

Roberto Horowitz

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87
papers

1,970
citations

24
h-index

42
g-index

101
ext. papers

2,307
ext. citations

3.3
avg, IF

4.86
L-index

#	Paper	IF	Citations
87	Safety-Critical Control With Nonaffine Control Inputs Via a Relaxed Control Barrier Function for an Autonomous Vehicle. <i>IEEE Robotics and Automation Letters</i> , 2022 , 7, 1944-1951	4.2	0
86	How Will the Presence of Autonomous Vehicles Affect the Equilibrium State of Traffic Networks?. <i>IEEE Transactions on Control of Network Systems</i> , 2020 , 7, 96-105	4	9
85	Vision-assisted Arm Motion Planning for Freeform 3D Printing 2019 ,		2
84	Neural-Attention-Based Deep Learning Architectures for Modeling Traffic Dynamics on Lane Graphs 2019 ,		2
83	Vehicle Localization and Control on Roads with Prior Grade Map 2018 ,		1
82	Can the Presence of Autonomous Vehicles Worsen the Equilibrium State of Traffic Networks? 2018 ,		11
81	A Submodular Approach for Optimal Sensor Placement in Traffic Networks 2018 ,		1
80	Application of Mixed H2/H ∞ Data Driven Control Design to Dual Stage Hard Disk Drives 2018 ,		2
79	Speed Advisory and Signal Offsets Control for Arterial Bandwidth Maximization and Energy Consumption Reduction. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 875-887	4.8	10
78	On node models for high-dimensional road networks. <i>Transportation Research Part B: Methodological</i> , 2017 , 105, 212-234	7.2	5
77	Fast feedforward vibration rejection algorithms based on orthogonalization 2017 ,		1
76	Low-complexity ramp metering for freeway congestion control via network utility maximization 2017 ,		2
75	Stochastic predictive freeway ramp metering from Signal Temporal Logic specifications 2017 ,		10
74	Particle-filter-enabled real-time sensor fault detection without a model of faults 2017 ,		2
73	Fusing Loop and GPS Probe Measurements to Estimate Freeway Density. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2016 , 17, 3577-3590	6.1	28
72	Probabilistic controller synthesis for freeway traffic networks 2016 ,		2
71	Adaptive rejection of periodic disturbances acting on linear systems with unknown dynamics 2016 ,		2

70	Stable hybrid Model Predictive Control for ramp metering 2016,		5
69	Computationally efficient model predictive control of freeway networks. <i>Transportation Research Part C: Emerging Technologies</i> , 2015 , 58, 532-553	8.4	31
68	Adaptive Repetitive Control Design With Online Secondary Path Modeling and Application to Bit-Patterned Media Recording. <i>IEEE Transactions on Magnetics</i> , 2015 , 51, 1-8	2	7
67	Arterial bandwidth maximization via signal offsets and variable speed limits control 2015,		6
66	Adaptive mismatch compensation for vibratory gyroscopes 2014,		3
65	Traffic Flow Prediction Using Optimal Autoregressive Moving Average with Exogenous Input-Based Predictors. <i>Transportation Research Record</i> , 2014 , 2421, 125-132	1.7	5
64	Robust Track-Following Controller Design for Hard Disk Drives With Irregular Sampling. <i>IEEE Transactions on Magnetics</i> , 2013 , 49, 2798-2804	2	4
63	Optimal H_{∞} Control for Linear Periodically Time-Varying Systems in Hard Disk Drives. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 212-220	5.5	22
62	Integration of Thin Film Strain Sensors Into Hard Drives for Active Feedback Vibration Suppression. <i>IEEE Sensors Journal</i> , 2013 , 13, 1708-1715	4	1
61	Optimal H_{∞} Control Design and Implementation of Hard Disk Drives With Irregular Sampling Rates. <i>IEEE Transactions on Control Systems Technology</i> , 2012 , 20, 402-407	4.8	3
60	Model Predictive Control of a Freeway Network With Capacity Drops 2012,		2
59	Optimal control of freeway networks based on the Link Node Cell transmission model 2012,		28
58	A parameter identification algorithm for the METANET model with a limited number of loop detectors 2012,		4
57	Probabilistic Graphical Models of Fundamental Diagram Parameters for Simulations of Freeway Traffic. <i>Transportation Research Record</i> , 2011 , 2249, 78-85	1.7	16
56	Arterial travel time estimation based on vehicle re-identification using magnetic sensors: Performance analysis 2011,		4
55	Vehicle re-identification using wireless magnetic sensors: Algorithm revision, modifications and performance analysis 2011,		11
54	Learning Coverage Control of Mobile Sensing Agents in One-Dimensional Stochastic Environments. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 804-809	5.9	7
53	A new approach for combined freeway Variable Speed Limits and Coordinated Ramp Metering 2010,		29

