David Angeli

List of Publications by Year
in descending order

167 papers	8,043 citations	81900 39 h-index	51608 86 g-index
169 all docs	169 docs citations	169 times ranked	3824 citing authors

#	Article	IF	Citations
1	A Robust Lyapunov Criterion for Nonoscillatory Behaviors in Biological Interaction Networks. IEEE Transactions on Automatic Control, 2022, 67, 3305-3320.	5.7	6
2	A Resilient Consensus Protocol for Networks With Heterogeneous Confidence and Byzantine Adversaries. , 2022, 6, 494-499.		1
3	Continuous-time switched systems with switching frequency constraints: Path-complete stability criteria. Automatica, 2022, 137, 110099.	5.0	7
4	Heterogeneous network flow and Petri nets characterize multilayer complex networks. Scientific Reports, 2022, 12, 3513.	3.3	0
5	Flexibility Framework With Recovery Guarantees for Aggregated Energy Storage Devices. IEEE Transactions on Smart Grid, 2022, 13, 3519-3531.	9.0	1
6	Ruling Out Positive Lyapunov Exponents by Using the Jacobian's Second Additive Compound Matrix. , 2022, 6, 2924-2928.		1
7	Homothetic Tube-Based Robust Economic MPC With Integrated Moving Horizon Estimation. IEEE Transactions on Automatic Control, 2021, 66, 64-75.	5.7	13
8	On Adversary Robust Consensus Protocols Through Joint-Agent Interactions. IEEE Transactions on Automatic Control, 2021, 66, 1646-1657.	5.7	3
9	Scheduling of energy storage. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20190435.	3.4	5
10	An iterative algorithm for regret minimization in flexible demand scheduling problems. Advanced Control for Applications, 2021, 3, e92.	1.7	1
11	Economic Model Predictive Control. , 2021, , 665-671.		0
12	On convergence for hybrid models of gene regulatory networks under polytopic uncertainties: a Lyapunov approach. Journal of Mathematical Biology, 2021, 83, 64.	1.9	3
13	Robust Distributed Estimation of the Maximum of a Field. IEEE Transactions on Control of Network Systems, 2020, 7, 372-383.	3.7	3
14	A Graphical Measure of Aggregate Flexibility for Energy-Constrained Distributed Resources. IEEE Transactions on Smart Grid, 2020, 11, 106-117.	9.0	14
15	On Convergence for Piecewise Affine Models of Gene Regulatory Networks via a Lyapunov Approach. IEEE Transactions on Automatic Control, 2020, 65, 3333-3348.	5.7	4
16	Homothetic tube-based robust offset-free economic Model Predictive Control. Automatica, 2020, 119, 109105.	5.0	9
17	A computational framework for a Lyapunov-enabled analysis of biochemical reaction networks. PLoS Computational Biology, 2020, 16, e1007681.	3.2	14
18	Correction to "Minimizing Unserved Energy Using Heterogeneous Storage Units"•[Sep 19 3647-3656]. IEEE Transactions on Power Systems, 2020, 35, 4144-4144.	6.5	0

