model of Guard Cell Abscisic Acid Signaling. PLoS Biology, 2006, 4, e312.	2.6	356
15	Boolean modeling in systems biology: an overview of methodology and applications. Physical Biology, 2012, 9, 055001.	0.8	353
16	Network model of survival signaling in large granular lymphocyte leukemia. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16308-16313.	3.3	337
17	Robustness and fragility of Boolean models for genetic regulatory networks. Journal of Theoretical Biology, 2005, 235, 431-449.	0.8	295
18	Slow Drag in a Granular Medium. Physical Review Letters, 1999, 82, 205-208.	2.9	286

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19	Boolean network simulations for life scientists. Source Code for Biology and Medicine, 2008, 3, 16.	1.7	280
20	What keeps sandcastles standing?. Nature, 1997, 387, 765-765.	13.7	273
21	Network Modeling of TGFβ Signaling in Hepatocellular Carcinoma Epithelial-to-Mesenchymal Transition Reveals Joint Sonic Hedgehog and Wnt Pathway Activation. Cancer Research, 2014, 74, 5963-5977.	0.4	243
22	Dynamics of Complex Systems: Scaling Laws for the Period of Boolean Networks. Physical Review Letters, 2000, 84, 5660-5663.	2.9	217
23	Border Control—A Membrane-Linked Interactome of <i>Arabidopsis</i> . Science, 2014, 344, 711-716.	6.0	213
24	Structure-based control of complex networks with nonlinear dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7234-7239.	3.3	204
25	Common and unique elements of the ABA-regulated transcriptome of Arabidopsis guard cells. BMC Genomics, 2011, 12, 216.	1.2	189
26	Conserved network motifs allow protein-protein interaction prediction. Bioinformatics, 2004, 20, 3346-3352.	1.8	179
27	Cell Fate Reprogramming by Control of Intracellular Network Dynamics. PLoS Computational Biology, 2015, 11, e1004193.	1.5	179
28	Attractor analysis of asynchronous Boolean models of signal transduction networks. Journal of Theoretical Biology, 2010, 266, 641-656.	0.8	163
29	Survivability of Multiagent-Based Supply Networks: A Topological Perspective. IEEE Intelligent Systems, 2004, 19, 24-31.	4.0	162
30	Dynamical and Structural Analysis of a T Cell Survival Network Identifies Novel Candidate Therapeutic Targets for Large Granular Lymphocyte Leukemia. PLoS Computational Biology, 2011, 7, e1002267.	1.5	162
31	Network Inference, Analysis, and Modeling in Systems Biology. Plant Cell, 2007, 19, 3327-3338.	3.1	156
32	Jamming and Fluctuations in Granular Drag. Physical Review Letters, 2000, 84, 5122-5125.	2.9	139
33	An effective network reduction approach to find the dynamical repertoire of discrete dynamic networks. Chaos, 2013, 23, 025111.	1.0	139
34	Maximum angle of stability in wet and dry spherical granular media. Physical Review E, 1997, 56, R6271-R6274.	0.8	133
35	Boolean modeling: a logicâ€based dynamic approach for understanding signaling and regulatory networks and for making useful predictions. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2014, 6, 353-369.	6.6	122
36	Combinatorial interventions inhibit TGFβ-driven epithelial-to-mesenchymal transition and support hybrid cellular phenotypes. Npj Systems Biology and Applications, 2015, 1, 15014.	1.4	122

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37	Boolean modeling of biological regulatory networks: A methodology tutorial. Methods, 2013, 62, 3-12.	1.9	121
38	Modeling Systems-Level Regulation of Host Immune Responses. PLoS Computational Biology, 2007, 3, e109.	1.5	119
39	Boolean modeling of transcriptome data reveals novel modes of heterotrimeric Gâ€protein action. Molecular Systems Biology, 2010, 6, 372.	3.2	117
40	Inference of Network Dynamics and Metabolic Interactions in the Gut Microbiome. PLoS Computational Biology, 2015, 11, e1004338.	1.5	106
41	Biological switches and clocks. Journal of the Royal Society Interface, 2008, 5, S1-8.	1.5	101
42	Differential gene expression in Arabidopsis wildâ€ŧype and mutant anthers: insights into anther cell differentiation and regulatory networks. Plant Journal, 2007, 52, 14-29.	2.8	98
43	Cooperative development of logical modelling standards and tools with CoLoMoTo. Bioinformatics, 2015, 31, 1154-1159.	1.8	98
