Kwang-hyun Cho

List of Publications by Year
in descending order

147	4,316	87888	144013
papers	citations	38 h-index	57 g-index

150	150	150	5332
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Network Analysis Identifies Regulators of Basal-Like Breast Cancer Reprogramming and Endocrine Therapy Vulnerability. Cancer Research, 2022, 82, 320-333.	0.9	15
2	The hidden community architecture of human brain networks. Scientific Reports, 2022, 12, 3540.	3.3	1
3	PRRX1 is a master transcription factor of stromal fibroblasts for myofibroblastic lineage progression. Nature Communications, 2022, 13, 2793.	12.8	27
4	A logical network-based drug-screening platform for Alzheimerâ€™s disease representing pathological features of human brain organoids. Nature Communications, 2021, 12, 280.	12.8	88
5	A Low-Power Timing-Error-Tolerant Circuit by Controlling a Clock. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, 29, 512-518.	3.1	2
6	Systems biology for reverse aging. Aging, 2021, 13, 14549-14551.	3.1	0
7	Stabilizing Control of Complex Biological Networks Based on Attractor-Specific Network Reduction. IEEE Transactions on Control of Network Systems, 2021, 8, 928-939.	3.7	6
8	Identifying molecular targets for reverse aging using integrated network analysis of transcriptomic and epigenomic changes during aging. Scientific Reports, 2021, 11, 12317.	3.3	8
9	Systems analysis identifies endothelin 1 axis blockade for enhancing the anti-tumor effect of multikinase inhibitor. Cancer Gene Therapy, 2021, , .	4.6	4
10	Discrete event dynamic modeling and analysis of the democratic progress in a society controlled by networked agents. IEEE Transactions on Automatic Control, 2021, , 1-1.	5.7	1
11	Achieving a global objective with competing networked agents in the framework of discrete event systems. International Journal of Control, 2020, 93, 889-897.	1.9	1
12	Network Inference Analysis Identifies SETDB1 as a Key Regulator for Reverting Colorectal Cancer Cells into Differentiated Normal-Like Cells. Molecular Cancer Research, 2020, 18, 118-129.	3.4	23
13	Inhibition of 3-phosphoinositideâ€“dependent protein kinase 1 (PDK1) can revert cellular senescence in human dermal fibroblasts. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31535-31546.	7.1	31
14	A Systems Biology Approach to Identifying a Master Regulator That Can Transform the Fast Growing Cellular State to a Slowly Growing One in Early Colorectal Cancer Development Model. Frontiers in Genetics, 2020, 11, 570546.	2.3	12
15	Precision Medicine: Realizing Cancer Precision Medicine by Integrating Systems Biology and Nanomaterial Engineering (Adv. Mater. 35/2020). Advanced Materials, 2020, 32, 2070265.	21.0	0
16	Boolean Feedforward Neural Network Modeling of Molecular Regulatory Networks for Cellular State Conversion. Frontiers in Physiology, 2020, 11, 594151.	2.8	1
17	Feedback analysis identifies a combination target for overcoming adaptive resistance to targeted cancer therapy. Oncogene, 2020, 39, 3803-3820.	5.9	14
18	Cotargeting <scp>BET</scp> proteins overcomes resistance arising from <scp>PI3K</scp>/<scp>mTOR</scp> blockadeâ€induced protumorigenic senescence in colorectal cancer. International Journal of Cancer, 2020, 147, 2824-2837.	5.1	6