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19	Study of Piecewise Multi-affine models for Genetic Regulatory Networks via a Lyapunov approach: an LMI framework. IFAC-PapersOnLine, 2020, 53, 16739-16744.	0.9	0
20	On Path-Complete Lyapunov Functions: Geometry and Comparison. IEEE Transactions on Automatic Control, 2019, 64, 1947-1957.	5.7	15
21	Distributed Coordination of Flexible Loads Using Locational Marginal Prices. IEEE Transactions on Control of Network Systems, 2019, 6, 1097-1110.	3.7	6
22	A Petri Net approach to consensus in networks with joint-agent interactions. Automatica, 2019, 110, 108466.	5.0	8
23	A game-theoretic approach for price-based coordination of flexible devices operating in integrated energy-reserve markets. Energy, 2019, 189, 116153.	8.8	9
24	Minimizing Unserved Energy Using Heterogeneous Storage Units. IEEE Transactions on Power Systems, 2019, 34, 3647-3656.	6.5	18
25	A Mean Field Game Approach for Distributed Control of Thermostatic Loads Acting in Simultaneous Energy-Frequency Response Markets. IEEE Transactions on Smart Grid, 2019, 10, 5987-5999.	9.0	43
26	Criteria for asymptotic clustering of opinion dynamics towards bimodal consensus. Automatica, 2019, 103, 230-238.	5.0	6
27	On second order consensus protocols allowing joint-agent interactions. , 2019, , .		0
28	Chance-Constrained Ancillary Service Specification for Heterogeneous Storage Devices. , 2019, , .		3
29	Approximate computation of storage functions for discrete-time systems using sum-of-squares techniques. IFAC-PapersOnLine, 2019, 52, 508-513.	0.9	9
30	Economic Model Predictive Control: Some Design Tools and Analysis Techniques. Control Engineering, 2019, , 145-167.	0.3	4
31	Perturbation Theory and Singular Perturbations for Input-to-State Multistable Systems on Manifolds. IEEE Transactions on Automatic Control, 2019, 64, 3555-3570.	5.7	12
32	Economic Model Predictive Control. , 2019, , 1-7.		2
33	Asymptotic Consensus on the Average of a Field for Time-Varying Nonlinear Networks Under Almost Periodic Connectivity. IEEE Transactions on Automatic Control, 2018, 63, 2389-2404.	5.7	4
34	On Distributed Scheduling of Flexible Demand and Nash Equilibria in the Electricity Market. Dynamic Games and Applications, 2018, 8, 761-798.	1.9	4
35	Investigating the Social Efficiency of Merchant Transmission Planning Through a Non-cooperative Game-Theoretic Framework. IEEE Transactions on Power Systems, 2018, 33, 4831-4841.	6.5	8
36	Integration of Price-Responsive Appliances in the Energy Market Through Flexible Demand Saturation. IEEE Transactions on Control of Network Systems, 2018, 5, 154-166.	3.7	6

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37	Distributed schemes for efficient deployment of price-responsive demand with partial flexibility. Journal of Control and Decision, 2018, 5, 169-194.	1.6	1
38	Coordination of Micro-Storage Devices in Power Grids: A Multi-Agent System Approach for Energy Arbitrage. , 2018, , .		0
39	Robustly Maximal Utilisation of Energy-Constrained Distributed Resources. , 2018, , .		10
40	On consensus protocols allowing joint-agent interactions. , 2018, , .		2
41	Distributed Coordination of Price-Responsive Electric Loads: A Receding Horizon Approach. , 2018, , .		4
42	A Game-Theoretic Modeling Approach for Merchant Transmission Planning. , 2018, , .		0
43	Tube-Based Robust Economic Model Predictive Control on Dissipative Systems with Generalized Optimal Regimes of Operation. , 2018, , .		9
44	A Distributed Price-based Strategy for Flexible Demand Coordination in Multi-area Systems. , 2018, , .		2
45	On piecewise quadratic Lyapunov functions for piecewise affine models of gene regulatory networks. , 2018, , .		6
46	Analysis of economic model predictive control with terminal penalty functions on generalized optimal regimes of operation. International Journal of Robust and Nonlinear Control, 2018, 28, 4790-4815.	3.7	19
47	A framework for receding-horizon control in infinite-horizon aggregative games. Annual Reviews in Control, 2018, 45, 191-204.	7.9	5
48	Necessary and sufficient conditions for consensus in nonlinear monotone networks with unilateral interactions. Automatica, 2017, 77, 51-60.	5.0	18
49	Price-Based Schemes for Distributed Coordination of Flexible Demand in the Electricity Market. IEEE Transactions on Smart Grid, 2017, 8, 3104-3116.	9.0	43
50	Characterizations of Integral Input-to-State Stability for Systems With Multiple Invariant Sets. IEEE Transactions on Automatic Control, 2017, 62, 3729-3743.	5.7	11
51	A Criterion for Exponential Consensus of Time-Varying Non-Monotone Nonlinear Networks. IEEE Transactions on Automatic Control, 2017, 62, 2483-2489.	5.7	8
52	A linear program to compare path-complete Lyapunov functions. , 2017, , .		3
53	A generalized approach to Economic Model Predictive Control with terminal penalty functions. IFAC-PapersOnLine, 2017, 50, 518-523.	0.9	5
54	A Semi-Decentralized Scheme for Integration of Price-Responsive Appliances in the Electricity Market. IFAC-PapersOnLine, 2017, 50, 6729-6736.	0.9	3

