Robert Shorten

List of Publications by Year
in descending order

96 papers	2,909 citations	218677 26 h-index	175258 52 g-index
98 all docs	98 docs citations	98 times ranked	1840 citing authors

#	Article	IF	Citations
1	Stability Criteria for Switched and Hybrid Systems. SIAM Review, 2007, 49, 545-592.	9.5	845
2	On linear co-positive Lyapunov functions for sets of linear positive systems. Automatica, 2009, 45, 1943-1947.	5.0	196
3	A Nonconservative LMI Condition for Stability of Switched Systems With Guaranteed Dwell Time. IEEE Transactions on Automatic Control, 2012, 57, 1297-1302.	5.7	138
4	Modelling TCP congestion control dynamics in drop-tail environments. Automatica, 2007, 43, 441-449.	5.0	90
5	Distributed Ledger Technology for Smart Cities, the Sharing Economy, and Social Compliance. IEEE Access, 2018, 6, 62728-62746.	4.2	82
6	Plug-and-Play Distributed Algorithms for Optimized Power Generation in a Microgrid. IEEE Transactions on Smart Grid, 2014, 5, 2145-2154.	9.0	78
7	Stochastic Park-and-Charge Balancing for Fully Electric and Plug-in Hybrid Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 895-901.	8.0	67
8	An alternative proof of the Barker, Berman, Plemmons (BBP) result on diagonal stability and extensions. Linear Algebra and Its Applications, 2009, 430, 34-40.	0.9	64
9	On the simultaneous diagonal stability of a pair of positive linear systems. Linear Algebra and Its Applications, 2006, 413, 13-23.	0.9	61
10	Real-time multiple-model estimation of centre of gravity position in automotive vehicles. Vehicle System Dynamics, 2008, 46, 763-788.	3.7	56
11	Hurwitz Stability of Metzler Matrices. IEEE Transactions on Automatic Control, 2010, 55, 1484-1487.	5.7	56
12	Delay-Tolerant Stochastic Algorithms for Parking Space Assignment. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 1922-1935.	8.0	52
13	Dwell time analysis for continuous-time switched linear positive systems. , 2010, , .		43
14	Post-lockdown abatement of COVID-19 by fast periodic switching. PLoS Computational Biology, 2021, 17, e1008604.	3.2	43
15	Residential electrical vehicle charging strategies: the good, the bad and the ugly. Journal of Modern Power Systems and Clean Energy, 2015, 3, 190-202.	5.4	37
16	Optimal real-time distributed V2G and G2V management of electric vehicles. International Journal of Control, 2014, 87, 1153-1162.	1.9	35
17	An LMI condition for the robustness of constant-delay linear predictor feedback with respect to uncertain time-varying input delays. Automatica, 2019, 109, 108551.	5.0	35
18	Quadratic Stability and Singular SISO Switching Systems. IEEE Transactions on Automatic Control, 2009, 54, 2714-2718.	5.7	32

#	Article	IF	Citations
19	On the Design of Campus Parking Systems With QoS Guarantees. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 1428-1437.	8.0	32
20	On Synchronization in Continuous-Time Networks of Nonlinear Nodes With State-Dependent and Degenerate Noise Diffusion. IEEE Transactions on Automatic Control, 2019, 64, 389-395.	5.7	32
21	On the Stability of Unverified Transactions in a DAG-Based Distributed Ledger. IEEE Transactions on Automatic Control, 2020, 65, 3772-3783.	5.7	32
22	On the Resilience of DAG-Based Distributed Ledgers in IoT Applications. IEEE Internet of Things Journal, 2020, 7, 7112-7122.	8.7	32
23	Positive matrices associated with synchronised communication networks. Linear Algebra and Its Applications, 2004, 393, 47-54.	0.9	29
24	Quadratic and Copositive Lyapunov Functions and the Stability of Positive Switched Linear Systems. Proceedings of the American Control Conference, 2007, , .	0.0	29
25	On common noise-induced synchronization in complex networks with state-dependent noise diffusion processes. Physica D: Nonlinear Phenomena, 2018, 369, 47-54.	2.8	29
26	A design methodology for switched discrete time linear systems with applications to automotive roll dynamics control. Automatica, 2008, 44, 2358-2363.	5.0	27
27	Traffic modelling framework for electric vehicles. International Journal of Control, 2012, 85, 880-897.	1.9	27
28	A methodology for the design of robust rollover prevention controllers for automotive vehicles: Part 2-Active steering. Proceedings of the American Control Conference, 2007, , .	0.0	26
29	Distributed Probabilistic Synchronization Algorithms for Communication Networks. IEEE Transactions on Automatic Control, 2008, 53, 389-393.	5.7	26
30	A control design method for a class of switched linear systems. Automatica, 2009, 45, 2592-2596.	5.0	25
31	Alleviating a form of electric vehicle range anxiety through on-demand vehicle access. International Journal of Control, 2015, 88, 717-728.	1.9	25
32	On the Characterization of Strict Positive Realness for General Matrix Transfer Functions. IEEE Transactions on Automatic Control, 2010, 55, 1899-1904.	5.7	24
33	A Context-Aware E-Bike System to Reduce Pollution Inhalation While Cycling. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 704-715.	8.0	24
34	Cooperative Regulation and Trading of Emissions Using Plug-in Hybrid Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2013, 14, 1572-1585.	8.0	23
35	A big-data model for multi-modal public transportation with application to macroscopic control and optimisation. International Journal of Control, 2015, 88, 2354-2368.	1.9	23
36	Boundary feedback stabilization of a reaction–diffusion equation with Robin boundary conditions and state-delay. Automatica, 2020, 116, 108931.	5.0	23