44	Stick-slip fluctuations in granular drag. Physical Review E, 2001, 64, 031307.	0.8	94
45	A network model for plant–pollinator community assembly. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 197-202.	3.3	90
46	A Reduction Method for Boolean Network Models Proven to Conserve Attractors. SIAM Journal on Applied Dynamical Systems, 2013, 12, 1997-2011.	0.7	86
47	Abscisic Acid–Responsive Guard Cell Metabolomes of <i>Arabidopsis</i> Wild-Type and <i>gpa1</i> G-Protein Mutants Â. Plant Cell, 2014, 25, 4789-4811.	3.1	79
48	Multi-level Modeling of Light-Induced Stomatal Opening Offers New Insights into Its Regulation by Drought. PLoS Computational Biology, 2014, 10, e1003930.	1.5	77
49	Systems-level network modeling of Small Cell Lung Cancer subtypes identifies master regulators and destabilizers. PLoS Computational Biology, 2019, 15, e1007343.	1.5	77
50	A new discrete dynamic model of ABA-induced stomatal closure predicts key feedback loops. PLoS Biology, 2017, 15, e2003451.	2.6	75
51	Generating super-shedders: co-infection increases bacterial load and egg production of a gastrointestinal helminth. Journal of the Royal Society Interface, 2013, 10, 20120588.	1.5	74
52	Complex Networks: An Engineering View. IEEE Circuits and Systems Magazine, 2010, 10, 10-25.	2.6	73
53	Elementary signaling modes predict the essentiality of signal transduction network components. BMC Systems Biology, 2011, 5, 44.	3.0	68
54	Variation in host susceptibility and infectiousness generated by co-infection: the myxoma– Trichostrongylus retortaeformis case in wild rabbits. Journal of the Royal Society Interface, 2007, 4, 831-840.	1.5	67

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55	Constraint-based network model of pathogen–immune system interactions. Journal of the Royal Society Interface, 2009, 6, 599-612.	1.5	59
56	Discrete Dynamic Modeling of Cellular Signaling Networks. Methods in Enzymology, 2009, 467, 281-306.	0.4	56
57	Stabilization of perturbed Boolean network attractors through compensatory interactions. BMC Systems Biology, 2014, 8, 53.	3.0	53
58	Bacteriophage-mediated competition in Bordetella bacteria. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 1843-1848.	1.2	52
59	A Novel Method for Signal Transduction Network Inference from Indirect Experimental Evidence. Journal of Computational Biology, 2007, 14, 927-949.	0.8	52
60	Discrete dynamic network modeling of oncogenic signaling: Mechanistic insights for personalized treatment of cancer. Current Opinion in Systems Biology, 2018, 9, 1-10.	1.3	52
61	Systems-level insights into cellular regulation: inferring, analysing, and modelling intracellular networks. IET Systems Biology, 2007, 1, 61-77.	0.8	51
62	Target Control in Logical Models Using the Domain of Influence of Nodes. Frontiers in Physiology, 2018, 9, 454.	1.3	51
63	A network modeling approach to elucidate drug resistance mechanisms and predict combinatorial drug treatments in breast cancer. Cancer Convergence, 2017, 1, 5.	8.0	50
64	Computational and Experimental Analysis Reveals a Requirement for Eosinophil-Derived IL-13 for the Development of Allergic Airway Responses in C57BL/6 Mice. Journal of Immunology, 2011, 186, 2936-2949.	0.4	48
65	Rapid and asymmetric divergence of duplicate genes in the human gene coexpression network. BMC Bioinformatics, 2006, 7, 46.	1.2	45
66	Topological implications of negative curvature for biological and social networks. Physical Review E, 2014, 89, 032811.	0.8	45
67	Search in weighted complex networks. Physical Review E, 2005, 72, 066128.	0.8	44
68	Towards control of cellular decision-making networks in the epithelial-to-mesenchymal transition. Physical Biology, 2019, 16, 031002.	0.8	44
69	Topology of plant-pollinator networks that are vulnerable to collapse from species extinction. Physical Review E, 2012, 86, 021924.	0.8	43
70	Parity and time reversal elucidate both decision-making in empirical models and attractor scaling in critical Boolean networks. Science Advances, 2021, 7, .	4.7	43
