Maria Elena Valcher

List of Publications by Year
in descending order

152	3,816	186265 28	138484 58
papers	citations	h-index	g-index

156	156	156	1377
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Consensus for clusters of agents with cooperative and antagonistic relationships. Automatica, 2022, 135, 110002.	5.0	11
2	Feedback context-aware pervasive systems in healthcare management: a Boolean Network approach. , 2022, , 237-260.		0
3	A Bandwagon Bias Based Model for Opinion Dynamics: Intertwining between Homophily and Influence Mechanisms. European Journal of Control, 2022, 68, 100675.	2.6	1
4	Scalable Control of Positive Systems. Annual Review of Control, Robotics, and Autonomous Systems, 2021, 4, 319-341.	11.8	9
5	Tripartite and Sign Consensus for Clustering Balanced Social Networks. , 2021, , .		0
6	Algebraic and Graph-Theoretic Conditions for the Herdability of Linear Time-Invariant Systems. , 2021, , .		1
7	Observability and Reconstructibility of Probabilistic Boolean Networks. , 2020, 4, 319-324.		35
8	Consensus in the presence of communication faults. , 2019, , .		2
9	On the effects of communication failures in a multi-agent consensus network. , 2019, , .		7
10	On the Common Linear Copositive Lyapunov Functions for Compartmental Switched Systems. Lecture Notes in Control and Information Sciences, 2019, , 27-36.	1.0	0
11	Computing the Projected Reachable Set of Stochastic Biochemical Reaction Networks Modeled by Switched Affine Systems. IEEE Transactions on Automatic Control, 2018, 63, 3719-3734.	5.7	13
12	Leader-Controlled Protocols to Accelerate Convergence in Consensus Networks. IEEE Transactions on Automatic Control, 2018, 63, 3191-3205.	5.7	15
13	A Tutorial on Positive Systems and Large Scale Control. , 2018, , .		46
14	A strategy to accelerate consensus in leader-follower networks. , 2018, , .		0
15	Stateâ€“feedback stabilization of multi-input compartmental systems. Systems and Control Letters, 2018, 119, 81-91.	2.3	11
16	Accelerating Consensus in High-Order Leader-Follower Networks. , 2018, 2, 381-386.		10
17	On the Consensus of Homogeneous Multiagent Systems With Positivity Constraints. IEEE Transactions on Automatic Control, 2017, 62, 5096-5110.	5.7	35
18	Input/output decoupling of Boolean control networks. IET Control Theory and Applications, 2017, 11, 2081-2088.	2.1	18

#	Article	IF	Citations
19	On the consensus of homogeneous multi-agent systems with arbitrarily switching topology. Automatica, 2017, 84, 79-85.	5.0	58
20	On the state-feedback stabilisation of compartmental systems. , 2017, , .		1
21	Positive Consensus Problem: The Case of Complete Communication. Lecture Notes in Control and Information Sciences, 2017, , 239-252.	1.0	2
22	Continuous-Time Compartmental Switched Systems. Lecture Notes in Control and Information Sciences, 2017, , 123-138.	1.0	1
23	Reachability analysis for switched affine systems and its application to controlled stochastic biochemical reaction networks. , 2016, , .		4
24	New results on the solution of the positive consensus problem. , 2016, , .		14
25	On the consensus problem with positivity constraints. , 2016, , .		6
26	The consensus problem in the behavioral approach. Systems and Control Letters, 2016, 95, 11-19.	2.3	3
27	Stability and Stabilizability of Continuous-Time Linear Compartmental Switched Systems. IEEE Transactions on Automatic Control, 2016, 61, 3885-3897.	5.7	17
28	Recent developments in Boolean networks control. Journal of Control and Decision, 2016, 3, 1-18.	1.6	47
29	Welcome addresses. , 2015, , .		0
30	A Generalized Tracking and Disturbance Rejection Problem for Multidimensional Behaviors. SIAM Journal on Control and Optimization, 2015, 53, 1375-1405.	2.1	1
31	On the use of hyperplane methods to compute the reachable set of controlled stochastic biochemical reaction networks. , 2015, , .		2
32	Fault detection problems for Boolean networks and Boolean control networks. , 2015, , .		7
33	On the stabilizability of continuous-time compartmental switched systems. , 2015, , .		4
34	Peer Review [President's Message]. IEEE Control Systems, 2015, 35, 14-16.	0.8	3
35	Ethics in Publishing and the Reuse of Previously Published Material [President's Message]. IEEE Control Systems, 2015, 35, 12-15.	0.8	1
36	The Impact of Control: Do We Have an Impact? [President's Message]. IEEE Control Systems, 2015, 35, 10-60.	0.8	0

