

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

168 papers	4,373 citations	32 h-index	63 g-index
193 ext. papers	5,476 ext. citations	3.9 avg, IF	6.16 L-index

#	Paper	IF	Citations
168	Passivity as a Design Tool for Group Coordination. <i>IEEE Transactions on Automatic Control</i> , 2007 , 52, 1386-1390	5.9	501
167	Constructive nonlinear control: a historical perspective. <i>Automatica</i> , 2001 , 37, 637-662	5.7	450
166	Nonlinear observers: a circle criterion design and robustness analysis. <i>Automatica</i> , 2001 , 37, 1923-1930	5.7	311
165	Passivity-based designs for synchronized path-following. <i>Automatica</i> , 2007 , 43, 1508-1518	5.7	166
164	Observer design for systems with multivariable monotone nonlinearities. <i>Systems and Control Letters</i> , 2003 , 50, 319-330	2.4	158
163	Diagonal stability of a class of cyclic systems and its connection with the secant criterion. <i>Automatica</i> , 2006 , 42, 1531-1537	5.7	150
162	A framework for nonlinear sampled-data observer design via approximate discrete-time models and emulation. <i>Automatica</i> , 2004 , 40, 1931-1938	5.7	137
161	Synchronization of Interconnected Systems With Applications to Biochemical Networks: An Input-Output Approach. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 1367-1379	5.9	135
160	Rigid body attitude coordination without inertial frame information. <i>Automatica</i> , 2008 , 44, 3170-3175	5.7	112
159	A passivity-based stability criterion for a class of biochemical reaction networks. <i>Mathematical Biosciences and Engineering</i> , 2008 , 5, 1-19	2.1	85
158	Adaptive motion coordination: Using relative velocity feedback to track a reference velocity. <i>Automatica</i> , 2009 , 45, 1020-1025	5.7	75
157	Adaptive design for reference velocity recovery in motion coordination. <i>Systems and Control Letters</i> , 2008 , 57, 602-610	2.4	72
156	Circle and Popov criteria as tools for nonlinear feedback design. <i>Automatica</i> , 2003 , 39, 643-650	5.7	64
155	Input-to-state stability for a class of Lurie systems. <i>Automatica</i> , 2002 , 38, 1945-1949	5.7	62
154	Robust nonlinear control of feedforward systems with unmodeled dynamics. <i>Automatica</i> , 2001 , 37, 265-272	5.7	59
153	Equilibrium-independent passivity: A new definition and numerical certification. <i>Automatica</i> , 2011 , 47, 1949-1956	5.7	57
152	Synchronized Phasor Data Based Energy Function Analysis of Dominant Power Transfer Paths in Large Power Systems. <i>IEEE Transactions on Power Systems</i> , 2007 , 22, 727-734	7	57

151	Time-scale separation redesigns for stabilization and performance recovery of uncertain nonlinear systems. <i>Automatica</i> , 2009 , 45, 34-44	5.7	53
150	An algorithm for estimation of membrane water content in PEM fuel cells. <i>Journal of Power Sources</i> , 2006 , 157, 389-394	8.9	53
149	Scaling the size of a formation using relative position feedback. <i>Automatica</i> , 2012 , 48, 2677-2685	5.7	49
148	Certifying spatially uniform behavior in reaction-diffusion PDE and compartmental ODE systems. <i>Automatica</i> , 2011 , 47, 1219-1229	5.7	48
147	Efficient finite abstraction of mixed monotone systems 2015 ,		47
146	Investigation of analysis methods for hyperpolarized ¹³ C-pyruvate metabolic MRI in prostate cancer patients. <i>NMR in Biomedicine</i> , 2018 , 31, e3997	4.4	44
145	Quaternion-Based Hybrid Feedback for Robust Global Attitude Synchronization. <i>IEEE Transactions on Automatic Control</i> , 2012 , 57, 2122-2127	5.9	42
144	In situ detection of anode flooding of a PEM fuel cell. <i>International Journal of Hydrogen Energy</i> , 2009 , 34, 6765-6770	6.7	41
143	A Compartmental Model for Traffic Networks and Its Dynamical Behavior. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2698-2703	5.9	40
142	Estimation of Radial Power System Transfer Path Dynamic Parameters Using Synchronized Phasor Data. <i>IEEE Transactions on Power Systems</i> , 2008 , 23, 564-571	7	37
141	Reachability Analysis of Nonlinear Systems Using Matrix Measures. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 265-270	5.9	35
140	Feasibility conditions for circle criterion designs. <i>Systems and Control Letters</i> , 2001 , 42, 405-412	2.4	35
139	Robust nonlinear control of systems with input unmodeled dynamics. <i>Systems and Control Letters</i> , 2000 , 41, 115-122	2.4	34
138	Gradient climbing in formation via extremum seeking and passivity-based coordination rules 2007 ,		33
137	Area aggregation and time-scale modeling for sparse nonlinear networks. <i>Systems and Control Letters</i> , 2008 , 57, 142-149	2.4	32
136	Traffic Network Control From Temporal Logic Specifications. <i>IEEE Transactions on Control of Network Systems</i> , 2016 , 3, 162-172	4	28
135	Observer designs for fuel processing reactors in fuel cell power systems. <i>International Journal of Hydrogen Energy</i> , 2005 , 30, 447-457	6.7	28
134	Cooperative Control for Multirotors Transporting an Unknown Suspended Load Under Environmental Disturbances. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 653-660	4.8	28

