# Madalena Chaves

List of Publications by Year
in descending order

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|---|---|---|---|
| 75<br>papers | 1,292<br>citations | 471061<br>17<br>h-index | 395343<br>33<br>g-index |
| 75<br>all docs | 75<br>docs citations | 75<br>times ranked | 986<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Qualitativeâ€‰Controlâ€‰Strategiesâ€‰forâ€‰Synchronization of Bistable Gene Regulatory Networks. IEEE Transactions on Automatic Control, 2023, 68, 673-688. | 3.6 | 4 |
| 2 | 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 |
| 3 | Cycle dynamics and synchronization in a coupled network of peripheral circadian clocks. Interface Focus, 2022, 12, 20210087. | 1.5 | 6 |
| 4 | Special issue â€œInternational Symposium on Molecular Logic and Computational Synthetic Biology: MLCSB18â€• Soft Computing, 2021, 25, 6729-6730. | 2.1 | 0 |
| 5 | Qualitative Modeling, Analysis and Control of Synthetic Regulatory Circuits. Methods in Molecular Biology, 2021, 2229, 1-40. | 0.4 | 3 |
| 6 | Control for synchronization of bistable piecewise affine genetic regulatory networks. IFAC-PapersOnLine, 2021, 54, 77-80. | 0.5 | 0 |
| 7 | Boolean dynamics revisited through feedback interconnections. Natural Computing, 2020, 19, 29-49. | 1.8 | 2 |
| 8 | Transcription-based circadian mechanism controls the duration of molecular clock states in response to signaling inputs. Journal of Theoretical Biology, 2020, 484, 110015. | 0.8 | 25 |
| 9 | Topology-induced dynamics in a network of synthetic oscillators with piecewise affine approximation. Chaos, 2020, 30, 113128. | 1.0 | 3 |
| 10 | Control of synchronization ratios in clock/cell cycle coupling by growth factors and glucocorticoids. Royal Society Open Science, 2020, 7, 192054. | 1.1 | 11 |
| 11 | Cell cycle period control through modulation of clock inputs. Journal of Bioinformatics and Computational Biology, 2020, 18, 2040006. | 0.3 | 3 |
| 12 | Qualitative Analysis of Mammalian Circadian Oscillations: Cycle Dynamics and Robustness. Lecture Notes in Computer Science, 2020, , 176-192. | 1.0 | 1 |
| 13 | Coupling and synchronization of piecewise linear genetic regulatory systems. , 2019, , . | | 4 |
| 14 | Period - control in a coupled system of two genetic oscillators for synthetic biology. IFAC-PapersOnLine, 2019, 52, 70-75. | 0.5 | 2 |
| 15 | Dynamics of complex feedback architectures in metabolic pathways. Automatica, 2019, 99, 323-332. | 3.0 | 20 |
| 16 | Analysis of a genetic-metabolic oscillator with piecewise linear models. Journal of Theoretical Biology, 2019, 462, 259-269. | 0.8 | 7 |
| 17 | rPrism â€“ A Software for Reactive Weighted State Transition Models. Lecture Notes in Computer Science, 2019, , 165-174. | 1.0 | 2 |
| 18 | Period control of the coupled clock and cell cycle systems. , 2019, , . | | 1 |