#	Article	IF	Citations
37	The Joy of Research [President's Message]. IEEE Control Systems, 2015, 35, 12-13.	0.8	0
38	Discovering China [President's Message]. IEEE Control Systems, 2015, 35, 11-15.	0.8	0
39	Switched Positive Linear Systems. Foundations and Trends in Systems and Control, 2015, 2, 101-273.	7.5	104
40	Fault Detection Analysis of Boolean Control Networks. IEEE Transactions on Automatic Control, 2015, 60, 2734-2739.	5.7	69
41	Output feedback stabilization of Boolean control networks. Automatica, 2015, 57, 21-28.	5.0	127
42	The Value of Conferences [President's Message]. IEEE Control Systems, 2015, 35, 10-11.	0.8	3
43	Partial interconnection and observer-based dead-beat control of two-dimensional behaviors. Multidimensional Systems and Signal Processing, 2015, 26, 459-479.	2.6	0
44	Fault detection of Boolean control networks. , 2014, , .		7
45	The consensus problem in the behavioral approach. , 2014, , .		1
46	On the reachable set of the controlled gene expression system. , 2014, , .		10
47	Feedback stabilization, regulation and optimal control of Boolean control networks. , 2014, , .		18
48	Stability properties of a class of positive switched systems with rank one difference. Systems and Control Letters, 2014, 64, 12-19.	2.3	10
49	Optimal Control of Boolean Control Networks. IEEE Transactions on Automatic Control, 2014, 59, 1258-1270.	5.7	214
50	On the Stabilizability and Consensus of Positive Homogeneous Multi-Agent Dynamical Systems. IEEE Transactions on Automatic Control, 2014, 59, 1936-1941.	5.7	75
51	On the consensus and bipartite consensus in high-order multi-agent dynamical systems with antagonistic interactions. Systems and Control Letters, 2014, 66, 94-103.	2.3	331
52	Identification problems for Boolean networks and Boolean control networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5399-5404.	0.4	6
53	A Call for Volunteers [Member Activities]. IEEE Control Systems, 2014, 34, 19-21.	0.8	0
54	Symbolic dynamics of Boolean control networks. Automatica, 2013, 49, 2525-2530.	5.0	45

#	Article	IF	Citations
55	Zero-Time-Controllability and Dead-Beat Control of Two-Dimensional Behaviors. SIAM Journal on Control and Optimization, 2013, 51, 195-220.	2.1	4
56	Asymptotic stability and stabilizability of special classes of discrete-time positive switched systems. Linear Algebra and Its Applications, 2013, 438, 1814-1831.	0.9	20
57	On the periodic trajectories of Boolean control networks. Automatica, 2013, 49, 1506-1509.	5.0	142
58	Observability, Reconstructibility and State Observers of Boolean Control Networks. IEEE Transactions on Automatic Control, 2013, 58, 1390-1401.	5.7	352
59	Finite-horizon optimal control of Boolean control networks. , 2013, , .		2
60	A stabilizable switched linear system does not necessarily admit a smooth homogeneous Lyapunov function. , 2013, , .		2
61	Partial interconnection dead-beat control of two-dimensional behaviors. , 2013, , .		0
62	On the stability and stabilizability of a class of continuous-time positive switched systems with rank one difference. , 2013, , .		1
63	Observability and reconstructibility of Boolean control networks. , 2012, , .		9
64	Dead-beat control of two-dimensional behaviors. , 2012, , .		2
65	Co-Positive Lyapunov Functions for the Stabilization of Positive Switched Systems. IEEE Transactions on Automatic Control, 2012, 57, 3038-3050.	5.7	132
66	Stability and Stabilizability Criteria for Discrete-Time Positive Switched Systems. IEEE Transactions on Automatic Control, 2012, 57, 1208-1221.	5.7	174
67	Zero-controllability and dead-beat control of discrete-time behaviors. , 2012, , .		0
68	Dead-Beat Control in the Behavioral Approach. IEEE Transactions on Automatic Control, 2012, 57, 2163-2175.	5.7	9
69	On the controllability and stabilizability of non-homogeneous multi-agent dynamical systems. Systems and Control Letters, 2012, 61, 780-787.	2.3	8
70	Stability and stabilizability of special classes of discrete-time positive switched systems. , 2011, , .		8
71	Reachability of a Class of Discrete-Time Positive Switched Systems. SIAM Journal on Control and Optimization, 2011, 49, 162-184.	2.1	7
72	Distributed Parameters Dynamic Model of a Solar Fresnel Collector Field. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14784-14789.	0.4	8

