Michael Malisoff

List of Publications by Year
in descending order

138 papers	2,025 citations	257357 24 h-index	289141 40 g-index
138 all docs	138 docs citations	138 times ranked	858 citing authors

#	Article	IF	Citations
1	Constructions of Strict Lyapunov Functions. Communications and Control Engineering, 2009, , .	1.0	204
2	Further results on input-to-state stability for nonlinear systems with delayed feedbacks. Automatica, 2008, 44, 2415-2421.	3.0	150
3	Robustness of nonlinear systems with respect to delay and sampling of the controls. Automatica, 2013, 49, 1925-1931.	3.0	86
4	Reduction Model Approach for Linear Time-Varying Systems With Delays. IEEE Transactions on Automatic Control, 2014, 59, 2068-2082.	3.6	68
5	Design of continuousâ€“discrete observers for time-varying nonlinear systems. Automatica, 2015, 57, 135-144.	3.0	64
6	Stabilization of Nonlinear Time-Varying Systems Through a New Prediction Based Approach. IEEE Transactions on Automatic Control, 2017, 62, 2908-2915.	3.6	60
7	Universal formulas for feedback stabilization with respect to Minkowski balls. Systems and Control Letters, 2000, 40, 247-260.	1.3	55
8	Further remarks on strict input-to-state stable Lyapunov functions for time-varying systems. Automatica, 2005, 41, 1973-1978.	3.0	54
9	Extensions of Razumikhinâ€™s theorem and Lyapunovâ€“Krasovskii functional constructions for time-varying systems with delay. Automatica, 2017, 78, 1-13.	3.0	52
10	Stability Analysis for Time-Varying Systems With Delay Using Linear Lyapunov Functionals and a Positive Systems Approach. IEEE Transactions on Automatic Control, 2016, 61, 771-776.	3.6	48
11	Trajectory Based Approach for the Stability Analysis of Nonlinear Systems with Time Delays. IEEE Transactions on Automatic Control, 2015, 60, 1716-1721.	3.6	45
12	Stabilization and robustness analysis for time-varying systems with time-varying delays using a sequential subpredictors approach. Automatica, 2017, 82, 118-127.	3.0	44
13	Further Results on Stabilization of Periodic Trajectories for a Chemostat With Two Species. IEEE Transactions on Automatic Control, 2008, 53, 66-74.	3.6	42
14	Stabilization of a chemostat model with Haldane growth functions and a delay in the measurements. Automatica, 2010, 46, 1428-1436.	3.0	41
15	Predictor-based tracking for neuromuscular electrical stimulation. International Journal of Robust and Nonlinear Control, 2015, 25, 2391-2419.	2.1	35
16	Stability and Robustness Analysis for Curve Tracking Control using Input-to-State Stability. IEEE Transactions on Automatic Control, 2012, 57, 1320-1326.	3.6	32
17	Stability and Control Design for Time-Varying Systems with Time-Varying Delays using a Trajectory-Based Approach. SIAM Journal on Control and Optimization, 2017, 55, 533-556.	1.1	32
18	Local Stabilization of Nonlinear Systems Through the Reduction Model Approach. IEEE Transactions on Automatic Control, 2014, 59, 3033-3039.	3.6	30

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19	Further results on strict Lyapunov functions for rapidly time-varying nonlinear systems. Automatica, 2006, 42, 1663-1671.	3.0	27
20	Uniform Global Asymptotic Stability of a Class of Adaptively Controlled Nonlinear Systems. IEEE Transactions on Automatic Control, 2009, 54, 1152-1158.	3.6	27
21	Strict Lyapunov Function Constructions Under LaSalle Conditions With an Application to Lotka-Volterra Systems. IEEE Transactions on Automatic Control, 2010, 55, 841-854.	3.6	27
22	New control design for bounded backstepping under input delays. Automatica, 2016, 66, 48-55.	3.0	27
23	Asymptotic stabilization for feedforward systems with delayed feedbacks. Automatica, 2013, 49, 780-787.	3.0	26
24	Bounded Tracking Controllers and Robustness Analysis for UAVs. IEEE Transactions on Automatic Control, 2013, 58, 180-187.	3.6	25
25	On the stability of periodic solutions in the perturbed chemostat. Mathematical Biosciences and Engineering, 2007, 4, 319-338.	1.0	24
26	Tracking control and robustness analysis for a nonlinear model of human heart rate during exercise. Automatica, 2011, 47, 968-974.	3.0	23
27	Adaptive control for planar curve tracking under controller uncertainty. Automatica, 2013, 49, 1411-1418.	3.0	23
28	Robustness of Adaptive Control under Time Delays for Three-Dimensional Curve Tracking. SIAM Journal on Control and Optimization, 2015, 53, 2203-2236.	1.1	23
29	A separation principle for a class of hybrid automata on a partial order. , 2009, , .		21
30	A Simplified Design for Strict Lyapunov Functions Under Matrosov Conditions. IEEE Transactions on Automatic Control, 2009, 54, 177-183.	3.6	21
31	Stability and Robustness Analysis for Switched Systems with Time-Varying Delays. SIAM Journal on Control and Optimization, 2018, 56, 158-182.	1.1	21
32	Stability analysis for systems with time-varying delay: Trajectory based approach. , 2015, , .		20
33	On Input-to-State Stability for Nonlinear Systems with Delayed Feedbacks. Proceedings of the American Control Conference, 2007, , .	0.0	19
34	Stabilization of Nonlinear Delay Systems: AÂTutorial on Recent Results. Advances in Delays and Dynamics, 2016, , 1-41.	0.4	18
35	Constructions of strict Lyapunov functions for discrete time and hybrid time-varying systems. Nonlinear Analysis: Hybrid Systems, 2008, 2, 394-407.	2.1	17
36	On tracking for the PVTOL model with bounded feedbacks. , 2011, , .		17

