Irma ChacÃ³n

List of Publications by Year
in descending order

137 papers	4,252 citations	136950 32 h-index	133252 59 g-index
137 all docs	137 docs citations	137 times ranked	2831 citing authors

#	Article	IF	Citations
1	A comprehensive review of shared mobility for sustainable transportation systems. International Journal of Sustainable Transportation, 2023, 17, 527-551.	4.1	12
2	On the primal and dual formulations of traffic assignment problems with perception stochasticity and demand elasticity. Transportation Letters, 2023, 15, 537-552.	3.1	1
3	Nonnegative tensor decomposition for urban mobility analysis and applications with mobile phone data. Transportmetrica A: Transport Science, 2022, 18, 29-53.	2.0	5
4	GraphSAGE-Based Traffic Speed Forecasting for Segment Network With Sparse Data. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 1755-1766.	8.0	38
5	Exploring impacts of COVID-19 on city-wide taxi and ride-sourcing markets: Evidence from Ningbo, China. Transport Policy, 2022, 115, 220-238.	6.6	23
6	Modeling and Managing Mixed On-Demand Ride Services of Human-Driven Vehicles and Autonomous Vehicles. Transportation Research Part B: Methodological, 2022, 157, 80-119.	5.9	18
7	A Bi-Level Optimization Model for Ride-Sourcing Platform's Spatial Pricing Strategy. Journal of Advanced Transportation, 2022, 2022, 1-22.	1.7	3
8	A simulation–optimization framework for a dynamic electric ride-hailing sharing problem with a novel charging strategy. Transportation Research, Part E: Logistics and Transportation Review, 2022, 159, 102615.	7.4	15
9	Analyzing Ride-Sourcing Market Equilibrium and Its Transitions with Heterogeneous Users. Journal of Advanced Transportation, 2022, 2022, 1-24.	1.7	0
10	Forecasting the transmission trends of respiratory infectious diseases with an exposure-risk-based model at the microscopic level. Environmental Research, 2022, 212, 113428.	7.5	5
11	Fitting Spatial-Temporal Data via a Physics Regularized Multi-Output Grid Gaussian Process: Case Studies of a Bike-Sharing System. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 21090-21101.	8.0	7
12	Network-scale traffic prediction via knowledge transfer and regional MFD analysis. Transportation Research Part C: Emerging Technologies, 2022, 141, 103719.	7.6	12
13	Exploring impacts of on-demand ridesplitting on mobility via real-world ridesourcing data and questionnaires. Transportation, 2021, 48, 1541-1561.	4.0	47
14	Capturing the interaction between travel time reliability and route choice behavior based on the generalized Bayesian traffic model. Transportation Research Part B: Methodological, 2021, 143, 48-64.	5.9	20
15	Hybrid Approach Combining Modified Gravity Model and Deep Learning for Short-Term Forecasting of Metro Transit Passenger Flows. Transportation Research Record, 2021, 2675, 25-38.	1.9	20
16	Predicting origin-destination ride-sourcing demand with a spatio-temporal encoder-decoder residual multi-graph convolutional network. Transportation Research Part C: Emerging Technologies, 2021, 122, 102858.	7.6	85
17	Integrating probabilistic tensor factorization with Bayesian supervised learning for dynamic ridesharing pattern analysis. Transportation Research Part C: Emerging Technologies, 2021, 124, 102916.	7.6	16
18	Equilibrium analyses and operational designs of a coupled market with substitutive and complementary ride-sourcing services to public transits. Transportation Research, Part E: Logistics and Transportation Review, 2021, 148, 102236.	7.4	21

