Reka Albert

List of Publications by Year in Descending Order

150 papers	61,550 citations	51 h-index	170 g-index
170 ext. papers	71,717 ext. citations	6.4 avg, IF	8.18 L-index

#	Paper	IF	Citations
150	Structure-based approach to identifying small sets of driver nodes in biological networks. *Chaos*, **2022**, 32, 063102	3.3	2
149	A Review of Two Network Curvature Measures. *Springer Optimization and Its Applications*, **2021**, 51-69	0.4	
148	Relationships among generalized positive feedback loops determine possible community outcomes in plant-pollinator interaction networks.. *Physical Review E*, **2021**, 104, 054304	2.4	0
147	synergy: a Python library for calculating, analyzing and visualizing drug combination synergy. *Bioinformatics*, **2021**, 37, 1473-1474	7.2	7
146	Mathematical modeling of the Candida albicans yeast to hyphal transition reveals novel control strategies. *PLoS Computational Biology*, **2021**, 17, e1008690	5	2
145	Detecting network anomalies using Forman-Ricci curvature and a case study for human brain networks. *Scientific Reports*, **2021**, 11, 8121	4.9	1
144	ER+ Breast Cancer Strongly Depends on MCL-1 and BCL-xL Anti-Apoptotic Proteins. *Cells*, **2021**, 10,	7.9	5
143	Cell Line-Specific Network Models of ER Breast Cancer Identify Potential PI3K□nhibitor Resistance Mechanisms and Drug Combinations. *Cancer Research*, **2021**, 81, 4603-4617	10.1	4
142	Parity and time reversal elucidate both decision-making in empirical models and attractor scaling in critical Boolean networks. *Science Advances*, **2021**, 7,	14.3	4
141	Network model and analysis of the spread of Covid-19 with social distancing. *Applied Network Science*, **2020**, 5, 100	2.9	11
140	A Guard Cell Abscisic Acid (ABA) Network Model That Captures the Stomatal Resting State. *Frontiers in Physiology*, **2020**, 11, 927	4.6	6
139	Model-driven discovery of calcium-related protein-phosphatase inhibition in plant guard cell signaling. *PLoS Computational Biology*, **2019**, 15, e1007429	5	10
138	Experimental species introduction shapes network interactions in a plant-pollinator community. *Biological Invasions*, **2019**, 21, 3505-3519	2.7	5
137	Systems-level network modeling of Small Cell Lung Cancer subtypes identifies master regulators and destabilizers. *PLoS Computational Biology*, **2019**, 15, e1007343	5	33
136	A feedback loop of conditionally stable circuits drives the cell cycle from checkpoint to checkpoint. *Scientific Reports*, **2019**, 9, 16430	4.9	9
135	Modeling of Molecular Networks. *Mathematics of Planet Earth*, **2019**, 35-62	0.4	1
134	Edgetic perturbations to eliminate fixed-point attractors in Boolean regulatory networks. *Chaos*, **2019**, 29, 023130	3.3	4

