# Jean-Luc GouzÃ©

List of Publications by Year
in descending order

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|---|---|---|---|
| 115 papers | 2,848 citations | 331670 21 h-index | 182427 51 g-index |
| 122 all docs | 122 docs citations | 122 times ranked | 1330 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | State observation in microbial consortia: A case study on a synthetic producerâ€cleaner consortium. International Journal of Robust and Nonlinear Control, 2023, 33, 5011-5022. | 3.7 | 1 |
| 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. | 3.7 | 0 |
| 3 | Dynamical Analysis and Optimization of a Generalized Resource Allocation Model of Microbial Growth. SIAM Journal on Applied Dynamical Systems, 2022, 21, 137-165. | 1.6 | 3 |
| 4 | Turnpike Property in Optimal Microbial Metabolite Production. Journal of Optimization Theory and Applications, 2022, 194, 375-407. | 1.5 | 3 |
| 5 | Global dynamics of the chemostat with overflow metabolism. Journal of Mathematical Biology, 2021, 82, 13. | 1.9 | 3 |
| 6 | Optimal proteome allocation and the temperature dependence of microbial growth laws. Npj Systems Biology and Applications, 2021, 7, 14. | 3.0 | 14 |
| 7 | Control for synchronization of bistable piecewise affine genetic regulatory networks. IFAC-PapersOnLine, 2021, 54, 77-80. | 0.9 | 0 |
| 8 | Hierarchical MPC applied to bacterial resource allocation and metabolite synthesis. , 2021, , . | | 2 |
| 9 | Qualitative control of undesired oscillations in a genetic negative feedback loop with uncertain measurements. Automatica, 2020, 112, 108642. | 5.0 | 3 |
| 10 | Robust adaptive estimation in the competitive chemostat. Computers and Chemical Engineering, 2020, 142, 107030. | 3.8 | 1 |
| 11 | Robust stabilization of competing species in the chemostat. Journal of Process Control, 2020, 87, 138-146. | 3.3 | 1 |
| 12 | Reducing a model of sugar metabolism in peach to catch different patterns among genotypes. Mathematical Biosciences, 2020, 321, 108321. | 1.9 | 1 |
| 13 | Enhanced production of heterologous proteins by a synthetic microbial community: Conditions and trade-offs. PLoS Computational Biology, 2020, 16, e1007795. | 3.2 | 20 |
| 14 | Observer-Based Robust Control of a Continuous Bioreactor with Heterogeneous Community. IFAC-PapersOnLine, 2020, 53, 11800-11805. | 0.9 | 2 |
| 15 | Optimizing bacterial resource allocation: metabolite production in continuous bioreactors. IFAC-PapersOnLine, 2020, 53, 16753-16758. | 0.9 | 5 |
| 16 | Optimal bacterial resource allocation: metabolite production in continuous bioreactors. Mathematical Biosciences and Engineering, 2020, 17, 7074-7100. | 1.9 | 8 |
| 17 | Control of negative feedback loops in genetic networks. , 2020, , . | | 2 |
| 18 | Control strategies for sustained oscillations in a disrupted biological clock. IFAC-PapersOnLine, 2020, 53, 16733-16738. | 0.9 | 0 |