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19	Efficient dispatching for on-demand ride services: Systematic optimization via Monte-Carlo tree search. Transportation Research Part C: Emerging Technologies, 2021, 127, 103156.	7.6	10
20	Understanding City-Wide Ride-Sourcing Travel Flow: A Geographically Weighted Regression Approach. Journal of Advanced Transportation, 2021, 2021, 1-15.	1.7	1
21	A modified artificial bee colony algorithm for the dynamic ride-hailing sharing problem. Transportation Research, Part E: Logistics and Transportation Review, 2021, 150, 102124.	7.4	20
22	Automated vehicle-involved traffic flow studies: A survey of assumptions, models, speculations, and perspectives. Transportation Research Part C: Emerging Technologies, 2021, 127, 103101.	7.6	84
23	Joint predictions of multi-modal ride-hailing demands: A deep multi-task multi-graph learning-based approach. Transportation Research Part C: Emerging Technologies, 2021, 127, 103063.	7.6	51
24	Exploring multi-homing behavior of ride-sourcing drivers via real-world multiple platforms data. Transportation Research Part F: Traffic Psychology and Behaviour, 2021, 80, 61-78.	3.7	14
25	A mean-field Markov decision process model for spatial-temporal subsidies in ride-sourcing markets. Transportation Research Part B: Methodological, 2021, 150, 540-565.	5.9	42
26	Modeling indoor-level non-pharmaceutical interventions during the COVID-19 pandemic: A pedestrian dynamics-based microscopic simulation approach. Transport Policy, 2021, 109, 12-23.	6.6	42
27	Quantifying the impact of COVID-19 on e-bike safety in China via multi-output and clustering-based regression models. PLoS ONE, 2021, 16, e0256610.	2.5	12
28	Competition between the transportation network company and the government with subsidies to public transit riders. Transportation Research, Part E: Logistics and Transportation Review, 2021, 152, 102426.	7.4	18
29	Spatial-temporal pricing for ride-sourcing platform with reinforcement learning. Transportation Research Part C: Emerging Technologies, 2021, 130, 103272.	7.6	23
30	Modeling network equilibrium of competitive ride-sourcing market with heterogeneous transportation network companies. Transportation Research Part C: Emerging Technologies, 2021, 130, 103277.	7.6	11
31	A Domain Adaptation Framework for Short-term Traffic Prediction. , 2021, , .		2
32	Short-Term Speed Forecasting of Large-Scale Urban Road Network Based on Transformer. , 2021, , .		1
33	Modeling Morning Commute Problem with Real-Time Ridesharing Services. , 2021, , .		0
34	Multi-step-ahead traffic speed forecasting using multi-output gradient boosting regression tree. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2020, 24, 125-141.	4.2	36
35	Measuring and enhancing the transferability of hidden Markov models for dynamic travel behavioral analysis. Transportation, 2020, 47, 585-605.	4.0	1
36	Spatial–Temporal Deep Tensor Neural Networks for Large-Scale Urban Network Speed Prediction. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3718-3729.	8.0	18

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37	A Balancing Act of Regulating On-Demand Ride Services. Management Science, 2020, 66, 2975-2992.	4.1	117
38	Simulating on-demand ride services in a Manhattan-like urban network considering traffic dynamics. Physica A: Statistical Mechanics and Its Applications, 2020, 545, 123621.	2.6	6
39	Modeling and managing heterogeneous ride-sourcing platforms with government subsidies on electric vehicles. Transportation Research Part B: Methodological, 2020, 139, 447-472.	5.9	37
40	Hybrid operations of human driving vehicles and automated vehicles with data-driven agent-based simulation. Transportation Research, Part D: Transport and Environment, 2020, 86, 102469.	6.8	18
41	A Grouping Approach to Ridesplitting Optimization. , 2020, , .		0
42	On Network Effects in the Ride-Sourcing Market with Heterogeneous Users. , 2020, , .		2
43	Dynamic optimization strategies for on-demand ride services platform: Surge pricing, commission rate, and incentives. Transportation Research Part B: Methodological, 2020, 138, 23-45.	5.9	69
44	Networkâ€wide traffic speed forecasting: 3D convolutional neural network with ensemble empirical mode decomposition. Computer-Aided Civil and Infrastructure Engineering, 2020, 35, 1132-1147.	9.8	36
45	Trajectory data-based traffic flow studies: A revisit. Transportation Research Part C: Emerging Technologies, 2020, 114, 225-240.	7.6	128
46	City-Level China Traffic Safety Analysis via Multi-Output and Clustering-Based Regression Models. Sustainability, 2020, 12, 3098.	3.2	2
47	Urban network-wide traffic speed estimation with massive ride-sourcing GPS traces. Transportation Research Part C: Emerging Technologies, 2020, 112, 136-152.	7.6	34
48	Coordinating Supply and Demand on an On-Demand Service Platform with Impatient Customers. Manufacturing and Service Operations Management, 2019, 21, 556-570.	3.7	348
49	Adaptive Rolling Smoothing With Heterogeneous Data for Traffic State Estimation and Prediction. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 1247-1258.	8.0	26
50	Spatial-temporal inference of urban traffic emissions based on taxi trajectories and multi-source urban data. Transportation Research Part C: Emerging Technologies, 2019, 106, 145-165.	7.6	56
51	Day-to-day evolution of departure time choice in stochastic capacity bottleneck models with bounded rationality and various information perceptions. Transportation Research, Part E: Logistics and Transportation Review, 2019, 131, 168-192.	7.4	30
52	Taxi Downsizing: A New Approach to Efficiency and Sustainability in the Taxi Industry. Sustainability, 2019, 11, 4944.	3.2	0
53	Ridesplitting is shaping young peopleâ€™s travel behavior: Evidence from comparative survey via ride-sourcing platform. Transportation Research, Part D: Transport and Environment, 2019, 75, 57-71.	6.8	62
54	How Does On-Demand Ridesplitting Influence Vehicle Use and Purchase Willingness? A Case Study in Hangzhou, China. IEEE Intelligent Transportation Systems Magazine, 2019, 11, 143-157.	3.8	30

