

Henry X Liu

List of Publications by Year in descending order

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143
papers

5,826
citations

61945

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143
all docs

143
docs citations

143
times ranked

3084
citing authors

#	ARTICLE	IF	CITATIONS
1	Testing Scenario Library Generation for Connected and Automated Vehicles: An Adaptive Framework. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 1213-1222.	4.7	33
2	Learning-Based Stochastic Driving Model for Autonomous Vehicle Testing. Transportation Research Record, 2022, 2676, 54-64.	1.0	8
3	Maximum Likelihood Estimation of Probe Vehicle Penetration Rates and Queue Length Distributions From Probe Vehicle Data. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7628-7636.	4.7	11
4	On the Cybersecurity of Traffic Signal Control System With Connected Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 16267-16279.	4.7	16
5	Advances in Automated Driving Systems. Energies, 2022, 15, 3476.	1.6	2
6	Learning the max pressure control for urban traffic networks considering the phase switching loss. Transportation Research Part C: Emerging Technologies, 2022, 140, 103670.	3.9	14
7	Design, Implementation, and Evaluation of a Roadside Cooperative Perception System. Transportation Research Record, 2022, 2676, 273-284.	1.0	10
8	Real-time Full-stack Traffic Scene Perception for Autonomous Driving with Roadside Cameras. , 2022, , .		11
9	Day-to-Day Signal Retiming Scheme for Single-Destination Traffic Networks Based on a Flow Splitting Approach. Networks and Spatial Economics, 2022, 22, 855-882.	0.7	1
10	Modeling and simulation of approaching behaviors to signalized intersections based on risk quantification. Transportation Research Part C: Emerging Technologies, 2022, 142, 103773.	3.9	4
11	Testing Scenario Library Generation for Connected and Automated Vehicles, Part II: Case Studies. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5635-5647.	4.7	42
12	Testing Scenario Library Generation for Connected and Automated Vehicles, Part I: Methodology. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 1573-1582.	4.7	89
13	Network topological effects on the macroscopic fundamental Diagram. Transportmetrica B, 2021, 9, 376-398.	1.4	6
14	Intelligent driving intelligence test for autonomous vehicles with naturalistic and adversarial environment. Nature Communications, 2021, 12, 748.	5.8	108
15	A cooperative driving framework for urban arterials in mixed traffic conditions. Transportation Research Part C: Emerging Technologies, 2021, 124, 102918.	3.9	32
16	A data-driven method for falsified vehicle trajectory identification by anomaly detection. Transportation Research Part C: Emerging Technologies, 2021, 128, 103196.	3.9	26
17	Corner Case Generation and Analysis for Safety Assessment of Autonomous Vehicles. Transportation Research Record, 2021, 2675, 587-600.	1.0	10
18	A hidden Markov model for the estimation of correlated queues in probe vehicle environments. Transportation Research Part C: Emerging Technologies, 2021, 128, 103128.	3.9	7

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19	A hierarchical behavior prediction framework at signalized intersections. , 2021, , .		2
20	Tube-Based Discrete Controller Design for Vehicle Platoons Subject to Disturbances and Saturation Constraints. IEEE Transactions on Control Systems Technology, 2020, 28, 1066-1073.	3.2	64
21	A restricted path-based ridesharing user equilibrium. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2020, 24, 383-403.	2.6	19
22	Cycle-Based End of Queue Estimation at Signalized Intersections Using Low-Penetration-Rate Vehicle Trajectories. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3257-3272.	4.7	28
23	Safety assessment of highly automated driving systems in test tracks: A new framework. Accident Analysis and Prevention, 2020, 144, 105664.	3.0	37
24	Real-Time Movement-Based Traffic Volume Prediction at Signalized Intersections. Journal of Transportation Engineering Part A: Systems, 2020, 146, .	0.8	15
25	Data Infrastructure for Connected Vehicle Applications. Transportation Research Record, 2020, 2674, 85-96.	1.0	10
26	Developing a dynamic utilisation scheme for exclusive bus lanes on urban expressways: an enhanced CTMâ€based approach versus a microsimulationâ€based approach. IET Intelligent Transport Systems, 2020, 14, 1657-1664.	1.7	3
27	A Similitude Theory for Modeling Traffic Flow Dynamics. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 900-911.	4.7	4
28	Various methods for queue length and traffic volume estimation using probe vehicle trajectories. Transportation Research Part C: Emerging Technologies, 2019, 107, 70-91.	3.9	57
29	Corridor level cooperative trajectory optimization with connected and automated vehicles. Transportation Research Part C: Emerging Technologies, 2019, 105, 405-421.	3.9	60
30	Missing data detection and imputation for urban ANPR system using an iterative tensor decomposition approach. Transportation Research Part C: Emerging Technologies, 2019, 107, 337-355.	3.9	29
31	Estimation of Queue Lengths, Probe Vehicle Penetration Rates, and Traffic Volumes at Signalized Intersections using Probe Vehicle Trajectories. Transportation Research Record, 2019, 2673, 660-670.	1.0	40
32	On the estimation of connected vehicle penetration rate based on single-source connected vehicle data. Transportation Research Part B: Methodological, 2019, 126, 169-191.	2.8	24
33	String stability for vehicular platoon control: Definitions and analysis methods. Annual Reviews in Control, 2019, 47, 81-97.	4.4	316
34	Managing connected and automated vehicles at isolated intersections: From reservation- to optimization-based methods. Transportation Research Part B: Methodological, 2019, 122, 416-435.	2.8	81
35	Augmented reality for robocars. IEEE Spectrum, 2019, 56, 22-27.	0.5	2
36	Bootstrap standard error estimations of nonlinear transport models based on linearly projected data. Transportmetrica A: Transport Science, 2019, 15, 602-630.	1.3	9