52	Convergence Analysis of a Steerable Nip Mechanism for Full Sheet Control in Printing Devices. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2010 , 132,	1.6	2
51	Robust Control Synthesis Techniques for Multirate and Multisensing Track-Following Servo Systems in Hard Disk Drives. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2010 , 132,	1.6	11
50	Full Sheet Control Using Steerable Nips. <i>IEEE/ASME Transactions on Mechatronics</i> , 2010 , 15, 48-58	5.5	7
49	Robust Track-Following Controller Design in Hard Disk Drives Based on Parameter Dependent Lyapunov Functions. <i>IEEE Transactions on Magnetics</i> , 2010 , 46, 1060-1068	2	16
48	Distributed learning and cooperative control for multi-agent systems. <i>Automatica</i> , 2009 , 45, 2802-2814	5.7	120
47	Freeway traffic flow simulation using the Link Node Cell transmission model 2009 ,		13
46	Imputation of Ramp Flow Data for Freeway Traffic Simulation. <i>Transportation Research Record</i> , 2009 , 2099, 58-64	1.7	21
45	A High-Resolution MEMS Piezoelectric Strain Sensor for Structural Vibration Detection. <i>IEEE Sensors Journal</i> , 2008 , 8, 2027-2035	4	35
44	Multiple robust track-following controller design in hard disk drives. <i>International Journal of Adaptive Control and Signal Processing</i> , 2008 , 22, 359-373	2.8	3
43	Behavior of the cell transmission model and effectiveness of ramp metering. <i>Transportation Research Part C: Emerging Technologies</i> , 2008 , 16, 485-513	8.4	117
42	Model Reduction and Parametric Uncertainty Identification for Robust H_2 Control Synthesis for Dual-Stage Hard Disk Drives. <i>IEEE Transactions on Magnetics</i> , 2007 , 43, 3763-3768	2	7
41	Trajectory-Switching Algorithm for a MEMS Gyroscope. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2007 , 56, 2561-2569	5.2	59
40	Dual-stage servo systems and vibration compensation in computer hard disk drives. <i>Control Engineering Practice</i> , 2007 , 15, 291-305	3.9	70
39	Parametric Uncertainty Identification and Model Reduction for Robust H_2 Synthesis for Track-Following in Dual-Stage Hard Disk Drives. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	5
38	Cooperatively learning mobile agents for gradient climbing 2007 ,		2
37	Track-Following Control With Active Vibration Damping of a PZT-Actuated Suspension Dual-Stage Servo System. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2006 , 128, 568-576	1.6	18
36	Modeling and performance of two types of piston-like out-of-plane motion micromechanical structures. <i>Journal of Micromechanics and Microengineering</i> , 2006 , 16, 1258-1266	2	1
35	Piecewise-Linearized Cell Transmission Model and Parameter Calibration Methodology. <i>Transportation Research Record</i> , 2006 , 1965, 183-191	1.7	26