#	Article	IF	Citations
73	Is stabilization of switched positive linear systems equivalent to the existence of an Hurwitz convex combination of the system matrices?. , 2011, , .		5
74	Preliminary results on the controllability and stabilizability of non-homogeneous multi-agent dynamical systems. , 2011, , .		0
75	Asymptotic exponential cones of Metzler matrices and their use in the solution of an algebraic problem. Linear Algebra and Its Applications, 2010, 432, 980-1006.	0.9	4
76	On the stability of continuous-time positive switched systems. , 2010, , .		3
77	Linear Copositive Lyapunov Functions for Continuous-Time Positive Switched Systems. IEEE Transactions on Automatic Control, 2010, 55, 1933-1937.	5.7	211
78	Stabilizability of discrete-time positive switched systems. , 2010, , .		9
79	Reachability Properties of Single-Input Continuous-Time Positive Switched Systems. IEEE Transactions on Automatic Control, 2010, 55, 1117-1130.	5.7	14
80	Reachability of a class of discrete-time positive switched systems. , 2009, , .		1
81	On the k-switching reachability sets of single-input positive switched systems. , 2009, , .		2
82	Reachability Properties of Continuous-Time Positive Systems. IEEE Transactions on Automatic Control, 2009, 54, 1586-1590.	5.7	47
83	Reachability Analysis for Different Classes of Positive Systems. Lecture Notes in Control and Information Sciences, 2009, , 29-41.	1.0	6
84	k-Switching Reachability Sets of Continuous-Time Positive Switched Systems. Lecture Notes in Control and Information Sciences, 2009, , 173-181.	1.0	0
85	Dead-beat estimation problems for 2D behaviors. Multidimensional Systems and Signal Processing, 2008, 19, 287-306.	2.6	11
86	Monomial reachability and zero controllability of discrete-time positive switched systems. Systems and Control Letters, 2008, 57, 340-347.	2.3	11
87	On the reachability properties of continuous-time positive systems. , 2008, , .		6
88	On the reachability of single-input positive switched systems. , 2008, , .		4
89	Recent advances on the reachability of single-input positive switched systems. , 2008, , .		2
90	Strong excitability of discrete-time positive switched systems. , 2007, , .		0