133	. <i>IEEE Transactions on Automatic Control</i> , 2011 , 56, 2766-2777	5.9	27
132	Robustness of network flow control against disturbances and time-delay. <i>Systems and Control Letters</i> , 2004 , 53, 13-29	2.4	27
131	Compositional controller synthesis for vehicular traffic networks 2015 ,		26
130	Networks of Dissipative Systems. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2016 ,	0.4	26
129	Gradient climbing in formation via extremum seeking and passivity-based coordination rules. <i>Asian Journal of Control</i> , 2008 , 10, 201-211	1.7	25
128	Optimizing Flip Angles for Metabolic Rate Estimation in Hyperpolarized Carbon-13 MRI. <i>IEEE Transactions on Medical Imaging</i> , 2016 , 35, 2403-2412	11.7	24
127	Stability of traffic flow networks with a polytree topology. <i>Automatica</i> , 2016 , 66, 246-253	5.7	24
126	A Dissipativity Approach to Safety Verification for Interconnected Systems. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 1722-1727	5.9	24
125	A Passivity-Based Approach to Stability of Spatially Distributed Systems With a Cyclic Interconnection Structure. <i>IEEE Transactions on Automatic Control</i> , 2008 , 53, 75-86	5.9	24
124	A feedback quenched oscillator produces turing patterning with one diffuser. <i>PLoS Computational Biology</i> , 2012 , 8, e1002331	5	23
123	A hybrid redesign of Newton observers in the absence of an exact discrete-time model. <i>Systems and Control Letters</i> , 2006 , 55, 429-436	2.4	23
122	Finite horizon robustness analysis of LTV systems using integral quadratic constraints. <i>Automatica</i> , 2019 , 100, 135-143	5.7	23
121	Pattern Formation by Lateral Inhibition in Large-Scale Networks of Cells. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 1250-1262	5.9	22
120	A relaxed condition for stability of nonlinear observer-based controllers. <i>Systems and Control Letters</i> , 2004 , 53, 311-320	2.4	22
119	Compositional Abstraction for Networks of Control Systems: A Dissipativity Approach. <i>IEEE Transactions on Control of Network Systems</i> , 2018 , 5, 1003-1015	4	20
118	Cell-in-the-loop pattern formation with optogenetically emulated cell-to-cell signaling. <i>Nature Communications</i> , 2020 , 11, 1355	17.4	19
117	Robust Stabilization and Performance Recovery of Nonlinear Systems With Unmodeled Dynamics. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 1351-1356	5.9	19
116	TIRA 2019 ,		18

