

Madalena Chaves

List of Publications by Year in descending order

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75
papers

1,292
citations

471371

17
h-index

395590

33
g-index

75
all docs

75
docs citations

75
times ranked

986
citing authors

#	ARTICLE	IF	CITATIONS
1	Robustness and fragility of Boolean models for genetic regulatory networks. <i>Journal of Theoretical Biology</i> , 2005, 235, 431-449.	0.8	295
2	Methods of robustness analysis for Boolean models of gene control networks. <i>IET Systems Biology</i> , 2006, 153, 154.	2.0	126
3	Bistable Biological Systems: A Characterization Through Local Compact Input-to-State Stability. <i>IEEE Transactions on Automatic Control</i> , 2008, 53, 87-100.	3.6	82
4	Uncovering operational interactions in genetic networks using asynchronous Boolean dynamics. <i>Journal of Theoretical Biology</i> , 2009, 260, 196-209.	0.8	77
5	Methods for qualitative analysis of genetic networks. , 2009, , .		50
6	Optimal Length and Signal Amplification in Weakly Activated Signal Transduction Cascades. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15311-15320.	1.2	46
7	State-estimators for Chemical Reaction Networks of Feinberg-Horn-Jackson Zero Deficiency Type. <i>European Journal of Control</i> , 2002, 8, 343-359.	1.6	45
8	Shape, Size, and Robustness: Feasible Regions in the Parameter Space of Biochemical Networks. <i>PLoS Computational Biology</i> , 2009, 5, e1000256.	1.5	44
9	Exact control of genetic networks in a qualitative framework: The bistable switch example. <i>Automatica</i> , 2011, 47, 1105-1112.	3.0	35
10	Multistability and oscillations in genetic control of metabolism. <i>Journal of Theoretical Biology</i> , 2012, 295, 139-153.	0.8	34
11	A Theoretical Exploration of Birhythmicity in the p53-Mdm2 Network. <i>PLoS ONE</i> , 2011, 6, e17075.	1.1	34
12	Input-to-State Stability of Rate-Controlled Biochemical Networks. <i>SIAM Journal on Control and Optimization</i> , 2005, 44, 704-727.	1.1	27
13	Design of a bistable switch to control cellular uptake. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150618.	1.5	25
14	Transcription-based circadian mechanism controls the duration of molecular clock states in response to signaling inputs. <i>Journal of Theoretical Biology</i> , 2020, 484, 110015.	0.8	25
15	Hierarchy of models: From qualitative to quantitative analysis of circadian rhythms in cyanobacteria. <i>Chaos</i> , 2013, 23, 025113.	1.0	24
16	Modeling and Analysis of Gene Regulatory Networks. , 2013, , 47-80.		24
17	Comparing Boolean and Piecewise Affine Differential Models for Genetic Networks. <i>Acta Biotheoretica</i> , 2010, 58, 217-232.	0.7	23
18	Geometry and topology of parameter space: investigating measures of robustness in regulatory networks. <i>Journal of Mathematical Biology</i> , 2009, 59, 315-358.	0.8	22

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19	Steady-states of receptor–ligand dynamics: a theoretical framework. <i>Journal of Theoretical Biology</i> , 2004, 227, 413-428.	0.8	21
20	Dynamics of complex feedback architectures in metabolic pathways. <i>Automatica</i> , 2019, 99, 323-332.	3.0	20
21	Vehicle networks: achieving regular formation. , 0, , .		16
22	Interconnection of asynchronous Boolean networks, asymptotic and transient dynamics. <i>Automatica</i> , 2013, 49, 884-893.	3.0	16
23	Studying the effect of cell division on expression patterns of the segment polarity genes. <i>Journal of the Royal Society Interface</i> , 2008, 5, S71-84.	1.5	14
24	Live and let die—A systems biology view on cell death. <i>Computers and Chemical Engineering</i> , 2009, 33, 583-589.	2.0	13
25	Regulation of Apoptosis via the NF κ B Pathway: Modeling and Analysis. , 2009, , 19-33.		11
26	Control of synchronization ratios in clock/cell cycle coupling by growth factors and glucocorticoids. <i>Royal Society Open Science</i> , 2020, 7, 192054.	1.1	11
27	Exact computation of amplification for a class of nonlinear systems arising from cellular signaling pathways. <i>Automatica</i> , 2006, 42, 1987-1992.	3.0	9
28	Analysis Tools for Interconnected Boolean Networks With Biological Applications. <i>Frontiers in Physiology</i> , 2018, 9, 586.	1.3	9
29	A Stability Result for Periodic Solutions of Nonmonotonic Smooth Negative Feedback Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 1091-1116.	0.7	7
30	Analysis of a genetic-metabolic oscillator with piecewise linear models. <i>Journal of Theoretical Biology</i> , 2019, 462, 259-269.	0.8	7
31	Stability of Rate-Controlled Zero-Deficiency Networks. , 2006, , .		6
32	Predicting the asymptotic dynamics of large biological networks by interconnections of Boolean modules. , 2011, , .		6
33	Attractor computation using interconnected Boolean networks: Testing growth rate models in <i>E. Coli</i> . <i>Theoretical Computer Science</i> , 2015, 599, 47-63.	0.5	6
34	Periodic Oscillations for Nonmonotonic Smooth Negative Feedback Circuits. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016, 15, 257-286.	0.7	6
35	Cycle dynamics and synchronization in a coupled network of peripheral circadian clocks. <i>Interface Focus</i> , 2022, 12, 20210087.	1.5	6
36	Oscillations induced by different timescales in signal transduction modules regulated by slowly evolving protein–protein interactions. <i>IET Systems Biology</i> , 2010, 4, 263-276.	0.8	5