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37	Spatiotemporal intersection control in a connected and automated vehicle environment. Transportation Research Part C: Emerging Technologies, 2018, 89, 364-383.	3.9	170
38	A capacity maximization scheme for intersection management with automated vehicles. Transportation Research Part C: Emerging Technologies, 2018, 94, 19-31.	3.9	22
39	A link-node reformulation of ridesharing user equilibrium with network design. Transportation Research Part B: Methodological, 2018, 112, 230-255.	2.8	61
40	Integrated optimization of traffic signals and vehicle trajectories at isolated urban intersections. Transportation Research Part B: Methodological, 2018, 112, 89-112.	2.8	237
41	An Augmented Reality Environment for Connected and Automated Vehicle Testing and Evaluation. , 2018, , .		29
42	Vulnerability of Traffic Control System Under Cyberattacks with Falsified Data. Transportation Research Record, 2018, 2672, 1-11.	1.0	38
43	Traffic state estimation using stochastic Lagrangian dynamics. Transportation Research Part B: Methodological, 2018, 115, 143-165.	2.8	36
44	Real-Time Detector-Free Adaptive Signal Control with Low Penetration of Connected Vehicles. Transportation Research Record, 2018, 2672, 35-44.	1.0	14
45	Vehicle actuated signal performance under general traffic at an isolated intersection. Transportation Research Part C: Emerging Technologies, 2018, 95, 582-598.	3.9	11
46	Indifference bands for boundedly rational route switching. Transportation, 2017, 44, 1169-1194.	2.1	32
47	Measuring winners and losers from the new I-35W Mississippi River Bridge. Transportation, 2017, 44, 905-918.	2.1	2
48	Unexpected versus expected network disruption: Effects on travel behavior. Transport Policy, 2017, 57, 68-78.	3.4	9
49	Estimating traffic volumes for signalized intersections using connected vehicle data. Transportation Research Part C: Emerging Technologies, 2017, 79, 347-362.	3.9	158
50	Hardware-in-the-loop testbed for evaluating connected vehicle applications. Transportation Research Part C: Emerging Technologies, 2017, 78, 50-62.	3.9	43
51	A capacity maximization scheme for intersection management with automated vehicles. Transportation Research Procedia, 2017, 23, 121-136.	0.8	53
52	New Dimensions of Intersection Control with Connected and Automated Vehicles. , 2017, , .		1
53	Ridesharing User Equilibrium and Its Implications for High-Occupancy Toll Lane Pricing. Transportation Research Record, 2017, 2667, 39-50.	1.0	33
54	Emergency Evacuation, Dynamic Transportation Models. , 2017, , 527-533.		0

