Mircea Lazar

List of Publications by Year
in descending order

113 papers	2,289 citations	304602 22 h-index	265120 42 g-index
114 all docs	114 docs citations	114 times ranked	1530 citing authors

#	Article	IF	Citations
1	Driving Mode Advice for Eco-Driving Assistance System With Driver Reaction Delay Compensation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 134-138.	2.2	5
2	On Data-Driven Control: Informativity of Noisy Input-Output Data With Cross-Covariance Bounds. , 2022, 6, 2192-2197.		8
3	Long-Horizon Nonlinear Model Predictive Control of Modular Multilevel Converters. Energies, 2022, 15, 1376.	1.6	2
4	Analysis of Power Amplifier Contribution to the Precision of Motion Systems. , 2022, , .		3
5	Construction of Continuous and Piecewise Affine Feedback Stabilizers for Nonlinear Systems. IEEE Transactions on Automatic Control, 2021, 66, 4059-4068.	3.6	1
6	A dissipativity–based framework for analyzing stability of predictive controllers. IFAC-PapersOnLine, 2021, 54, 159-165.	0.5	4
7	Stabilizing non–linear model predictive control using linear parameter–varying embeddings and tubes. IET Control Theory and Applications, 2021, 15, 1404-1421.	1.2	9
8	Piece–wise ellipsoidal set–based model predictive control of linear parameter varying systems with application to a tower crane. Asian Journal of Control, 2021, 23, 1324-1339.	1.9	9
9	Stabilization of discrete–time nonlinear systems based on control dissipation functions. , 2021, , .		0
10	Heterogeneously parameterized tube model predictive control for LPV systems. Automatica, 2020, 111, 108622.	3.0	40
11	Driving Mode Optimization for Hybrid Trucks Using Road and Traffic Preview Data. Energies, 2020, 13, 5341.	1.6	11
12	Real-time Driving Mode Advice for Eco-driving using MPC. IFAC-PapersOnLine, 2020, 53, 13830-13835.	0.5	6
13	Chemotherapy followed by anti-CD137 mAb immunotherapy improves disease control in a mouse myeloma model. JCI Insight, 2019, 4, .	2.3	20
14	Automated-Sampling-Based Stability Verification and DOA Estimation for Nonlinear Systems. IEEE Transactions on Automatic Control, 2018, 63, 3659-3674.	3.6	21
15	Computation of Lyapunov Functions for Nonlinear Differential Equations via a Massera-Type Construction. IEEE Transactions on Automatic Control, 2018, 63, 1259-1272.	3.6	23
16	Feedback stabilization of positive nonlinear systems with applications to biological systems. , 2018, , .		5
17	An instrumental variable method for closed-loop identification of coreless linear motors. , 2018, , .		2
18	Stabilizing tube-based model predictive control: Terminal set and cost construction for LPV systems. Automatica, 2017, 85, 137-144.	3.0	36

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19	A switching control law approach for cancer immunotherapy of an evolutionary tumor growth model. Mathematical Biosciences, 2017, 284, 40-50.	0.9	9
20	A method to guarantee local convergence for sequential quadratic programming with poor Hessian approximation. , 2017, , .		2
21	Stabilizing non-linear MPC using linear parameter-varying representations. , 2017, , .		6
22	A sampling approach to constructing Lyapunov functions for nonlinear continuous-time systems. , 2016, , .		2
23	Construction of continuous and piecewise affine Lyapunov functions via a finite-time converse. IFAC-PapersOnLine, 2016, 49, 13-18.	0.5	3
24	Computation of Lyapunov functions for nonlinear differential equations via a Yoshizawaâ€"type construction. IFAC-PapersOnLine, 2016, 49, 29-34.	0.5	9
25	A tube-based approach to nonlinear explicit MPC. , 2016, , .		7
26	Tube-based anticipative model predictive control for linear parameter-varying systems. , 2016, , .		18
27	A sampling approach to finding Lyapunov functions for nonlinear discrete-time systems. , 2016, , .		19
28	MPC for linear parameter-varying systems in input-output representation. , 2016, , .		2
29	Driveline oscillations damping: A tractable predictive control solution based on a piecewise affine model. Nonlinear Analysis: Hybrid Systems, 2016, 19, 168-185.	2.1	22
30	Finite-step Terminal Ingredients for Stabilizing Model Predictive Control. IFAC-PapersOnLine, 2015, 48, 9-15.	0.5	15
31	Stabilizing Model Predictive Control of a Gantry Crane Based on Flexible Set-Membership Constraints. IFAC-PapersOnLine, 2015, 48, 248-253.	0.5	3
32	From non-homogeneous stabilizing control laws to tracking of constrained discrete-time linear systems. , 2015, , .		0
33	Feedback stabilization via rational control Lyapunov functions. , 2015, , .		5
34	Stabilizing Model Predictive Control based on flexible set-membership constraints. , 2015, , .		5
35	Fast and scalable constrained reference tracking for discrete-time linear systems. , 2015, , .		0
36	Cancellation of normal parasitic forces in coreless linear motors. , 2015, , .		10

