Vikash V Gayah

List of Publications by Year
in descending order

92 papers	2,807 citations	186265 28 h-index	206112 48 g-index
92 all docs	92 docs citations	92 times ranked	1544 citing authors

#	Article	IF	Citations
1	Decentralized arterial traffic signal optimization with connected vehicle information. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2023, 27, 145-160.	4.2	4
2	Development and evaluation of frameworks for real-time bus passenger occupancy prediction. International Journal of Transportation Science and Technology, 2023, 12, 399-413.	3.6	7
3	Simulation analysis of urban network performance under link disruptions: Impacts of information provisions in different street configurations. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2023, 27, 471-487.	4.2	1
4	Incorporating Phase Rotation Into a Person-Based Signal Timing Optimization Algorithm. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 513-521.	8.0	4
5	Green time usage metrics on signalized intersections and arterials using high-resolution traffic data. International Journal of Transportation Science and Technology, 2022, 11, 509-521.	3.6	6
6	Coordinated Perimeter Flow and Variable Speed Limit Control for Mixed Freeway and Urban Networks. Transportation Research Record, 2022, 2676, 596-609.	1.9	1
7	A note on estimating safety performance functions with a flexible specification of traffic volume. Accident Analysis and Prevention, 2022, 167, 106571.	5.7	4
8	County-level crash prediction models for Pennsylvania accounting for income characteristics. Transportation Research Interdisciplinary Perspectives, 2022, 13, 100562.	2.7	0
9	Safety Prediction Method for Freeway Facilities with High-Occupancy Lanes. Transportation Research Record, 2022, 2676, 501-513.	1.9	1
10	A latent choice model to analyze the role of preliminary preferences in shaping observed choices. Transportation Research Part B: Methodological, 2022, 161, 95-108.	5.9	0
11	Recent Advances in Reinforcement Learning for Traffic Signal Control. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2021, 22, 12-18.	4.0	88
12	Model-free perimeter metering control for two-region urban networks using deep reinforcement learning. Transportation Research Part C: Emerging Technologies, 2021, 124, 102949.	7.6	20
13	Identification of Optimal Left-Turn Restriction Locations using Heuristic Methods. Transportation Research Record, 2021, 2675, 452-467.	1.9	2
14	Estimating safety performance functions for two-lane rural roads using an alternative functional form for traffic volume. Accident Analysis and Prevention, 2021, 157, 106173.	5.7	12
15	Examining the impacts of crash data aggregation on SPF estimation. Accident Analysis and Prevention, 2021, 160, 106313.	5.7	4
16	Estimation of crash type frequencies on individual collector roadway segments. Accident Analysis and Prevention, 2021, 161, 106345.	5.7	6
17	A heuristic method to optimize generic signal phasing and timing plans at signalized intersections using Connected Vehicle technology. Transportation Research Part C: Emerging Technologies, 2020, 111, 156-170.	7.6	25
18	An equitable traffic signal control scheme at isolated signalized intersections using Connected Vehicle technology. Transportation Research Part C: Emerging Technologies, 2020, 110, 81-97.	7.6	48

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19	Resilience of Urban Street Network Configurations under Low Demands. Transportation Research Record, 2020, 2674, 982-994.	1.9	4
20	Analytical Method to Approximate the Impact of Turning on the Macroscopic Fundamental Diagram. Transportation Research Record, 2020, 2674, 933-947.	1.9	4
21	Traffic Signal Control Optimization in a Connected Vehicle Environment Considering Pedestrians. Transportation Research Record, 2020, 2674, 499-511.	1.9	13
22	Estimating Baseline Numbers for Safety Measure Target Setting in Virginia. Transportation Research Record, 2020, 2674, 523-535.	1.9	2
23	Impact of Bus Routes on Crash Frequency in Metropolitan Areas. Transportation Research Record, 2020, 2674, 305-316.	1.9	2
24	Crash modification factors for adaptive traffic signal control: An Empirical Bayes before-after study. Accident Analysis and Prevention, 2020, 144, 105672.	5.7	9
25	PressLight. , 2019, , .		147
26	Evaluating the predictive power of an SPF for two-lane rural roads with random parameters on out-of-sample observations. Accident Analysis and Prevention, 2019, 132, 105275.	5.7	20
27	Identification of Spatiotemporal Relationships in Travel Speeds along Individual Roadways using Probe Vehicle Data. Transportation Research Record, 2019, 2673, 546-560.	1.9	2
28	Traffic-responsive signals combined with perimeter control: investigating the benefits. Transportmetrica B, 2019, 7, 1402-1425.	2.3	26
29	Joint Optimization of Signal Phasing and Timing and Vehicle Speed Guidance in a Connected and Autonomous Vehicle Environment. Transportation Research Record, 2019, 2673, 70-83.	1.9	44
30	Analysis of one-way and two-way street configurations on urban grid networks. Transportmetrica B, 2019, 7, 61-81.	2.3	23
31	An analytical framework to model uncertainty in urban network dynamics using Macroscopic Fundamental Diagrams. Transportation Research Part B: Methodological, 2018, 117, 660-675.	5.9	12
32	Implementing phase rotation in a person-based signal timing optimization framework. , 2018, , .		6
33	A Scalable and Computationally Efficient Connected Vehicle-Based Signal Control Algorithm. , 2018, , .		2
34	Methods to reduce dimensionality and identify candidate solutions in multi-objective signal timing problems. Transportation Research Part C: Emerging Technologies, 2018, 96, 398-414.	7.6	5
35	Safety and operational impacts of setting speed limits below engineering recommendations. Accident Analysis and Prevention, 2018, 121, 43-52.	5.7	21
36	Safety performance functions for horizontal curves and tangents on two lane, two way rural roads. Accident Analysis and Prevention, 2018, 120, 28-37.	5.7	26