115	Dynamical properties of a compartmental model for traffic networks 2014 ,		17
114	Passivity-based Formation Control for UAVs with a Suspended Load. <i>IFAC-PapersOnLine</i> , 2017 , 50, 13150-13155	13	17
113	Graph Weight Allocation to Meet Laplacian Spectral Constraints. <i>IEEE Transactions on Automatic Control</i> , 2012 , 57, 1872-1877	5.9	17
112	Feedback tuning of bifurcations. <i>Systems and Control Letters</i> , 2003 , 50, 229-239	2.4	17
111	Compositional performance certification of interconnected systems using ADMM. <i>Automatica</i> , 2015 , 61, 55-63	5.7	16
110	Delay Robustness of Interconnected Passive Systems: An Integral Quadratic Constraint Approach. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 712-724	5.9	15
109	Formal Methods for Control of Traffic Flow: Automated Control Synthesis from Finite-State Transition Models. <i>IEEE Control Systems</i> , 2017 , 37, 109-128	2.9	14
108	Passivity-Based Designs for Synchronized Path Following 2006 ,		14
107	Freeway traffic control from linear temporal logic specifications 2014 ,		13
106	Synchronization of diffusively-coupled limit cycle oscillators. <i>Automatica</i> , 2013 , 49, 3613-3622	5.7	13
105	Instability Mechanisms in Cooperative Control. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 258-263	3.9	13
104	A Two-Time-Scale Redesign for Robust Stabilization and Performance Recovery of Uncertain Nonlinear Systems. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	13
103	Boundedness without Absolute Stability in Systems with Stiffening Nonlinearities. <i>European Journal of Control</i> , 2002 , 8, 243-250	2.5	13
102	Sampled-Data Reachability Analysis Using Sensitivity and Mixed-Monotonicity 2018 , 2, 761-766		13
101	Offset optimization in signalized traffic networks via semidefinite relaxation. <i>Transportation Research Part B: Methodological</i> , 2017 , 100, 82-92	7.2	12
100	Symbolic control design for monotone systems with directed specifications. <i>Automatica</i> , 2017 , 83, 10-19	5.7	12
99	Stability of an analog optimization circuit for quadratic programming. <i>Systems and Control Letters</i> , 2016 , 88, 68-74	2.4	12
98	Stability certification of large scale stochastic systems using dissipativity. <i>Automatica</i> , 2012 , 48, 2956-2964	3.7	12

97	Real-time optimization of net power in a fuel cell system. <i>Journal of Power Sources</i> , 2009 , 187, 422-430	8.9	12
96	Mixed monotonicity of partial first-in-first-out traffic flow models 2016 ,		12
95	Adaptive Synchronization of Diffusively Coupled Systems. <i>IEEE Transactions on Control of Network Systems</i> , 2015 , 2, 131-141	4	11
94	Using electrochemical impedance to determine airflow rates. <i>International Journal of Hydrogen Energy</i> , 2008 , 33, 4694-4701	6.7	11
93	Transformation of Optimal Centralized Controllers Into Near-Globally Optimal Static Distributed Controllers. <i>IEEE Transactions on Automatic Control</i> , 2019 , 64, 66-80	5.9	11
92	Constructing Control System Abstractions from Modular Components 2018 ,		10
91	A GRAPH PARTITIONING APPROACH TO PREDICTING PATTERNS IN LATERAL INHIBITION SYSTEMS. <i>SIAM Journal on Applied Dynamical Systems</i> , 2013 , 12, 2012-2031	2.8	10
90	Finite abstraction of mixed monotone systems with discrete and continuous inputs. <i>Nonlinear Analysis: Hybrid Systems</i> , 2017 , 23, 254-271	4.5	9
89	Improving Urban Traffic Throughput With Vehicle Platooning: Theory and Experiments. <i>IEEE Access</i> , 2020 , 8, 141208-141223	3.5	9
88	A Small Gain Theorem for Parametric Assume-Guarantee Contracts 2017 ,		8
87	Dynamic contracts for distributed temporal logic control of traffic networks 2017 ,		8
86	A sufficient condition for additive -stability and application to reaction-diffusion models. <i>Systems and Control Letters</i> , 2009 , 58, 736-741	2.4	8
85	A passivity-based stability criterion for a class of interconnected systems and applications to biochemical reaction networks 2007 ,		8
84	2017 ,		7
83	Controlling a network of signalized intersections from temporal logical specifications 2015 ,		7
82	Optimal experiment design for physiological parameter estimation using hyperpolarized carbon-13 magnetic resonance imaging 2015 ,		7
81	Synchronization and pattern formation in diffusively coupled systems 2012 ,		7
80	Robust Control of the Sit-to-Stand Movement for a Powered Lower Limb Orthosis. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 2390-2403	4.8	7