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|---|---|---|---|
| 19 | A Stability Result for Periodic Solutions of Nonmonotonic Smooth Negative Feedback Systems. SIAM Journal on Applied Dynamical Systems, 2018, 17, 1091-1116. | 0.7 | 7 |
| 20 | Analysis Tools for Interconnected Boolean Networks With Biological Applications. Frontiers in Physiology, 2018, 9, 586. | 1.3 | 9 |
| 21 | Applying differential dynamic logic to reconfigurable biological networks. Mathematical Biosciences, 2017, 291, 10-20. | 0.9 | 4 |
| 22 | A comprehensive reduced model of the mammalian cell cycle. IFAC-PapersOnLine, 2017, 50, 12617-12622. | 0.5 | 4 |
| 23 | 2D piecewise affine models approximate real continuous dynamics up to invariant sets**This work was supported in part by the projects GeMCo (ANR 2010 BLANC020101), RESET (Bioinformatique,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 1060-1065. | 0.5 | 1 |
| 24 | Periodic Oscillations for Nonmonotonic Smooth Negative Feedback Circuits. SIAM Journal on Applied Dynamical Systems, 2016, 15, 257-286. | 0.7 | 6 |
| 25 | Design of a bistable switch to control cellular uptake. Journal of the Royal Society Interface, 2015, 12, 20150618. | 1.5 | 25 |
| 26 | Continuous-switch piecewise quadratic models of biological networks: Application to bacterial growth. Automatica, 2015, 61, 164-172. | 3.0 | 2 |
| 27 | Attractor computation using interconnected Boolean networks: Testing growth rate models in E. Coli. Theoretical Computer Science, 2015, 599, 47-63. | 0.5 | 6 |
| 28 | Links between topology of the transition graph and limit cycles in a two-dimensional piecewise affine biological model. Journal of Mathematical Biology, 2014, 69, 1461-1495. | 0.8 | 0 |
| 29 | Probabilistic Approach for Predicting Periodic Orbits in Piecewise Affine Differential Models. Bulletin of Mathematical Biology, 2013, 75, 967-987. | 0.9 | 2 |
| 30 | A linear reformulation of Boolean optimization problems and structure identification of gene regulation networks. , 2013, , . | | 4 |
| 31 | Interconnection of asynchronous Boolean networks, asymptotic and transient dynamics. Automatica, 2013, 49, 884-893. | 3.0 | 16 |
| 32 | Hierarchy of models: From qualitative to quantitative analysis of circadian rhythms in cyanobacteria. Chaos, 2013, 23, 025113. | 1.0 | 24 |
| 33 | 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 |
| 34 | Modeling and Analysis of Gene Regulatory Networks. , 2013, , 47-80. | | 24 |
| 35 | Structure estimation for unate Boolean models of gene regulation networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1725-1730. | 0.4 | 1 |
| 36 | Robust estimation for hybrid models of genetic networks. , 2012, , . | | 0 |

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|---|---|---|---|
| 37 | Multistability and oscillations in genetic control of metabolism. Journal of Theoretical Biology, 2012, 295, 139-153. | 0.8 | 34 |
| 38 | 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 |
| 39 | An observer for a piecewise affine genetic network model with Boolean observations. , 2011, , . | | 1 |
| 40 | Global Gene Regulation in Metabolic Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14838-14843. | 0.4 | 3 |
| 41 | Mechanisms for coexistence of two limit cycles in a biochemical model1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 8378-8383. | 0.4 | 1 |
| 42 | Exact control of genetic networks in a qualitative framework: The bistable switch example. Automatica, 2011, 47, 1105-1112. | 3.0 | 35 |
| 43 | Predicting the asymptotic dynamics of large biological networks by interconnections of Boolean modules. , 2011, , . | | 6 |
| 44 | A Theoretical Exploration of Birhythmicity in the p53-Mdm2 Network. PLoS ONE, 2011, 6, e17075. | 1.1 | 34 |
| 45 | Qualitative Control of Genetic Networks: the Bistable Switch Example. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 338-343. | 0.4 | 0 |
| 46 | Comparing Boolean and Piecewise Affine Differential Models for Genetic Networks. Acta Biotheoretica, 2010, 58, 217-232. | 0.7 | 23 |
| 47 | Oscillations induced by different timescales in signal transduction modules regulated by slowly evolving proteinâ€“protein interactions. IET Systems Biology, 2010, 4, 263-276. | 0.8 | 5 |
| 48 | Piecewise Affine Models of Regulatory Genetic Networks: Review and Probabilistic Interpretation. Lecture Notes in Control and Information Sciences, 2010, , 241-253. | 0.6 | 1 |
| 49 | Methods for qualitative analysis of genetic networks. , 2009, , . | | 50 |
| 50 | Shape, Size, and Robustness: Feasible Regions in the Parameter Space of Biochemical Networks. PLoS Computational Biology, 2009, 5, e1000256. | 1.5 | 44 |
| 51 | Uncovering operational interactions in genetic networks using asynchronous Boolean dynamics. Journal of Theoretical Biology, 2009, 260, 196-209. | 0.8 | 77 |
| 52 | Geometry and topology of parameter space: investigating measures of robustness in regulatory networks. Journal of Mathematical Biology, 2009, 59, 315-358. | 0.8 | 22 |
| 53 | Live and let dieâ€”A systems biology view on cell death. Computers and Chemical Engineering, 2009, 33, 583-589. | 2.0 | 13 |
| 54 | Regulation of Apoptosis via the NFÎºB Pathway: Modeling and Analysis. , 2009, , 19-33. | | 11 |