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37	A switched systems approach to cancer therapy. , 2015, , .		5
38	Efficient State Reference Generation for Torque Control in Externally Excited Synchronous Machines. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	5
39	Temporal logic model predictive control. Automatica, 2015, 56, 78-85.	3.0	16
40	On stability analysis methods for large-scale discrete-time systems. Automatica, 2015, 55, 66-72.	3.0	28
41	A delta-sampling verification theorem for discrete-time, possibly discontinuous systems. , 2015, , .		6
42	Stabilizing model predictive control: On the enlargement of the terminal set. International Journal of Robust and Nonlinear Control, 2015, 25, 2646-2670.	2.1	10
43	A Relaxed Small-Gain Theorem for Interconnected Discrete-Time Systems. IEEE Transactions on Automatic Control, 2015, 60, 812-817.	3.6	15
44	On the computation of Lyapunov functions for discrete-time nonlinear systems. , 2014, , .		8
45	Domain of attraction computation for tumor dynamics. , 2014, , .		9
46	On controlled-invariance and stabilization of time-delay systems. , 2014, , .		1
47	Low-complexity constrained control of the opposed current converter using quadratic control contractive sets. , 2014, , .		1
48	Stability analysis of switched linear systems defined by graphs. , 2014, , .		20
49	Finite Bisimulations for Switched Linear Systems. IEEE Transactions on Automatic Control, 2014, 59, 3122-3134.	3.6	16
50	Construction of invariant polytopic sets with specified complexity. International Journal of Control, 2014, 87, 1681-1693.	1.2	16
51	On stability and stabilization of periodic discrete-time systems with an application to satellite attitude control. Automatica, 2014, 50, 3190-3196.	3.0	7
52	Constrained reference tracking for a high-speed buck converter. , 2014, , .		0
53	LTL receding horizon control for finite deterministic systems. Automatica, 2014, 50, 399-408.	3.0	52
54	Stabilizing Dynamic Controllers for Hybrid Systems: A Hybrid Control Lyapunov Function Approach. IEEE Transactions on Automatic Control, 2014, 59, 2629-2643.	3.6	22

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55	Computation of piecewise affine terminal cost functions for model predictive control. , 2014, , .		0
56	The Minkowskiâ€"Lyapunov equation for linear dynamics: Theoretical foundations. Automatica, 2014, 50, 2015-2024.	3.0	18
57	Language-Guided Controller Synthesis for Linear Systems. IEEE Transactions on Automatic Control, 2014, 59, 1163-1176.	3.6	29
58	An alternative converse Lyapunov theorem for discrete-time systems. Systems and Control Letters, 2014, 70, 49-59.	1.3	49
59	Alternative Stability Conditions for Switched Discrete Time Linear Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6007-6012.	0.4	18
60	Tractable Razumikhin-type conditions for input-to-state stability analysis of delay difference inclusions. Automatica, 2013, 49, 619-625.	3.0	21
61	Necessary and Sufficient Razumikhin-Type Conditions for Stability of Delay Difference Equations. IEEE Transactions on Automatic Control, 2013, 58, 2637-2642.	3.6	20
62	Horizon-1 Predictive Control of Automotive Electromagnetic Actuators. IEEE Transactions on Control Systems Technology, 2013, 21, 1652-1665.	3.2	3
63	Further Input-to-State Stability Subtleties for Discrete-Time Systems. IEEE Transactions on Automatic Control, 2013, 58, 1609-1613.	3.6	25
64	An explicit solution to constrained stabilization via polytopic tubes. , 2013, , .		5
65	Lyapunov based predictive control of vehicle drivetrains over CAN. Control Engineering Practice, 2013, 21, 1884-1898.	3.2	81
66	On constrained stabilization of discrete-time linear systems. , 2013, , .		3
67	Complexity-driven construction of controlled invariant polytopic sets. , 2013, , .		0
68	A real-time control system architecture for industrial power amplifiers. , 2013, , .		6
69	Constrained state-feedback control of an externally excited synchronous machine. , 2013, , .		1
70	Constrained stabilization of periodic discrete-time systems via periodic Lyapunov functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 17-22.	0.4	1
71	Stabilizing linear model predictive control: On the enlargement of the terminal set. , 2013, , .		10
72	Receding horizon temporal logic control for finite deterministic systems. , 2012, , .		9

