GÃ¡bor Orosz

List of Publications by Year
in descending order

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85 papers	3,178 citations	236925 25 h-index	175258 52 g-index
87 all docs	87 docs citations	87 times ranked	1554 citing authors

#	Article	IF	Citations
1	Connectivity-Based Delay-Tolerant Control of Automated Vehicles: Theory and Experiments. IEEE Transactions on Intelligent Vehicles, 2023, 8, 275-289.	12.7	10
2	Conflict Analysis for Cooperative Maneuvering With Status and Intent Sharing via V2X Communication. IEEE Transactions on Intelligent Vehicles, 2023, 8, 1105-1118.	12.7	8
3	Safe Controller Synthesis With Tunable Input-to-State Safe Control Barrier Functions. , 2022, 6, 908-913.		34
4	Impacts of Connected Automated Vehicles on Freeway Traffic Patterns at Different Penetration Levels. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4305-4318.	8.0	28
5	Safety-Critical Control of Compartmental Epidemiological Models With Measurement Delays. , 2021, 5, 1537-1542.		21
6	Delayed Lagrangian continuum models for on-board traffic prediction. Transportation Research Part C: Emerging Technologies, 2021, 123, 102991.	7.6	15
7	Saving Energy with Delayed Information in Connected Vehicle Systems. , 2021, , .		1
8	Certifying Safety for Nonlinear Time Delay Systems via Safety Functionals: A Discretization Based Approach. , 2021, , .		4
9	MPC-Based Connected Cruise Control with Multiple Human Predecessors. , 2021, , .		10
10	On the deployment of V2X roadside units for traffic prediction. Transportation Research Part C: Emerging Technologies, 2021, 129, 103238.	7.6	16
11	On the handling of automated vehicles: Modeling, bifurcation analysis, and experiments. European Journal of Mechanics, A/Solids, 2021, 90, 104372.	3.7	6
12	Energy-efficient Stochastic Connected Cruise Control. , 2021, , .		1
13	Bayesian Inference for Time Delay Systems with Application to Connected Automated Vehicles. , 2021, , .		2
14	Opportunistic Strategy for Cooperative Maneuvering Using Conflict Analysis. , 2021, , .		3
15	Robust Design of Connected Cruise Control Among Human-Driven Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 749-761.	8.0	32
16	Experimental Validation of String Stability for Connected Vehicles Subject to Information Delay. IEEE Transactions on Control Systems Technology, 2020, 28, 1203-1217.	5.2	34
17	Fuel Efficient Connected Cruise Control for Heavy-Duty Trucks in Real Traffic. IEEE Transactions on Control Systems Technology, 2020, 28, 2474-2481.	5.2	29
18	Safety-Critical Control of Active Interventions for COVID-19 Mitigation. IEEE Access, 2020, 8, 188454-188474.	4.2	24