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37	Signal Timing Optimization with Connected Vehicle Technology: Platooning to Improve Computational Efficiency. Transportation Research Record, 2018, 2672, 81-92.	1.9	45
38	On the existence of network Macroscopic Safety Diagrams: Theory, simulation and empirical evidence. PLoS ONE, 2018, 13, e0200541.	2.5	13
39	Using survival models to estimate bus travel times and associated uncertainties. Transportation Research Part C: Emerging Technologies, 2017, 74, 366-382.	7.6	43
40	Development of regionalized SPFs for two-lane rural roads in Pennsylvania. Accident Analysis and Prevention, 2017, 108, 343-353.	5.7	17
41	Investigating Driver Behavior at Minor-Street Stop-Controlled Intersections in Qatar. Transportation Research Record, 2017, 2663, 109-116.	1.9	34
42	Estimating the Impacts of Bus Stops and Transit Signal Priority on Intersection Operations: Queuing and Variational Theory Approach. Transportation Research Record, 2017, 2622, 70-83.	1.9	19
43	Evaluation of Real-Time Transit Information Systems: An information demand and supply approach. International Journal of Transportation Science and Technology, 2017, 6, 86-98.	3.6	18
44	Analysis of Traffic Statics and Dynamics in Signalized Networks: A Poincaré Map Approach. Transportation Science, 2017, 51, 1009-1029.	4.4	10
45	An analytical framework to model uncertainty in urban network dynamics using Macroscopic Fundamental Diagrams. Transportation Research Procedia, 2017, 23, 497-516.	1.5	8
46	Accounting for Endogeneity in Maintenance Decisions and Overlay Thickness in a Pavement-Roughness Deterioration Model. Journal of Infrastructure Systems, 2017, 23, .	1.8	5
47	Development of a Mode Choice Model for General Purpose Flexible-Route Transit Systems. Transportation Research Record, 2017, 2650, 133-141.	1.9	23
48	Improving Urban Street Network Efficiency by Prohibiting Conflicting Left Turns at Signalized Intersections. Transportation Research Record, 2017, 2622, 58-69.	1.9	28
49	Person-Based Optimization of Signal Timing. Transportation Research Record, 2017, 2620, 31-42.	1.9	18
50	Exploratory Analysis of Signal Coordination Impacts on Macroscopic Fundamental Diagram. Transportation Research Record, 2016, 2560, 36-46.	1.9	38
51	Quantifying the safety effects of horizontal curves on two-way, two-lane rural roads. Accident Analysis and Prevention, 2016, 92, 71-81.	5.7	63
52	On the impact of obstructions on the capacity of nearby signalised intersections. Transportmetrica B, 2016, 4, 48-67.	2.3	8
53	Bus priority at signalized intersections with single-lane approaches: A novel pre-signal strategy. Transportation Research Part C: Emerging Technologies, 2016, 63, 51-70.	7.6	65
54	Deriving macroscopic fundamental diagrams from probe data: Issues and proposed solutions. Transportation Research Part C: Emerging Technologies, 2016, 66, 136-149.	7.6	62

