

# Guy-Bart V Stan

## List of Publications by Year in descending order

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Version: 2024-02-01

98  
papers

4,263  
citations

156536

32  
h-index

150775

59  
g-index

113  
all docs

113  
docs citations

113  
times ranked

4409  
citing authors

#	ARTICLE	IF	CITATIONS
1	A modular RNA interference system for multiplexed gene regulation. <i>Nucleic Acids Research</i> , 2022, 50, 1783-1793.	6.5	7
2	Building an RNA-Based Toggle Switch Using Inhibitory RNA Aptamers. <i>ACS Synthetic Biology</i> , 2022, 11, 562-569.	1.9	4
3	Spores-on-a-chip: new frontiers for spore research. <i>Trends in Microbiology</i> , 2022, 30, 515-518.	3.5	4
4	A linear programming-based strategy to save pipette tips in automated DNA assembly. <i>Synthetic Biology</i> , 2022, 7, ysac004.	1.2	4
5	Resource-aware whole-cell model of division of labour in a microbial consortium for complex-substrate degradation. <i>Microbial Cell Factories</i> , 2022, 21, .	1.9	4
6	<i>In situ</i> Generation of RNA Complexes for Synthetic Molecular Strand-Displacement Circuits in Autonomous Systems. <i>Nano Letters</i> , 2021, 21, 265-271.	4.5	11
7	rfaRm: An R client-side interface to facilitate the analysis of the Rfam database of RNA families. <i>PLoS ONE</i> , 2021, 16, e0245280.	1.1	1
8	A Modelling Framework Linking Resource-Based Stochastic Translation to the Optimal Design of Synthetic Constructs. <i>Biology</i> , 2021, 10, 37.	1.3	5
9	Handhold-Mediated Strand Displacement: A Nucleic Acid Based Mechanism for Generating Far-from-Equilibrium Assemblies through Templated Reactions. <i>ACS Nano</i> , 2021, 15, 3272-3283.	7.3	22
10	Stationary Distributions of Continuous-Time Markov Chains: A Review of Theory and Truncation-Based Approximations. <i>SIAM Review</i> , 2021, 63, 3-64.	4.2	15
11	Approximations of Countably Infinite Linear Programs over Bounded Measure Spaces. <i>SIAM Journal on Optimization</i> , 2021, 31, 604-625.	1.2	2
12	Quasi-robust control of biochemical reaction networks via stochastic morphing. <i>Journal of the Royal Society Interface</i> , 2021, 18, 20200985.	1.5	6
13	Control engineering and synthetic biology: working in synergy for the analysis and control of microbial systems. <i>Current Opinion in Microbiology</i> , 2021, 62, 68-75.	2.3	22
14	Quorum sensing in synthetic biology: A review. <i>Current Opinion in Systems Biology</i> , 2021, 28, 100378.	1.3	28
15	Homeostasis. <i>Cell Systems</i> , 2021, 12, 1124-1126.	2.9	0
16	Characterization and mitigation of gene expression burden in mammalian cells. <i>Nature Communications</i> , 2020, 11, 4641.	5.8	92
17	SBOL Visual 2 Ontology. <i>ACS Synthetic Biology</i> , 2020, 9, 972-977.	1.9	3
18	Solving Optimal Control Problems for Monotone Systems Using the Koopman Operator. <i>Lecture Notes in Control and Information Sciences</i> , 2020, , 283-312.	0.6	0