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37	A linear reformulation of Boolean optimization problems and structure identification of gene regulation networks. , 2013, , .		4
38	Applying differential dynamic logic to reconfigurable biological networks. Mathematical Biosciences, 2017, 291, 10-20.	0.9	4
39	A comprehensive reduced model of the mammalian cell cycle. IFAC-PapersOnLine, 2017, 50, 12617-12622.	0.5	4
40	Coupling and synchronization of piecewise linear genetic regulatory systems. , 2019, , .		4
41	A Simple Model to Control Growth Rate of Synthetic E. coli during the Exponential Phase: Model Analysis and Parameter Estimation. Lecture Notes in Computer Science, 2012, , 107-126.	1.0	4
42	Qualitative Control Strategies for Synchronization of Bistable Gene Regulatory Networks. IEEE Transactions on Automatic Control, 2023, 68, 673-688.	3.6	4
43	COMPUTATION OF AMPLIFICATION FOR SYSTEMS ARISING FROM CELLULAR SIGNALING PATHWAYS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 7-12.	0.4	3
44	BISTABILITY PRESERVING MODEL REDUCTION IN APOPTOSIS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 19-24.	0.4	3
45	Global Gene Regulation in Metabolic Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14838-14843.	0.4	3
46	Topology-induced dynamics in a network of synthetic oscillators with piecewise affine approximation. Chaos, 2020, 30, 113128.	1.0	3
47	Cell cycle period control through modulation of clock inputs. Journal of Bioinformatics and Computational Biology, 2020, 18, 2040006.	0.3	3
48	Qualitative Modeling, Analysis and Control of Synthetic Regulatory Circuits. Methods in Molecular Biology, 2021, 2229, 1-40.	0.4	3
49	Observers for chemical reaction networks. , 2001, , .		2
50	Structure and timescale analysis in genetic regulatory networks. , 2006, , .		2
51	Probabilistic Approach for Predicting Periodic Orbits in Piecewise Affine Differential Models. Bulletin of Mathematical Biology, 2013, 75, 967-987.	0.9	2
52	A class of Switched Piecewise Quadratic Systems for coupling gene expression with growth rate in bacteria. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 271-276.	0.4	2
53	Continuous-switch piecewise quadratic models of biological networks: Application to bacterial growth. Automatica, 2015, 61, 164-172.	3.0	2
54	Period - control in a coupled system of two genetic oscillators for synthetic biology. IFAC-PapersOnLine, 2019, 52, 70-75.	0.5	2

#	ARTICLE	IF	CITATIONS
55	Boolean dynamics revisited through feedback interconnections. <i>Natural Computing</i> , 2020, 19, 29-49.	1.8	2
56	rPrism – A Software for Reactive Weighted State Transition Models. <i>Lecture Notes in Computer Science</i> , 2019, , 165-174.	1.0	2
57	An observer for a piecewise affine genetic network model with Boolean observations. , 2011, , .		1
58	Mechanisms for coexistence of two limit cycles in a biochemical model. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 8378-8383.	0.4	1
59	Structure estimation for unate Boolean models of gene regulation networks. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 1725-1730.	0.4	1
60	2D piecewise affine models approximate real continuous dynamics up to invariant sets**This work was supported in part by the projects GeMCo (ANR 2010 BLANCO20101), RESET (Bioinformatique,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54 1060-1065.	0.5	1
61	Qualitative Analysis of Mammalian Circadian Oscillations: Cycle Dynamics and Robustness. <i>Lecture Notes in Computer Science</i> , 2020, , 176-192.	1.0	1
62	Period control of the coupled clock and cell cycle systems. , 2019, , .		1
63	Piecewise Affine Models of Regulatory Genetic Networks: Review and Probabilistic Interpretation. <i>Lecture Notes in Control and Information Sciences</i> , 2010, , 241-253.	0.6	1
64	An Alternative Observer for Zero Deficiency Chemical Networks. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001, 34, 537-540.	0.4	0
65	Discussion on –State-estimators for Chemical Reaction Networks of Feinberg-Horn-Jackson Zero Deficiency Type– by M. Chaves and E.D. Sontag. <i>European Journal of Control</i> , 2002, 8, 360.	1.6	0
66	Gains and optimal design in signaling pathways. , 2004, , .		0
67	Live & let die - A systems biology view on cell death. <i>Computer Aided Chemical Engineering</i> , 2007, , 927-928.	0.3	0
68	Study and parameter identification of a model coupling cell signaling and gene expression. , 2008, , .		0
69	Qualitative Control of Genetic Networks: the Bistable Switch Example. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 338-343.	0.4	0
70	Robust estimation for hybrid models of genetic networks. , 2012, , .		0
71	Links between topology of the transition graph and limit cycles in a two-dimensional piecewise affine biological model. <i>Journal of Mathematical Biology</i> , 2014, 69, 1461-1495.	0.8	0
72	Special issue –International Symposium on Molecular Logic and Computational Synthetic Biology: MLCSB18–. <i>Soft Computing</i> , 2021, 25, 6729-6730.	2.1	0

#	ARTICLE	IF	CITATIONS
73	Operational interactions in genetic networks: Application to an apoptosis signalling pathway. , 2009, , .		0
74	Control for synchronization of bistable piecewise affine genetic regulatory networks. IFAC-PapersOnLine, 2021, 54, 77-80.	0.5	0
75	Weak synchronization and convergence in coupled genetic regulatory networks: Applications to damped oscillators and multistable circuits. International Journal of Robust and Nonlinear Control, 2023, 33, 4867-4892.	2.1	0