#	ARTICLE	IF	CITATIONS
55	Trajectory analysis for on-demand services: A survey focusing on spatial-temporal demand and supply patterns. Transportation Research Part C: Emerging Technologies, 2019, 108, 74-99.	7.6	31
56	A generalized Bayesian traffic model. Transportation Research Part C: Emerging Technologies, 2019, 108, 182-206.	7.6	19
57	Bayesian network for red-light-running prediction at signalized intersections. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2019, 23, 120-132.	4.2	20
58	Analyzing Simulation-Based Active Traffic Management Impact on a Large-Scale Regional Network. Transportation Research Record, 2019, 2673, 638-647.	1.9	2
59	Modelling driversâ€™ working and recharging schedules in a ride-sourcing market with electric vehicles and gasoline vehicles. Transportation Research, Part E: Logistics and Transportation Review, 2019, 125, 160-180.	7.4	60
60	Multiâ€model ensemble for shortâ€term traffic flow prediction under normal and abnormal conditions. IET Intelligent Transport Systems, 2019, 13, 260-268.	3.0	28
61	A Bayesian Stochastic Kriging Optimization Model Dealing with Heteroscedastic Simulation Noise for Freeway Traffic Management. Transportation Science, 2019, 53, 545-565.	4.4	9
62	Simulation-Based Optimization for Network Modeling With Heterogeneous Data. , 2019, , 201-225.		0
63	PCA-based missing information imputation for real-time crash likelihood prediction under imbalanced data. Transportmetrica A: Transport Science, 2019, 15, 872-895.	2.0	22
64	Probabilistic Data Fusion for Short-Term Traffic Prediction With Semiparametric Density Ratio Model. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2459-2469.	8.0	6
65	Hexagon-Based Convolutional Neural Network for Supply-Demand Forecasting of Ride-Sourcing Services. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4160-4173.	8.0	100
66	The conditional probability of travel speed and its application to short-term prediction. Transportmetrica B, 2019, 7, 684-706.	2.3	6
67	A spatial econometric model for travel flow analysis and real-world applications with massive mobile phone data. Transportation Research Part C: Emerging Technologies, 2018, 86, 510-526.	7.6	63
68	Connected vehicle-based red-light running prediction for adaptive signalized intersections. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2018, 22, 229-243.	4.2	29
69	A mixed Bayesian network for two-dimensional decision modeling of departure time and mode choice. Transportation, 2018, 45, 1499-1522.	4.0	28
70	Optimal travel information provision strategies: an agent-based approach under uncertainty. Transportmetrica B, 2018, 6, 129-150.	2.3	7
71	Simulation-based pricing optimization for improving network-wide travel time reliability. Transportmetrica A: Transport Science, 2018, 14, 155-176.	2.0	13
72	Short-Term Forecasting of Traffic Flow and Speed: A Deep Learning Approach. , 2018, , .		2