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37	Continuous Discrete Sequential Observers for Time-Varying Systems Under Sampling and Input Delays. IEEE Transactions on Automatic Control, 2020, 65, 1704-1709.	3.6	17
38	Collaborative Autonomous Surveys in Marine Environments Affected by Oil Spills. Studies in Computational Intelligence, 2014, , 87-113.	0.7	17
39	Bounded-from-below solutions of the Hamilton-Jacobi equation for optimal control problems with exit times: vanishing lagrangians, eikonal equations, and shape-from-shading. Nonlinear Differential Equations and Applications, 2004, 11, 95-122.	0.4	15
40	Stabilization in a Two-Species Chemostat With Monod Growth Functions. IEEE Transactions on Automatic Control, 2009, 54, 855-861.	3.6	15
41	Finite time estimation through a continuousâ€discrete observer. International Journal of Robust and Nonlinear Control, 2018, 28, 4831-4849.	2.1	15
42	Further results on Lyapunov functions for slowly time-varying systems. Mathematics of Control, Signals, and Systems, 2007, 19, 1-21.	1.4	14
43	New prediction approach for stabilizing time-varying systems under time-varying input delay. , 2016, , .		14
44	Adaptive planar curve tracking control and robustness analysis under state constraints and unknown curvature. Automatica, 2017, 75, 133-143.	3.0	14
45	Sequential Predictors Under Time-Varying Feedback and Measurement Delays and Sampling. IEEE Transactions on Automatic Control, 2019, 64, 2991-2996.	3.6	14
46	Stability and stabilization for models of chemostats with multiple limiting substrates. Journal of Biological Dynamics, 2012, 6, 612-627.	0.8	13
47	Event-triggered control for continuous-time linear systems with a delay in the input. Systems and Control Letters, 2022, 159, 105075.	1.3	12
48	Finite time estimation for time-varying systems with delay in the measurements. Systems and Control Letters, 2019, 133, 104551.	1.3	11
49	Tracking control and robustness analysis for planar vertical takeoff and landing aircraft under bounded feedbacks. International Journal of Robust and Nonlinear Control, 2012, 22, 1899-1920.	2.1	10
50	Reduced order finite time observers and output feedback for time-varying nonlinear systems. Automatica, 2020, 119, 109083.	3.0	10
51	Event-triggered control using a positive systems approach. European Journal of Control, 2021, 62, 63-68.	1.6	10
52	Strict Lyapunov functions and feedback controls for SIR models with quarantine and vaccination. Discrete and Continuous Dynamical Systems - Series B, 2022, 27, 6969.	0.5	10
53	Tracking and robustness analysis for controlled microelectromechanical relays. International Journal of Robust and Nonlinear Control, 2008, 18, 1637-1656.	2.1	9
54	Bounded backstepping control and robustness analysis for time-varying systems under converging-input-converging-state conditions. European Journal of Control, 2018, 42, 15-24.	1.6	9