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73	Non-conservative dissipativity and small-gain conditions for stability analysis of interconnected systems. , 2012, , .		9
74	Finite bisimulations for switched linear systems. , 2012, , .		9
75	Formal Abstraction of Linear Systems via Polyhedral Lyapunov Functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 88-93.	0.4	6
76	A hybrid polytopic partition approach to constrained stabilization of bilinear systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 430-435.	0.4	0
77	Stability of periodically time-varying systems: Periodic Lyapunov functions. Automatica, 2012, 48, 2663-2669.	3.0	11
78	Minkowski terminal cost functions for MPC. Automatica, 2012, 48, 2721-2725.	3.0	14
79	Lyapunov-based constrained engine torque control using electronic throttle and variable cam timing. , 2012, , .		5
80	Stabilization of Bilinear Power Converters by Affine State Feedback Under Input and State Constraints. IEEE Transactions on Circuits and Systems II: Express Briefs, 2012, 59, 520-524.	2.2	26
81	FPGA implementation of optimal and approximate model predictive control for a buck-boost DC-DC converter. , 2012, , .		18
82	Assessment of non-centralised model predictive control techniques for electrical power networks. International Journal of Control, 2012, 85, 1162-1177.	1.2	53
83	Input-to-state stability analysis for interconnected difference equations with delay. Mathematics of Control, Signals, and Systems, 2012, 24, 33-54.	1.4	23
84	Set-Induced Stability Results for Delay Difference Equations. Lecture Notes in Control and Information Sciences, 2012, , 73-84.	0.6	5
85	Stabilization of polytopic delay difference inclusions via the Razumikhin approach. Automatica, 2011, 47, 2562-2570.	3.0	25
86	On infinity norms as Lyapunov functions for continuous-time dynamical systems. , 2011, , .		8
87	A predictive control solution for driveline oscillations damping. , 2011, , .		30
88	On positive invariance for delay difference equations. , 2011, , .		19
89	Small-gain results for discrete-time networks of systems with delay. , 2011, , .		0
90	Constrained stabilization of a two-input buck-boost DC/DC converter using a set-theoretic method. , 2011, , .		3

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91	On polytopic inclusions as a modeling framework for systems with time-varying delays. Automatica, 2010, 46, 615-619.	3.0	94
92	Stabilization of polytopic delay difference inclusions: Time-varying control Lyapunov functions. , 2010, , .		0
93	On parameterized Lyapunov and control Lyapunov functions for discrete-time systems. , 2010, , .		5
94	A relaxation of Lyapunov conditions and controller synthesis for discrete-time periodic systems. , 2010, , .		3
95	Comparison of overapproximation methods for stability analysis of networked control systems. , 2010, , .		60
96	On infinity norms as Lyapunov functions: Alternative necessary and sufficient conditions. , 2010, , .		31
97	On integration of event-based estimation and robust MPC in a feedback loop. , 2010, , .		24
98	On infinity norms as Lyapunov functions for piecewise affine systems. , 2010, , .		11
99	Real-time control of power systems using nodal prices. International Journal of Electrical Power and Energy Systems, 2009, 31, 522-530.	3.3	108
100	Predictive control of hybrid systems: Input-to-state stability results for sub-optimal solutions. Automatica, 2009, 45, 180-185.	3.0	76
101	Stabilization of networked control systems via non-monotone control ^lyapunov functions. , 2009, , .		17
102	On Polytopic Approximations of Systems with Time-Varying Input Delays. Lecture Notes in Control and Information Sciences, 2009, , 225-233.	0.6	10
103	Min-max Model Predictive Control of Nonlinear Systems: A Unifying Overview on Stability. European Journal of Control, 2009, 15, 5-21.	1.6	163
104	Lyapunov Functions, Stability and Input-to-State Stability Subtleties for Discrete-Time Discontinuous Systems. IEEE Transactions on Automatic Control, 2009, 54, 2421-2425.	3.6	55
105	Synthesis of Trajectory-Dependent Control Lyapunov Functions by a Single Linear Program. Lecture Notes in Computer Science, 2009, , 237-251.	1.0	9
106	On robustness of constrained discrete-time systems to state measurement errors. Automatica, 2008, 44, 1161-1165.	3.0	23
107	On input-to-state stability of minâ€"max nonlinear model predictive control. Systems and Control Letters, 2008, 57, 39-48.	1.3	134
108	Global input-to-state stability and stabilization of discrete-time piecewise affine systems. Nonlinear Analysis: Hybrid Systems, 2008, 2, 721-734.	2.1	21

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109	Squaring the circle: An algorithm for generating polyhedral invariant sets from ellipsoidal ones. Automatica, 2007, 43, 2096-2103.	3.0	22
110	Stabilizing Model Predictive Control of Hybrid Systems. IEEE Transactions on Automatic Control, 2006, 51, 1813-1818.	3.6	190
111	A hybrid MPC approach to the design of a Smart adaptive cruise controller. , 2006, , .		14
112	Infinity Norms as Lyapunov Functions for Model Predictive Control of Constrained PWA Systems. Lecture Notes in Computer Science, 2005, , 417-432.	1.0	19
113	A neural predictive controller for non-linear systems. Mathematics and Computers in Simulation, 2002, 60, 315-324.	2.4	56