

Vikash V Gayah

List of Publications by Year in descending order

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92
papers

2,807
citations

185998

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205818

48
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92
all docs

92
docs citations

92
times ranked

1544
citing authors

#	ARTICLE	IF	CITATIONS
1	Macroscopic relations of urban traffic variables: Bifurcations, multivaluedness and instability. Transportation Research Part B: Methodological, 2011, 45, 278-288.	2.8	290
2	Clockwise hysteresis loops in the Macroscopic Fundamental Diagram: An effect of network instability. Transportation Research Part B: Methodological, 2011, 45, 643-655.	2.8	233
3	PressLight. , 2019, , .		147
4	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.	2.8	137
5	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.	3.2	88
6	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.	2.6	78
7	A robust optimization approach for dynamic traffic signal control with emission considerations. Transportation Research Part C: Emerging Technologies, 2016, 70, 3-26.	3.9	76
8	Analytical Capacity Comparison of One-Way and Two-Way Signalized Street Networks. Transportation Research Record, 2012, 2301, 76-85.	1.0	67
9	Dynamic Variable Speed Limit Strategies for Real-Time Crash Risk Reduction on Freeways. Transportation Research Record, 2008, 2078, 108-116.	1.0	65
10	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.	1.3	65
11	Bus priority at signalized intersections with single-lane approaches: A novel pre-signal strategy. Transportation Research Part C: Emerging Technologies, 2016, 63, 51-70.	3.9	65
12	Quantifying the safety effects of horizontal curves on two-way, two-lane rural roads. Accident Analysis and Prevention, 2016, 92, 71-81.	3.0	63
13	Deriving macroscopic fundamental diagrams from probe data: Issues and proposed solutions. Transportation Research Part C: Emerging Technologies, 2016, 66, 136-149.	3.9	62
14	Using Mobile Probe Data and the Macroscopic Fundamental Diagram to Estimate Network Densities. Transportation Research Record, 2013, 2390, 76-86.	1.0	59
15	On the impacts of bus stops near signalized intersections: Models of car and bus delays. Transportation Research Part B: Methodological, 2014, 68, 123-140.	2.8	59
16	Accuracy of Networkwide Traffic States Estimated from Mobile Probe Data. Transportation Research Record, 2014, 2421, 1-11.	1.0	56
17	Mitigating negative impacts of near-side bus stops on cars. Transportation Research Part B: Methodological, 2013, 47, 42-56.	2.8	50
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.	3.9	48

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19	Effects of Turning Maneuvers and Route Choice on a Simple Network. Transportation Research Record, 2011, 2249, 15-19.	1.0	47
20	On the continuum approximation of the on-and-off signal control on dynamic traffic networks. Transportation Research Part B: Methodological, 2014, 61, 73-97.	2.8	47
21	Signal Timing Optimization with Connected Vehicle Technology: Platooning to Improve Computational Efficiency. Transportation Research Record, 2018, 2672, 81-92.	1.0	45
22	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.	1.0	44
23	Using survival models to estimate bus travel times and associated uncertainties. Transportation Research Part C: Emerging Technologies, 2017, 74, 366-382.	3.9	43
24	Continuum signalized junction model for dynamic traffic networks: Offset, spillback, and multiple signal phases. Transportation Research Part B: Methodological, 2015, 77, 213-239.	2.8	40
25	Exploratory Analysis of Signal Coordination Impacts on Macroscopic Fundamental Diagram. Transportation Research Record, 2016, 2560, 36-46.	1.0	38
26	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.	3.9	37
27	Investigating Driver Behavior at Minor-Street Stop-Controlled Intersections in Qatar. Transportation Research Record, 2017, 2663, 109-116.	1.0	34
28	Analysis of Network Exit Functions for Various Urban Grid Network Configurations. Transportation Research Record, 2015, 2491, 12-21.	1.0	33
29	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.	3.9	32
30	Use of Microsimulation for Examination of Macroscopic Fundamental Diagram Hysteresis Patterns for Hierarchical Urban Street Networks. Transportation Research Record, 2015, 2491, 117-126.	1.0	29
31	Improving Urban Street Network Efficiency by Prohibiting Conflicting Left Turns at Signalized Intersections. Transportation Research Record, 2017, 2622, 58-69.	1.0	28
32	Safety performance functions for horizontal curves and tangents on two lane, two way rural roads. Accident Analysis and Prevention, 2018, 120, 28-37.	3.0	26
33	Traffic-responsive signals combined with perimeter control: investigating the benefits. Transportmetrica B, 2019, 7, 1402-1425.	1.4	26
34	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.	3.9	25
35	A kinematic wave approach to traffic statics and dynamics in a double-ring network. Transportation Research Part B: Methodological, 2013, 57, 114-131.	2.8	24
36	Development of a Mode Choice Model for General Purpose Flexible-Route Transit Systems. Transportation Research Record, 2017, 2650, 133-141.	1.0	23