79	Dissipativity Tools for Convergence to Nash Equilibria in Population Games. <i>IEEE Transactions on Control of Network Systems</i> , 2021 , 8, 39-50	4	7
78	. <i>IEEE Transactions on Control of Network Systems</i> , 2018 , 5, 525-535	4	6
77	Modular Synthetic Inverters from Zinc Finger Proteins and Small RNAs. <i>PLoS ONE</i> , 2016 , 11, e0149483	3.7	6
76	Semidefinite relaxations in optimal experiment design with application to substrate injection for hyperpolarized MRI 2016 ,		6
75	Parallel dynamic programming for optimal experiment design in nonlinear systems 2016 ,		6
74	Exploiting symmetry for discrete-time reachability computations 2018 , 2, 213-217		5
73	Scaling the size of a multiagent formation via distributed feedback 2011 ,		5
72	A decentralized design for group alignment and synchronous rotation without inertial frame information 2007 ,		5
71	Simulation-Based Reachability Analysis for Nonlinear Systems Using Componentwise Contraction Properties. <i>Lecture Notes in Computer Science</i> , 2018 , 61-76	0.9	5
70	Spatio-Temporally Constrained Reconstruction for Hyperpolarized Carbon-13 MRI Using Kinetic Models. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 2603-2612	11.7	5
69	Imitation Learning With Stability and Safety Guarantees 2022 , 6, 409-414		5
68	Synchronization of limit cycle oscillations in diffusively-coupled systems 2013 ,		4
67	Graph weight design for Laplacian eigenvalue constraints with multi-agent systems applications 2011 ,		4
66	A quenched oscillator network for pattern formation in gene expression 2011 ,		4
65	Redesign of backstepping for robustness against unmodelled dynamics. <i>International Journal of Robust and Nonlinear Control</i> , 2001 , 11, 633-643	3.6	4
64	Data-Driven Reachable Set Computation using Adaptive Gaussian Process Classification and Monte Carlo Methods 2020 ,		4
63	Continuous Abstraction of Nonlinear Systems using Sum-of-Squares Programming 2019 ,		4
62	Finite Horizon Backward Reachability Analysis and Control Synthesis for Uncertain Nonlinear Systems 2019 ,		4

61	Designing Spatially Distributed Gene Regulatory Networks To Elicit Contrasting Patterns. <i>ACS Synthetic Biology</i> , 2019 , 8, 119-126	5.7	4
60	Symmetry reduction for dynamic programming. <i>Automatica</i> , 2018 , 97, 367-375	5.7	4
59	Reachability analysis using dissipation inequalities for uncertain nonlinear systems. <i>Systems and Control Letters</i> , 2020 , 142, 104736	2.4	3
58	A Tug-of-War Mechanism for Pattern Formation in a Genetic Network. <i>ACS Synthetic Biology</i> , 2017 , 6, 2056-2066	5.7	3
57	Offset optimization of signalized intersections via the Burer-Monteiro method 2017 ,		3
56	Performance certification of interconnected nonlinear systems using ADMM 2014 ,		3
55	Guard synthesis for safety of hybrid systems using sum of squares programming 2012 ,		3
54	Spatial uniformity in diffusively-coupled systems using weighted L2 norm contractions 2013 ,		3
53	Robust global asymptotic attitude synchronization by hybrid control 2010 ,		3
52	Formation control with size scaling using relative displacement feedback 2012 ,		3
51	Remarks on the stability of spatially distributed systems with a cyclic interconnection structure. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	3
50	Group Coordination when the Reference Velocity is Available Only to the Leader: An Adaptive Design. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	3
49	Area Aggregation and Time Scale Modeling for Sparse Nonlinear Networks 2006 ,		3
48	. <i>IEEE/ACM Transactions on Networking</i> , 2006 , 14, 1313-1322	3.8	3
47	PIRK: Scalable Interval Reachability Analysis for High-Dimensional Nonlinear Systems. <i>Lecture Notes in Computer Science</i> , 2020 , 556-568	0.9	3
46	Editorial to the Special Issue of L-CSS on Control and Network Theory for Biological Systems 2019 , 3, 228-229		3
45	Backward Reachability for Polynomial Systems on A Finite Horizon. <i>IEEE Transactions on Automatic Control</i> , 2021 , 1-1	5.9	3
44	Stability Analysis using Quadratic Constraints for Systems with Neural Network Controllers. <i>IEEE Transactions on Automatic Control</i> , 2021 , 1-1	5.9	3