133	CONTROLLING THE CELL CYCLE RESTRICTION SWITCH ACROSS THE INFORMATION GRADIENT. *International Journal of Modeling, Simulation, and Scientific Computing*, **2019**, 22, 1950020	0.8	2
132	A survey of some tensor analysis techniques for biological systems. *Quantitative Biology*, **2019**, 7, 266-273	3.9	1
131	Towards control of cellular decision-making networks in the epithelial-to-mesenchymal transition. *Physical Biology*, **2019**, 16, 031002	3	23
130	Discrete dynamic network modeling of oncogenic signaling: Mechanistic insights for personalized treatment of cancer. *Current Opinion in Systems Biology*, **2018**, 9, 1-10	3.2	26
129	General method to find the attractors of discrete dynamic models of biological systems. *Physical Review E*, **2018**, 97, 042308	2.4	15
128	Target Control in Logical Models Using the Domain of Influence of Nodes. *Frontiers in Physiology*, **2018**, 9, 454	4.6	19
127	Identifying (un)controllable dynamical behavior in complex networks. *PLoS Computational Biology*, **2018**, 14, e1006630	5	11
126	An Overview of Systems Biology **2018**, 41-66		
125	Self-sustaining positive feedback loops in discrete and continuous systems. *Journal of Theoretical Biology*, **2018**, 459, 36-44	2.3	5
124	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	4	1
123	Correlations in the degeneracy of structurally controllable topologies for networks. *Scientific Reports*, **2017**, 7, 46251	4.9	5
122	A framework to find the logic backbone of a biological network. *BMC Systems Biology*, **2017**, 11, 122	3.5	17
121	A network modeling approach to elucidate drug resistance mechanisms and predict combinatorial drug treatments in breast cancer **2017**, 1, 5		33
120	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	11.5	122
119	A new discrete dynamic model of ABA-induced stomatal closure predicts key feedback loops. *PLoS Biology*, **2017**, 15, e2003451	9.7	35
118	Top-down network analysis characterizes hidden termite-termite interactions. *Ecology and Evolution*, **2016**, 6, 6178-88	2.8	4
117	A comparative study of qualitative and quantitative dynamic models of biological regulatory networks. *EPJ Nonlinear Biomedical Physics*, **2016**, 4,		16
116	Node-independent elementary signaling modes: A measure of redundancy in Boolean signaling transduction networks. *Network Science*, **2016**, 4, 273-292	2.9	7

115	Analysis of a dynamic model of guard cell signaling reveals the stability of signal propagation. *BMC Systems Biology*, **2016**, 10, 78	3.5	9
114	Compensatory interactions to stabilize multiple steady states or mitigate the effects of multiple deregulations in biological networks. *Physical Review E*, **2016**, 94, 062316	2.4	3
113	Discrete Dynamic Modeling: A Network Approach for Systems Pharmacology. *AAPS Advances in the Pharmaceutical Sciences Series*, **2016**, 81-103	0.5	2
112	Motif profile dynamics and transient species in a Boolean model of mutualistic ecological communities. *Journal of Complex Networks*, **2016**, 4, 127-139	1.7	2
111	Cell fate reprogramming by control of intracellular network dynamics. *PLoS Computational Biology*, **2015**, 11, e1004193	5	110
110	Plant□pollinator community network response to species invasion depends on both invader and community characteristics. *Oikos*, **2015**, 124, 406-413	4	17
109	Topological constraints on network control profiles. *Scientific Reports*, **2015**, 5, 18693	4.9	8
108	Combinatorial interventions inhibit TGF□driven epithelial-to-mesenchymal transition and support hybrid cellular phenotypes. *Npj Systems Biology and Applications*, **2015**, 1, 15014	5	75
107	A voxelwise approach to determine consensus regions-of-interest for the study of brain network plasticity. *Frontiers in Neuroanatomy*, **2015**, 9, 97	3.6	12
106	Cooperative development of logical modelling standards and tools with CoLoMoTo. *Bioinformatics*, **2015**, 31, 1154-9	7.2	61
105	Inference of Network Dynamics and Metabolic Interactions in the Gut Microbiome. *PLoS Computational Biology*, **2015**, 11, e1004338	5	78
104	Signaling Networks: Asynchronous Boolean Models **2015**, 65-91		10
103	Border control--a membrane-linked interactome of Arabidopsis. *Science*, **2014**, 344, 711-6	33.3	146
102	Boolean modeling: a logic-based dynamic approach for understanding signaling and regulatory networks and for making useful predictions. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2014**, 6, 353-69	6.6	75
101	Network modeling of TGF□signaling in hepatocellular carcinoma epithelial-to-mesenchymal transition reveals joint sonic hedgehog and Wnt pathway activation. *Cancer Research*, **2014**, 74, 5963-77	10.1	164
100	Stabilization of perturbed Boolean network attractors through compensatory interactions. *BMC Systems Biology*, **2014**, 8, 53	3.5	37
99	Network models. Comment on "Control profiles of complex networks". *Science*, **2014**, 346, 561	33.3	10
98	Topological implications of negative curvature for biological and social networks. *Physical Review E*, **2014**, 89, 032811	2.4	33