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55	Smooth Lyapunov Functions for Multistable Differential Inclusions. IFAC-PapersOnLine, 2017, 50, 1661-1666.	0.9	0
56	Convergence and optimality of a new iterative price-based scheme for distributed coordination of flexible loads in the electricity market. , 2017, , .		6
57	Smooth Lyapunov functions for multistable hybrid systems on manifolds. , 2017, , .		2
58	Consensus-based algorithm for distributed estimation of the maximum of a field. , 2017, , .		1
59	Consensus for nonlinear monotone networks with unilateral interactions. , 2016, , .		2
60	Output-to-State Stability for systems on manifolds with multiple invariant sets. , 2016, , .		2
61	Cascades of iISS and Strong iISS systems with multiple invariant sets. , 2016, , .		1
62	Decentralized coordination of large populations of flexible electrical appliances through demand saturation. , 2016, , .		1
63	The ISS approach to the stability and robustness properties of nonautonomous systems with decomposable invariant sets: An overview. European Journal of Control, 2016, 30, 50-60.	2.6	9
64	Input-to-state stability for cascade systems with multiple invariant sets. Systems and Control Letters, 2016, 98, 97-110.	2.3	12
65	Construction of robust Lyapunov functions for reaction networks. , 2016, , .		3
66	Theoretical advances on Economic Model Predictive Control with time-varying costs. Annual Reviews in Control, 2016, 41, 218-224.	7.9	18
67	Scheduling of Wind Farms for Optimal Frequency Response and Energy Recovery. IEEE Transactions on Control Systems Technology, 2016, 24, 1764-1778.	5.2	24
68	Frozen state conditions for exponential consensus of time-varying cooperative nonlinear networks. Automatica, 2016, 64, 182-189.	5.0	19
69	Shaping pulses to control bistable systems: Analysis, computation and counterexamples. Automatica, 2016, 63, 254-264.	5.0	30
70	New Approach to the Stability of Chemical Reaction Networks: Piecewise Linear in Rates Lyapunov Functions. IEEE Transactions on Automatic Control, 2016, 61, 76-89.	5.7	51
71	Theoretical advances on Economic Model Predictive Control with time-varying costs. IFAC-PapersOnLine, 2015, 48, 272-277.	0.9	4
72	Economic Model Predictive Control with parameter-varying cost and guaranteed average performance. , 2015, , .		5

