Albert Goldbeter

List of Publications by Year
in descending order

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110 papers	7,891 citations	61984 43 h-index	60623 81 g-index
116 all docs	116 docs citations	116 times ranked	5451 citing authors

#	Article	IF	Citations
1	Multi-synchronization and other patterns of multi-rhythmicity in oscillatory biological systems. Interface Focus, 2022, 12, 20210089.	3.0	12
2	From circadian clock mechanism to sleep disorders and jet lag: Insights from a computational approach. Biochemical Pharmacology, 2021, 191, 114482.	4.4	10
3	A Computational Model for the Cold Response Pathway in Plants. Frontiers in Physiology, 2020, 11, 591073.	2.8	9
4	Robust synchronization of the cell cycle and the circadian clock through bidirectional coupling. Journal of the Royal Society Interface, 2019, 16, 20190376.	3.4	27
5	Multi-rhythmicity generated by coupling two cellular rhythms. Journal of the Royal Society Interface, 2019, 16, 20180835.	3.4	21
6	The positive circadian regulators CLOCK and BMAL1 control G2/M cell cycle transition through Cyclin B1. Cell Cycle, 2019, 18, 16-33.	2.6	48
7	Revisiting a skeleton model for the mammalian cell cycle: From bistability to Cdk oscillations and cellular heterogeneity. Journal of Theoretical Biology, 2019, 461, 276-290.	1.7	10
8	Modeling-Based Investigation of the Effect of Noise in Cellular Systems. Frontiers in Molecular Biosciences, 2018, 5, 34.	3.5	26
9	Dissipative structures in biological systems: bistability, oscillations, spatial patterns and waves. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170376.	3.4	104
10	Dissipative structures and biological rhythms. Chaos, 2017, 27, 104612.	2.5	36
11	Dynamics of the mammalian cell cycle in physiological and pathological conditions. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2016, 8, 140-156.	6.6	20
12	Cell Fate Specification Based on Tristability in the Inner Cell Mass of Mouse Blastocysts. Biophysical Journal, 2016, 110, 710-722.	0.5	64
13	The balance between cell cycle arrest and cell proliferation: control by the extracellular matrix and by contact inhibition. Interface Focus, 2014, 4, 20130075.	3.0	137
14	Computational Models for Circadian Rhythms: Deterministic versus Stochastic Approaches. , 2014, , 183-222.		2
15	Gata6, Nanog and Erk signaling control cell fate in the inner cell mass through a tristable regulatory network. Development (Cambridge), 2014, 141, 3637-3648.	2.5	176
16	FROM SIMPLE TO COMPLEX OSCILLATORY BEHAVIOR IN CELLULAR REGULATORY NETWORKS. World Scientific Lecture Notes in Complex Systems, 2014, , 1-21.	0.1	1
17	Dai ritmi biologici ai ritmi a componente psicologica. Psicobiettivo, 2014, , 77-97.	0.1	0
18	Oscillatory enzyme reactions and Michaelisâ€“Menten kinetics. FEBS Letters, 2013, 587, 2778-2784.	2.8	37

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19	Critical phase shifts slow down circadian clock recovery: Implications for jet lag. Journal of Theoretical Biology, 2013, 333, 47-57.	1.7	23
20	Entrainment of the Mammalian Cell Cycle by the Circadian Clock: Modeling Two Coupled Cellular Rhythms. PLoS Computational Biology, 2012, 8, e1002516.	3.2	105
21	Systems biology of cellular rhythms. FEBS Letters, 2012, 586, 2955-2965.	2.8	86
22	From quiescence to proliferation: Cdk oscillations drive the mammalian cell cycle. Frontiers in Physiology, 2012, 3, 413.	2.8	44
23	Effect of positive feedback loops on the robustness of oscillations in the network of cyclinâ€dependent kinases driving the mammalian cell cycle. FEBS Journal, 2012, 279, 3411-3431.	4.7	40
24	A skeleton model for the network of cyclin-dependent kinases driving the mammalian cell cycle. Interface Focus, 2011, 1, 24-35.	3.0	65
25	An automaton model for the cell cycle. Interface Focus, 2011, 1, 36-47.	3.0	44
26	A model for the dynamics of bipolar disorders. Progress in Biophysics and Molecular Biology, 2011, 105, 119-127.	2.9	35
27	Circadian Rhythms and Cancer Chronotherapeutics. , 2011, , 381-407.		1
28	From simple to complex patterns of oscillatory behavior in a model for the mammalian cell cycle containing multiple oscillatory circuits. Chaos, 2010, 20, 045109.	2.5	30
29	Temporal self-organization of the cyclin/Cdk network driving the mammalian cell cycle. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21643-21648.	7.1	202
30	Identifying mechanisms of chronotolerance and chronoefficacy for the anticancer drugs 5-fluorouracil and oxaliplatin by computational modeling. European Journal of Pharmaceutical Sciences, 2009, 36, 20-38.	4.0	69
31	Dependence of the period on the rate of protein degradation in minimal models for circadian oscillations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4665-4683.	3.4	31
32	Modeling the segmentation clock as a network of coupled oscillations in the Notch, Wnt and FGF signaling pathways. Journal of Theoretical Biology, 2008, 252, 574-585.	1.7	162
33	Modeling the circadian clock: From molecular mechanism to physiological disorders. BioEssays, 2008, 30, 590-600.	2.5	52
34	Biological rhythms: Clocks for all times. Current Biology, 2008, 18, R751-R753.	3.9	42
35	Biological switches and clocks. Journal of the Royal Society Interface, 2008, 5, S1-8.	3.4	101
36	Stochastic modelling of nucleocytoplasmic oscillations of the transcription factor Msn2 in yeast. Journal of the Royal Society Interface, 2008, 5, S95-109.	3.4	25