97	Multi-level modeling of light-induced stomatal opening offers new insights into its regulation by drought. *PLoS Computational Biology*, **2014**, 10, e1003930	5	42
96	Restoration of plant–pollinator interaction networks via species translocation. *Theoretical Ecology*, **2014**, 7, 209-220	1.6	8
95	Abscisic acid-responsive guard cell metabolomes of Arabidopsis wild-type and gpa1 G-protein mutants. *Plant Cell*, **2013**, 25, 4789-811	11.6	59
94	Global versus local extinction in a network model of plant–pollinator communities. *Theoretical Ecology*, **2013**, 6, 495-503	1.6	11
93	Introduction to focus issue: quantitative approaches to genetic networks. *Chaos*, **2013**, 23, 025001	3.3	18
92	Minimal functional routes in directed graphs with dependent edges. *International Transactions in Operational Research*, **2013**, 20, 391-409	2.9	5
91	A REDUCTION METHOD FOR BOOLEAN NETWORK MODELS PROVEN TO CONSERVE ATTRACTORS. *SIAM Journal on Applied Dynamical Systems*, **2013**, 12, 1997-2011	2.8	57
90	Boolean Models of Cellular Signaling Networks **2013**, 197-210		2
89	Boolean modeling of biological regulatory networks: a methodology tutorial. *Methods*, **2013**, 62, 3-12	4.6	81
88	Clustering social networks using ant colony optimization. *Operational Research*, **2013**, 13, 47-65	1.6	15
87	Effects of community structure on the dynamics of random threshold networks. *Physical Review E*, **2013**, 87, 012810	2.4	16
86	Generating super-shedders: co-infection increases bacterial load and egg production of a gastrointestinal helminth. *Journal of the Royal Society Interface*, **2013**, 10, 20120588	4.1	60
85	An effective network reduction approach to find the dynamical repertoire of discrete dynamic networks. *Chaos*, **2013**, 23, 025111	3.3	77
84	Some perspectives on network modeling in therapeutic target prediction. *Biomedical Engineering and Computational Biology*, **2013**, 5, 17-24	3.6	4
83	Transience and constancy of interactions in a plant-frugivore network. *Ecosphere*, **2013**, 4, art147	3.1	26
82	Internet Based Service Networks. *Springer Optimization and Its Applications*, **2012**, 263-303	0.4	
81	Topology of plant-pollinator networks that are vulnerable to collapse from species extinction. *Physical Review E*, **2012**, 86, 021924	2.4	27
80	Discrete dynamic modeling of signal transduction networks. *Methods in Molecular Biology*, **2012**, 880, 255-72	1.4	10

79	Boolean modeling in systems biology: an overview of methodology and applications. *Physical Biology*, **2012**, 9, 055001	3	261
78	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	5	31
77	miR-200b restoration and DNA methyltransferase inhibitor block lung metastasis of mesenchymal-phenotype hepatocellular carcinoma. *Oncogenesis*, **2012**, 1, e15	6.6	27
76	Networks in motion. *Physics Today*, **2012**, 65, 43-48	0.9	31
75	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	11.5	64
74	Why Do CD8+ T Cells become Indifferent to Tumors: A Dynamic Modeling Approach. *Frontiers in Physiology*, **2011**, 2, 32	4.6	3
73	Exploring phospholipase C-coupled Ca(2+) signalling networks using Boolean modelling. *IET Systems Biology*, **2011**, 5, 174-84	1.4	4
72	Elementary signaling modes predict the essentiality of signal transduction network components. *BMC Systems Biology*, **2011**, 5, 44	3.5	53
71	Common and unique elements of the ABA-regulated transcriptome of Arabidopsis guard cells. *BMC Genomics*, **2011**, 12, 216	4.5	134
70	Network analysis reveals cross-links of the immune pathways activated by bacteria and allergen. *Physical Review E*, **2011**, 84, 031929	2.4	11
69	Computationally efficient measure of topological redundancy of biological and social networks. *Physical Review E*, **2011**, 84, 036117	2.4	21
68	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, 2936-49	5.3	42
67	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	5	123
66	Complex Networks: An Engineering View. *IEEE Circuits and Systems Magazine*, **2010**, 10, 10-25	3.2	51
65	Boolean models of within-host immune interactions. *Current Opinion in Microbiology*, **2010**, 13, 377-81	7.9	20
64	Boolean modeling of transcriptome data reveals novel modes of heterotrimeric G-protein action. *Molecular Systems Biology*, **2010**, 6, 372	12.2	89
63	Attractor analysis of asynchronous Boolean models of signal transduction networks. *Journal of Theoretical Biology*, **2010**, 266, 641-56	2.3	107
62	Disease Dynamics in a Dynamic Social Network. *Physica A: Statistical Mechanics and Its Applications*, **2010**, 389, 2663-2674	3.3	30