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|---|---|---|---|
| 19 | Optimal control of a fed-batch reactor with overflow metabolism. IFAC-PapersOnLine, 2020, 53, 16820-16825. | 0.9 | 2 |
| 20 | A new qualitative control strategy for the genetic Toggle Switch. IFAC-PapersOnLine, 2019, 52, 532-537. | 0.9 | 6 |
| 21 | Global asymptotic stability of a genetic negative feedback loop with an affine control. , 2019, , . | | 0 |
| 22 | Robust Control of a Competitive Environment in the Chemostat using Discontinuous Control Laws. , 2019, , . | | 2 |
| 23 | Singular regimes for the maximization of metabolite production. , 2019, , . | | 6 |
| 24 | On Adaptive Estimation of Bacterial Growth in the Competitive Chemostat. IFAC-PapersOnLine, 2019, 52, 262-267. | 0.9 | 1 |
| 25 | Global stabilization of a genetic positive feedback loop via the design of a synthetic auto-repression. IFAC-PapersOnLine, 2019, 52, 143-148. | 0.9 | 0 |
| 26 | Dynamical reduction of linearized metabolic networks through quasi steady state approximation. AIChE Journal, 2019, 65, 18-31. | 3.6 | 4 |
| 27 | Analysis of a genetic-metabolic oscillator with piecewise linear models. Journal of Theoretical Biology, 2019, 462, 259-269. | 1.7 | 7 |
| 28 | Optimal control of bacterial growth for the maximization of metabolite production. Journal of Mathematical Biology, 2019, 78, 985-1032. | 1.9 | 20 |
| 29 | Modeling the bioconversion of polysaccharides in a continuous reactor: A case study of the production of oligogalacturonates by Dickeya dadantii. Journal of Biological Chemistry, 2019, 294, 1753-1762. | 3.4 | 4 |
| 30 | Reduction and Stability Analysis of a Transcriptionâ€“Translation Model of RNA Polymerase. Bulletin of Mathematical Biology, 2018, 80, 294-318. | 1.9 | 3 |
| 31 | A Stability Result for Periodic Solutions of Nonmonotonic Smooth Negative Feedback Systems. SIAM Journal on Applied Dynamical Systems, 2018, 17, 1091-1116. | 1.6 | 7 |
| 32 | Optimal feedback strategies for bacterial growth with degradation, recycling, and effect of temperature. Optimal Control Applications and Methods, 2018, 39, 1084-1109. | 2.1 | 12 |
| 33 | Analytical Reduction of Nonlinear Metabolic Networks Accounting for Dynamics in Enzymatic Reactions. Complexity, 2018, 2018, 1-22. | 1.6 | 3 |
| 34 | Principal process analysis of biological models. BMC Systems Biology, 2018, 12, 68. | 3.0 | 2 |
| 35 | Optimization and control of bioâ€conversion of polymeric substrate in the chemostat. AICHE Journal, 2017, 63, 4738-4747. | 3.6 | 1 |
| 36 | Mathematical modelling of microbes: metabolism, gene expression and growth. Journal of the Royal Society Interface, 2017, 14, 20170502. | 3.4 | 46 |

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|---|---|---|---|
| 37 | Optimal resource allocation for bacterial growth with degradation * *This work was supported in part by the project RESET (Bioin-formatique, ANR-11-BINF-0005) and program LABEX SIGNALIFE (ANR-11-LABX-0028-01).. IFAC-PapersOnLine, 2017, 50, 9858-9863. | 0.9 | 2 |
| 38 | Principal Process Analysis and reduction of biological models with order of magnitude. IFAC-PapersOnLine, 2017, 50, 12661-12666. | 0.9 | 1 |
| 39 | Dynamical Allocation of Cellular Resources as an Optimal Control Problem: Novel Insights into Microbial Growth Strategies. PLoS Computational Biology, 2016, 12, e1004802. | 3.2 | 84 |
| 40 | 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 ETQq0 0 0 rgBT /Overlock 10 Tf 50 62 1060-1065. | 0.9 | 1 |
| 41 | Periodic Oscillations for Nonmonotonic Smooth Negative Feedback Circuits. SIAM Journal on Applied Dynamical Systems, 2016, 15, 257-286. | 1.6 | 6 |
| 42 | Hybrid Control of a Bioreactor With Quantized Measurements. IEEE Transactions on Automatic Control, 2016, 61, 1385-1390. | 5.7 | 11 |
| 43 | Model reduction and process analysis of biological models. , 2015, , . | | 1 |
| 44 | Continuous-switch piecewise quadratic models of biological networks: Application to bacterial growth. Automatica, 2015, 61, 164-172. | 5.0 | 2 |
| 45 | Stability analysis of a reduced transcription-translation model of RNA polymerase. , 2014, , . | | 2 |
| 46 | 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. | 1.9 | 0 |
| 47 | Mathematical study of the global dynamics of a concave gene expression model. , 2014, , . | | 2 |
| 48 | Control of a Bioreactor with Quantized Measurements. Lecture Notes in Computer Science, 2014, , 47-62. | 1.3 | 0 |
| 49 | Probabilistic Approach for Predicting Periodic Orbits in Piecewise Affine Differential Models. Bulletin of Mathematical Biology, 2013, 75, 967-987. | 1.9 | 2 |
| 50 | Global Stability of Reversible Enzymatic Metabolic Chains. Acta Biotheoretica, 2013, 61, 41-57. | 1.5 | 3 |
| 51 | Stabilizing Effect of Cannibalism in a Two Stages Population Model. Acta Biotheoretica, 2013, 61, 119-139. | 1.5 | 2 |
| 52 | Global Stability of Enzymatic Chains of Full Reversible Michaelis-Menten Reactions. Acta Biotheoretica, 2013, 61, 425-436. | 1.5 | 6 |
| 53 | Stability analysis and reduction of gene transcription models. , 2013, , . | | 4 |
| 54 | Positive control for global stabilization of predator-prey systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 265-270. | 0.4 | 6 |