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19	Realizing Cancer Precision Medicine by Integrating Systems Biology and Nanomaterial Engineering. Advanced Materials, 2020, 32, e1906783.	21.0	21
20	Coupled feedback regulation of nuclear factor of activated T-cells (NFAT) modulates activation-induced cell death of T cells. Scientific Reports, 2019, 9, 10637.	3.3	8
21	Locally Activating TrkB Receptor Generates Actin Waves and Specifies Axonal Fate. Cell Chemical Biology, 2019, 26, 1652-1663.e4.	5.2	26
22	Minimal intervening control of biomolecular networks leading to a desired cellular state. Scientific Reports, 2019, 9, 13124.	3.3	12
23	Signal flow control of complex signaling networks. Scientific Reports, 2019, 9, 14289.	3.3	6
24	The Hidden Control Architecture of Complex Brain Networks. IScience, 2019, 13, 154-162.	4.1	15
25	Transient-error correction system with real-time logic switching inspired from attractor-conversion characteristics of a cancer cell. Microelectronics Reliability, 2019, 96, 51-59.	1.7	0
26	Systems analysis identifies potential target genes to overcome cetuximab resistance in colorectal cancer cells. FEBS Journal, 2019, 286, 1305-1318.	4.7	31
27	Topological estimation of signal flow in complex signaling networks. Scientific Reports, 2018, 8, 5262.	3.3	13
28	Attractor landscape analysis of the cardiac signaling network reveals mechanism-based therapeutic strategies for heart failure. Journal of Molecular Cell Biology, 2018, 10, 180-194.	3.3	7
29	Combined Positive and Negative Feedback Allows Modulation of Neuronal Oscillation Frequency during Sensory Processing. Cell Reports, 2018, 25, 1548-1560.e3.	6.4	24
30	Global Stabilization of Boolean Networks to Control the Heterogeneity of Cellular Responses. Frontiers in Physiology, 2018, 9, 774.	2.8	8
31	Determining Relative Dynamic Stability of Cell States Using Boolean Network Model. Scientific Reports, 2018, 8, 12077.	3.3	43
32	Efficient harmonic peak detection of vowel sounds for enhanced voice activity detection. IET Signal Processing, 2018, 12, 975-982.	1.5	4
33	A positive feedback loop bi-stably activates fibroblasts. Nature Communications, 2018, 9, 3016.	12.8	82
34	The phenotype control kernel of a biomolecular regulatory network. BMC Systems Biology, 2018, 12, 49.	3.0	13
35	Predicting epileptic seizures from scalp EEG based on attractor state analysis. Computer Methods and Programs in Biomedicine, 2017, 143, 75-87.	4.7	101
36	Cancer reversion, a renewed challenge in systems biology. Current Opinion in Systems Biology, 2017, 2, 49-58.	2.6	12

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37	Protein disulfide isomerase inhibition synergistically enhances the efficacy of sorafenib for hepatocellular carcinoma. Hepatology, 2017, 66, 855-868.	7.3	35
38	Context-independent essential regulatory interactions for apoptosis and hypertrophy in the cardiac signaling network. Scientific Reports, 2017, 7, 34.	3.3	11
39	Inhibitory Basal Ganglia Inputs Induce Excitatory Motor Signals in the Thalamus. Neuron, 2017, 95, 1181-1196.e8.	8.1	89
40	Percolation transition of cooperative mutational effects in colorectal tumorigenesis. Nature Communications, 2017, 8, 1270.	12.8	28
41	Quantitative evaluation and reversion analysis of the attractor landscapes of an intracellular regulatory network for colorectal cancer. BMC Systems Biology, 2017, 11, 45.	3.0	27
42	Self-Repairing Digital System Based on State Attractor Convergence Inspired by the Recovery Process of a Living Cell. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017, 25, 648-659.	3.1	10
43	Network dynamics-based cancer panel stratification for systemic prediction of anticancer drug response. Nature Communications, 2017, 8, 1940.	12.8	36
44	A novel interaction perturbation analysis reveals a comprehensive regulatory principle underlying various biochemical oscillators. BMC Systems Biology, 2017, 11, 95.	3.0	5
45	Minimal systems analysis of mitochondria-dependent apoptosis induced by cisplatin. Korean Journal of Physiology and Pharmacology, 2016, 20, 367.	1.2	4
46	Brain-inspired speech segmentation for automatic speech recognition using the speech envelope as a temporal reference. Scientific Reports, 2016, 6, 37647.	3.3	8
47	An efficient algorithm for identifying primary phenotype attractors of a large-scale Boolean network. BMC Systems Biology, 2016, 10, 95.	3.0	15
48	Powerâ€based supervisory control theory of hybrid systems and its application to the analysis of financial crisis. IET Control Theory and Applications, 2016, 10, 780-788.	2.1	3
49	The reverse control of irreversible biological processes. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2016, 8, 366-377.	6.6	26
50	Cover Image, Volume 8, Issue 5. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2016, 8, i-i.	6.6	0
51	Attractor landscape analysis of colorectal tumorigenesis and its reversion. BMC Systems Biology, 2016, 10, 96.	3.0	47
52	Robustness Analysis of Network Modularity. IEEE Transactions on Control of Network Systems, 2016, 3, 348-357.	3.7	8
53	Systems biological approaches to the cardiac signaling network. Briefings in Bioinformatics, 2016, 17, 419-428.	6.5	8
54	A Regulated Double-Negative Feedback Decodes the Temporal Gradient of Input Stimulation in a Cell Signaling Network. PLoS ONE, 2016, 11, e0162153.	2.5	3