43	Symmetry reduction for dynamic programming and application to MRI 2017 ,		2
42	Finite Time Robust Control of the Sit-to-Stand Movement for Powered Lower Limb Orthoses 2018 ,		2
41	Hierarchical Control via an Approximate Aggregate Manifold 2018 ,		2
40	Motion Planning of the Sit to Stand Movement for Powered Lower Limb Orthoses 2017 ,		2
39	Trajectory-based reachability analysis of switched nonlinear systems using matrix measures 2014 ,		2
38	New architecture for patterning gene expression using zinc finger proteins and small RNAs 2012 ,		2
37	A Three-time-scale redesign for robust stabilization and performance recovery of nonlinear systems with input uncertainties 2007 ,		2
36	Backward Reachability Using Integral Quadratic Constraints for Uncertain Nonlinear Systems 2021 , 5, 707-712		2
35	Reachability Analysis for Robustness Evaluation of the Sit-to-Stand Movement for Powered Lower Limb Orthoses 2018 ,		2
34	Decoupling translational and rotational effects on the phase synchronization of rotating helices. <i>Physical Review E</i> , 2015 , 91, 023018	2.4	1
33	Major Computational Breakthroughs in the Synthesis of Symbolic Controllers via Decomposed Algorithms 2018 ,		1
32	Pattern Formation over Multigraphs. <i>IEEE Transactions on Network Science and Engineering</i> , 2018 , 5, 55-64	4.9	1
31	A computational approach to synthesizing guards for hybrid systems. <i>Systems and Control Letters</i> , 2014 , 73, 25-32	2.4	1
30	A scalable method for designing distributed controllers for systems with unknown initial states 2017 ,		1
29	Verifying safety of interconnected passive systems using SOS programming 2013 ,		1
28	On spatially uniform behavior in reaction-diffusion systems 2010 ,		1
27	Nonlinear analysis of ring oscillator circuits 2010 ,		1
26	Equilibrium-independent passivity: a new definition and implications 2010 ,		1

25	2010,			1
24	Robust stabilization and performance recovery of nonlinear systems with input unmodeled dynamics 2008 ,			1
23	Continuous and discrete abstractions for planning, applied to ship docking. <i>IFAC-PapersOnLine</i> , 2020 , 53, 1831-1836	0.7		1
22	Cell-in-the-loop pattern formation with optogenetically emulated cell-to-cell signaling			1
21	Dissipativity with Dynamic Supply Rates. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2016 , 63-72	0.4		1
20	Symmetric Monotone Embedding of Traffic Flow Networks with First-In-First-Out Dynamics. <i>IFAC-PapersOnLine</i> , 2016 , 49, 642-647	0.7		1
19	Abstraction-Based Control Synthesis. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2021 , 93-101	0.4		1
18	Approximate abstractions of control systems with an application to aggregation. <i>Automatica</i> , 2020 , 119, 109065	5.7		0
17	An Efficient Algorithm to Compute Norms for Finite Horizon, Linear Time-Varying Systems 2021 , 5, 1597-1602			0
16	An Input/Output Framework for Submanifold Stabilization. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 5170-5184	5.9		
15	A Spatial Filtering Approach to Biological Patterning. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 1694-1721	2.8		
14	Pattern Formation in Large-Scale Networks with Asymmetric Connections. <i>IFAC-PapersOnLine</i> , 2017 , 50, 10944-10949	0.7		
13	A Compartmental Lateral Inhibition System to Generate Contrasting Patterns. <i>IEEE Life Sciences Letters</i> , 2015 , 1, 7-10			
12	Interval Reachability Analysis using Second-Order Sensitivity. <i>IFAC-PapersOnLine</i> , 2020 , 53, 1825-1830	0.7		
11	Control and Optimization Problems in Hyperpolarized Carbon-13 MRI. <i>Lecture Notes in Control and Information Sciences - Proceedings</i> , 2018 , 29-40	0.2		
10	Automatic Generation of Communication Requirements for Enforcing Multi-Agent Safety. <i>Electronic Proceedings in Theoretical Computer Science</i> , <i>EPTCS</i> , 269, 3-16			
9	Flexible Computational Pipelines for Robust Abstraction-Based Control Synthesis. <i>Lecture Notes in Computer Science</i> , 2019 , 591-608	0.9		
8	Comparison to Other Input/Output Approaches. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2016 , 73-81	0.4		

- 7 Stability of Interconnected Systems. *Springer Briefs in Electrical and Computer Engineering*, **2016**, 13-21 0.4
- 6 Mixed Monotonicity. *Springer Briefs in Electrical and Computer Engineering*, **2021**, 33-41 0.4
- 5 Sampled-Data Mixed Monotonicity. *Springer Briefs in Electrical and Computer Engineering*, **2021**, 43-59 0.4
- 4 Computing Worst-Case Disturbances for Finite-Horizon Linear Time-Varying Approximations of Uncertain Systems **2021**, 5, 1753-1758
- 3 Compositional Analysis of Interconnected Systems Using Delta Dissipativity **2022**, 6, 662-667
- 2 Monotonicity-Based Symbolic Control for Safety in Driving Scenarios **2022**, 6, 830-835
- 1 Measure of Robustness Against Parameter Uncertainty. *Springer Briefs in Electrical and Computer Engineering*, **2021**, 87-92 0.4