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19	Improving fuel economy of heavy-duty vehicles in daily driving. , 2020, , .		6
20	On the moment dynamics of stochastically delayed linear control systems. International Journal of Robust and Nonlinear Control, 2020, 30, 8074-8097.	3.7	10
21	Connected and automated road vehicles: state of the art and future challenges. Vehicle System Dynamics, 2020, 58, 672-704.	3.7	78
22	Theme issue on connected and automated road vehicles. Vehicle System Dynamics, 2020, 58, 669-671.	3.7	0
23	Conflict Analysis for Cooperative Merging Using V2X Communication. , 2020, , .		5
24	Robust stability of connected cruise controllers. , 2019, , 163-184.		0
25	Connected automated vehicle design among human-driven vehicles. IFAC-PapersOnLine, 2019, 51, 403-406.	0.9	9
26	Experimental Validation on Connected Cruise Control With Flexible Connectivity Topologies. IEEE/ASME Transactions on Mechatronics, 2019, 24, 2791-2802.	5.8	14
27	On the global dynamics of connected vehicle systems. Nonlinear Dynamics, 2019, 96, 1865-1877.	5.2	18
28	Stability of Linear Continuous-Time Systems With Stochastically Switching Delays. IEEE Transactions on Automatic Control, 2019, 64, 4741-4747.	5.7	6
29	Safety Functionals for Time Delay Systems. , 2019, , .		14
30	Lagrangian Models for Controlling Large-Scale Heterogeneous Traffic. , 2019, , .		4
31	End-to-End Safe Reinforcement Learning through Barrier Functions for Safety-Critical Continuous Control Tasks. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 3387-3395.	4.9	254
32	On the nonlinear dynamics of automated vehicles â€“ A nonholonomic approach. European Journal of Mechanics, A/Solids, 2019, 74, 371-380.	3.7	14
33	Application of Predictor Feedback to Compensate Time Delays in Connected Cruise Control. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 545-559.	8.0	54
34	Optimal Gear Shift Schedule Design for Automated Vehicles: Hybrid System Based Analytical Approach. IEEE Transactions on Control Systems Technology, 2018, 26, 2078-2090.	5.2	16
35	Synchronization in networks with heterogeneous coupling delays. Physical Review E, 2018, 97, 012311.	2.1	20
36	Experimental validation of connected automated vehicle design among human-driven vehicles. Transportation Research Part C: Emerging Technologies, 2018, 91, 335-352.	7.6	132

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37	Hierarchical Design of Connected Cruise Control in the Presence of Information Delays and Uncertain Vehicle Dynamics. IEEE Transactions on Control Systems Technology, 2018, 26, 139-150.	5.2	60
38	Beyond-Line-of-Sight Identification by Using Vehicle-to-Vehicle Communication. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 1962-1972.	8.0	25
39	Safety Guaranteed Connected Cruise Control. , 2018, , .		15
40	Data-based fuel-economy optimization of connected automated trucks in traffic. , 2018, , .		3
41	Experimental verification platform for connected vehicle networks. , 2018, , .		12
42	Connected cruise control among human-driven vehicles: Experiment-based parameter estimation and optimal control design. Transportation Research Part C: Emerging Technologies, 2018, 95, 445-459.	7.6	65
43	Analysis of connected vehicle networks using network-based perturbation techniques. Nonlinear Dynamics, 2017, 89, 1651-1672.	5.2	15
44	To Delay or Not to Delayâ€"Stability of Connected Cruise Control. Advances in Delays and Dynamics, 2017, , 263-282.	0.4	4
45	Bistability and oscillations in coâ€repressive synthetic microbial consortia. Quantitative Biology, 2017, 5, 55-66.	0.5	28
46	Optimal Control of Connected Vehicle Systems With Communication Delay and Driver Reaction Time. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 2056-2070.	8.0	143
47	Scalable stability analysis on large connected vehicle systems subject to stochastic communication delays. Transportation Research Part C: Emerging Technologies, 2017, 83, 39-60.	7.6	42
48	Connected cruise control design using probabilistic model checking. , 2017, , .		1
49	Saving fuel using wireless vehicle-to-vehicle communication. , 2017, , .		15
50	Stability and Frequency Response Under Stochastic Communication Delays With Applications to Connected Cruise Control Design. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 388-403.	8.0	103
51	Consensus and disturbance attenuation in multiâ€agent chains with nonlinear control and time delays. International Journal of Robust and Nonlinear Control, 2017, 27, 781-803.	3.7	38
52	Data-driven parameter estimation for optimal connected cruise control. , 2017, , .		4
53	Seeing Beyond the Line of Site â€“ Controlling Connected Automated Vehicles. Mechanical Engineering, 2017, 139, S8-S12.	0.1	18
54	Fuel Consumption Optimization of Heavy-Duty Vehicles With Grade, Wind, and Traffic Information. Journal of Computational and Nonlinear Dynamics, 2016, 11, .	1.2	50