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55	Biphasic activation of extracellular signal-regulated kinase (ERK) 1/2 in epidermal growth factor (EGF)-stimulated SW480 colorectal cancer cells. BMB Reports, 2016, 49, 220-225.	2.4	12
56	A systems-biological study on the identification of safe and effective molecular targets for the reduction of ultraviolet B-induced skin pigmentation. Scientific Reports, 2015, 5, 10305.	3.3	19
57	An Efficient Steady-State Analysis Method for Large Boolean Networks with High Maximum Node Connectivity. PLoS ONE, 2015, 10, e0145734.	2.5	9
58	Network-based identification of feedback modules that control RhoA activity and cell migration. Journal of Molecular Cell Biology, 2015, 7, 242-252.	3.3	20
59	Evolutionary design of complex digital circuits based on hierarchical module composition and predominant component prevention. Electronics Letters, 2015, 51, 1568-1570.	1.0	2
60	Silence on the relevant literature and errors in implementation. Nature Biotechnology, 2015, 33, 336-339.	17.5	14
61	Identification of Gene Networks with Time Delayed Regulation Based on Temporal Expression Profiles. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2015, 12, 1161-1168.	3.0	2
62	Analyses of the TCR repertoire of MHC class II-restricted innate CD4+ T cells. Experimental and Molecular Medicine, 2015, 47, e154-e154.	7.7	5
63	Precritical State Transition Dynamics in the Attractor Landscape of a Molecular Interaction Network Underlying Colorectal Tumorigenesis. PLoS ONE, 2015, 10, e0140172.	2.5	12
64	MLK3 Is Part of a Feedback Mechanism That Regulates Different Cellular Responses to Reactive Oxygen Species. Science Signaling, 2014, 7, ra52.	3.6	45
65	Robustness and Evolvability of the Human Signaling Network. PLoS Computational Biology, 2014, 10, e1003763.	3.2	23
66	The hidden switches underlying RORÎ±-mediated circuits that critically regulate uncontrolled cell proliferation. Journal of Molecular Cell Biology, 2014, 6, 338-348.	3.3	27
67	The switching role of Î²-adrenergic receptor signalling in cell survival or death decision of cardiomyocytes. Nature Communications, 2014, 5, 5777.	12.8	59
68	The APC Network Regulates the Removal of Mutated Cells from Colonic Crypts. Cell Reports, 2014, 7, 94-103.	6.4	19
69	Heterozygous mutations in cyclic AMP phosphodiesterase-4D (PDE4D) and protein kinase A (PKA) provide new insights into the molecular pathology of acrodysostosis. Cellular Signalling, 2014, 26, 2446-2459.	3.6	56
70	A design principle underlying the paradoxical roles of E3 ubiquitin ligases. Scientific Reports, 2014, 4, 5573.	3.3	8
71	A novel prognostic factor for hepatocellular carcinoma: protein disulfide isomerase. Korean Journal of Internal Medicine, 2014, 29, 580.	1.7	16
72	Impaired coupling of local and global functional feedbacks underlies abnormal synchronization and negative symptoms of schizophrenia. BMC Systems Biology, 2013, 7, 30.	3.0	9