71	Boolean Modelingof Genetic Regulatory Networks. Lecture Notes in Physics, 0, , 459-481.	0.3	42
72	Network Model of Immune Responses Reveals Key Effectors to Single and Co-infection Dynamics by a Respiratory Bacterium and a Gastrointestinal Helminth. PLoS Computational Biology, 2012, 8, e1002345.	1.5	42

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73	NET-SYNTHESIS: a software for synthesis, inference and simplification of signal transduction networks. Bioinformatics, 2008, 24, 293-295.	1.8	39
74	Networks in motion. Physics Today, 2012, 65, 43-48.	0.3	39
75	The physics of sand castles: maximum angle of stability in wet and dry granular media. Physica A: Statistical Mechanics and Its Applications, 1999, 266, 366-371.	1.2	36
76	pystablemotifs: Python library for attractor identification and control in Boolean networks. Bioinformatics, 2022, 38, 1465-1466.	1.8	35
77	Model-driven discovery of calcium-related protein-phosphatase inhibition in plant guard cell signaling. PLoS Computational Biology, 2019, 15, e1007429.	1.5	34
78	USING GRAPH CONCEPTS TO UNDERSTAND THE ORGANIZATION OF COMPLEX SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 2201-2214.	0.7	33
79	A comparative study of qualitative and quantitative dynamic models of biological regulatory networks. EPJ Nonlinear Biomedical Physics, 2016, 4, .	0.8	32
80	A framework to find the logic backbone of a biological network. BMC Systems Biology, 2017, 11, 122.	3.0	32
81	Disease dynamics in a dynamic social network. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 2663-2674.	1.2	31
82	synergy: a Python library for calculating, analyzing and visualizing drug combination synergy. Bioinformatics, 2021, 37, 1473-1474.	1.8	31
83	Driven Interfaces in Disordered Media: Determination of Universality Classes from Experimental Data. Physical Review Letters, 1998, 81, 2926-2929.	2.9	30
84	miR-200b restoration and DNA methyltransferase inhibitor block lung metastasis of mesenchymal-phenotype hepatocellular carcinoma. Oncogenesis, 2012, 1, e15-e15.	2.1	29
85	Transience and constancy of interactions in a plantâ€frugivore network. Ecosphere, 2013, 4, 1-25.	1.0	29
86	Boolean models of within-host immune interactions. Current Opinion in Microbiology, 2010, 13, 377-381.	2.3	28
87	A Guard Cell Abscisic Acid (ABA) Network Model That Captures the Stomatal Resting State. Frontiers in Physiology, 2020, 11, 927.	1.3	28
88	Discrete Dynamic Modeling with Asynchronous Update, or How to Model Complex Systems in the Absence of Quantitative Information. Methods in Molecular Biology, 2009, 553, 207-225.	0.4	28
89	Search in spatial scale-free networks. New Journal of Physics, 2007, 9, 190-190.	1.2	27
90	Identifying (un)controllable dynamical behavior in complex networks. PLoS Computational Biology, 2018, 14, e1006630.	1.5	27

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91	Computationally efficient measure of topological redundancy of biological and social networks. Physical Review E, 2011, 84, 036117.	0.8	26
92	Elucidation of directionality for co-expressed genes: predicting intra-operon termination sites. Bioinformatics, 2006, 22, 209-214.	1.8	25
93	Introduction to Focus Issue: Quantitative Approaches to Genetic Networks. Chaos, 2013, 23, 025001.	1.0	25
94	General method to find the attractors of discrete dynamic models of biological systems. Physical Review E, 2018, 97, 042308.	0.8	25
95	Network model and analysis of the spread of Covid-19 with social distancing. Applied Network Science, 2020, 5, 100.	0.8	24
96	Dynamic Receptor Team Formation Can Explain the High Signal Transduction Gain in Escherichia coli. Biophysical Journal, 2004, 86, 2650-2659.	0.2	23
97	Clustering social networks using ant colony optimization. Operational Research, 2013, 13, 47-65.	1.3	23
98	Plant–pollinator community network response to species invasion depends on both invader and community characteristics. Oikos, 2015, 124, 406-413.	1.2	22
99	A feedback loop of conditionally stable circuits drives the cell cycle from checkpoint to checkpoint. Scientific Reports, 2019, 9, 16430.	1.6	22
