

Roberto Horowitz

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/10644948/publications.pdf>

Version: 2024-02-01

101
papers

2,693
citations

236833

25
h-index

214721

47
g-index

101
all docs

101
docs citations

101
times ranked

1522
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimal freeway ramp metering using the asymmetric cell transmission model. Transportation Research Part C: Emerging Technologies, 2006, 14, 244-262.	3.9	275
2	Distributed learning and cooperative control for multi-agent systems. Automatica, 2009, 45, 2802-2814.	3.0	169
3	Congested Freeway Microsimulation Model Using VISSIM. Transportation Research Record, 2004, 1876, 71-81.	1.0	148
4	Learning Control of Robot Manipulators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1993, 115, 402-411.	0.9	146
5	Behavior of the cell transmission model and effectiveness of ramp metering. Transportation Research Part C: Emerging Technologies, 2008, 16, 485-513.	3.9	135
6	A Unified Approach to the Design of Adaptive and Repetitive Controllers for Robotic Manipulators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1990, 112, 618-629.	0.9	129
7	An Adaptive Control Scheme for Mechanical Manipulatorsâ€™ Compensation of Nonlinearity and Decoupling Control. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1986, 108, 127-135.	0.9	117
8	Dynamic Friction Model-Based Tire-Road Friction Estimation and Emergency Braking Control. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2005, 127, 22-32.	0.9	98
9	Dual-stage servo systems and vibration compensation in computer hard disk drives. Control Engineering Practice, 2007, 15, 291-305.	3.2	87
10	A Comparison of Four Discrete-Time Repetitive Control Algorithms. , 1992, , .		83
11	Emergency Braking Control with an Observer-based Dynamic Tire/Road Friction Model and Wheel Angular Velocity Measurement. Vehicle System Dynamics, 2003, 39, 81-97.	2.2	83
12	Trajectory-Switching Algorithm for a MEMS Gyroscope. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 2561-2569.	2.4	67
13	Safe Platooning in Automated Highway Systems Part I: Safety Regions Design. Vehicle System Dynamics, 1999, 32, 23-55.	2.2	57
14	A High-Resolution MEMS Piezoelectric Strain Sensor for Structural Vibration Detection. IEEE Sensors Journal, 2008, 8, 2027-2035.	2.4	53
15	Macroscopic traffic flow propagation stability for adaptive cruise controlled vehicles. Transportation Research Part C: Emerging Technologies, 2006, 14, 81-95.	3.9	44
16	Stability of macroscopic traffic flow modeling through wavefront expansion. Transportation Research Part B: Methodological, 2003, 37, 661-679.	2.8	42
17	New Adaptive Mode of Operation for MEMS Gyroscopes. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 800-810.	0.9	42
18	Computationally efficient model predictive control of freeway networks. Transportation Research Part C: Emerging Technologies, 2015, 58, 532-553.	3.9	42

#	ARTICLE	IF	CITATIONS
19	A new approach for combined freeway Variable Speed Limits and Coordinated Ramp Metering. , 2010, , .		39
20	Optimal control of freeway networks based on the Link Node Cell transmission model. , 2012, , .		38
21	An Automated Highway System link layer controller for traffic flow stabilization. Transportation Research Part C: Emerging Technologies, 1997, 5, 11-37.	3.9	36
22	How Will the Presence of Autonomous Vehicles Affect the Equilibrium State of Traffic Networks?. IEEE Transactions on Control of Network Systems, 2020, 7, 96-105.	2.4	36
23	Piecewise-Linearized Cell Transmission Model and Parameter Calibration Methodology. Transportation Research Record, 2006, 1965, 183-191.	1.0	33
24	Traffic flow control in automated highway systems. Control Engineering Practice, 1999, 7, 1071-1078.	3.2	31
25	Fusing Loop and GPS Probe Measurements to Estimate Freeway Density. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 3577-3590.	4.7	31
26	Imputation of Ramp Flow Data for Freeway Traffic Simulation. Transportation Research Record, 2009, 2099, 58-64.	1.0	29
27	Design and control of a thermal stabilizing system for a MEMS optomechanical uncooled infrared imaging camera. Sensors and Actuators A: Physical, 2003, 104, 132-142.	2.0	28
28	Track-Following Controller Design for a Compound Disk Drive Actuator. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1990, 112, 391-402.	0.9	27
29	Optimal H_{∞} Control for Linear Periodically Time-Varying Systems in Hard Disk Drives. IEEE/ASME Transactions on Mechatronics, 2013, 18, 212-220.	3.7	27
30	Track-Following Control With Active Vibration Damping of a PZT-Actuated Suspension Dual-Stage Servo System. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 568-576.	0.9	25
31	Robust Track-Following Controller Design in Hard Disk Drives Based on Parameter Dependent Lyapunov Functions. IEEE Transactions on Magnetics, 2010, 46, 1060-1068.	1.2	24
32	Nonlinear Feedback System Stability via Coprime Factorization Analysis. , 1992, , .		21
33	Track-following control with active vibration damping and compensation of a dual-stage servo system. Microsystem Technologies, 2005, 11, 1276-1286.	1.2	21
34	Probabilistic Graphical Models of Fundamental Diagram Parameters for Simulations of Freeway Traffic. Transportation Research Record, 2011, 2249, 78-85.	1.0	21
35	Set of New Traffic-Responsive Ramp-Metering Algorithms and Microscopic Simulation Results. Transportation Research Record, 2006, 1959, 9-18.	1.0	20
36	Can the Presence of Autonomous Vehicles Worsen the Equilibrium State of Traffic Networks?. , 2018, , .		19