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|---|---|---|---|
| 55 | 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 |
| 56 | Analysis and reduction of transcription translation coupled models for gene expression. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 36-41. | 0.4 | 3 |
| 57 | Modeling and Analysis of Gene Regulatory Networks. , 2013, , 47-80. | | 24 |
| 58 | Global Stability of Full Open Reversible Michaelis-Menten Reactions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 591-596. | 0.4 | 5 |
| 59 | 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 |
| 60 | Stabilization of an oscillating n-dimensional structured population model. , 2012, , . | | 0 |
| 61 | Robust estimation for hybrid models of genetic networks. , 2012, , . | | 0 |
| 62 | Global stability for a model of competition in the chemostat with microbial inputs. Nonlinear Analysis: Real World Applications, 2012, 13, 582-598. | 1.7 | 19 |
| 63 | 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. | 1.3 | 4 |
| 64 | An observer for a piecewise affine genetic network model with Boolean observations. , 2011, , . | | 1 |
| 65 | Exact control of genetic networks in a qualitative framework: The bistable switch example. Automatica, 2011, 47, 1105-1112. | 5.0 | 35 |
| 66 | Dynamical study and robustness for a nonlinear wastewater treatment model. Nonlinear Analysis: Real World Applications, 2011, 12, 487-500. | 1.7 | 13 |
| 67 | A Theoretical Exploration of Birhythmicity in the p53-Mdm2 Network. PLoS ONE, 2011, 6, e17075. | 2.5 | 34 |
| 68 | Qualitative control of periodic solutions in piecewise affine models of genetic networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 326-331. | 0.4 | 1 |
| 69 | 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 |
| 70 | Comparing Boolean and Piecewise Affine Differential Models for Genetic Networks. Acta Biotheoretica, 2010, 58, 217-232. | 1.5 | 23 |
| 71 | Constrained Hybrid Neural Modelling of Biotechnological Processes. International Journal of Chemical Reactor Engineering, 2010, 8, . | 1.1 | 2 |
| 72 | Limit cycles in piecewise-affine gene network models with multiple interaction loops. International Journal of Systems Science, 2010, 41, 119-130. | 5.5 | 18 |

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|---|---|---|---|
| 73 | Piecewise Affine Models of Regulatory Genetic Networks: Review and Probabilistic Interpretation. Lecture Notes in Control and Information Sciences, 2010, , 241-253. | 1.0 | 1 |
| 74 | Periodic Solutions of Piecewise Affine Gene Network Models with Non Uniform Decay Rates: The Case of a Negative Feedback Loop. Acta Biotheoretica, 2009, 57, 429-455. | 1.5 | 28 |
| 75 | Near optimal interval observers bundle for uncertain bioreactors. Automatica, 2009, 45, 291-295. | 5.0 | 184 |
| 76 | An Algorithmic Approach to Orders of Magnitude in a Biochemical System. Lecture Notes in Control and Information Sciences, 2009, , 233-241. | 1.0 | 1 |
| 77 | A Simple Unforced Oscillatory Growth Model in the Chemostat. Bulletin of Mathematical Biology, 2008, 70, 344-357. | 1.9 | 13 |
| 78 | Hierarchical analysis of piecewise affine models of gene regulatory networks. Theory in Biosciences, 2008, 127, 125-134. | 1.4 | 3 |
| 79 | Global stabilization of a class of partially known nonnegative systems. Automatica, 2008, 44, 2128-2134. | 5.0 | 1 |
| 80 | A mathematical framework for the control of piecewise-affine models of gene networks. Automatica, 2008, 44, 2326-2332. | 5.0 | 19 |
| 81 | Near optimal interval observers bundle for uncertain bioreactors. , 2007, , . | | 20 |
| 82 | Piecewise-Linear Models of Genetic Regulatory Networks: Theory and Example. Lecture Notes in Control and Information Sciences, 2007, , 137-159. | 1.0 | 15 |
| 83 | Analyse qualitative de la dynamique de rÃ©seaux de rÃ©gulation gÃ©nique par des mod?Ã¨les linÃ©aires par morceaux. Techniques Et Sciences Informatiques, 2007, 26, 11-45. | 0.0 | 0 |
| 84 | A SIMPLE IMPROVEMENT OF INTERVAL ASYMPTOTIC OBSERVERS FOR BIOTECHNOLOGICAL PROCESSES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 119-124. | 0.4 | 2 |
| 85 | Robust control for an uncertain chemostat model. International Journal of Robust and Nonlinear Control, 2006, 16, 133-155. | 3.7 | 32 |
| 86 | Piecewise-linear Models of Genetic Regulatory Networks: Equilibria and their Stability. Journal of Mathematical Biology, 2006, 52, 27-56. | 1.9 | 157 |
| 87 | Feedback control for nonmonotone competition models in the chemostat. Nonlinear Analysis: Real World Applications, 2005, 6, 671-690. | 1.7 | 39 |
| 88 | A tunable multivariable nonlinear robust observer for biological systems. Comptes Rendus - Biologies, 2005, 328, 317-325. | 0.2 | 11 |
| 89 | A biochemically based structured model for phytoplankton growth in the chemostat. Ecological Complexity, 2005, 2, 21-33. | 2.9 | 9 |
| 90 | Closed loop observers bundle for uncertain biotechnological models. Journal of Process Control, 2004, 14, 765-774. | 3.3 | 178 |