#	Article	IF	Citations
91	Member Initiatives for 2006 and 2007 [Member Activities]. IEEE Control Systems, 2007, 27, 16-38.	0.8	0
92	Zero patterns and dominant modes of the state evolutions of autonomous continuous-time positive systems. , 2007, , .		0
93	Generalized Luenberger observers for 2D state-space models. , 2007, , .		5
94	A note on the excitability properties of discrete-time positive switched systems. , 2007, , .		1
95	On the zero pattern properties and asymptotic behavior of continuous-time positive system trajectories. Linear Algebra and Its Applications, 2007, 425, 283-302.	0.9	22
96	A Behavioral Approach to Estimation and Dead-Beat Observer Design With Applications to Stateâ€“Space Models. IEEE Transactions on Automatic Control, 2006, 51, 1787-1797.	5.7	17
97	Linear systems theoryâ€”a structural decomposition approach by B.M. Chen, Z. Lin and Y. Shamash. Copyright BirkhÃuser, Boston, 2004, ISBN: 0-8176-3779-6.. Automatica, 2006, 42, 885-886.	5.0	0
98	A polynomial matrix approach to the structural properties of 2D positive systems. Linear Algebra and Its Applications, 2006, 413, 458-473.	0.9	6
99	The general fault detection and isolation problem for 2D state-space models. Systems and Control Letters, 2006, 55, 894-899.	2.3	29
100	Observer-based Fault Detection and Isolation for 2D State-space Models. Multidimensional Systems and Signal Processing, 2006, 17, 219-242.	2.6	39
101	On the reachability of continuous-time positive switched systems. , 2006, , .		7
102	Reachability properties of discrete-time positive switched systems. , 2006, , .		7
103	LINEAR-QUADRATIC CONTROL AND QUADRATIC DIFFERENTIAL FORMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 1-12.	0.4	7
104	Two-dimensional behavior decompositions with Finite-Dimensional Intersection: A Complete Characterization. Multidimensional Systems and Signal Processing, 2005, 16, 335-354.	2.6	10
105	An Energy-Based Adaptive Control Design Technique for Multibody-Mechanisms With Flexible Links. IEEE/ASME Transactions on Mechatronics, 2005, 10, 571-580.	5.8	11
106	Driving variable realizations and the non-negative realization problem for controllable behaviours. International Journal of Control, 2005, 78, 720-733.	1.9	0
107	Controllability and reachability of 2-D positive systems: a graph theoretic approach. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 576-585.	0.1	54
108	Unknown input observers for 2D state-space models. International Journal of Control, 2004, 77, 861-876.	1.9	24

#	Article	IF	Citations
109	Optimal filtering, fault detection and isolation for linear discrete-time systems in a noisy environment. International Journal of Adaptive Control and Signal Processing, 2003, 17, 729-750.	4.1	8
110	ON THE POSITIVE REALIZATION OF CONTROLLABLE BEHAVIORS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 47-52.	0.4	0
111	DISTURBED FAULT DETECTION AND ISOLATION PROBLEMS FOR LINEAR STATE MODELS IN A NOISY ENVIRONMENT. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 167-172.	0.4	2
112	On some special features which are peculiar to discrete time behaviors with trajectories on Z+. Linear Algebra and Its Applications, 2002, 351-352, 719-737.	0.9	3
113	Title is missing!. Multidimensional Systems and Signal Processing, 2002, 13, 289-315.	2.6	4
114	Nonnegative Realization of Autonomous Systems in the Behavioral Approach. SIAM Journal on Control and Optimization, 2001, 40, 540-556.	2.1	9
115	On the stability of delay-differential systems in the behavioral framework. IEEE Transactions on Automatic Control, 2001, 46, 1634-1638.	5.7	2
116	A note on the direct sum decomposition of two-dimensional behaviors. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 490-494.	0.1	13
117	On the Construction of Matrix Invariants with Applications. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 783-788.	0.4	0
118	State-space descriptions and observability properties of 2D finite-dimensional autonomous behaviors. Systems and Control Letters, 2001, 44, 91-102.	2.3	3
119	Behavior decompositions and two-sided diophantine equations. Automatica, 2001, 37, 1387-1395.	5.0	12
120	Autonomous behaviours decomposition and modal analysis. International Journal of Control, 2001, 74, 1690-1705.	1.9	3
121	Properties of finite-dimensional sets of solutions of 2D difference equations. , 2001, , .		0
122	Nonnegative linear systems in the behavioral approach: the autonomous case. Linear Algebra and Its Applications, 2000, 319, 147-162.	0.9	11
123	A behavioral approach to classic polynomial matrix descriptions. Systems and Control Letters, 2000, 40, 279-288.	2.3	2
124	On the Decomposition of Two-Dimensional Behaviors. Multidimensional Systems and Signal Processing, 2000, 11, 49-65.	2.6	25
125	An Algebraic Approach to the Construction of Polyhedral Invariant Cones. SIAM Journal on Matrix Analysis and Applications, 2000, 22, 453-471.	1.4	18
126	Characteristic cones and stability properties of two-dimensional autonomous behaviors. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 290-302.	0.1	76