61	Dynamic models of immune responses: what is the ideal level of detail?. *Theoretical Biology and Medical Modelling*, **2010**, 7, 35	2.3	17
60	Inference of signal transduction networks from double causal evidence. *Methods in Molecular Biology*, **2010**, 673, 239-51	1.4	5
59	Constraint-based network model of pathogen-immune system interactions. *Journal of the Royal Society Interface*, **2009**, 6, 599-612	4.1	40
58	Discrete dynamic modeling of cellular signaling networks. *Methods in Enzymology*, **2009**, 467, 281-306	1.7	47
57	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
56	Discrete dynamic modeling with asynchronous update, or how to model complex systems in the absence of quantitative information. *Methods in Molecular Biology*, **2009**, 553, 207-25	1.4	25
55	Biological switches and clocks. *Journal of the Royal Society Interface*, **2008**, 5 Suppl 1, S1-8	4.1	78
54	Studying the effect of cell division on expression patterns of the segment polarity genes. *Journal of the Royal Society Interface*, **2008**, 5 Suppl 1, S71-84	4.1	14
53	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, 16308-13	11.5	277
52	NET-SYNTHESIS: a software for synthesis, inference and simplification of signal transduction networks. *Bioinformatics*, **2008**, 24, 293-5	7.2	37
51	Inferring (Biological) Signal Transduction Networks via Transitive Reductions of Directed Graphs. *Algorithmica*, **2008**, 51, 129-159	0.9	17
50	Boolean network simulations for life scientists. *Source Code for Biology and Medicine*, **2008**, 3, 16	1.9	191
49	Complexity and Large-Scale Networks. *Operations Research Series*, **2008**, 319-351		1
48	Toward Understanding the Structure and Function of Cellular Interaction Networks. *Bolyai Society Mathematical Studies*, **2008**, 239-275	0.4	1
47	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, 831-40	4.1	53
46	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	3.3	15
45	Differential gene expression in Arabidopsis wild-type and mutant anthers: insights into anther cell differentiation and regulatory networks. *Plant Journal*, **2007**, 52, 14-29	6.9	92
44	Effects of Noise on Ecological Invasion Processes: Bacteriophage-Mediated Competition in Bacteria. *Journal of Statistical Physics*, **2007**, 128, 229-256	1.5	