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73	Discovery of a kernel for controlling biomolecular regulatory networks. Scientific Reports, 2013, 3, 2223.	3.3	93
74	Small-world networks in individuals at ultra-high risk for psychosis and first-episode schizophrenia during a working memory task. Neuroscience Letters, 2013, 535, 35-39.	2.1	25
75	Self-Repairing Digital System With Unified Recovery Process Inspired by Endocrine Cellular Communication. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2013, 21, 1027-1040.	3.1	18
76	Biphasic RLRâ€“IFN-Î² Response Controls the Balance between Antiviral Immunity and Cell Damage. Journal of Immunology, 2013, 190, 1192-1200.	0.8	27
77	Recurrent connections form a phase-locking neuronal tuner for frequency-dependent selective communication. Scientific Reports, 2013, 3, 2519.	3.3	9
78	Signaling networks, network pathology and computational chemotherapy. Oncotarget, 2013, 4, 178-179.	1.8	0
79	The core regulation module of stress-responsive regulatory networks in yeast. Nucleic Acids Research, 2012, 40, 8793-8802.	14.5	18
80	The co-regulation mechanism of transcription factors in the human gene regulatory network. Nucleic Acids Research, 2012, 40, 8849-8861.	14.5	26
81	The crossregulation between ERK and PI3K signaling pathways determines the tumoricidal efficacy of MEK inhibitor. Journal of Molecular Cell Biology, 2012, 4, 153-163.	3.3	65
82	Attractor Landscape Analysis Reveals Feedback Loops in the p53 Network That Control the Cellular Response to DNA Damage. Science Signaling, 2012, 5, ra83.	3.6	146
83	A Hierarchical Self-Repairing Architecture for Fast Fault Recovery of Digital Systems Inspired From Paralogous Gene Regulatory Circuits. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2012, 20, 2315-2328.	3.1	26
84	Cooperative Activation of PI3K by Ras and Rho Family Small GTPases. Molecular Cell, 2012, 47, 281-290.	9.7	146
85	Spatiotemporal network motif reveals the biological traits of developmental gene regulatory networks in Drosophila melanogaster. BMC Systems Biology, 2012, 6, 31.	3.0	20
86	The regulatory circuits for hysteretic switching in cellular signal transduction pathways. FEBS Journal, 2012, 279, 3329-3337.	4.7	6
87	An MEG study of alpha modulation in patients with schizophrenia and in subjects at high risk of developing psychosis. Schizophrenia Research, 2011, 126, 36-42.	2.0	63
88	A hidden incoherent switch regulates RCAN1 in the calcineurinâ€“NFAT signaling network. Journal of Cell Science, 2011, 124, 82-90.	2.0	45
89	Reduction of Complex Signaling Networks to a Representative Kernel. Science Signaling, 2011, 4, ra35.	3.6	54
90	Evolutionary design principles and functional characteristics based on kingdom-specific network motifs. Bioinformatics, 2011, 27, 245-251.	4.1	17