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73	Integral ISS for systems with multiple invariant sets. , 2015, , .		0
74	On exponential consensus for time-varying non-cooperative nonlinear networks. , 2015, , .		3
75	Analysis of Nash equilibria in energy markets with large populations of price-responsive flexible appliances. , 2015, , .		5
76	Distributed Control of Micro-Storage Devices With Mean Field Games. IEEE Transactions on Smart Grid, 2015, , 1-1.	9.0	13
77	Characterizations of Input-to-State Stability for Systems With Multiple Invariant Sets. IEEE Transactions on Automatic Control, 2015, 60, 3242-3256.	5.7	45
78	On average performance of Economic Model Predictive Control with time-varying cost and terminal constraints. , 2015, , .		5
79	On Necessity and Robustness of Dissipativity in Economic Model Predictive Control. IEEE Transactions on Automatic Control, 2015, 60, 1671-1676.	5.7	98
80	Robust Lyapunov functions for Complex Reaction Networks: An uncertain system framework. , 2014, , .		14
81	Transient average constraints in economic model predictive control. Automatica, 2014, 50, 2943-2950.	5.0	23
82	Performance analysis of economic MPC with self-tuning terminal cost. , 2014, , .		1
83	A small-gain result for orthant-monotone systems under mixed feedback. Systems and Control Letters, 2014, 68, 9-19.	2.3	21
84	Cooperative economic model predictive control for linear systems with convex objectives. European Journal of Control, 2014, 20, 141-151.	2.6	12
85	Convergence in economic model predictive control with average constraints. Automatica, 2014, 50, 3100-3111.	5.0	39
86	Strong iISS is preserved under cascade interconnection. Automatica, 2014, 50, 2424-2427.	5.0	36
87	Combining iISS and ISS With Respect to Small Inputs: The Strong iISS Property. IEEE Transactions on Automatic Control, 2014, 59, 2518-2524.	5.7	70
88	On the performance of economic model predictive control with self-tuning terminal cost. Journal of Process Control, 2014, 24, 1179-1186.	3.3	42
89	Combinatorial approaches to Hopf bifurcations in systems of interacting elements. Communications in Mathematical Sciences, 2014, 12, 1101-1133.	1.0	15
90	Economic and Environmental Benefits of Dynamic Demand in Providing Frequency Regulation. IEEE Transactions on Smart Grid, 2013, 4, 2036-2048.	9.0	109

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91	On detachable maps and flows. Journal of Difference Equations and Applications, 2013, 19, 146-161.	1.1	0
92	Economic model predictive control with self-tuning terminal cost. European Journal of Control, 2013, 19, 408-416.	2.6	74
93	Piecewise Linear in rates Lyapunov functions for Complex Reaction Networks. , 2013, , .		11
94	Frozen state conditions for asymptotic consensus of time-varying cooperative nonlinear networks. , 2013, , .		11
95	On convergence of averagely constrained economic MPC and necessity of dissipativity for optimal steady-state operation. , 2013, , .		34
96	Distributed frequency control by means of responsive wind generation. , 2012, , .		0
97	Remarks on the invalidation of biological models using monotone systems theory. , 2012, , .		9
98	Strong iISS: Combination of iISS and ISS with respect to small inputs. , 2012, , .		7
99	Addendum to â€œConvergence in Strongly Monotone Systems with an Increasing First Integralâ€. SIAM Journal on Mathematical Analysis, 2012, 44, 536-537.	1.9	5
100	A stochastic approach to distributed power frequency control by means of smart appliances. , 2012, , .		3
101	A Stochastic Approach to â€œDynamic-Demandâ€Refrigerator Control. IEEE Transactions on Control Systems Technology, 2012, 20, 581-592.	5.2	143
102	On Average Performance and Stability of Economic Model Predictive Control. IEEE Transactions on Automatic Control, 2012, 57, 1615-1626.	5.7	457
103	Fundamentals of economic model predictive control. , 2012, , .		183
104	Enforcing convergence in nonlinear economic MPC. , 2011, , .		17
105	Persistence Results for Chemical Reaction Networks with Time-Dependent Kinetics and No Global Conservation Laws. SIAM Journal on Applied Mathematics, 2011, 71, 128-146.	1.8	45
106	Economic optimization using model predictive control with a terminal cost. Annual Reviews in Control, 2011, 35, 178-186.	7.9	331
107	Boundedness analysis for open Chemical Reaction Networks with mass-action kinetics. Natural Computing, 2011, 10, 751-774.	3.0	6
108	Stability Robustness in the Presence of Exponentially Unstable Isolated Equilibria. IEEE Transactions on Automatic Control, 2011, 56, 1582-1592.	5.7	41