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55	Sequential predictors for delay compensation for discrete time systems with time-varying delays. Automatica, 2020, 122, 109188.	3.0	9
56	Sequential predictors for delay-compensating feedback stabilization of bilinear systems with uncertainties. Systems and Control Letters, 2021, 152, 104933.	1.3	9
57	Uniform global asymptotic stability of adaptive cascaded nonlinear systems with unknown high-frequency gains. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 1132-1145.	0.6	8
58	Backstepping design for output feedback stabilization for a class of uncertain systems. Systems and Control Letters, 2019, 123, 134-143.	1.3	8
59	Tracking and parameter identification for model reference adaptive control. International Journal of Robust and Nonlinear Control, 2020, 30, 1582-1606.	2.1	8
60	Vector Extensions of Halanayâ€™s Inequality. IEEE Transactions on Automatic Control, 2022, 67, 1453-1459.	3.6	8
61	Event-triggered control for linear time-varying systems using a positive systems approach. Systems and Control Letters, 2022, 161, 105131.	1.3	8
62	Stabilizing a Periodic Solution in the Chemostat: A Case Study in Tracking. , 2006, , .		7
63	Robustness of a class of three-dimensional curve tracking control laws under time delays and polygonal state constraints. , 2013, , .		7
64	Stabilization of linear time varying systems with input delays: Application to rapidly time varying systems. , 2013, , .		7
65	Reduction model approach for systems with a time-varying delay. , 2015, , .		7
66	Remarks on output feedback stabilization of two-species chemostat models. Automatica, 2010, 46, 1739-1742.	3.0	6
67	Continuous-Discrete Observers for Time-Varying Nonlinear Systems: A Tutorial on Recent Results. , 2015, , 181-188.		6
68	New bounded backstepping control designs for time-varying systems under converging-input-converging-state conditions. , 2016, , .		6
69	Stabilization and Robustness Analysis for a Chain of Saturating Integrators With Imprecise Measurements. , 2019, 3, 428-433.		6
70	Stability and observer designs using new variants of Halanayâ€™s inequality. Automatica, 2021, 123, 109299.	3.0	6
71	Reduced-order fast converging observers for systems with discrete measurements and measurement error. Systems and Control Letters, 2021, 150, 104892.	1.3	6
72	Event-Triggered Control for Discrete-Time Systems Using a Positive Systems Approach. , 2022, 6, 1843-1848.		6

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73	Input-to-state stability for curve tracking control: A constructive approach. , 2011, , .		5
74	Sampled-data feedback stabilization of age-structured chemostat models. , 2015, , .		5
75	Bounded backstepping approach under input delays. , 2015, , .		5
76	Stabilization in a chemostat with sampled and delayed measurements. , 2016, , .		5
77	Contention resolving optimal priority assignment for event-triggered model predictive controllers. , 2017, , .		5
78	On Control-Lyapunov Functions for Hybrid Time-Varying Systems. , 2006, , .		4
79	Lyapunov Function Constructions for Slowly Time-Varying Systems. , 2006, , .		4
80	Stabilization and robustness analysis for a chemostat model with two species and monod growth rates via a Lyapunov approach. , 2007, , .		4
81	Model-based nonlinear control of the human heart rate during treadmill exercising. , 2010, , .		4
82	An adaptive control design for 3D curve tracking based on robust forward invariance. , 2013, , .		4
83	Stability and robustness analysis for human pointing motions with acceleration under feedback delays. International Journal of Robust and Nonlinear Control, 2017, 27, 703-721.	2.1	4
84	Bounded backstepping through a dynamic extension with delay. , 2017, , .		4
85	New technique for stability analysis for time-varying systems with delay. , 2014, , .		3
86	Continuous-Discrete Sequential Observers under Sampling and Input Delays. , 2018, , .		3
87	Reduced Order Finite Time Observers for Time-Varying Nonlinear Systems. , 2018, , .		3
88	Stability Analysis for Time-Varying Systems With Asynchronous Sampling Using Contractivity Approach. , 2021, 5, 49-54.		3
89	Stability Analysis Using Generalized Sup-Delay Inequalities. , 2021, 5, 1411-1416.		3
90	New Finite-Time and Fast Converging Observers With a Single Delay. , 2022, 6, 1561-1566.		3

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91	New Versions of Halanayâ€™s Inequality With Multiple Gain Terms. , 2022, 6, 1790-1795.		3
92	Event-Triggered Control for Systems with State Delays Using a Positive Systems Approach. , 2021, , .		3
93	Event-Triggered Control of Robotic Fish With Reduced Communication Rate. IEEE Robotics and Automation Letters, 2022, 7, 9405-9412.	3.3	3
94	Stabilization of a Periodic Trajectory for a Chemostat with Two Species. Proceedings of the American Control Conference, 2007, , .	0.0	2
95	Lyapunov functions and robustness analysis under Matrosov conditions with an application to biological systems. , 2008, , .		2
96	Stability analysis of switched systems with time-varying discontinuous delays. , 2017, , .		2
97	Sequential predictors under time-varying delays: Effects of delayed state observations in dynamic controller. , 2017, , .		2
98	Backstepping Design for Output Feedback Stabilization for a Class of Uncertain Systems using Dynamic Extension. IFAC-PapersOnLine, 2018, 51, 260-265.	0.5	2
99	Tracking, Parameter Identification, and Convergence Rates for Model Reference Adaptive Control. , 2018, , .		2
100	Contention-Resolving Model Predictive Control for Coordinating Automated Vehicles at a Traffic Intersection. , 2019, , .		2
101	Stabilization for a chain of saturating integrators arising in the visual landing of aircraft with sampling. Systems and Control Letters, 2020, 135, 104574.	1.3	2
102	Delayed Multivariable Extremum Seeking with Sequential Predictors. , 2020, , .		2
103	Feedback Stabilization with Discrete Measurements using Bounds on Fundamental Matrices. , 2021, , .		2
104	Event-Triggered Prediction-Based Delay Compensation Approach. , 2022, 6, 2515-2520.		2
105	Sampled-data estimator for nonlinear systems with uncertainties and arbitrarily fast rate of convergence. Automatica, 2022, 142, 110361.	3.0	2
106	Subpredictor approach for event-triggered control of discrete-time systems with input delays. European Journal of Control, 2022, 68, 100664.	1.6	2
107	ISS inequalities for vector versions of Halanayâ€™s inequality and of the trajectory-based approach. European Journal of Control, 2022, 68, 100665.	1.6	2
108	Lyapunov functions under LaSalle conditions with an application to Lotka-Volterra systems. , 2009, , .		1