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55	A probabilistic optimization model for allocating freeway sensors. Transportation Research Part C: Emerging Technologies, 2016, 67, 378-398.	3.9	25
56	Boundedly rational route choice behavior: A review of models and methodologies. Transportation Research Part B: Methodological, 2016, 85, 142-179.	2.8	105
57	An Adaptive Signal Control Scheme to Prevent Intersection Traffic Blockage. IEEE Transactions on Intelligent Transportation Systems, 2016, , 1-10.	4.7	19
58	Quasi-optimal feedback control for an isolated intersection under oversaturation. Transportation Research Part C: Emerging Technologies, 2016, 67, 109-130.	3.9	22
59	Second best toll pricing within the framework of bounded rationality. Transportation Research Part B: Methodological, 2016, 83, 74-90.	2.8	51
60	Emergency Evacuation, Dynamic Transportation Models. , 2016, , 1-7.		0
61	A Generalized Flow Splitting Model for Day-to-day Traffic Assignment. Transportation Research Procedia, 2015, 9, 56-70.	0.8	4
62	Stochastic Eco-routing in a Signalized Traffic Network. Transportation Research Procedia, 2015, 7, 110-128.	0.8	14
63	Fine-Tuning Time-of-Day Transitions for Arterial Traffic Signals. Transportation Research Record, 2015, 2488, 32-40.	1.0	3
64	Multiagent Route Choice Game for Transportation Engineering. Transportation Research Record, 2015, 2480, 55-63.	1.0	2
65	Optimal vehicle speed trajectory on a signalized arterial with consideration of queue. Transportation Research Part C: Emerging Technologies, 2015, 61, 106-120.	3.9	218
66	Stochastic eco-routing in a signalized traffic network. Transportation Research Part C: Emerging Technologies, 2015, 59, 32-47.	3.9	23
67	Analysis of yellow-light running at signalized intersections using high-resolution traffic data. Transportation Research, Part A: Policy and Practice, 2015, 73, 39-52.	2.0	22
68	Quasi-optimal feedback control for a system of oversaturated intersections. Transportation Research Part C: Emerging Technologies, 2015, 57, 224-240.	3.9	21
69	Submission to the DTA 2012 Special Issue: On the Stability of a Boundedly Rational Day-to-Day Dynamic. Networks and Spatial Economics, 2015, 15, 537-557.	0.7	27
70	Submission to the DTA2012 Special Issue: Convergence of Time Discretization Schemes for Continuous-Time Dynamic Network Loading Models. Networks and Spatial Economics, 2015, 15, 419-441.	0.7	7
71	Submission to the DTA2012 Special Issue: Approximating Time Delays in Solving Continuous-Time Dynamic User Equilibria. Networks and Spatial Economics, 2015, 15, 443-463.	0.7	10
72	Length-based vehicle classification using event-based loop detector data. Transportation Research Part C: Emerging Technologies, 2014, 38, 156-166.	3.9	23

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73	Using high-resolution event-based data for traffic modeling and control: An overview. Transportation Research Part C: Emerging Technologies, 2014, 42, 28-43.	3.9	50
74	A probabilistic stationary speed-density relation based on Newell's simplified car-following model. Transportation Research Part B: Methodological, 2014, 68, 205-223.	2.8	63
75	Hybrid powertrain optimization with trajectory prediction based on inter-vehicle-communication and vehicle-infrastructure-integration. Transportation Research Part C: Emerging Technologies, 2014, 45, 41-63.	3.9	86
76	Braess paradox under the boundedly rational user equilibria. Transportation Research Part B: Methodological, 2014, 67, 86-108.	2.8	50
77	Use of Event-Based Traffic Data in Generating Time-Space Diagrams for Evaluation of Signal Coordination. Transportation Research Record, 2014, 2439, 94-104.	1.0	12
78	The Uncertainty of Drivers' Gap Selection and its Impact on the Fundamental Diagram. Procedia, Social and Behavioral Sciences, 2013, 80, 901-921.	0.5	9
79	Boundedly Rational User Equilibria (BRUE): Mathematical Formulation and Solution Sets. Procedia, Social and Behavioral Sciences, 2013, 80, 231-248.	0.5	13
80	Managing oversaturated signalized arterials: A maximum flow based approach. Transportation Research Part C: Emerging Technologies, 2013, 36, 196-211.	3.9	26
81	Boundedly rational user equilibria (BRUE): Mathematical formulation and solution sets. Transportation Research Part B: Methodological, 2013, 57, 300-313.	2.8	68
82	Arterial offset optimization using archived high-resolution traffic signal data. Transportation Research Part C: Emerging Technologies, 2013, 37, 131-144.	3.9	47
83	A stochastic model of traffic flow: Gaussian approximation and estimation. Transportation Research Part B: Methodological, 2013, 47, 15-41.	2.8	64
84	Analysis of Drivers' Stop-or-Run Behavior at Signalized Intersections with High-Resolution Traffic and Signal Event Data. Transportation Research Record, 2013, 2365, 99-108.	1.0	11
85	Performance Diagnosis Tool for Arterial Traffic Signals. Transportation Research Record, 2013, 2366, 109-116.	1.0	4
86	Performance Diagnosis Tool for Arterial Traffic Signals. Transportation Research Record, 2013, 2356, 109-116.	1.0	8
87	Hybrid Powertrain Optimization With Real-Time Traffic Information. , 2013, , .		2
88	Real-time estimation of arterial travel time under congested conditions. Transportmetrica, 2012, 8, 87-104.	1.8	29
89	Modeling the day-to-day traffic evolution process after an unexpected network disruption. Transportation Research Part B: Methodological, 2012, 46, 50-71.	2.8	120
90	A stochastic model of traffic flow: Theoretical foundations. Transportation Research Part B: Methodological, 2012, 46, 156-174.	2.8	95