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|---|---|---|---|
| 91 | Qualitative simulation of genetic regulatory networks using piecewise-linear models. Bulletin of Mathematical Biology, 2004, 66, 301-340. | 1.9 | 309 |
| 92 | Interval Observers Bundle for a Class of Bioprocess Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 277-282. | 0.4 | 0 |
| 93 | Closed Loop Multi-Observers for Uncertain Biotechnological Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 13-18. | 0.4 | 0 |
| 94 | Parallelotopic and practical observers for non-linear uncertain systems. International Journal of Control, 2003, 76, 237-251. | 1.9 | 68 |
| 95 | INTERVAL OBSERVERS WITH GUARANTEED CONFIDENCE LEVELS APPLICATION TO THE ACTIVATED SLUDGE PROCESS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 413-418. | 0.4 | 1 |
| 96 | A class of piecewise linear differential equations arising in biological models. Dynamical Systems, 2002, 17, 299-316. | 0.4 | 143 |
| 97 | A size-structured, non-conservative ODE model of the chemostat. Mathematical Biosciences, 2002, 177-178, 127-145. | 1.9 | 2 |
| 98 | A discrete, size-structured model of phytoplankton growth in the chemostat. Journal of Mathematical Biology, 2002, 45, 313-336. | 1.9 | 13 |
| 99 | Global qualitative description of a class of nonlinear dynamical systems. Artificial Intelligence, 2002, 136, 29-59. | 5.8 | 34 |
| 100 | A Bounded Error Observer for a Class of Bioreactor Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 1-6. | 0.4 | 6 |
| 101 | Estimation of uncertain models of activated sludge processes with interval observers. Journal of Process Control, 2001, 11, 299-310. | 3.3 | 68 |
| 102 | REGULATION OF A FISHERY: FROM A LOCAL OPTIMAL CONTROL PROBLEM TO AN â€œINVARIANT DOMAINâ€˜ APPROACH. Natural Resource Modelling, 2001, 14, 311-333. | 2.0 | 0 |
| 103 | Interval observers for uncertain biological systems. Ecological Modelling, 2000, 133, 45-56. | 2.5 | 556 |
| 104 | Non-linear qualitative signal processing for biological systems: application to the algal growth in bioreactors. Mathematical Biosciences, 1999, 157, 357-372. | 1.9 | 35 |
| 105 | On the stockâ€“recruitment relationships in fish population models. Environmental Modeling and Assessment, 1998, 3, 87-93. | 2.2 | 20 |
| 106 | Positive and Negative Circuits in Dynamical Systems. Journal of Biological Systems, 1998, 06, 11-15. | 1.4 | 209 |
| 107 | Qualitative Dynamics of a Class of Nonlinear Biological Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 763-768. | 0.4 | 0 |
| 108 | Stability of a class of nonlinear stirred tank reactor. , 1997, , . | | 0 |

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| 109 | TRANSIENT BEHAVIOR OF BIOLOGICAL MODELS AS A TOOL OF QUALITATIVE VALIDATIONâ€"APPLICATION TO THE DROOP MODEL AND TO A N-P-Z MODEL. Journal of Biological Systems, 1996, 04, 303-314. | 1.4 | 4 |
| 110 | POSITIVITY, SPACE SCALE AND CONVERGENCE TOWARDS THE EQUILIBRIUM. Journal of Biological Systems, 1995, 03, 613-620. | 1.4 | 2 |
| 111 | Transient behavior of biological loop models with application to the Droop model. Mathematical Biosciences, 1995, 127, 19-43. | 1.9 | 54 |
| 112 | Global behavior of n-dimensional lotkaâ€"volterra systems. Mathematical Biosciences, 1993, 113, 231-243. | 1.9 | 12 |
| 113 | Modelling the reproduction of Centropages typicus (Copepoda: Calanoida) in a fluctuating food supply: effect of adaptation. Journal of Plankton Research, 1990, 12, 549-572. | 1.8 | 19 |
| 114 | Effect of activity on the selective stabilization of the motor innervation of fast muscle posterior latissimus dorsi from chick embryo. International Journal of Developmental Neuroscience, 1986, 4, 415-429. | 1.6 | 13 |
| 115 | Selective stabilization of muscle innervation during development: A mathematical model. Biological Cybernetics, 1983, 46, 207-215. | 1.3 | 48 |