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91	Modular nonblocking state feedback control of discrete event systems and its application to dynamic oligopolistic markets. International Journal of Control, 2011, 84, 2046-2057.	1.9	5
92	Identification of feedback loops embedded in cellular circuits by investigating non-causal impulse response components. Journal of Mathematical Biology, 2010, 60, 285-312.	1.9	7
93	Dynamic network rewiring determines temporal regulatory functions in Drosophilamelanogaster development processes. BioEssays, 2010, 32, 505-513.	2.5	16
94	Genomic Binding Profiling of the Fission Yeast Stress-Activated MAPK Sty1 and the bZIP Transcriptional Activator Atf1 in Response to H2O2. PLoS ONE, 2010, 5, e11620.	2.5	55
95	A system-level investigation into the cellular toxic response mechanism mediated by AhR signal transduction pathway. Bioinformatics, 2010, 26, 2169-2175.	4.1	10
96	A design principle underlying the synchronization of oscillations in cellular systems. Journal of Cell Science, 2010, 123, 537-543.	2.0	55
97	Functional Roles of Multiple Feedback Loops in Extracellular Signal-Regulated Kinase and Wnt Signaling Pathways That Regulate Epithelial-Mesenchymal Transition. Cancer Research, 2010, 70, 6715-6724.	0.9	138
98	Modelling Spatially Regulated Î²-Catenin Dynamics and Invasion inÂIntestinal Crypts. Biophysical Journal, 2010, 99, 716-725.	0.5	66
99	Multiple roles of the NFâ€?B signaling pathway regulated by coupled negative feedback circuits. FASEB Journal, 2009, 23, 2796-2802.	0.5	20
100	Hub genes with positive feedbacks function as master switches in developmental gene regulatory networks. Bioinformatics, 2009, 25, 1898-1904.	4.1	48
101	Positive- and negative-feedback regulations coordinate the dynamic behavior of the Ras-Raf-MEK-ERK signal transduction pathway. Journal of Cell Science, 2009, 122, 425-435.	2.0	162
102	Delay-coobservability and its algebraic properties for the decentralized supervisory control of discrete event systems with communication delays. Automatica, 2009, 45, 1252-1259.	5.0	2
103	Supervisory control for fault-tolerant scheduling of real-time multiprocessor systems with aperiodic tasks. International Journal of Control, 2009, 82, 217-227.	1.9	12
104	The biphasic behavior of incoherent feedâ€forward loops in biomolecular regulatory networks. BioEssays, 2008, 30, 1204-1211.	2.5	93
105	Real-time preemptive scheduling of sporadic tasks based on supervisory control of discrete event systems. Information Sciences, 2008, 178, 3393-3401.	6.9	24
106	Dynamical analysis of the calcium signaling pathway in cardiac myocytes based on logarithmic sensitivity analysis. Biotechnology Journal, 2008, 3, 639-647.	3.5	11
107	System-level investigation into the regulatory mechanism of the calcineurin/NFAT signaling pathway. Cellular Signalling, 2008, 20, 1117-1124.	3.6	14
108	Coupled Feedback Loops Form Dynamic Motifs of Cellular Networks. Biophysical Journal, 2008, 94, 359-365.	0.5	120

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109	Evolutionary design principles of modules that control cellular differentiation: consequences for hysteresis and multistationarity. Bioinformatics, 2008, 24, 1516-1522.	4.1	13
110	Coherent coupling of feedback loops: a design principle of cell signaling networks. Bioinformatics, 2008, 24, 1926-1932.	4.1	59
111	Quantitative analysis of robustness and fragility in biological networks based on feedback dynamics. Bioinformatics, 2008, 24, 987-994.	4.1	90
112	Identification of Intra-Cellular Feedback Loops by Intermittent Step Perturbation Method. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 289-294.	0.4	1
113	Modelling the dynamics of signalling pathways. Essays in Biochemistry, 2008, 45, 1-28.	4.7	44
114	Reconstruction of Gene Regulatory Networks by Neuro-fuzzy Inference Systems. , 2007, , .		6
115	Interlinked mutual inhibitory positive feedbacks induce robust cellular memory effects. FEBS Letters, 2007, 581, 4899-4904.	2.8	15
116	Boolean Dynamics of Biological Networks with Multiple Coupled Feedback Loops. Biophysical Journal, 2007, 92, 2975-2981.	0.5	56
117	Topological Difference of Core Regulatory Networks Induces Different Entrainment Characteristics of Plant and Animal Circadian Clocks. Biophysical Journal, 2007, 93, L01-L03.	0.5	6
118	Coupled positive and negative feedback circuits form an essential building block of cellular signaling pathways. BioEssays, 2007, 29, 85-90.	2.5	72
119	Decentralized supervisory control of discrete event systems with communication delays based on conjunctive and permissive decision structures. Automatica, 2007, 43, 738-743.	5.0	37
120	Inferring gene regulatory networks from temporal expression profiles under time-delay and noise. Computational Biology and Chemistry, 2007, 31, 239-245.	2.3	62
121	Analysis of feedback loops and robustness in network evolution based on Boolean models. BMC Bioinformatics, 2007, 8, 430.	2.6	48
122	Unraveling the functional interaction structure of a biomolecular network through alternate perturbation of initial conditions. Journal of Proteomics, 2007, 70, 701-707.	2.4	1
123	Delay-Robust Supervisory Control of Discrete-Event Systems With Bounded Communication Delays. IEEE Transactions on Automatic Control, 2006, 51, 911-915.	5.7	53
124	The influence of the signal dynamics of activated form of IKK on NF-Î²B and anti-apoptotic gene expressions: A systems biology approach. FEBS Letters, 2006, 580, 822-830.	2.8	58
125	Inferring biomolecular regulatory networks from phase portraits of time-series expression profiles. FEBS Letters, 2006, 580, 3511-3518.	2.8	10
126	Wnt pathway mutations selected by optimal Î²-catenin signaling for tumorigenesis. FEBS Letters, 2006, 580, 3665-3670.	2.8	54