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91	Modeling and solving continuous-time instantaneous dynamic user equilibria: A differential complementarity systems approach. <i>Transportation Research Part B: Methodological</i> , 2012, 46, 389-408.	2.8	46
92	Continuous-time point-queue models in dynamic network loading. <i>Transportation Research Part B: Methodological</i> , 2012, 46, 360-380.	2.8	79
93	An improved linearization technique for a class of quadratic 0-1 programming problems. <i>Optimization Letters</i> , 2012, 6, 31-41.	0.9	15
94	Numerical Studies on Reformulation Techniques for Continuous Network Design with Asymmetric User Equilibria. , 2012, , 138-157.		0
95	A simple forward-backward procedure for real-time signal timing adjustment on oversaturated arterial networks. , 2011, , .		5
96	A mixed-integer linear program for optimizing sensor locations along freeway corridors. <i>Transportation Research Part B: Methodological</i> , 2011, 45, 208-217.	2.8	47
97	An empirical analysis on the arterial fundamental diagram. <i>Transportation Research Part B: Methodological</i> , 2011, 45, 255-266.	2.8	82
98	Bounded rationality and irreversible network change. <i>Transportation Research Part B: Methodological</i> , 2011, 45, 1606-1618.	2.8	89
99	A shockwave profile model for traffic flow on congested urban arterials. <i>Transportation Research Part B: Methodological</i> , 2011, 45, 1768-1786.	2.8	88
100	Inverse variational inequalities with projection-based solution methods. <i>European Journal of Operational Research</i> , 2011, 208, 12-18.	3.5	29
101	Day-to-Day Dynamic Model in Discrete-Continuum Transportation Networks. <i>Transportation Research Record</i> , 2011, 2263, 66-72.	1.0	8
102	Hybrid Extended Kalman Filtering Approach for Traffic Density Estimation along Signalized Arterials. <i>Transportation Research Record</i> , 2010, 2188, 165-173.	1.0	20
103	Solving a class of constrained "black-box" inverse variational inequalities. <i>European Journal of Operational Research</i> , 2010, 204, 391-401.	3.5	43
104	Stochasticity of freeway operational capacity and chance-constrained ramp metering. <i>Transportation Research Part C: Emerging Technologies</i> , 2010, 18, 741-756.	3.9	27
105	Identification of oversaturated intersections using high-resolution traffic signal data. <i>Transportation Research Part C: Emerging Technologies</i> , 2010, 18, 626-638.	3.9	112
106	Development of Data-Processing Framework for Transit Performance Analysis. <i>Transportation Research Record</i> , 2010, 2143, 34-43.	1.0	9
107	The traffic and behavioral effects of the I-35W Mississippi River bridge collapse. <i>Transportation Research, Part A: Policy and Practice</i> , 2010, 44, 771-784.	2.0	89
108	A link-based day-to-day traffic assignment model. <i>Transportation Research Part B: Methodological</i> , 2010, 44, 597-608.	2.8	147