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55	A robust optimization approach for dynamic traffic signal control with emission considerations. Transportation Research Part C: Emerging Technologies, 2016, 70, 3-26.	7.6	76
56	Assessing Park-and-Ride Efficiency and User Reactions to Parking Management Strategies. Journal of Public Transportation, 2016, 19, 75-92.	1.2	12
57	Examining Perimeter Gating Control of Urban Traffic Networks with Locally Adaptive Traffic Signals. , 2016, , 579-586.		1
58	Data-driven Linear Decision Rule Approach for Distributionally Robust Optimization of On-line Signal Control. Transportation Research Procedia, 2015, 7, 536-555.	1.5	6
59	Use of Microsimulation for Examination of Macroscopic Fundamental Diagram Hysteresis Patterns for Hierarchical Urban Street Networks. Transportation Research Record, 2015, 2491, 117-126.	1.9	29
60	Comparative Analysis of Traffic State Estimation. Transportation Research Record, 2015, 2491, 43-52.	1.9	12
61	Analysis of Network Exit Functions for Various Urban Grid Network Configurations. Transportation Research Record, 2015, 2491, 12-21.	1.9	33
62	Examining the Link Between Public Transit Use and Active Commuting. International Journal of Environmental Research and Public Health, 2015, 12, 4256-4274.	2.6	21
63	Design and Evaluation of Network Control Strategies Using the Macroscopic Fundamental Diagram. , 2015, , .		0
64	Continuum signalized junction model for dynamic traffic networks: Offset, spillback, and multiple signal phases. Transportation Research Part B: Methodological, 2015, 77, 213-239.	5.9	40
65	Providing Bus Priority at Signalized Intersections with Single-lane Approaches. Transportation Research Procedia, 2015, 9, 225-245.	1.5	12
66	Data-driven linear decision rule approach for distributionally robust optimization of on-line signal control. Transportation Research Part C: Emerging Technologies, 2015, 59, 260-277.	7.6	32
67	Dynamic Prediction of Vehicle Cluster Distribution in Mixed Traffic: A Statistical Mechanics-Inspired Method. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 2424-2434.	8.0	11
68	Relationship between mean and day-to-day variation in travel time in urban networks. EURO Journal on Transportation and Logistics, 2015, 3, 227-243.	2.2	9
69	On the continuum approximation of the on-and-off signal control on dynamic traffic networks. Transportation Research Part B: Methodological, 2014, 61, 73-97.	5.9	47
70	Statistical mechanics-inspired framework for studying the effects of mixed traffic flows on highway congestion. , 2014, , .		3
71	On the impacts of locally adaptive signal control on urban network stability and the Macroscopic Fundamental Diagram. Transportation Research Part B: Methodological, 2014, 70, 255-268.	5.9	137
72	On the impacts of bus stops near signalized intersections: Models of car and bus delays. Transportation Research Part B: Methodological, 2014, 68, 123-140.	5.9	59

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73	Accuracy of Networkwide Traffic States Estimated from Mobile Probe Data. Transportation Research Record, 2014, 2421, 1-11.	1.9	56
74	Mitigating negative impacts of near-side bus stops on cars. Transportation Research Part B: Methodological, 2013, 47, 42-56.	5.9	50
75	A kinematic wave approach to traffic statics and dynamics in a double-ring network. Transportation Research Part B: Methodological, 2013, 57, 114-131.	5.9	24
76	Inhomogeneous Flow Patterns in Undersaturated Road Networks. Transportation Research Record, 2013, 2390, 68-75.	1.9	19
77	Using Mobile Probe Data and the Macroscopic Fundamental Diagram to Estimate Network Densities. Transportation Research Record, 2013, 2390, 76-86.	1.9	59
78	A method to estimate the macroscopic fundamental diagram using limited mobile probe data. , 2013, , .		5
79	Comparison of Driver Behavior by Time of Day and Wet Pavement Conditions. Journal of Transportation Engineering, 2012, 138, 1023-1029.	0.9	18
80	The potential of parsimonious models for understanding large scale transportation systems and answering big picture questions. EURO Journal on Transportation and Logistics, 2012, 1, 47-65.	2.2	65
81	Analytical Capacity Comparison of One-Way and Two-Way Signalized Street Networks. Transportation Research Record, 2012, 2301, 76-85.	1.9	67
82	Presignal Used to Increase Bus- and Car-Carrying Capacity at Intersections. Transportation Research Record, 2012, 2315, 191-196.	1.9	21
83	Macroscopic relations of urban traffic variables: Bifurcations, multivaluedness and instability. Transportation Research Part B: Methodological, 2011, 45, 278-288.	5.9	290
84	Clockwise hysteresis loops in the Macroscopic Fundamental Diagram: An effect of network instability. Transportation Research Part B: Methodological, 2011, 45, 643-655.	5.9	233
85	Effects of Turning Maneuvers and Route Choice on a Simple Network. Transportation Research Record, 2011, 2249, 15-19.	1.9	47
86	Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches. Journal of Transportation Engineering, 2010, 136, 410-423.	0.9	13
87	Dynamic Variable Speed Limit Strategies for Real-Time Crash Risk Reduction on Freeways. Transportation Research Record, 2008, 2078, 108-116.	1.9	65
88	Crash Risk Assessment Using Intelligent Transportation Systems Data and Real-Time Intervention Strategies to Improve Safety on Freeways. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2007, 11, 107-120.	4.2	78
89	Considering various ALINEA ramp metering strategies for crash risk mitigation on freeways under congested regime. Transportation Research Part C: Emerging Technologies, 2007, 15, 113-134.	7.6	37
90	Cordon-Based Pricing Schemes for Mixed Urban-Freeway Networks using Macroscopic Fundamental Diagrams. Transportation Research Record, 0, , 036119812110159.	1.9	0

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91	Increasing Returns to Scale in Carpool Matching: Evidence from <i>Scoop</i>. Findings, 0, , .	0.0	2
92	Application of Emerging Data Sources for Pedestrian Safety Analysis in Charlotte, NC. Transportation Research Record, 0, , 036119812210933.	1.9	0