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109	Tracking and robustness analysis for UAVs with bounded feedbacks. , 2012, , .		1
110	Stabilization of a chain of exponential integrators using a strict Lyapunov function. , 2015, , .		1
111	Adaptive planar curve tracking control with unknown curvature. , 2016, , .		1
112	Sequential Predictors for Linear Time-Varying Systems with Delays in the Vector Field and in the Input. , 2018, , .		1
113	Stabilization and Robustness Analysis for a Chain of Saturating Integrators Arising in the Visual Landing of Aircraft. , 2019, , .		1
114	Sampled-Data Estimator for Nonlinear Systems with Arbitrarily Fast Rate of Convergence. , 2020, , .		1
115	Stability Analysis using New Variant of Halanayâ€™s Inequality. IFAC-PapersOnLine, 2021, 54, 783-786.	0.5	1
116	Reduced Order Fast Converging Observer for Systems with Discrete Measurements. IFAC-PapersOnLine, 2021, 54, 219-224.	0.5	1
117	Controls for a nonlinear system arising in visionâ€based landing of airliners. International Journal of Robust and Nonlinear Control, 2021, 31, 1227-1244.	2.1	1
118	Almost Finite-Time Observers for a Family of Nonlinear Continuous-Time Systems. , 2022, 6, 2593-2598.		1
119	Feedback stabilization and robustness analysis using bounds on fundamental matrices. Systems and Control Letters, 2022, 164, 105212.	1.3	1
120	Remarks on tracking and robustness analysis for MEM relays. , 2008, , .		0
121	Stabilization of two-species chemostats with delayed measurements and haldane growth functions. , 2010, , .		0
122	Further results on robust output feedback control for the chemostat dynamics. , 2010, , .		0
123	On uniform global asymptotic stability of adaptive systems with unknown control gains. , 2010, , .		0
124	Discussion on: â€œOn a Small Gain Theorem for ISS Networks in Dissipative Lyapunov Formâ€• European Journal of Control, 2011, 17, 367-369.	1.6	0
125	On stability and stabilization for chemostats with many limiting nutrients. , 2011, , .		0
126	Adaptive controllers and robustness analysis for curve tracking with unknown control gains. , 2012, , .		0

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127	Stabilization for feedforward systems with delay in the input. , 2012, , .		0
128	Uniform global asymptotic stability for nonlinear systems under input delays and sampling of the controls. , 2013, , .		0
129	Stability Analysis for Neutral and Time-Varying Systems Using Linear Lyapunov Functionals and a Positive Systems Approach. , 2014, , .		0
130	Robustness of adaptive control for three-dimensional curve tracking under state constraints: Effects of scaling control terms. , 2016, , .		0
131	Stability and robustness analysis for a multi-species chemostat model with uncertainties. , 2017, , .		0
132	Stability Analysis using Generalized Sup-Delay Inequalities. , 2021, , .		0
133	Output Feedback Stabilization by Reduced Order Finite Time Observers using a Trajectory Based Approach. , 2019, , .		0
134	Delayed Newton-Based Multivariable Extremum Seeking with Sequential Predictors. IFAC-PapersOnLine, 2020, 53, 5381-5385.	0.5	0
135	Further Results on Stabilization of Periodic Trajectories for a Chemostat With Two Species. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, , 1-1.	3.5	0
136	New Fixed Time and Fast Converging Reduced Order Observers. , 2021, , .		0
137	Sequential Predictors for Stabilization of Bilinear Systems under Measurement Uncertainty. , 2021, , .		0
138	New Bounds for State Transition Matrices. , 2022, , 1-1.		0