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37	Analysis of one-way and two-way street configurations on urban grid networks. <i>Transportmetrica B</i> , 2019, 7, 61-81.	1.4	23
38	Presignal Used to Increase Bus- and Car-Carrying Capacity at Intersections. <i>Transportation Research Record</i> , 2012, 2315, 191-196.	1.0	21
39	Examining the Link Between Public Transit Use and Active Commuting. <i>International Journal of Environmental Research and Public Health</i> , 2015, 12, 4256-4274.	1.2	21
40	Safety and operational impacts of setting speed limits below engineering recommendations. <i>Accident Analysis and Prevention</i> , 2018, 121, 43-52.	3.0	21
41	Evaluating the predictive power of an SPF for two-lane rural roads with random parameters on out-of-sample observations. <i>Accident Analysis and Prevention</i> , 2019, 132, 105275.	3.0	20
42	Model-free perimeter metering control for two-region urban networks using deep reinforcement learning. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 124, 102949.	3.9	20
43	Inhomogeneous Flow Patterns in Undersaturated Road Networks. <i>Transportation Research Record</i> , 2013, 2390, 68-75.	1.0	19
44	Estimating the Impacts of Bus Stops and Transit Signal Priority on Intersection Operations: Queuing and Variational Theory Approach. <i>Transportation Research Record</i> , 2017, 2622, 70-83.	1.0	19
45	Comparison of Driver Behavior by Time of Day and Wet Pavement Conditions. <i>Journal of Transportation Engineering</i> , 2012, 138, 1023-1029.	0.9	18
46	Evaluation of Real-Time Transit Information Systems: An information demand and supply approach. <i>International Journal of Transportation Science and Technology</i> , 2017, 6, 86-98.	2.0	18
47	Person-Based Optimization of Signal Timing. <i>Transportation Research Record</i> , 2017, 2620, 31-42.	1.0	18
48	Development of regionalized SPFs for two-lane rural roads in Pennsylvania. <i>Accident Analysis and Prevention</i> , 2017, 108, 343-353.	3.0	17
49	Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches. <i>Journal of Transportation Engineering</i> , 2010, 136, 410-423.	0.9	13
50	On the existence of network Macroscopic Safety Diagrams: Theory, simulation and empirical evidence. <i>PLoS ONE</i> , 2018, 13, e0200541.	1.1	13
51	Traffic Signal Control Optimization in a Connected Vehicle Environment Considering Pedestrians. <i>Transportation Research Record</i> , 2020, 2674, 499-511.	1.0	13
52	Comparative Analysis of Traffic State Estimation. <i>Transportation Research Record</i> , 2015, 2491, 43-52.	1.0	12
53	Providing Bus Priority at Signalized Intersections with Single-lane Approaches. <i>Transportation Research Procedia</i> , 2015, 9, 225-245.	0.8	12
54	An analytical framework to model uncertainty in urban network dynamics using Macroscopic Fundamental Diagrams. <i>Transportation Research Part B: Methodological</i> , 2018, 117, 660-675.	2.8	12