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109	Numerical Studies on Reformulation Techniques for Continuous Network Design with Asymmetric User Equilibria. <i>International Journal of Operations Research and Information Systems</i> , 2010, 1, 52-72.	1.0	7
110	Measuring Winners and Losers from the New I-35w Mississippi River Bridge. <i>SSRN Electronic Journal</i> , 2009, , .	0.4	6
111	Evaluation of Integrated Platoon-Priority and Advance Warning Flasher System at High-Speed Intersections. <i>Transportation Research Record</i> , 2009, 2128, 121-131.	1.0	1
112	Self-adaptive projection method for co-coercive variational inequalities. <i>European Journal of Operational Research</i> , 2009, 196, 43-48.	3.5	27
113	Method of Successive Weighted Averages (MSWA) and Self-Regulated Averaging Schemes for Solving Stochastic User Equilibrium Problem. <i>Networks and Spatial Economics</i> , 2009, 9, 485-503.	0.7	173
114	A Link-Node Discrete-Time Dynamic Second Best Toll Pricing Model with a Relaxation Solution Algorithm. <i>Networks and Spatial Economics</i> , 2009, 9, 243-267.	0.7	25
115	Optimal Sensor Locations for Freeway Bottleneck Identification. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2009, 24, 535-550.	6.3	51
116	A virtual vehicle probe model for time-dependent travel time estimation on signalized arterials. <i>Transportation Research Part C: Emerging Technologies</i> , 2009, 17, 11-26.	3.9	143
117	Real-time queue length estimation for congested signalized intersections. <i>Transportation Research Part C: Emerging Technologies</i> , 2009, 17, 412-427.	3.9	300
118	Perception of Waiting Time at Signalized Intersections. <i>Transportation Research Record</i> , 2009, 2135, 52-59.	1.0	23
119	A distributed modelling framework for large-scale microscopic traffic simulation. <i>World Review of Intermodal Transportation Research</i> , 2009, 2, 107.	0.2	3
120	Simulating Transportation for Realistic Engineering Education and Training. <i>Transportation Research Record</i> , 2009, 2109, 12-21.	1.0	14
121	On the Quadratic Programming Approach for Hub Location Problems. <i>Springer Optimization and Its Applications</i> , 2009, , 211-228.	0.6	1
122	Evaluation of Cell Phone Traffic Data in Minnesota. <i>Transportation Research Record</i> , 2008, 2086, 1-7.	1.0	51
123	A link-node complementarity model and solution algorithm for dynamic user equilibria with exact flow propagations. <i>Transportation Research Part B: Methodological</i> , 2008, 42, 823-842.	2.8	65
124	SMART-SIGNAL: Systematic Monitoring of Arterial Road Traffic Signals. , 2008, , .		8
125	Evaluation of Corridor Traffic Management and Planning Strategies that use Microsimulation. <i>Transportation Research Record</i> , 2008, 2088, 26-35.	1.0	10
126	Emergency Evacuation, Dynamic Transportation Models. , 2008, , 261-267.		1

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127	Model Reference Adaptive Control Framework for Real-Time Traffic Management under Emergency Evacuation. Journal of the Urban Planning and Development Division, ASCE, 2007, 133, 43-50.	0.8	75
128	Improving Queue Size Estimation for Minnesota's Stratified Zone Metering Strategy. Transportation Research Record, 2007, 2012, 38-46.	1.0	23
129	Estimation of the time-dependency of values of travel time and its reliability from loop detector data. Transportation Research Part B: Methodological, 2007, 41, 448-461.	2.8	68
130	Decomposition Scheme for Continuous Network Design Problem with Asymmetric User Equilibria. Transportation Research Record, 2006, 1964, 185-192.	1.0	9
131	A general MPCC model and its solution algorithm for continuous network design problem. Mathematical and Computer Modelling, 2006, 43, 493-505.	2.0	47
132	Performance Evaluation of ITS Strategies Using Microscopic Simulation. , 2004, , 28.		2
133	Performance Evaluation of Adaptive Ramp-Metering Algorithms Using Microscopic Traffic Simulation Model. Journal of Transportation Engineering, 2004, 130, 330-338.	0.9	60
134	Uncovering the contribution of travel time reliability to dynamic route choice using real-time loop data. Transportation Research, Part A: Policy and Practice, 2004, 38, 435-453.	2.0	65
135	Using Microscopic Simulation to Evaluate Potential Intelligent Transportation System Strategies Under Nonrecurrent Congestion. Transportation Research Record, 2004, 1886, 76-84.	1.0	36
136	Study Travel Time Variability from Probe Vehicle Data. , 2002, , 16.		7
137	Development of Vision-Based Vehicle Detection and Recognition System for Intelligent Vehicles. Transportation Research Record, 1999, 1679, 130-138.	1.0	5
138	Vision-based object detection and recognition system for intelligent vehicles. , 1999, 3525, 326.		4
139	A calibration procedure for microscopic traffic simulation. , 0, , .		35
140	Distributed large-scale network modeling with paramics implementation. , 0, , .		6
141	A link based quasi-variational inequality model for dynamic user equilibria, towards real time traffic operations. , 0, , .		0
142	Dynamic equilibrium assignment with microscopic traffic simulation. , 0, , .		8
143	Determining Yellow Change and Clearance Intervals for Left-Turning Phases: Evaluation of the Current Guidelines with Connected Vehicle Data. Transportation Research Record, 0, , 036119812210915.	1.0	0