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37	Selection of in-phase or out-of-phase synchronization in a model based on global coupling of cells undergoing metabolic oscillations. Chaos, 2008, 18, 037127.	2.5	21
38	Arginine Biosynthesis in Escherichia coli. Journal of Biological Chemistry, 2008, 283, 6347-6358.	3.4	54
39	Implications of circadian clocks for the rhythmic delivery of cancer therapeutics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3575-3598.	3.4	57
40	The Frequency Encoding of Pulsatility. Novartis Foundation Symposium, 2008, 227, 19-45.	1.1	8
41	Rescue of the Quasiâ€Steadyâ€State Approximation in a Model for Oscillations in an Enzymatic Cascade. SIAM Journal on Applied Mathematics, 2007, 67, 305-320.	1.8	10
42	Sharp developmental thresholds defined through bistability by antagonistic gradients of retinoic acid and FGF signaling. Developmental Dynamics, 2007, 236, 1495-1508.	1.8	126
43	Nucleocytoplasmic Oscillations of the Yeast Transcription Factor Msn2: Evidence for Periodic PKA Activation. Current Biology, 2007, 17, 1044-1049.	3.9	131
44	A cell cycle automaton model for probing circadian patterns of anticancer drug delivery. Advanced Drug Delivery Reviews, 2007, 59, 1036-1053.	13.7	60
45	FROM PERIODIC BEHAVIOR TO CHAOS IN BIOLOGICAL SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 321.	0.4	1
46	Amplitude of circadian oscillations entrained by 24-h lightâ€“dark cycles. Journal of Theoretical Biology, 2006, 242, 478-488.	1.7	40
47	Oscillations and waves of cyclic AMP in Dictyostelium: A prototype for spatio-temporal organization and pulsatile intercellular communication. Bulletin of Mathematical Biology, 2006, 68, 1095-1109.	1.9	43
48	A model for the dynamics of human weight cycling. Journal of Biosciences, 2006, 31, 129-136.	1.1	19
49	Computational Models for Circadian Rhythms: Deterministic Versus Stochastic Approaches. , 2006, , 249-291.		3
50	Report of an EU projects workshop on systems biology held in Brussels, Belgium on 8 December 2004. IET Systems Biology, 2005, 152, 55-60.	2.0	0
51	A biochemical oscillator explains several aspects of Myxococcus xanthus behavior during development. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15760-15765.	7.1	97
52	Computational biology: A propagating wave of interest. Current Biology, 2004, 14, R601-R602.	3.9	5
53	Stochastic models for circadian oscillations: Emergence of a biological rhythm. International Journal of Quantum Chemistry, 2004, 98, 228-238.	2.0	25
54	Emergence of coherent oscillations in stochastic models for circadian rhythms. Physica A: Statistical Mechanics and Its Applications, 2004, 342, 221-233.	2.6	23