#	ARTICLE	IF	CITATIONS
37	On Optimality Criteria for Reverse Charging of Electric Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 451-456.	8.0	22
38	ISS Property with respect to boundary disturbances for a class of Riesz-spectral boundary control systems. Automatica, 2019, 109, 108504.	5.0	20
39	Decentralized Assignment of Electric Vehicles at Charging Stations Based on Personalized Cost Functions and Distributed Ledger Technologies. IEEE Internet of Things Journal, 2021, 8, 11112-11122.	8.7	18
40	On a theorem of Redheffer concerning diagonal stability. Linear Algebra and Its Applications, 2009, 431, 2317-2329.	0.9	17
41	Some stability tests for switched descriptor systems. Automatica, 2019, 106, 257-265.	5.0	17
42	Robustness of constant-delay predictor feedback for in-domain stabilization of reactionâ€"diffusion PDEs with time- and spatially-varying input delays. Automatica, 2021, 123, 109347.	5.0	15
43	A novel matrix approach for controlling the invariant densities of chaotic maps. Chaos, Solitons and Fractals, 2008, 35, 161-175.	5.1	14
44	Exponential input-to-state stabilization of a class of diagonal boundary control systems with delay boundary control. Systems and Control Letters, 2020, 138, 104651.	2.3	13
45	On a class of generalized eigenvalue problems and equivalent eigenvalue problems that arise in systems and control theory. Automatica, 2011, 47, 431-442.	5.0	12
46	On the 45Â° -Region and the uniform asymptotic stability of classes of second order parameter-varying and switched systems. International Journal of Control, 2002, 75, 812-823.	1.9	11
47	SYNTHESIS OF PIECEWISE-LINEAR CHAOTIC MAPS: INVARIANT DENSITIES, AUTOCORRELATIONS, AND SWITCHING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 2169-2189.	1.7	11
48	Stability and D-stability for Switched Positive Systems. Lecture Notes in Control and Information Sciences, 2009, , 101-109.	1.0	10
49	Strict positive realness of descriptor systems in state space. International Journal of Control, 2010, 83, 1799-1809.	1.9	10
50	On the quadratic stability of switched linear systems associated with symmetric transfer function matrices. Automatica, 2014, 50, 2872-2879.	5.0	10
51	Smart procurement of naturally generated energy (SPONGE) for PHEVs. International Journal of Control, 2016, 89, 1467-1480.	1.9	10
52	A New Take on Protecting Cyclists in Smart Cities. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3992-3999.	8.0	10
53	Access Control for Distributed Ledgers in the Internet of Things: A Networking Approach. IEEE Internet of Things Journal, 2022, 9, 2277-2292.	8.7	10
54	Nonlinear AIMD Congestion Control and Contraction Mappings. SIAM Journal on Control and Optimization, 2007, 46, 1882-1896.	2.1	9