34	Set of New Traffic-Responsive Ramp-Metering Algorithms and Microscopic Simulation Results. <i>Transportation Research Record</i> , 2006 , 1959, 9-18	1.7	7
33	Macroscopic traffic flow propagation stability for adaptive cruise controlled vehicles. <i>Transportation Research Part C: Emerging Technologies</i> , 2006 , 14, 81-95	8.4	37
32	Optimal freeway ramp metering using the asymmetric cell transmission model. <i>Transportation Research Part C: Emerging Technologies</i> , 2006 , 14, 244-262	8.4	220
31	Dynamic Friction Model-Based Tire-Road Friction Estimation and Emergency Braking Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2005 , 127, 22-32	1.6	76
30	Discrete time adaptive control for a MEMS gyroscope. <i>International Journal of Adaptive Control and Signal Processing</i> , 2005 , 19, 485-503	2.8	7
29	A pivot nonlinearity compensation by use of variable structure estimator for hard disk drives. <i>Microsystem Technologies</i> , 2005 , 11, 702-710	1.7	
28	Track-following control with active vibration damping and compensation of a dual-stage servo system. <i>Microsystem Technologies</i> , 2005 , 11, 1276-1286	1.7	15
27	New Adaptive Mode of Operation for MEMS Gyroscopes. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2004 , 126, 800-810	1.6	37
26	Congested Freeway Microsimulation Model Using VISSIM. <i>Transportation Research Record</i> , 2004 , 1876, 71-81	1.7	114
25	Characterization and performance of optomechanical uncooled infrared imaging system 2003 , 4820, 164		13
24	Multi-destination traffic flow control in automated highway systems. <i>Transportation Research Part C: Emerging Technologies</i> , 2003 , 11, 1-28	8.4	11
23	Design and control of a thermal stabilizing system for a MEMS optomechanical uncooled infrared imaging camera. <i>Sensors and Actuators A: Physical</i> , 2003 , 104, 132-142	3.9	23
22	Emergency Braking Control with an Observer-based Dynamic Tire/Road Friction Model and Wheel Angular Velocity Measurement. <i>Vehicle System Dynamics</i> , 2003 , 39, 81-97	2.8	58
21	Stability of macroscopic traffic flow modeling through wavefront expansion. <i>Transportation Research Part B: Methodological</i> , 2003 , 37, 661-679	7.2	32
20	MC-18 A Multi-rate Variable Structure Seeking Control of HDDs. <i>Proceedings of JSME-IIP/ASME-ISPS Joint Conference on Micromechatronics for Information and Precision Equipment IIP/ISPS Joint MIPE</i> , 2003 , 2003, 117-118		
19	A Variable Structure Multi-rate State Estimator and Its Application to Seeking Control of HDDs. <i>Transactions of the Society of Instrument and Control Engineers</i> , 2003 , 39, 662-669	0.1	
18	DESIGN AND CONTROL OF A THERMAL STABILIZING SYSTEM FOR AN OPTOMECHANICAL UNCOOLED INFRARED IMAGING CAMERA. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002 , 35, 367-372		1
17	Nonstationary Velocity Profiles for Emergency Vehicles on Automated Highways. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2002 , 124, 133-140	1.6	

16	One Track-Seeking Controller Design for Dual-Stage Actuator in Magnetic Disk Drives. <i>The Proceedings of the Conference on Information Intelligence and Precision Equipment IIP, 2000</i> , 2000, 154-159		
15	Safe Platooning in Automated Highway Systems Part I: Safety Regions Design. <i>Vehicle System Dynamics</i> , 1999 , 32, 23-55	2.8	43
14	Traffic flow control in automated highway systems. <i>Control Engineering Practice</i> , 1999 , 7, 1071-1078	3.9	27
13	Automated Highway Systems: The Smart Way to Go. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1997 , 30, 449-460		1
12	An Automated Highway System link layer controller for traffic flow stabilization. <i>Transportation Research Part C: Emerging Technologies</i> , 1997 , 5, 11-37	8.4	33
11	Safety Oriented Maneuvers for IVHS. <i>Vehicle System Dynamics</i> , 1996 , 26, 271-299	2.8	12
10	Learning Control of Robot Manipulators. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1993 , 115, 402-411	1.6	111
9	A Direct Adaptive Control Scheme for Disk File Servos 1993 ,		7
8	A Comparison of Four Discrete-Time Repetitive Control Algorithms 1992 ,		63
7	Nonlinear Feedback System Stability via Coprime Factorization Analysis 1992 ,		2
6	An Exponentially Stable Adaptive Control Law For Robot Manipulators 1990 ,		2
5	Track-Following Controller Design for a Compound Disk Drive Actuator. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1990 , 112, 391-402	1.6	24
4	A Unified Approach to the Design of Adaptive and Repetitive Controllers for Robotic Manipulators. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1990 , 112, 618-629	1.6	84
3	Repetitive Control of a Two Degree of Freedom SCARA Manipulator 1989 ,		4
2	An Adaptive Control Scheme for Mechanical Manipulators Compensation of Nonlinearity and Decoupling Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1986 , 108, 127-135	1.6	76
1	Set of New Traffic-Responsive Ramp-Metering Algorithms and Microscopic Simulation Results		17