43	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	2	25
42	Modeling systems-level regulation of host immune responses. *PLoS Computational Biology*, **2007**, 3, e109	5	98
41	Search in spatial scale-free networks. *New Journal of Physics*, **2007**, 9, 190-190	2.9	24
40	Systems-level insights into cellular regulation: inferring, analysing, and modelling intracellular networks. *IET Systems Biology*, **2007**, 1, 61-77	1.4	44
39	Network inference, analysis, and modeling in systems biology. *Plant Cell*, **2007**, 19, 3327-38	11.6	127
38	Near linear time algorithm to detect community structures in large-scale networks. *Physical Review E*, **2007**, 76, 036106	2.4	1742
37	A novel method for signal transduction network inference from indirect experimental evidence. *Journal of Computational Biology*, **2007**, 14, 927-49	1.7	43
36	A Novel Method for Signal Transduction Network Inference from Indirect Experimental Evidence. *Lecture Notes in Computer Science*, **2007**, 407-419	0.9	1
35	Rapid and asymmetric divergence of duplicate genes in the human gene coexpression network. *BMC Bioinformatics*, **2006**, 7, 46	3.6	41
34	Elucidation of directionality for co-expressed genes: predicting intra-operon termination sites. *Bioinformatics*, **2006**, 22, 209-14	7.2	21
33	Bacteriophage-mediated competition in Bordetella bacteria. *Proceedings of the Royal Society B: Biological Sciences*, **2006**, 273, 1843-8	4.4	44
32	Structure and timescale analysis in genetic regulatory networks **2006**,		1
31	Predicting essential components of signal transduction networks: a dynamic model of guard cell abscisic acid signaling. *PLoS Biology*, **2006**, 4, e312	9.7	296
30	Scale-free networks in cell biology. *Journal of Cell Science*, **2005**, 118, 4947-57	5.3	812
29	Robustness and fragility of Boolean models for genetic regulatory networks. *Journal of Theoretical Biology*, **2005**, 235, 431-49	2.3	254
28	Modeling cascading failures in the North American power grid. *European Physical Journal B*, **2005**, 46, 101-107	1.2	417
27	Search in weighted complex networks. *Physical Review E*, **2005**, 72, 066128	2.4	41
26	Conserved network motifs allow protein-protein interaction prediction. *Bioinformatics*, **2004**, 20, 3346-52	7.2	150

25	Boolean Modelingof Genetic Regulatory Networks. *Lecture Notes in Physics*, **2004**, 459-481	0.8	35
24	Survivability of multiagent-based supply networks: a topological perspect. *IEEE Intelligent Systems*, **2004**, 19, 24-31	4.2	130
23	Structural vulnerability of the North American power grid. *Physical Review E*, **2004**, 69, 025103	2.4	847
22	Dynamic receptor team formation can explain the high signal transduction gain in Escherichia coli. *Biophysical Journal*, **2004**, 86, 2650-9	2.9	23
21	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	2.3	699
20	Spatial Pattern Formation and Morphogenesis in Development: Recent Progress for Two Model Systems **2003**, 21-32		0
19	Statistical mechanics of complex networks. *Reviews of Modern Physics*, **2002**, 74, 47-97	40.5	13246
18	Stick-slip fluctuations in granular drag. *Physical Review E*, **2001**, 64, 031307	2.4	79
17	Scale-free characteristics of random networks: the topology of the world-wide web. *Physica A: Statistical Mechanics and Its Applications*, **2000**, 281, 69-77	3.3	819
16	Error and attack tolerance of complex networks. *Nature*, **2000**, 406, 378-82	50.4	5753
15	The large-scale organization of metabolic networks. *Nature*, **2000**, 407, 651-4	50.4	3619
14	An Experimental Study of the Fluctuations in Granular Drag. *Materials Research Society Symposia Proceedings*, **2000**, 627, 1		
13	Dynamics of complex systems: scaling laws for the period of boolean networks. *Physical Review Letters*, **2000**, 84, 5660-3	7.4	176
12	Jamming and fluctuations in granular drag. *Physical Review Letters*, **2000**, 84, 5122-5	7.4	121
11	Topology of evolving networks: local events and universality. *Physical Review Letters*, **2000**, 85, 5234-7	7.4	842
10	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	3.3	31
9	Mean-field theory for scale-free random networks. *Physica A: Statistical Mechanics and Its Applications*, **1999**, 272, 173-187	3.3	1501
8	Diameter of the World-Wide Web. *Nature*, **1999**, 401, 130-131	50.4	2869

7	Slow Drag in a Granular Medium. *Physical Review Letters*, **1999**, 82, 205-208	7.4	243
6	Emergence of scaling in random networks. *Science*, **1999**, 286, 509-12	33.3	22075
5	Driven Interfaces in Disordered Media: Determination of Universality Classes from Experimental Data. *Physical Review Letters*, **1998**, 81, 2926-2929	7.4	28
4	Maximum angle of stability in wet and dry spherical granular media. *Physical Review E*, **1997**, 56, R6271-R6274	2.4	124
3	What keeps sandcastles standing?. *Nature*, **1997**, 387, 765-765	50.4	230
2	Target Control in Logical Models Using the Domain of Influence of Nodes		1
1	An Overview of Systems Biology41-66		1