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55	Estimating safety performance functions for two-lane rural roads using an alternative functional form for traffic volume. <i>Accident Analysis and Prevention</i> , 2021, 157, 106173.	3.0	12
56	Assessing Park-and-Ride Efficiency and User Reactions to Parking Management Strategies. <i>Journal of Public Transportation</i> , 2016, 19, 75-92.	0.3	12
57	Dynamic Prediction of Vehicle Cluster Distribution in Mixed Traffic: A Statistical Mechanics-Inspired Method. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2015, 16, 2424-2434.	4.7	11
58	Analysis of Traffic Statics and Dynamics in Signalized Networks: A Poincaré Map Approach. <i>Transportation Science</i> , 2017, 51, 1009-1029.	2.6	10
59	Relationship between mean and day-to-day variation in travel time in urban networks. <i>EURO Journal on Transportation and Logistics</i> , 2015, 3, 227-243.	1.3	9
60	Crash modification factors for adaptive traffic signal control: An Empirical Bayes before-after study. <i>Accident Analysis and Prevention</i> , 2020, 144, 105672.	3.0	9
61	On the impact of obstructions on the capacity of nearby signalised intersections. <i>Transportmetrica B</i> , 2016, 4, 48-67.	1.4	8
62	An analytical framework to model uncertainty in urban network dynamics using Macroscopic Fundamental Diagrams. <i>Transportation Research Procedia</i> , 2017, 23, 497-516.	0.8	8
63	Development and evaluation of frameworks for real-time bus passenger occupancy prediction. <i>International Journal of Transportation Science and Technology</i> , 2023, 12, 399-413.	2.0	7
64	Data-driven Linear Decision Rule Approach for Distributionally Robust Optimization of On-line Signal Control. <i>Transportation Research Procedia</i> , 2015, 7, 536-555.	0.8	6
65	Implementing phase rotation in a person-based signal timing optimization framework. , 2018, , .		6
66	Green time usage metrics on signalized intersections and arterials using high-resolution traffic data. <i>International Journal of Transportation Science and Technology</i> , 2022, 11, 509-521.	2.0	6
67	Estimation of crash type frequencies on individual collector roadway segments. <i>Accident Analysis and Prevention</i> , 2021, 161, 106345.	3.0	6
68	A method to estimate the macroscopic fundamental diagram using limited mobile probe data. , 2013, , .		5
69	Accounting for Endogeneity in Maintenance Decisions and Overlay Thickness in a Pavement-Roughness Deterioration Model. <i>Journal of Infrastructure Systems</i> , 2017, 23, .	1.0	5
70	Methods to reduce dimensionality and identify candidate solutions in multi-objective signal timing problems. <i>Transportation Research Part C: Emerging Technologies</i> , 2018, 96, 398-414.	3.9	5
71	Resilience of Urban Street Network Configurations under Low Demands. <i>Transportation Research Record</i> , 2020, 2674, 982-994.	1.0	4
72	Analytical Method to Approximate the Impact of Turning on the Macroscopic Fundamental Diagram. <i>Transportation Research Record</i> , 2020, 2674, 933-947.	1.0	4

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73	Incorporating Phase Rotation Into a Person-Based Signal Timing Optimization Algorithm. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 513-521.	4.7	4
74	Examining the impacts of crash data aggregation on SPF estimation. Accident Analysis and Prevention, 2021, 160, 106313.	3.0	4
75	Decentralized arterial traffic signal optimization with connected vehicle information. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2023, 27, 145-160.	2.6	4
76	A note on estimating safety performance functions with a flexible specification of traffic volume. Accident Analysis and Prevention, 2022, 167, 106571.	3.0	4
77	Statistical mechanics-inspired framework for studying the effects of mixed traffic flows on highway congestion. , 2014, , .		3
78	A Scalable and Computationally Efficient Connected Vehicle-Based Signal Control Algorithm. , 2018, , .		2
79	Identification of Spatiotemporal Relationships in Travel Speeds along Individual Roadways using Probe Vehicle Data. Transportation Research Record, 2019, 2673, 546-560.	1.0	2
80	Estimating Baseline Numbers for Safety Measure Target Setting in Virginia. Transportation Research Record, 2020, 2674, 523-535.	1.0	2
81	Impact of Bus Routes on Crash Frequency in Metropolitan Areas. Transportation Research Record, 2020, 2674, 305-316.	1.0	2
82	Identification of Optimal Left-Turn Restriction Locations using Heuristic Methods. Transportation Research Record, 2021, 2675, 452-467.	1.0	2
83	Increasing Returns to Scale in Carpool Matching: Evidence from <i>Scoop</i>. Findings, 0, , .	0.0	2
84	Coordinated Perimeter Flow and Variable Speed Limit Control for Mixed Freeway and Urban Networks. Transportation Research Record, 2022, 2676, 596-609.	1.0	1
85	Examining Perimeter Gating Control of Urban Traffic Networks with Locally Adaptive Traffic Signals. , 2016, , 579-586.		1
86	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.	2.6	1
87	Safety Prediction Method for Freeway Facilities with High-Occupancy Lanes. Transportation Research Record, 2022, 2676, 501-513.	1.0	1
88	Design and Evaluation of Network Control Strategies Using the Macroscopic Fundamental Diagram. , 2015, , .		0
89	Cordon-Based Pricing Schemes for Mixed Urban-Freeway Networks using Macroscopic Fundamental Diagrams. Transportation Research Record, 0, , 036119812110159.	1.0	0
90	County-level crash prediction models for Pennsylvania accounting for income characteristics. Transportation Research Interdisciplinary Perspectives, 2022, 13, 100562.	1.6	0

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91	A latent choice model to analyze the role of preliminary preferences in shaping observed choices. Transportation Research Part B: Methodological, 2022, 161, 95-108.	2.8	0
92	Application of Emerging Data Sources for Pedestrian Safety Analysis in Charlotte, NC. Transportation Research Record, 0, , 036119812210933.	1.0	0