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73	Gradient Boosting Regression Tree for Traffic Flow Prediction Considering Temporal and Spatial Correlations. , 2018, , .		1
74	Traffic Flow Prediction Based on Probe Vehicle GPS Traces Considering Temporal and Spatial Correlations. , 2018, , .		1
75	Random Forests for Freeway Short-Term Traffic Speed Prediction. , 2018, , .		0
76	Analyzing the impact of a planned transit-oriented development on mode share and traffic conditions. Transportation Planning and Technology, 2018, 41, 816-829.	2.0	2
77	Measuring the Passenger Car Equivalent of Small Cars and SUVs on Rainy and Sunny Days. Transportation Research Record, 2018, 2672, 110-119.	1.9	5
78	Spatial visitation prediction of on-demand ride services using the scaling law. Physica A: Statistical Mechanics and Its Applications, 2018, 508, 84-94.	2.6	8
79	Integrating mesoscopic dynamic traffic assignment with agent-based travel behavior models for cumulative land development impact analysis. Transportation Research Part C: Emerging Technologies, 2018, 93, 446-462.	7.6	12
80	Calibrating supply parameters of large‐scale DTA models with surrogate‐based optimisation. IET Intelligent Transport Systems, 2018, 12, 642-650.	3.0	4
81	Optimal Time-Varying Pricing for Toll Roads Under Multiple Objectives: A Simulation-Based Optimization Approach. Transportation Science, 2017, 51, 412-426.	4.4	42
82	Vehicle headway modeling and its inferences in macroscopic/microscopic traffic flow theory: A survey. Transportation Research Part C: Emerging Technologies, 2017, 76, 170-188.	7.6	116
83	Understanding ridesplitting behavior of on-demand ride services: An ensemble learning approach. Transportation Research Part C: Emerging Technologies, 2017, 76, 51-70.	7.6	187
84	Traffic state and emission estimation for urban expressways based on heterogeneous data. Transportation Research, Part D: Transport and Environment, 2017, 53, 440-453.	6.8	31
85	Integrated Agent-Based Travel Behavior and Dynamic Traffic Microsimulation for Ramp-Metering Analysis. Transportation Research Record, 2017, 2665, 11-20.	1.9	2
86	Short-term forecasting of passenger demand under on-demand ride services: A spatio-temporal deep learning approach. Transportation Research Part C: Emerging Technologies, 2017, 85, 591-608.	7.6	485
87	Short-term forecasting of emerging on-demand ride services. , 2017, , .		10
88	A surrogate-based optimization algorithm for network design problems. Frontiers of Information Technology and Electronic Engineering, 2017, 18, 1693-1704.	2.6	5
89	Dynamic traffic assignment integration with real-time ramp metering for large-scale network management. , 2017, , .		0
90	Competition between High-Speed Rail and Airline Based on Game Theory. Mathematical Problems in Engineering, 2017, 2017, 1-9.	1.1	3

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91	A Novel Trip Coverage Index for Transit Accessibility Assessment Using Mobile Phone Data. Journal of Advanced Transportation, 2017, 2017, 1-14.	1.7	13
92	Understanding network travel time reliability with on-demand ride service data. Frontiers of Engineering Management, 2017, 4, 388.	6.1	14
93	Shortâ€term traffic flow prediction with linear conditional Gaussian Bayesian network. Journal of Advanced Transportation, 2016, 50, 1111-1123.	1.7	109
94	Cellular signaling data driven simulation-based dynamic traffic assignment and its applications to a real-world road network. , 2016, , .		0
95	A global optimization algorithm for trajectory data based car-following model calibration. Transportation Research Part C: Emerging Technologies, 2016, 68, 311-332.	7.6	71
96	Agent-based en-route diversion: Dynamic behavioral responses and network performance represented by Macroscopic Fundamental Diagrams. Transportation Research Part C: Emerging Technologies, 2016, 64, 148-163.	7.6	30
97	Time-of-day vehicle mileage fees for congestion mitigation and revenue generation: A simulation-based optimization method and its real-world application. Transportation Research Part C: Emerging Technologies, 2016, 63, 71-95.	7.6	52
98	An extended generalized filter algorithm for urban expressway traffic time estimation based on heterogeneous data. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2016, 20, 474-484.	4.2	14
99	Surrogate-Based Optimization for Solving a Mixed Integer Network Design Problem. Transportation Research Record, 2015, 2497, 124-136.	1.9	33
100	Dynamic Demand Forecasting and Ticket Assignment for High-Speed Rail Revenue Management in China. Transportation Research Record, 2015, 2475, 37-45.	1.9	33
101	Multidimensional Travel Decision-Making: Descriptive Behavioural Theory and Agent-Based Models. , 2015, , 213-231.		5
102	Temporal-Spatial Analysis of Traffic Congestion Based on Modified CTM. Mathematical Problems in Engineering, 2015, 2015, 1-11.	1.1	2
103	The analysis of dynamic travel mode choice: a heterogeneous hidden Markov approach. Transportation, 2015, 42, 985-1002.	4.0	32
104	Agent-Based Microsimulation Approach for Design and Evaluation of Flexible Work Schedules. Transportation Research Record, 2015, 2537, 167-176.	1.9	7
105	Developing a 24-Hour Large-Scale Microscopic Traffic Simulation Model for the Before-and-After Study of a New Tolled Freeway in the Washington, DCâ€"Baltimore Region. Journal of Transportation Engineering, 2015, 141, .	0.9	25
106	Investigations of interactions between bus rapid transit and general traffic flows. Journal of Advanced Transportation, 2015, 49, 326-340.	1.7	7
107	Simulation-based Optimization of Mixed Road Pricing Policies in a large Real-world Network. Transportation Research Procedia, 2015, 8, 215-226.	1.5	13
108	Emission Mitigation via Longitudinal Control of Intelligent Vehicles in a Congested Platoon. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 490-506.	9.8	43