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109	A small-gain result for orthant-monotone systems in feedback: The non sign-definite case. , 2011, , .		5
110	Graph-theoretic characterizations of monotonicity of chemical networks in reaction coordinates. Journal of Mathematical Biology, 2010, 61, 581-616.	1.9	62
111	A Modular Criterion for Persistence of Chemical Reaction Networks. IEEE Transactions on Automatic Control, 2010, 55, 1674-1679.	5.7	3
112	Convergence in Strongly Monotone Systems with an Increasing First Integral. SIAM Journal on Mathematical Analysis, 2010, 42, 334-353.	1.9	13
113	Chemical networks with inflows and outflows: A positive linear differential inclusions approach. Biotechnology Progress, 2009, 25, 632-642.	2.6	36
114	Attractors in coherent systems of differential equations. Journal of Differential Equations, 2009, 246, 3058-3076.	2.2	17
115	Further Results on Incremental Input-to-State Stability. IEEE Transactions on Automatic Control, 2009, 54, 1386-1391.	5.7	38
116	Convergence in Networks With Counterclockwise Neural Dynamics. IEEE Transactions on Neural Networks, 2009, 20, 794-804.	4.2	8
117	A Tutorial on Chemical Reaction Network Dynamics. European Journal of Control, 2009, 15, 398-406.	2.6	94
118	A tutorial on Chemical Reaction Networks dynamics. , 2009, , .		1
119	Oscillations in I/O Monotone Systems Under Negative Feedback. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2009, , .	0.1	2
120	An ellipsoidal off-line MPC scheme for uncertain polytopic discrete-time systems. Automatica, 2008, 44, 3113-3119.	5.0	146
121	Integral Input to State Stable systems in cascade. Systems and Control Letters, 2008, 57, 519-527.	2.3	54
122	Tight estimates for convergence of some non-stationary consensus algorithms. Systems and Control Letters, 2008, 57, 996-1004.	2.3	17
123	Translation-invariant monotone systems, and a global convergence result for enzymatic futile cycles. Nonlinear Analysis: Real World Applications, 2008, 9, 128-140.	1.7	53
124	Oscillations in I/O Monotone Systems Under Negative Feedback. IEEE Transactions on Automatic Control, 2008, 53, 166-176.	5.7	35
125	Input-output instability patterns of Chemical Reaction Networks. , 2008, , .		1
126	On modularity and persistence of chemical reaction networks. , 2008, , .		2

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127	A Petri net approach to the study of persistence in chemical reaction networks. Mathematical Biosciences, 2007, 210, 598-618.	1.9	154
128	Multistability in Systems With Counter-Clockwise Inputâ€"Output Dynamics. IEEE Transactions on Automatic Control, 2007, 52, 596-609.	5.7	28
129	A tight small-gain theorem for not necessarily ISS systems. Systems and Control Letters, 2007, 56, 87-91.	2.3	70
130	Data-based supervisory control of uncertain systems with application to automatic drug delivery for anesthesia. Automatica, 2007, 43, 1289-1295.	5.0	3
131	Monotone Chemical Reaction Networks. Journal of Mathematical Chemistry, 2007, 41, 295-314.	1.5	97
132	A Petri Net Approach to Persistence Analysis in Chemical Reaction Networks. Lecture Notes in Control and Information Sciences, 2007, , 181-216.	1.0	23
133	Nonlinear control systems analysis and design, Horacio J. Marquez; John Wiley & Sons, Inc., ISBN: 0-471-42799-3.. Automatica, 2006, 42, 189-190.	5.0	0
134	Crowding effects promote coexistence in the chemostat. Journal of Mathematical Analysis and Applications, 2006, 319, 48-60.	1.0	26
135	Stability of leaderless discrete-time multi-agent systems. Mathematics of Control, Signals, and Systems, 2006, 18, 293-322.	2.3	82
136	Systems With Counterclockwise Inputâ€"Output Dynamics. IEEE Transactions on Automatic Control, 2006, 51, 1130-1143.	5.7	76
137	Nonlinear norm-observability notions and stability of switched systems. IEEE Transactions on Automatic Control, 2005, 50, 154-168.	5.7	270
138	Robust stabilization via saturated feedback. IEEE Transactions on Automatic Control, 2005, 50, 1997-2014.	5.7	20
139	Detection of multistability, bifurcations, and hysteresis in a large class of biological positive-feedback systems. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1822-1827.	7.1	879
140	Uniform Global Asymptotic Stability of Differential Inclusions. Journal of Dynamical and Control Systems, 2004, 10, 391-412.	0.8	28
141	Adaptive switching supervisory control of nonlinear systems with no prior knowledge of noise bounds. Automatica, 2004, 40, 449-457.	5.0	28
142	Multi-stability in monotone input/output systems. Systems and Control Letters, 2004, 51, 185-202.	2.3	142
143	A small-gain theorem for almost global convergence of monotone systems. Systems and Control Letters, 2004, 52, 407-414.	2.3	35
144	Global Regulation of Input-Saturated Discrete-Time Linear Systems Subject to Persistent Disturbances. European Journal of Control, 2004, 10, 228-236.	2.6	0