#	ARTICLE	IF	CITATIONS
37	Characterization and performance of optomechanical uncooled infrared imaging system. , 2003, 4820, 164.		17
38	Freeway traffic flow simulation using the Link Node Cell transmission model. , 2009, , .		17
39	Safety Oriented Maneuvers for IVHS. Vehicle System Dynamics, 1996, 26, 271-299.	2.2	16
40	Stochastic predictive freeway ramp metering from Signal Temporal Logic specifications. , 2017, , .		16
41	Model Reduction and Parametric Uncertainty Identification for Robust H_{∞} Control Synthesis for Dual-Stage Hard Disk Drives. IEEE Transactions on Magnetics, 2007, 43, 3763-3768.	1.2	13
42	Robust Control Synthesis Techniques for Multirate and Multisensing Track-Following Servo Systems in Hard Disk Drives. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	0.9	13
43	Adaptive Repetitive Control Design With Online Secondary Path Modeling and Application to Bit-Patterned Media Recording. IEEE Transactions on Magnetics, 2015, 51, 1-8.	1.2	13
44	Multi-destination traffic flow control in automated highway systems. Transportation Research Part C: Emerging Technologies, 2003, 11, 1-28.	3.9	12
45	Vehicle re-identification using wireless magnetic sensors: Algorithm revision, modifications and performance analysis. , 2011, , .		12
46	Speed Advisory and Signal Offsets Control for Arterial Bandwidth Maximization and Energy Consumption Reduction. IEEE Transactions on Control Systems Technology, 2017, 25, 875-887.	3.2	12
47	Safety-Critical Control With Nonaffine Control Inputs Via a Relaxed Control Barrier Function for an Autonomous Vehicle. IEEE Robotics and Automation Letters, 2022, 7, 1944-1951.	3.3	12
48	Learning Coverage Control of Mobile Sensing Agents in One-Dimensional Stochastic Environments. IEEE Transactions on Automatic Control, 2010, 55, 804-809.	3.6	11
49	Robust Track-Following Controller Design for Hard Disk Drives With Irregular Sampling. IEEE Transactions on Magnetics, 2013, 49, 2798-2804.	1.2	10
50	Repetitive Control of a Two Degree of Freedom SCARA Manipulator. , 1989, , .		9
51	Full Sheet Control Using Steerable Nips. IEEE/ASME Transactions on Mechatronics, 2010, 15, 48-58.	3.7	9
52	On node models for high-dimensional road networks. Transportation Research Part B: Methodological, 2017, 105, 212-234.	2.8	9
53	An Exponentially Stable Adaptive Control Law For Robot Manipulators. , 1990, , .		8
54	A Direct Adaptive Control Scheme for Disk File Servos. , 1993, , .		8

#	ARTICLE	IF	CITATIONS
55	Discrete time adaptive control for a MEMS gyroscope. International Journal of Adaptive Control and Signal Processing, 2005, 19, 485-503.	2.3	8
56	Set of New Traffic-Responsive Ramp-Metering Algorithms and Microscopic Simulation Results. Transportation Research Record, 2006, 1959, 9-18.	1.0	8
57	Optimal H_{∞} control for hard disk drives with an irregular sampling rate. , 2011, , .		8
58	Traffic Flow Prediction Using Optimal Autoregressive Moving Average with Exogenous Input-Based Predictors. Transportation Research Record, 2014, 2421, 125-132.	1.0	8
59	A Submodular Approach for Optimal Sensor Placement in Traffic Networks. , 2018, , .		8
60	Cooperatively learning mobile agents for gradient climbing. , 2007, , .		7
61	Stable hybrid Model Predictive Control for ramp metering. , 2016, , .		7
62	Application of Mixed H_2/H_{∞} Data Driven Control Design to Dual Stage Hard Disk Drives. , 2018, , .		7
63	Parametric Uncertainty Identification and Model Reduction for Robust H_2 Synthesis for Track-Following in Dual-Stage Hard Disk Drives. Proceedings of the American Control Conference, 2007, , .	0.0	6
64	Multiple robust track-following controller design in hard disk drives. International Journal of Adaptive Control and Signal Processing, 2008, 22, 359-373.	2.3	6
65	Optimal H_{∞} Control Design and Implementation of Hard Disk Drives With Irregular Sampling Rates. IEEE Transactions on Control Systems Technology, 2012, 20, 402-407.	3.2	6
66	Arterial bandwidth maximization via signal offsets and variable speed limits control. , 2015, , .		6
67	Arterial travel time estimation based on vehicle re-identification using magnetic sensors: Performance analysis. , 2011, , .		5
68	A parameter identification algorithm for the METANET model with a limited number of loop detectors. , 2012, , .		5
69	Data-Driven Feedforward Control Design and Input Shaping Techniques for Multi Actuator Drives. ASME Letters in Dynamic Systems and Control, 2021, 1, .	0.4	5
70	Time Optimal Seek Trajectories for a Dual Stage Optical Disc Drive Actuator. , 1990, , .		4
71	Convergence Analysis of a Steerable Nip Mechanism for Full Sheet Control in Printing Devices. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	0.9	4
72	Model Predictive Control of a Freeway Network With Capacity Drops. , 2012, , .		4