100	Large-scale inference and graph-theoretical analysis of gene-regulatory networks in B. Subtilis. Physica A: Statistical Mechanics and Its Applications, 2007, 373, 796-810.	1.2	21
101	Inferring (Biological) Signal Transduction Networks viaÂTransitive Reductions of Directed Graphs. Algorithmica, 2008, 51, 129-159.	1.0	20
102	Dynamic models of immune responses: what is the ideal level of detail?. Theoretical Biology and Medical Modelling, 2010, 7, 35.	2.1	19
103	Global versus local extinction in a network model of plant–pollinator communities. Theoretical Ecology, 2013, 6, 495-503.	0.4	18
104	Effects of community structure on the dynamics of random threshold networks. Physical Review E, 2013, 87, 012810.	0.8	18
105	Restoration of plant–pollinator interaction networks via species translocation. Theoretical Ecology, 2014, 7, 209-220.	0.4	17
106	Topological constraints on network control profiles. Scientific Reports, 2016, 5, 18693.	1.6	16
107	Experimental species introduction shapes network interactions in a plant-pollinator community. Biological Invasions, 2019, 21, 3505-3519.	1.2	16
108	Mathematical modeling of the Candida albicans yeast to hyphal transition reveals novel control strategies. PLoS Computational Biology, 2021, 17, e1008690.	1.5	16

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109	ER+ Breast Cancer Strongly Depends on MCL-1 and BCL-xL Anti-Apoptotic Proteins. Cells, 2021, 10, 1659.	1.8	16
110	Discrete Dynamic Modeling of Signal Transduction Networks. Methods in Molecular Biology, 2012, 880, 255-272.	0.4	15
111	Studying the effect of cell division on expression patterns of the segment polarity genes. Journal of the Royal Society Interface, 2008, 5, S71-84.	1.5	14
112	A voxelwise approach to determine consensus regions-of-interest for the study of brain network plasticity. Frontiers in Neuroanatomy, 2015, 9, 97.	0.9	14
113	Analysis of a dynamic model of guard cell signaling reveals the stability of signal propagation. BMC Systems Biology, 2016, 10, 78.	3.0	14
114	Network analysis reveals cross-links of the immune pathways activated by bacteria and allergen. Physical Review E, 2011, 84, 031929.	0.8	13
115	Edgetic perturbations to eliminate fixed-point attractors in Boolean regulatory networks. Chaos, 2019, 29, 023130.	1.0	13
116	Cell Line–Specific Network Models of ER+ Breast Cancer Identify Potential PI3Kα Inhibitor Resistance Mechanisms and Drug Combinations. Cancer Research, 2021, 81, 4603-4617.	0.4	13
117	Signaling Networks. , 2015, , 65-91.		13
118	Correlations in the degeneracy of structurally controllable topologies for networks. Scientific Reports, 2017, 7, 46251.	1.6	12
119	Self-sustaining positive feedback loops in discrete and continuous systems. Journal of Theoretical Biology, 2018, 459, 36-44.	0.8	12
120	Comment on "Control profiles of complex networks― Science, 2014, 346, 561-561.	6.0	11
121	Shaping specificity in signaling networks. Nature Genetics, 2007, 39, 286-287.	9.4	10
122	Node-independent elementary signaling modes: A measure of redundancy in Boolean signaling transduction networks. Network Science, 2016, 4, 273-292.	0.8	10
123	Data-Driven Math Model of FLT3-ITD Acute Myeloid Leukemia Reveals Potential Therapeutic Targets. Journal of Personalized Medicine, 2021, 11, 193.	1.1	10
124	Structure-based approach to identifying small sets of driver nodes in biological networks. Chaos, 2022, 32, .	1.0	10
125	Minimal functional routes in directed graphs with dependent edges. International Transactions in Operational Research, 2013, 20, 391-409.	1.8	8
126	Topâ€down network analysis characterizes hidden termite–termite interactions. Ecology and Evolution, 2016, 6, 6178-6188.	0.8	7

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127	Detecting network anomalies using Forman–Ricci curvature and a case study for human brain networks. Scientific Reports, 2021, 11, 8121.	1.6	7
128	Whole community invasions and the integration of novel ecosystems. PLoS Computational Biology, 2022, 18, e1010151.	1.5	7
129	Compensatory interactions to stabilize multiple steady states or mitigate the effects of multiple deregulations in biological networks. Physical Review E, 2016, 94, 062316.	0.8	6