#	Article	IF	Citations
127	Dead beat observer synthesis. Systems and Control Letters, 1999, 37, 285-292.	2.3	23
128	State observers for discrete-time linear systems with unknown inputs. IEEE Transactions on Automatic Control, 1999, 44, 397-401.	5.7	117
129	Observer synthesis in the behavioral approach. IEEE Transactions on Automatic Control, 1999, 44, 2297-2307.	5.7	37
130	Stability properties and periodic evolutions of bilinear systems in input-output form. IEEE Transactions on Automatic Control, 1999, 44, 1197-1202.	5.7	1
131	Primitivity of Positive Matrix Pairs: Algebraic Characterization, Graph Theoretic Description, and 2D Systems Interpretation. SIAM Journal on Matrix Analysis and Applications, 1998, 19, 71-88.	1.4	22
132	Multidimensional Systems with Finite Support Behaviors: Signal Structure, Generation, and Detection. SIAM Journal on Control and Optimization, 1998, 36, 760-779.	2.1	27
133	On the internal stability and asymptotic behavior of 2-D positive systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 602-613.	0.1	93
134	nD Polynomial Matrices with Applications to Multidimensional Signal Analysis. Multidimensional Systems and Signal Processing, 1997, 8, 387-408.	2.6	67
135	On some connections between bilinear input/output maps and 2D systems. Nonlinear Analysis: Theory, Methods & Applications, 1997, 30, 1995-2005.	1.1	2
136	On the control of finite support behaviors. Systems and Control Letters, 1997, 31, 65-75.	2.3	0
137	Directed graphs, 2D state models, and characteristic polynomials of irreducible matrix pairs. Linear Algebra and Its Applications, 1997, 263, 275-310.	0.9	54
138	Matrix Pairs and 2D Systems Analysis. European Consortium for Mathematics in Industry, 1997, , 56-69.	0.4	0
139	A state-space approach to the design of syndrome formers. Systems and Control Letters, 1996, 27, 99-107.	2.3	0
140	On the spectral and combinatorial structure of 2D positive systems. Linear Algebra and Its Applications, 1996, 245, 223-258.	0.9	27
141	Controllability and reachability criteria for discrete time positive systems. International Journal of Control, 1996, 65, 511-536.	1.9	116
142	State models and asymptotic behaviour of 2D positive systems. IMA Journal of Mathematical Control and Information, 1995, 12, 17-36.	1.7	32
143	Matrix Pairs in Two-Dimensional Systems: An Approach Based on Trace Series and Hankel Matrices. SIAM Journal on Control and Optimization, 1995, 33, 1127-1150.	2.1	12
144	On 2D finite support convolutional codes: An algebraic approach. Multidimensional Systems and Signal Processing, 1994, 5, 231-243.	2.6	34

#	Article	IF	Citations
145	On the structure of finite memory and separable two-dimensional systems. Automatica, 1994, 30, 347-350.	5.0	10
146	Algebraic aspects of two-dimensional convolutional codes. IEEE Transactions on Information Theory, 1994, 40, 1068-1082.	2.4	54
147	Polynomial inverses of 2D transfer matrices and finite memory realizations via inverse systems. Multidimensional Systems and Signal Processing, 1993, 4, 269-284.	2.6	3
148	Duality analysis of 2D convolutional codes. , 0, , .		1
149	A behavioral approach to the estimation problem and its applications to state-space models. , 0, , .		4
150	Optimality with Respect to Blips. , 0, , .		0
151	A Polynomial Matrix Approach to the Structural Properties of 2D Positive Systems. , 0, , .		0
152	An Algebraic Approach to the Structural Properties of Continuous Time Positive Switched Systems. , 0, , 185-192.		9