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145	Separation Principles for Input-Output and Integral-Input-to-State Stability. SIAM Journal on Control and Optimization, 2004, 43, 256-276.	2.1	78
146	An Almost Global Notion of Input-to-State Stability. IEEE Transactions on Automatic Control, 2004, 49, 866-874.	5.7	118
147	Monotone control systems. IEEE Transactions on Automatic Control, 2003, 48, 1684-1698.	5.7	503
148	Integral versions of iss for sampled-data nonlinear systems via their approximate discrete-time models. IEEE Transactions on Automatic Control, 2002, 47, 2033-2037.	5.7	35
149	A Lyapunov approach to incremental stability properties. IEEE Transactions on Automatic Control, 2002, 47, 410-421.	5.7	532
150	Lyapunov-based switching supervisory control of nonlinear uncertain systems. IEEE Transactions on Automatic Control, 2002, 47, 500-505.	5.7	93
151	A Unifying Integral ISS Framework for Stability of Nonlinear Cascades. SIAM Journal on Control and Optimization, 2002, 40, 1888-1904.	2.1	127
152	A Trajectory-Based Approach for the Stability Robustness of Nonlinear Systems with Inputs. Mathematics of Control, Signals, and Systems, 2002, 15, 336-355.	2.3	5
153	Discussion on:â€˜Variable Horizon Robust Predictive Control via Adjustable Controllability Setsâ€™ by M. N. Demenkov and N. B. Filimonov. European Journal of Control, 2001, 7, 605-608.	2.6	0
154	Power characterizations of input-to-state stability and integral input-to-state stability. IEEE Transactions on Automatic Control, 2001, 46, 1298-1303.	5.7	10
155	On feasible set-membership state estimators in constrained command governor control. Automatica, 2001, 37, 151-156.	5.0	39
156	Almost global stabilization of the inverted pendulum via continuous state feedback. Automatica, 2001, 37, 1103-1108.	5.0	128
157	Predictive PI-control of linear plants under positional and incremental input saturations. Automatica, 2000, 36, 1505-1516.	5.0	33
158	Further Equivalences and Semiglobal Versions of Integral Input to State Stability. Journal of Dynamical and Control Systems, 2000, 10, 127-149.	0.4	75
159	Robust command governors for constrained linear systems. IEEE Transactions on Automatic Control, 2000, 45, 2071-2077.	5.7	125
160	A characterization of integral input-to-state stability. IEEE Transactions on Automatic Control, 2000, 45, 1082-1097.	5.7	526
161	Forward completeness, unboundedness observability, and their Lyapunov characterizations. Systems and Control Letters, 1999, 38, 209-217.	2.3	307
162	Intrinsic robustness of global asymptotic stability. Systems and Control Letters, 1999, 38, 297-307.	2.3	54

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163	Input-to-state stability of PD-controlled robotic systems. Automatica, 1999, 35, 1285-1290.	5.0	102
164	Command governors for constrained nonlinear systems. IEEE Transactions on Automatic Control, 1999, 44, 816-820.	5.7	75
165	Some remarks on density functions for dual Lyapunov methods. , 0, , .		14
166	A tight small gain theorem for not necessarily ISS systems. , 0, , .		7
167	Smooth output-to-state stability for multistable systems on compact manifolds. ESAIM - Control, Optimisation and Calculus of Variations, 0, , .	1.3	0