130	Exploring phospholipase C-coupled Ca2+ signalling networks using boolean modelling. IET Systems Biology, 2011, 5, 174-184.	0.8	5
131	Some Perspectives on Network Modeling in Therapeutic Target Prediction. Biomedical Engineering and Computational Biology, 2013, 5, BECB.S10793.	0.8	5
132	CONTROLLING THE CELL CYCLE RESTRICTION SWITCH ACROSS THE INFORMATION GRADIENT. International Journal of Modeling, Simulation, and Scientific Computing, 2019, 22, 1950020.	0.9	5
133	Inference of Signal Transduction Networks from Double Causal Evidence. Methods in Molecular Biology, 2010, 673, 239-251.	0.4	5
134	Inference of a Boolean Network From Causal Logic Implications. Frontiers in Genetics, 0, 13, .	1.1	5
135	Motif profile dynamics and transient species in a Boolean model of mutualistic ecological communities. Journal of Complex Networks, 2016, 4, 127-139.	1.1	4
136	A survey of some tensor analysis techniques for biological systems. Quantitative Biology, 2019, 7, 266-277.	0.3	4
137	Relationships among generalized positive feedback loops determine possible community outcomes in plant-pollinator interaction networks. Physical Review E, 2021, 104, 054304.	0.8	4
138	Why Do CD8+ T Cells become Indifferent to Tumors: A Dynamic Modeling Approach. Frontiers in Physiology, 2011, 2, 32.	1.3	3
139	Context-specific regulation of lysosomal lipolysis through network-level diverting of transcription factor interactions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	3
140	Structure and timescale analysis in genetic regulatory networks. , 2006, , .		2
141	Boolean Models of Cellular Signaling Networks. , 2013, , 197-210.		2
142	Discrete Dynamic Modeling: A Network Approach for Systems Pharmacology. AAPS Advances in the Pharmaceutical Sciences Series, 2016, , 81-103.	0.2	2
143	Introduction to the Special Issue on Approaches to Control Biological and Biologically Inspired Networks. IEEE Transactions on Control of Network Systems, 2018, 5, 690-693.	2.4	2
144	Spatial Pattern Formation and Morphogenesis in Development: Recent Progress for Two Model Systems. , 2003, , 21-32.		2

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145	Toward Understanding the Structure and Function of Cellular Interaction Networks. Bolyai Society Mathematical Studies, 2008, , 239-275.	0.3	1
146	Boolean Networks in Inference and Dynamic Modeling of Biological Systems at the Molecular and Physiological Level. World Scientific Lecture Notes in Complex Systems, 2009, , 59-78.	0.1	1
147	Complexity and Large-Scale Networks. Operations Research Series, 2008, , 319-351.	0.0	1
148	A Novel Method for Signal Transduction Network Inference from Indirect Experimental Evidence. Lecture Notes in Computer Science, 2007, , 407-419.	1.0	1
149	Modeling of Molecular Networks. Mathematics of Planet Earth, 2019, , 35-62.	0.1	1
150	Abstract 675: Network modeling of drug resistance mechanisms and drug combinations in breast cancer. , 2019, , .		1
151	An Overview of Systems Biology. , 0, , 41-66.		1
152	An Experimental Study of the Fluctuations in Granular Drag. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	0
153	Effects of Noise on Ecological Invasion Processes: Bacteriophage-Mediated Competition in Bacteria. Journal of Statistical Physics, 2007, 128, 229-256.	0.5	0
154	Dynamic Network Modeling of Epithelial-to-Mesenchymal Transition Determines Snail1 as Critical Driver of Stemness in Liver Cancer. Gastroenterology, 2011, 140, S-14.	0.6	0
155	Internet Based Service Networks. Springer Optimization and Its Applications, 2012, , 263-303.	0.6	0
156	Introduction to the Special Section on Network Science in Biological and Bio-Inspired Systems. IEEE Transactions on Network Science and Engineering, 2020, 7, 409-410.	4.1	0
157	Abstract 1465: Metastatic potential of hepatocellular carcinoma determined by dynamic modeling of EMT network and Snail1 expression. , 2011, , .		0
158	Quantification of Regulation in Networks with Positive and Negative Interaction Weights. , 2016, , 1642-1646.		0