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109	Stochastic Evolutions of Dynamic Traffic Flow. , 2015, , .		12
110	Multimodel Ensemble for Freeway Traffic State Estimations. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 1323-1336.	8.0	68
111	Characterising scattering features in flow–density plots using a stochastic platoon model. Transportmetrica A: Transport Science, 2014, 10, 820-848.	2.0	18
112	A Traffic Breakdown Model Based on Queueing Theory. Networks and Spatial Economics, 2014, 14, 485-504.	1.6	16
113	Surrogate–Based Optimization of Expensive–to–Evaluate Objective for Optimal Highway Toll Charges in Transportation Network. Computer-Aided Civil and Infrastructure Engineering, 2014, 29, 359-381.	9.8	93
114	Short-term forecasting of high-speed rail demand: A hybrid approach combining ensemble empirical mode decomposition and gray support vector machine with real-world applications in China. Transportation Research Part C: Emerging Technologies, 2014, 44, 110-127.	7.6	122
115	Social Welfare Maximization of Multimodal Transportation. Transportation Research Record, 2014, 2451, 36-49.	1.9	12
116	Dynamic Transportation Planning and Operations: Concept, Framework and Applications in China. Procedia, Social and Behavioral Sciences, 2013, 96, 2332-2343.	0.5	9
117	Asymmetric stochastic Tau Theory in car-following. Transportation Research Part F: Traffic Psychology and Behaviour, 2013, 18, 21-33.	3.7	25
118	A Simulation-based Approach for Sustainable Transportation Systems Evaluation and Optimization: Theory, Systematic Framework and Applications. Procedia, Social and Behavioral Sciences, 2013, 96, 2274-2286.	0.5	22
119	Freeway Travel-Time Estimation Based on Temporal–Spatial Queueing Model. IEEE Transactions on Intelligent Transportation Systems, 2013, 14, 1536-1541.	8.0	49
120	Decentralized Cooperation Strategies in Two-Dimensional Traffic of Cellular Automata. Communications in Theoretical Physics, 2012, 58, 883-890.	2.5	3
121	JAMMING TRANSITION OF POINT-TO-POINT TRAFFIC THROUGH CO-OPERATIVE MECHANISMS. International Journal of Modern Physics C, 2012, 23, 1250077.	1.7	1
122	Comparison of Highway Traffic Breakdown Features between U.S. and China Using Discrete Wavelet Transform: An Empirical Study. , 2012, , .		1
123	Phase Diagram Analysis Based on a Temporal-Spatial Queueing Model. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 1705-1716.	8.0	20
124	Evaluation of Accident-Induced Indirect Costs for Measuring Penalties on Violations of Laws. Transportation Research Record, 2012, 2317, 111-120.	1.9	3
125	Location specific cell transmission model for freeway traffic. Tsinghua Science and Technology, 2010, 15, 475-480.	6.1	14
126	On the Intrinsic Concordance between the Wide Scattering Feature of Synchronized Flow and the Empirical Spacing Distributions. Chinese Physics Letters, 2010, 27, 074501.	3.3	9

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127	Equilibrium analysis and comparison for general CTMs and LCTMs. , 2010, , .		1
128	PERTURBATION AND STABILITY ANALYSIS OF THE MULTI-ANTICIPATIVE INTELLIGENT DRIVER MODEL. International Journal of Modern Physics C, 2010, 21, 647-668.	1.7	11
129	A TWO-DIMENSIONAL CA TRAFFIC MODEL WITH DYNAMIC ROUTE CHOICES BETWEEN RESIDENCE AND WORKPLACE. International Journal of Modern Physics C, 2010, 21, 221-237.	1.7	5
130	A Markov Model for Headway/Spacing Distribution of Road Traffic. IEEE Transactions on Intelligent Transportation Systems, 2010, 11, 773-785.	8.0	117
131	Stabilization of traffic flow based on multi-anticipative intelligent driver model. , 2009, , .		5
132	Evolutionary Algorithm of Port Based Location Routing Problem. , 2009, , .		2
133	Spatio-Temporal Evolution of Traffic Congestions on Urban Freeways. , 2009, , .		0
134	Evaluation and Optimization of Public Transport Subsidies for Alternative Energy. , 2009, , .		1
135	Estimation of Vehicle Usage Rate Based on Capture-Recapture Model with License Plate Recognition Data. , 2008, , .		2
136	Coordinating Supply and Demand on an On-Demand Platform: Price, Wage, and Payout Ratio. SSRN Electronic Journal, 0, , .	0.4	11
137	Service Operations for Mixed Autonomous Paradigm: Lane Design and Subsidy. Production and Operations Management, 0, , .	3.8	3