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|---|---|---|---|
| 55 | Operational interactions in genetic networks: Application to an apoptosis signalling pathway. , 2009, , . | | 0 |
| 56 | 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 |
| 57 | Bistable Biological Systems: A Characterization Through Local Compact Input-to-State Stability. IEEE Transactions on Automatic Control, 2008, 53, 87-100. | 3.6 | 82 |
| 58 | Study and parameter identification of a model coupling cell signaling and gene expression. , 2008, , . | | 0 |
| 59 | Live & let die - A systems biology view on cell death. Computer Aided Chemical Engineering, 2007, , 927-928. | 0.3 | 0 |
| 60 | BISTABILITY PRESERVING MODEL REDUCTION IN APOPTOSIS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 19-24. | 0.4 | 3 |
| 61 | Exact computation of amplification for a class of nonlinear systems arising from cellular signaling pathways. Automatica, 2006, 42, 1987-1992. | 3.0 | 9 |
| 62 | Methods of robustness analysis for Boolean models of gene control networks. IET Systems Biology, 2006, 153, 154. | 2.0 | 126 |
| 63 | Structure and timescale analysis in genetic regulatory networks. , 2006, , . | | 2 |
| 64 | Stability of Rate-Controlled Zero-Deficiency Networks. , 2006, , . | | 6 |
| 65 | 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 |
| 66 | Robustness and fragility of Boolean models for genetic regulatory networks. Journal of Theoretical Biology, 2005, 235, 431-449. | 0.8 | 295 |
| 67 | Input-to-State Stability of Rate-Controlled Biochemical Networks. SIAM Journal on Control and Optimization, 2005, 44, 704-727. | 1.1 | 27 |
| 68 | Steady-states of receptorâ€“ligand dynamics: a theoretical framework. Journal of Theoretical Biology, 2004, 227, 413-428. | 0.8 | 21 |
| 69 | Optimal Length and Signal Amplification in Weakly Activated Signal Transduction Cascades. Journal of Physical Chemistry B, 2004, 108, 15311-15320. | 1.2 | 46 |
| 70 | Gains and optimal design in signaling pathways. , 2004, , . | | 0 |
| 71 | Discussion on â€˜State-estimators for Chemical Reaction Networks of Feinberg-Horn-Jackson Zero Deficiency Typeâ€™ by M. Chaves and E.D. Sontag. European Journal of Control, 2002, 8, 360. | 1.6 | 0 |
| 72 | State-estimators for Chemical Reaction Networks of Feinberg-Horn-Jackson Zero Deficiency Type. European Journal of Control, 2002, 8, 343-359. | 1.6 | 45 |

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| 73 | Observers for chemical reaction networks. , 2001, , . | | 2 |
| 74 | An Alternative Observer for Zero Deficiency Chemical Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 537-540. | 0.4 | 0 |
| 75 | Vehicle networks: achieving regular formation. , 0, , . | | 16 |