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55	Stability of continuous-time systems with stochastic delay. , 2016, , .		3
56	Estimation of feedback gains and delays in connected vehicle systems. , 2016, , .		4
57	Sequential parametric optimization for connected cruise control with application to fuel economy optimization. , 2016, , .		14
58	Robust Stability Analysis for Connected Vehicle Systems. IFAC-PapersOnLine, 2016, 49, 165-170.	0.9	8
59	Dynamics of Heterogeneous Connected Vehicle Systems. IFAC-PapersOnLine, 2016, 49, 171-176.	0.9	7
60	Black-box modeling of connected vehicle networks. , 2016, , .		2
61	Stability of Systems with Stochastic Delays and Applications to Genetic Regulatory Networks. SIAM Journal on Applied Dynamical Systems, 2016, 15, 1844-1873.	1.6	12
62	Connected cruise control: modelling, delay effects, and nonlinear behaviour. Vehicle System Dynamics, 2016, 54, 1147-1176.	3.7	186
63	Motif-Based Design for Connected Vehicle Systems in Presence of Heterogeneous Connectivity Structures and Time Delays. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 1638-1651.	8.0	166
64	Optimized connected cruise control with time delay. IFAC-PapersOnLine, 2015, 48, 468-473.	0.9	2
65	Nonlinear Network Modes in Cyclic Systems with Applications to Connected Vehicles. Journal of Nonlinear Science, 2015, 25, 1015-1049.	2.1	20
66	Moment-based plant and string stability analysis of connected cruise control with stochastic delays. , 2015, , .		5
67	Nonlinear dynamics of connected vehicle systems with communication delays. , 2015, , .		9
68	Connected Vehicle Systems with Nonlinear Dynamics and Time Delaysâˆ—â€—This work was supported by the National Science Foundation (Award Number 1351456).. IFAC-PapersOnLine, 2015, 48, 370-375.	0.9	4
69	Design of Rightmost Eigenvalues Using Distributed Delay. , 2014, , .		1
70	Optimal control of connected vehicle systems. , 2014, , .		20
71	Stability analysis of connected cruise control with stochastic delays. , 2014, , .		38
72	Exact stability analysis of discrete-time linear systems with stochastic delays. , 2014, , .		7

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73	Spectrum design using distributed delay. International Journal of Dynamics and Control, 2014, 2, 234-246.	2.5	9
74	Dynamics of connected vehicle systems with delayed acceleration feedback. Transportation Research Part C: Emerging Technologies, 2014, 46, 46-64.	7.6	353
75	Designing Network Motifs in Connected Vehicle Systems: Delay Effects and Stability. , 2013, , .		19
76	Stability of Connected Vehicle Platoons With Delayed Acceleration Feedback. , 2013, , .		12
77	Decomposing the dynamics of heterogeneous delayed networks with applications to connected vehicle systems. Physical Review E, 2013, 88, 040902.	2.1	37
78	Stability of discrete-time systems with stochastically delayed feedback. , 2013, , .		5
79	Controlling biological networks by time-delayedÂsignals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 439-454.	3.4	49
80	Robotic reactions: Delay-induced patterns in autonomous vehicle systems. Physical Review E, 2010, 81, 025204.	2.1	30
81	Traffic jams: dynamics and control. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 4455-4479.	3.4	302
82	Delay effects in shimmy dynamics of wheels with stretched string-like tyres. European Journal of Mechanics, A/Solids, 2009, 28, 516-525.	3.7	61
83	Exciting traffic jams: Nonlinear phenomena behind traffic jam formation on highways. Physical Review E, 2009, 80, 046205.	2.1	106
84	Subcritical Hopf bifurcations in a car-following model with reaction-time delay. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 2643-2670.	2.1	103
85	TRAFFIC JAM DYNAMICS IN A CAR-FOLLOWING MODEL WITH REACTION-TIME DELAY AND STOCHASTICITY OF DRIVERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 199-204.	0.4	7