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19	Bounding the stationary distributions of the chemical master equation via mathematical programming. <i>Journal of Chemical Physics</i> , 2019, 151, 034109.	1.2	18
20	Riboswitch identification using Ligase-Assisted Selection for the Enrichment of Responsive Ribozymes (LigASERR). <i>Synthetic Biology</i> , 2019, 4, ysz019.	1.2	3
21	The Exit Time Finite State Projection Scheme: Bounding Exit Distributions and Occupation Measures of Continuous-Time Markov Chains. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A748-A769.	1.3	13
22	Host-aware synthetic biology. <i>Current Opinion in Systems Biology</i> , 2019, 14, 66-72.	1.3	83
23	Whole-Cell Biosensor with Tunable Limit of Detection Enables Low-Cost Agglutination Assays for Medical Diagnostic Applications. <i>ACS Sensors</i> , 2019, 4, 370-378.	4.0	57
24	An Automatic Sparse Model Estimation Method Guided by Constraints That Encode System Properties. , 2019, , .		1
25	Computational Re-design of Synthetic Genetic Oscillators for Independent Amplitude and Frequency Modulation. <i>Cell Systems</i> , 2018, 6, 508-520.e5.	2.9	30
26	Cell-free prediction of protein expression costs for growing cells. <i>Nature Communications</i> , 2018, 9, 1457.	5.8	85
27	Portable gene expression guaranteed. <i>Nature Biotechnology</i> , 2018, 36, 313-314.	9.4	1
28	Identification of Nonlinear State-Space Systems From Heterogeneous Datasets. <i>IEEE Transactions on Control of Network Systems</i> , 2018, 5, 737-747.	2.4	13
29	Investigating the consequences of asymmetric endoplasmic reticulum inheritance in <i>Saccharomyces cerevisiae</i> under stress using a combination of single cell measurements and mathematical modelling. <i>Synthetic and Systems Biotechnology</i> , 2018, 3, 64-75.	1.8	3
30	Burden-driven feedback control of gene expression. <i>Nature Methods</i> , 2018, 15, 387-393.	9.0	281
31	Tools for engineering coordinated system behaviour in synthetic microbial consortia. <i>Nature Communications</i> , 2018, 9, 2677.	5.8	144
32	Synthetic Biology Open Language Visual (SBOL Visual) Version 2.0. <i>Journal of Integrative Bioinformatics</i> , 2018, 15, .	1.0	21
33	A Minimal Realization Technique for the Dynamical Structure Function of a Class of LTI Systems. <i>IEEE Transactions on Control of Network Systems</i> , 2017, 4, 301-311.	2.4	8
34	Intracellular delivery of biologic therapeutics by bacterial secretion systems. <i>Expert Reviews in Molecular Medicine</i> , 2017, 19, e6.	1.6	22
35	The Interplay between Feedback and Buffering in Cellular Homeostasis. <i>Cell Systems</i> , 2017, 5, 498-508.e23.	2.9	27
36	Constructing synthetic biology workflows in the cloud. <i>Engineering Biology</i> , 2017, 1, 61-65.	0.8	9

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37	Biomolecular implementation of nonlinear system theoretic operators. , 2016, , .		5
38	Online model selection for synthetic gene networks. , 2016, , .		5
39	Bounding Stationary Averages of Polynomial Diffusions via Semidefinite Programming. SIAM Journal of Scientific Computing, 2016, 38, A3891-A3920.	1.3	20
40	Overloaded and stressed: whole-cell considerations for bacterial synthetic biology. Current Opinion in Microbiology, 2016, 33, 123-130.	2.3	203
41	Shaping pulses to control bistable systems: Analysis, computation and counterexamples. Automatica, 2016, 63, 254-264.	3.0	30
42	A Sparse Bayesian Approach to the Identification of Nonlinear State-Space Systems. IEEE Transactions on Automatic Control, 2016, 61, 182-187.	3.6	94
43	Identifying biochemical reaction networks from heterogeneous datasets. , 2015, , .		4
44	Shaping pulses to control bistable biological systems. , 2015, , .		4
45	Simplified mechanistic models of gene regulation for analysis and design. Journal of the Royal Society Interface, 2015, 12, 20150312.	1.5	20
46	Modelling Synthetic Biology Systems. , 2015, , 89-108.		2
47	Noise Propagation in Synthetic Gene Circuits for Metabolic Control. ACS Synthetic Biology, 2015, 4, 116-125.	1.9	76
48	A Forward-Design Approach to Increase the Production of Poly-3-Hydroxybutyrate in Genetically Engineered Escherichia coli. PLoS ONE, 2015, 10, e0117202.	1.1	11
49	Online fault diagnosis for nonlinear power systems. Automatica, 2015, 55, 27-36.	3.0	36
50	Quantifying cellular capacity identifies gene expression designs with reduced burden. Nature Methods, 2015, 12, 415-418.	9.0	398
51	GeneGuard: A Modular Plasmid System Designed for Biosafety. ACS Synthetic Biology, 2015, 4, 307-316.	1.9	103
52	SBOL Visual: A Graphical Language for Genetic Designs. PLoS Biology, 2015, 13, e1002310.	2.6	73
53	Mathematical Modeling of HIV Dynamics After Antiretroviral Therapy Initiation: A Clinical Research Study. AIDS Research and Human Retroviruses, 2014, 30, 831-834.	0.5	7
54	Model Reduction of Genetic-Metabolic Networks via Time Scale Separation. , 2014, , 181-210.		5