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55	Modeling the mammalian circadian clock: Sensitivity analysis and multiplicity of oscillatory mechanisms. Journal of Theoretical Biology, 2004, 230, 541-562.	1.7	146
56	Ilya Prigogine (1917â€“2003). Journal of Biosciences, 2003, 28, 657-659.	1.1	4
57	Segmentation clock: insights from computational models. Current Biology, 2003, 13, R632-R634.	3.9	26
58	Stochastic models for circadian rhythms: effect of molecular noise on periodic and chaotic behaviour. Comptes Rendus - Biologies, 2003, 326, 189-203.	0.2	74
59	Toward a detailed computational model for the mammalian circadian clock. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7051-7056.	7.1	596
60	Development and Validation of Computational Models for Mammalian Circadian Oscillators. OMICS A Journal of Integrative Biology, 2003, 7, 387-400.	2.0	14
61	Oscillatory nucleocytoplasmic shuttling of the general stress response transcriptional activators Msn2 and Msn4 in Saccharomyces cerevisiae. Journal of Cell Biology, 2003, 161, 497-505.	5.2	128
62	Oscillatory Behavior of the Nuclear Localization of the Transcription Factors Msn2 and Msn4 in Response to Stress in Yeast. Scientific World Journal, The, 2003, 3, 609-612.	2.1	8
63	Robustness of circadian rhythms with respect to molecular noise. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 673-678.	7.1	356
64	Time-patterned drug administration: insights from a modeling approach. Chronobiology International, 2002, 19, 157-175.	2.0	24
65	A Model for the Enhancement of Fitness in Cyanobacteria Based on Resonance of a Circadian Oscillator with the External Lightâ€“Dark Cycle. Journal of Theoretical Biology, 2002, 214, 577-597.	1.7	30
66	Computational approaches to cellular rhythms. Nature, 2002, 420, 238-245.	27.8	531
67	From simple to complex oscillatory behavior in metabolic and genetic control networks. Chaos, 2001, 11, 247.	2.5	91
68	A molecular explanation for the long-term suppression of circadian rhythms by a single light pulse. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 280, R1206-R1212.	1.8	36
69	A Model for a Network of Phosphorylationâ€“dephosphorylation Cycles Displaying the Dynamics of Dominoes and Clocks. Journal of Theoretical Biology, 2001, 210, 167-186.	1.7	68
70	Modeling the molecular regulatory mechanism of circadian rhythms in Drosophila. BioEssays, 2000, 22, 84-93.	2.5	81
71	Modeling the Differential Fitness of Cyanobacterial Strains whose Circadian Oscillators have Different Free-running Periods: Comparing the Mutual Inhibition and Substrate Depletion Hypotheses. Journal of Theoretical Biology, 2000, 205, 321-340.	1.7	23
72	Oscillations and bistability predicted by a model for a cyclical bienzymatic system involving the regulated isocitrate dehydrogenase reaction. Biophysical Chemistry, 2000, 83, 153-170.	2.8	12

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73	Entrainment Versus Chaos in a Model for a Circadian Oscillator Driven by Light-Dark Cycles. Journal of Statistical Physics, 2000, 101, 649-663.	1.2	55
74	Theoretical models for circadian rhythms in Neurospora and Drosophila. Comptes Rendus De L'AcadÃ©mie Des Sciences SÃ©rie 3, Sciences De La Vie, 2000, 323, 57-67.	0.8	62
75	Modeling the molecular regulatory mechanism of circadian rhythms in Drosophila. BioEssays, 2000, 22, 84.	2.5	2
76	Alternating Oscillations and Chaos in a Model of Two Coupled Biochemical Oscillators Driving Successive Phases of the Cell Cycle. Annals of the New York Academy of Sciences, 1999, 879, 180-193.	3.8	41
77	Chaos and Birhythmicity in a Model for Circadian Oscillations of the PER and TIM Proteins in Drosophila. Journal of Theoretical Biology, 1999, 198, 445-459.	1.7	128
78	Bursting, Chaos and Birhythmicity Originating from Self-modulation of the Inositol 1,4,5-trisphosphate Signal in a Model for Intracellular Ca2+Oscillations. Bulletin of Mathematical Biology, 1999, 61, 507-530.	1.9	110
79	Limit Cycle Models for Circadian Rhythms Based on Transcriptional Regulation in <i>Drosophila</i> and <i>Neurospora</i>. Journal of Biological Rhythms, 1999, 14, 433-448.	2.6	249
80	CaM kinase II as frequency decoder of Ca2+ oscillations. BioEssays, 1998, 20, 607-610.	2.5	77
81	Modeling oscillations and waves of cAMP in Dictyostelium discoideum cells. Biophysical Chemistry, 1998, 72, 9-19.	2.8	43
82	From bistability to oscillations in a model for the isocitrate dehydrogenase reaction. Biophysical Chemistry, 1998, 72, 201-210.	2.8	11
83	Bistability without Hysteresis in Chemical Reaction Systems:â€‰ The Case of Nonconnected Branches of Coexisting Steady States. Journal of Physical Chemistry A, 1998, 102, 7813-7820.	2.5	3
84	A Model for Circadian Rhythms in<i>Drosophila</i>Incorporating the Formation of a Complex between the PER and TIM Proteins. Journal of Biological Rhythms, 1998, 13, 70-87.	2.6	277
85	Bistability in the Isocitrate Dehydrogenase Reaction: An Experimentally Based Theoretical Study. Biophysical Journal, 1998, 74, 1229-1240.	0.5	27
86	Temperature Compensation of Circadian Rhythms: Control of the Period in a Model for Circadian Oscillations of the Per Protein in Drosophila. Chronobiology International, 1997, 14, 511-520.	2.0	56
87	Bistability without Hysteresis in Chemical Reaction Systems:Â A Theoretical Analysis of Irreversible Transitions between Multiple Steady States. Journal of Physical Chemistry A, 1997, 101, 9367-9376.	2.5	39
88	Modelling oscillations and waves of cytosolic calcium. Nonlinear Analysis: Theory, Methods & Applications, 1997, 30, 1781-1792.	1.1	7
89	Complex intracellular calcium oscillations A theoretical exploration of possible mechanisms. Biophysical Chemistry, 1997, 66, 25-41.	2.8	111
90	The Glucose-induced Switch Between Glycogen Phosphorylase and Glycogen Synthase in the Liver: Outlines of a Theoretical Approach. Journal of Theoretical Biology, 1996, 182, 421-426.	1.7	23