#	Article	IF	Citations
55	A characterisation of common diagonal stability over cones. Linear and Multilinear Algebra, 2012, 60, 1117-1123.	1.0	9
56	Signalling and obfuscation for congestion control. International Journal of Control, 2015, 88, 2086-2096.	1.9	9
57	Smart Procurement of Naturally Generated Energy (SPONGE) for Plug-In Hybrid Electric Buses. IEEE Transactions on Automation Science and Engineering, 2017, 14, 598-607.	5.2	9
58	Nonhomogeneous Place-dependent Markov Chains, Unsynchronised AIMD, and Optimisation. Journal of the ACM, 2019, 66, 1-37.	2.2	9
59	An ergodic AIMD algorithm with application to high-speed networks. International Journal of Control, 2012, 85, 746-764.	1.9	8
60	On the second eigenvalue of matrices associated with TCP. Linear Algebra and Its Applications, 2006, 416, 175-183.	0.9	7
61	Generalized distributed rate limiting. , 2009, , .		7
62	Adaptive Williams filters for active vehicle suspensions. Transactions of the Institute of Measurement and Control, 2010, 32, 660-676.	1.7	7
63	Applications of Linear Co-positive Lyapunov Functions for Switched Linear Positive Systems. Lecture Notes in Control and Information Sciences, 2009, , 331-338.	1.0	7
64	Deterministic and stochastic convergence properties of AIMD algorithms with nonlinear back-off functions. Automatica, 2012, 48, 1291-1299.	5.0	6
65	A framework for real–time emissions trading in large–scale vehicle fleets. IET Intelligent Transport Systems, 2015, 9, 275-284.	3.0	6
66	A Markov-chain based model for a bike-sharing system. , 2015, , .		6
67	Consensus with state obfuscation: an application to speed advisory systems. , 2016, , .		6
68	On the design of cyber-physical control system for a smart pedelec (Ebike). , 2019, , .		6
69	SPR based design conditions for quadratic stability of multi-mode switched linear systems. Automatica, 2020, 122, 109254.	5.0	6
70	Communication-efficient Distributed Multi-resource Allocation. , 2018, , .		5
71	Robustness of Constant-Delay Predictor Feedback with Respect to Distinct Uncertain Time-Varying Input Delays. IFAC-PapersOnLine, 2020, 53, 7677-7682.	0.9	5
72	Distributed Ledger Enabled Control of Tyre Induced Particulate Matter in Smart Cities. Frontiers in Sustainable Cities, 2020, 2, .	2.4	5

#	Article	IF	Citations
73	Secure Access Control for DAG-Based Distributed Ledgers. IEEE Internet of Things Journal, 2022, 9, 10792-10806.	8.7	5
74	A Passivity Based Decentralized Control Design Methodology With Application to Vehicle Dynamics Control. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	1.6	4
75	Classical Results on the Stability of Linear Time-Invariant Systems, and the Schwarz Form. IEEE Transactions on Automatic Control, 2014, 59, 3020-3025.	5.7	4
76	Clustering behaviour in Markov chains with eigenvalues close to one. Linear Algebra and Its Applications, 2018, 555, 163-185.	0.9	4
77	Integral action for setpoint regulation control of a reaction–diffusion equation in the presence of a state delay. Automatica, 2021, 134, 109935.	5.0	4
78	On nonlinear AIMD congestion control for high-speed networks. , 2006, , .		3
79	On the Dynamics of TCP's Higher Moments. IEEE Communications Letters, 2007, 11, 210-212.	4.1	3
80	An extension of the KYP-lemma for the design of state-dependent switching systems with uncertainty. Systems and Control Letters, 2013, 62, 626-631.	2.3	3
81	dockChain: A Solution for Electric Vehicles Charge Point Anxiety. , 2018, , .		3
82	In-Domain Stabilization of Block Diagonal Infinite-Dimensional Systems With Time-Varying Input Delays. IEEE Transactions on Automatic Control, 2021, 66, 6017-6024.	5.7	3
83	On the diagonal stability of a class of almost positive switched systems. , 2010, , .		2
84	A Vehicle-in-the-Loop Emulation Platform for Demonstrating Intelligent Transportation Systems. Lecture Notes in Control and Information Sciences, 2019, , 133-154.	1.0	2
85	Markovian city-scale modelling and mitigation of micro-particles from tires. PLoS ONE, 2021, 16, e0260226.	2.5	2
86	Asynchronous algorithms for network utility maximisation with a single bit. , 2015, , .		1
87	Identification of New Patterns in Urban Traffic Flows. , 2018, , .		1
88	Reinforcement Learning Augmented Optimization for Smart Mobility. , 2019, , .		1
89	On the ergodicity of AIMD networks. Proceedings of the American Control Conference, 2007, , .	0.0	0
90	Padé Approximations of and preservation of quadratic Lyapunov functions. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10807-10808.	0.2	0

#	Article	IF	Citations
91	Adaptive williams filters with application to suspension control: The vector case. , 2009, , .		0
92	A result on second order nonlinear operators arising in high-speed networking applications. Automatica, 2009, 45, 1207-1214.	5.0	0
93	Cooperative control and smart procurement of naturally generated energy (SPONGE) for PHEVs. , 2015, , .		0
94	Hysteresis-based supervisory control with application to non-pharmaceutical containment of COVID-19. Annual Reviews in Control, 2021, 52, 508-522.	7.9	0
95	On the Derivation of Stability Properties for Time-Delay Systems Without Constraint on the Time-Derivative of the Initial Condition. IEEE Transactions on Automatic Control, 2021, 66, 5401-5406.	5.7	0
96	Electric Vehicle Ensembles for Quality of Service Based Mitigation of Renewable Production Risk. , 2022, , .		0