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127	Switching feedback mechanisms realize the dual role of MCIP in the regulation of calcineurin activity. FEBS Letters, 2006, 580, 5965-5973.	2.8	34
128	The multi-step phosphorelay mechanism of unorthodox two-component systems in E. coli realizes ultrasensitivity to stimuli while maintaining robustness to noises. Computational Biology and Chemistry, 2006, 30, 438-444.	2.3	65
129	Dynamics of biological systems: role of systems biology in medical research. Expert Review of Molecular Diagnostics, 2006, 6, 891-902.	3.1	48
130	A hybrid systems framework for cellular processes. BioSystems, 2005, 80, 273-282.	2.0	20
131	Identification of small scale biochemical networks based on general type system perturbations. FEBS Journal, 2005, 272, 2141-2151.	4.7	49
132	Unravelling the functional interaction structure of a cellular network from temporal slope information of experimental data. FEBS Journal, 2005, 272, 3950-3959.	4.7	2
133	Run-to-Run Overlay Control of Steppers in Semiconductor Manufacturing Systems Based on History Data Analysis and Neural Network Modeling. IEEE Transactions on Semiconductor Manufacturing, 2005, 18, 605-613.	1.7	18
134	A unified framework for unraveling the functional interaction structure of a biomolecular network based on stimulus-response experimental data. FEBS Letters, 2005, 579, 4520-4528.	2.8	16
135	Control and coordination in biochemical networks - Introduction to the special section on systems biology. IEEE Control Systems, 2004, 24, 30-34.	0.8	21
136	Systems biology. IEEE Control Systems, 2003, 23, 38-48.	0.8	24
137	Investigations Into the Analysis and Modeling of the TNFÂ-Mediated NF-ÂB-Signaling Pathway. Genome Research, 2003, 13, 2413-2422.	5.5	80
138	Microarray data clustering based on temporal variation: FCV with TSD preclustering. Applied Bioinformatics, 2003, 2, 35-45.	1.6	25
139	Multiagent supervisory control for antifault propagation in serial production systems. IEEE Transactions on Industrial Electronics, 2001, 48, 460-466.	7.9	11
140	A study on fault-tolerant control and operation of serial production systems. , 0, , .		0
141	Congestion control for virtual-connection using a Smith predictor in high-speed Gigabit Ethernet networks. , 0, , .		0
142	Towards LonWorks technology and its applications to automation. , 0, , .		5
143	Design of PLCs for automated industrial systems based on discrete event models. , 0, , .		4
144	Congestion control of high-speed Gigabit-Ethernet networks for industrial applications. , 0, , .		15

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145	A new consolidation algorithm in point-to-multipoint ABR service of ATM networks for industrial applications. , 0, , .		0
146	Robust supervisory control of communication networks. , 0, , .		1
147	State feedback control of real-time discrete event systems with infinite states. International Journal of Control, 0, , 1-11.	1.9	3