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55	Mathematical Modeling of HIV Dynamics After Antiretroviral Therapy Initiation: A Review. <i>BioResearch Open Access</i> , 2014, 3, 233-241.	2.6	22
56	The Synthetic Biology Open Language (SBOL) provides a community standard for communicating designs in synthetic biology. <i>Nature Biotechnology</i> , 2014, 32, 545-550.	9.4	247
57	Distributed Reconstruction of Nonlinear Networks: An ADMM Approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014, 47, 3208-3213.	0.4	9
58	Analysis of Synchronizing Biochemical Networks via Incremental Dissipativity. , 2014, , 117-139.		0
59	Tuning the dials of Synthetic Biology. <i>Microbiology (United Kingdom)</i> , 2013, 159, 1236-1253.	0.7	87
60	Nonlinear heat transfer processes in a two-phase thermofluidic oscillator. <i>Applied Energy</i> , 2013, 104, 958-977.	5.1	33
61	Decentralised minimum-time consensus. <i>Automatica</i> , 2013, 49, 1227-1235.	3.0	104
62	Building-in biosafety for synthetic biology. <i>Microbiology (United Kingdom)</i> , 2013, 159, 1221-1235.	0.7	110
63	Real-time fault diagnosis for large-scale nonlinear power networks. , 2013, , .		3
64	Synthetic gene circuits for metabolic control: design trade-offs and constraints. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20120671.	1.5	70
65	Observability and coarse graining of consensus dynamics through the external equitable partition. <i>Physical Review E</i> , 2013, 88, 042805.	0.8	49
66	On periodic reference tracking using batch-mode reinforcement learning with application to gene regulatory network control. , 2013, , .		8
67	Systematic Computation of Nonlinear Cellular and Molecular Dynamics with Low-Power CytoMimetic Circuits: A Simulation Study. <i>PLoS ONE</i> , 2013, 8, e53591.	1.1	9
68	Stochastic simulation of enzymatic reactions under transcriptional feedback regulation. , 2013, , .		2
69	Reconstruction of arbitrary biochemical reaction networks: A compressive sensing approach. , 2012, , .		23
70	Engineering and ethical perspectives in synthetic biology. <i>EMBO Reports</i> , 2012, 13, 584-590.	2.0	49
71	Global State Synchronization in Networks of Cyclic Feedback Systems. <i>IEEE Transactions on Automatic Control</i> , 2012, 57, 478-483.	3.6	62
72	Design tradeoffs in a synthetic gene control circuit for metabolic networks. , 2012, , .		3

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73	Design constraints in an operon circuit for engineered control of metabolic networks. , 2012, , .		0
74	Arterial reservoir-excess pressure and ventricular work. Medical and Biological Engineering and Computing, 2012, 50, 419-424.	1.6	52
75	Fast Consensus Via Predictive Pinning Control. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 2247-2258.	3.5	109
76	Computational design approaches and tools for synthetic biology. Integrative Biology (United Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	0.6	74
77	Essential information for synthetic DNA sequences. Nature Biotechnology, 2011, 29, 22-22.	9.4	40
78	Robust dynamical network structure reconstruction. Automatica, 2011, 47, 1230-1235.	3.0	110
79	Networks of passive oscillators. , 2011, , .		0
80	The circadian oscillator gene <i>GIGANTEA</i> mediates a long-term response of the <i>Arabidopsis thaliana</i> circadian clock to sucrose. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5104-5109.	3.3	205
81	Correct biological timing in <i>Arabidopsis</i> requires multiple light-signaling pathways. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13171-13176.	3.3	73
82	Constructive synchronization of networked feedback systems. , 2010, , .		14
83	Robust dynamical network reconstruction. , 2010, , .		8
84	Decentralised final value theorem for discrete-time LTI systems with application to minimal-time distributed consensus. , 2009, , .		18
85	Minimal dynamical structure realisations with application to network reconstruction from data. , 2009, , .		11
86	Apoptosis characterizes immunological failure of HIV infected patients. Control Engineering Practice, 2009, 17, 798-804.	3.2	9
87	Ultrafast consensus via predictive mechanisms. Europhysics Letters, 2008, 83, 40003.	0.7	39
88	Robust synchronization in networks of cyclic feedback systems. , 2008, , .		5
89	Dynamical structure analysis of sparsity and minimality heuristics for reconstruction of biochemical networks. , 2008, , .		6
90	Collective behavior coordination with predictive mechanisms. IEEE Circuits and Systems Magazine, 2008, 8, 67-85.	2.6	74

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91	Global Asymptotic Stability of the Limit Cycle in Piecewise Linear versions of the Goodwin Oscillator. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3659-3664.	0.4	4
92	Output synchronization in networks of cyclic biochemical oscillators. Proceedings of the American Control Conference, 2007, , .	0.0	22
93	Analysis of Interconnected Oscillators by Dissipativity Theory. IEEE Transactions on Automatic Control, 2007, 52, 256-270.	3.6	233
94	The cross-entropy method for power system combinatorial optimization problems. , 2007, , .		34
95	Clinical data based optimal STI strategies for HIV: a reinforcement learning approach. , 2006, , .		40
96	Feedback mechanisms for global oscillations in Lure systems. Systems and Control Letters, 2005, 54, 809-818.	1.3	26
97	Global analysis of limit cycles in networks of oscillators. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 1153-1158.	0.4	6
98	The Interplay Between Feedback and Buffering in Homeostasis. SSRN Electronic Journal, 0, , .	0.4	1