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91	Thresholds and Oscillations in Enzymatic Cascades. The Journal of Physical Chemistry, 1996, 100, 19174-19181.	2.9	10
92	Scaling in biochemical kinetics: dissection of a relaxation oscillator. Journal of Mathematical Biology, 1994, 32, 147-160.	1.9	18
93	Enzyme Sharing in Phosphorylation-Dephosphorylation Cascades: The Case where One Protein Kinase (or Phosphatase) Acts on Two Different Substrates. Journal of Theoretical Biology, 1993, 165, 43-61.	1.7	3
94	Protein phosphorylation driven by intracellular calcium oscillations: A kinetic analysis. Biophysical Chemistry, 1992, 42, 257-270.	2.8	48
95	Problems and paradigms: Oscillations and waves of cytosolic calcium: Insights from theoretical models. BioEssays, 1992, 14, 485-493.	2.5	77
96	Frequency encoding of pulsatile signals of cAMP based on receptor desensitization in Dictyostelium cells. Journal of Theoretical Biology, 1990, 146, 355-367.	1.7	13
97	Allosteric regulation, cooperativity, and biochemical oscillations. Biophysical Chemistry, 1990, 37, 341-353.	2.8	49
98	Oscillatory isozymes as the simplest model for coupled biochemical oscillators. Journal of Theoretical Biology, 1989, 138, 149-174.	1.7	30
99	A Model Based on Receptor Desensitization for Cyclic AMP Signaling in Dictyostelium Cells. Biophysical Journal, 1987, 52, 807-828.	0.5	290
100	From simple to complex oscillatory behaviour: Analysis of bursting in a multiply regulated biochemical system. Journal of Theoretical Biology, 1987, 124, 219-250.	1.7	79
101	Modeling dynamic phenomena in molecular and cellular biology. Mathematical Biosciences, 1986, 78, 149-152.	1.9	0
102	A mechanism for exact sensory adaptation based on receptor modification. Journal of Theoretical Biology, 1986, 120, 151-179.	1.7	91
103	Excitability with multiple thresholds. Biophysical Chemistry, 1985, 23, 71-77.	2.8	8
104	Birhythmicity in a model for the cyclic AMP signalling system of the slime mold Dictyostelium discoideum. FEBS Letters, 1985, 191, 149-153.	2.8	24
105	Metabolic oscillations in biochemical systems controlled by covalent enzyme modification. Biochimie, 1981, 63, 119-124.	2.6	6
106	On the role of enzyme cooperativity in metabolic oscillations: analysis of the hill coefficient in a model for glycolytic periodicities. Biophysical Chemistry, 1976, 6, 95-99.	2.8	10
107	Mechanism for oscillatory synthesis of cyclic AMP in Dictyostelium discoideum. Nature, 1975, 253, 540-542.	27.8	81
108	Modulation of the adenylate energy charge by sustained metabolic oscillations. FEBS Letters, 1974, 43, 327-330.	2.8	42

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109	Kinetic negative co-operativity in the allosteric model of Monod, Wyman and Changeux. Journal of Molecular Biology, 1974, 90, 185-190.	4.2	13
110	Optimizing Temporal Patterns of Anticancer Drug Delivery by Simulations of a Cell Cycle Automaton. , 0, , 273-297.		1