#	ARTICLE	IF	CITATIONS
73	Adaptive mismatch compensation for vibratory gyroscopes. , 2014, , .		4
74	An Extended Game-Theory Model for Aggregate Lane Choice Behavior of Vehicles at Traffic Diverges with a Bifurcating Lane. , 2019, , .		4
75	Integration of Thin Film Strain Sensors Into Hard Drives for Active Feedback Vibration Suppression. IEEE Sensors Journal, 2013, 13, 1708-1715.	2.4	3
76	Adaptive rejection of periodic disturbances acting on linear systems with unknown dynamics. , 2016, , .		3
77	Neural-Attention-Based Deep Learning Architectures for Modeling Traffic Dynamics on Lane Graphs. , 2019, , .		3
78	Automated Highway Systems: The Smart Way to Go 1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 449-460.	0.4	2
79	DESIGN AND CONTROL OF A THERMAL STABILIZING SYSTEM FOR AN OPTOMECHANICAL UNCOOLED INFRARED IMAGING CAMERA. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 367-372.	0.4	2
80	Modeling and performance of two types of piston-like out-of-plane motion micromechanical structures. Journal of Micromechanics and Microengineering, 2006, 16, 1258-1266.	1.5	2
81	Design and control of a dual-stage disk drive servo system with a high-aspect ratio electrostatic microactuator. , 2008, , .		2
82	A Robust Approach to Dynamic Feedback Linearization for a Steerable Nips Mechanism. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2011, 133, .	0.9	2
83	Probabilistic controller synthesis for freeway traffic networks. , 2016, , .		2
84	Low-complexity ramp metering for freeway congestion control via network utility maximization. , 2017, , .		2
85	Particle-filter-enabled real-time sensor fault detection without a model of faults. , 2017, , .		2
86	Vehicle Localization and Control on Roads with Prior Grade Map. , 2018, , .		2
87	Mixed H ₂ /H _∞ ; Data-Driven Control Design for Hard Disk Drives. , 2018, , .		2
88	Vision-assisted Arm Motion Planning for Freeform 3D Printing. , 2019, , .		2
89	Fast feedforward vibration rejection algorithms based on orthogonalization. , 2017, , .		1
90	A Game-Theoretic Model for Aggregate Lane Choice Behavior of Highway Mainline Vehicles at the Vicinity of On-ramps. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
91	Nonstationary Velocity Profiles for Emergency Vehicles on Automated Highways. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2002, 124, 133-140.	0.9	0
92	A pivot nonlinearity compensation by use of variable structure estimator for hard disk drives. Microsystem Technologies, 2005, 11, 702-710.	1.2	0
93	Discrete-time $H_{\infty 2}$ guaranteed cost analysis for systems with norm-bounded structured uncertainty. , 2012, , .		0
94	A probabilistic approach to robust controller design for a servo system with irregular sampling. , 2013, , .		0
95	The method of averaging using an adaptive notch filter in vibratory gyroscopes. , 2014, , .		0
96	Macroscopic freeway model calibration with partially observed data, a case study. , 2014, , .		0
97	Signal Control for Urban Traffic Networks with Unknown System Parameters. , 2018, , .		0
98	One Track-Seeking Controller Design for Dual-Stage Actuator in Magnetic Disk Drives. The Proceedings of the Conference on Information Intelligence and Precision Equipment IIP, 2000, 2000, 154-159.	0.0	0
99	MC-18 A Multi-rate Variable Structure Seeking Control of HDDs. Proceedings of JSME-IIP/ASME-ISPS Joint Conference on Micromechatronics for Information and Precision Equipment IIP/ISPS Joint MIPE, 2003, 2003, 117-118.	0.0	0
100	A Variable Structure Multi-rate State Estimator and Its Application to Seeking Control of HDDs. Transactions of the Society of Instrument and Control Engineers, 2003, 39, 662-669.	0.1	0
101	Learning Optimal Control Using Integral Equations. , 1991, , .		0