Karim El-Basyouny

List of Publications by Year
in descending order

105	2,436	257101	243296
papers	citations	24 h-index	44 g-index

105	105	105	1259
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Traffic sign extraction using deep hierarchical feature learning and mobile light detection and ranging (LiDAR) data on rural highways. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2023, 27, 643-664.	2.6	3
2	Calibrating safety-based design charts for horizontal curves using system reliability analysis and multivariate models. Journal of Transportation Safety and Security, 2022, 14, 1997-2028.	1.1	3
3	Virtual analysis of urban road visibility using mobile laser scanning data and deep learning. Automation in Construction, 2022, 133, 104014.	4.8	8
4	Enriching Roadside Safety Assessments Using LiDAR Technology: Disaggregate Collision-Level Data Fusion and Analysis. Infrastructures, 2022, 7, 7.	1.4	3
5	Aggregate Spatial Analysis of Design Reliability to Sight Distance Requirements: Assessing Reliability of Transportation Infrastructure on a Network Level. Journal of Infrastructure Systems, 2022, 28, .	1.0	2
6	Fully Automated Algorithm for Light Pole Detection and Mapping in Rural Highway Environment Using Mobile Light Detection and Ranging Point Clouds. Transportation Research Record, 2022, 2676, 617-629.	1.0	4
7	Effects of Inclement Weather Events on Road Surface Conditions and Traffic Safety: An Event-Based Empirical Analysis Framework. Transportation Research Record, 2022, 2676, 51-62.	1.0	5
8	Octreeâ€based point cloud simulation to assess the readiness of highway infrastructure for autonomous vehicles. Computer-Aided Civil and Infrastructure Engineering, 2021, 36, 922-940.	6.3	22
9	Towards a more inclusive and safe design of horizontal curves: Exploring the association between curve features, reliability measures, and safety. Accident Analysis and Prevention, 2021, 153, 106009.	3.0	16
10	The Implications of Weather and Reflectivity Variations on Automatic Traffic Sign Recognition Performance. Journal of Advanced Transportation, 2021, 2021, 1-15.	0.9	5
11	Safety Assessment of Urban Intersection Sight Distance Using Mobile LiDAR Data. Sustainability, 2021, 13, 9259.	1.6	9
12	Automated Assessment of Passing Sight Distance on Rural Highways using Mobile LiDAR Data. Transportation Research Record, 2021, 2675, 676-688.	1.0	8
13	Automated Object Detection, Mapping, and Assessment of Roadside Clear Zones Using Lidar Data. Transportation Research Record, 2021, 2675, 432-448.	1.0	9
14	Automated Framework to Audit Traffic Signs Using Remote Sensing Data. Journal of Infrastructure Systems, 2021, 27, .	1.0	5
15	Automated assessment of infrastructure preparedness for autonomous vehicles. Automation in Construction, 2021, 129, 103820.	4.8	19
16	Effect of Redesigning Public Shared Space Amid the COVID-19 Pandemic on Physical Distancing and Traffic Safety. Journal of Transportation Engineering Part A: Systems, 2021, 147, .	0.8	2
17	Automatic Detection and Mapping of Highway Guardrails from Mobile Lidar Point Clouds. , 2021, , .		5
18	Exploring the associations between winter maintenance operations, weather variables, surface condition, and road safety: A path analysis approach. Accident Analysis and Prevention, 2021, 163, 106448.	3.0	14

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19	Location-based analysis of car-following behavior during braking using naturalistic driving data. Canadian Journal of Civil Engineering, 2020, 47, 498-505.	0.7	6
20	Analyzing the ability of crash-prone highways to handle stochastically modelled driver demand for stopping sight distance. Accident Analysis and Prevention, 2020, 136, 105395.	3.0	11
21	Multivariate models to investigate the relationship between collision risk and reliability outcomes on horizontal curves. Accident Analysis and Prevention, 2020, 147, 105745.	3.0	11
22	A framework to detect horizontal curves and assess their geometric properties from remotely sensed point clouds. International Journal of Remote Sensing, 2020, 41, 8328-8351.	1.3	9
23	A Citywide Location-Allocation Framework for Driver Feedback Signs: Optimizing Safety and Coverage of Vulnerable Road Users. Sustainability, 2020, 12, 10415.	1.6	0
24	Voxel-Based Methodology for Automated 3D Sight Distance Assessment on Highways using Mobile Light Detection and Ranging Data. Transportation Research Record, 2020, 2674, 587-599.	1.0	17
25	Investigating safety effects of wider longitudinal pavement markings. Accident Analysis and Prevention, 2020, 142, 105527.	3.0	17
26	A context identification layer to the reasoning subsystem of context-aware driver assistance systems based on proximity to intersections. Transportation Research Part C: Emerging Technologies, 2020, 117, 102703.	3.9	7
27	Before-and-After Empirical Bayes Evaluation of Achieving Bare Pavement using Anti-Icing on Urban Roads. Transportation Research Record, 2020, 2674, 92-101.	1.0	9
28	Before-and-After Empirical Bayes Evaluation of Citywide Installation of Driver Feedback Signs. Transportation Research Record, 2020, 2674, 419-427.	1.0	4
29	Lessons learned from the large-scale application of Driver Feedback Signs in an urban city. Journal of Transportation Safety and Security, 2020, , 1-19.	1.1	1
30	Calibrating Design Guidelines using Mental Workload and Reliability Analysis. Transportation Research Record, 2020, 2674, 360-369.	1.0	13
31	Network-level comparison of various Forward Collision Warning algorithms. Simulation, 2019, 95, 313-325.	1.1	5
32	Interactive allocation of mobile photo enforcement resources with multiple program objectives. Sustainable Cities and Society, 2019, 48, 101572.	5.1	1
33	Investigating the Effects of Mental Workload on Highway Safety. Transportation Research Record, 2019, 2673, 619-629.	1.0	16
34	Estimating Traffic Volume on Minor Roads at Rural Stop-Controlled Intersections using Deep Learning. Transportation Research Record, 2019, 2673, 108-116.	1.0	10
35	Investigating tradeâ€offs between optimal mobile photo enforcement programme plans. Journal of Multi-Criteria Decision Analysis, 2019, 26, 51-61.	1.0	3
36	Effects of LiDAR Point Density on Extraction of Traffic Signs: A Sensitivity Study. Transportation Research Record, 2019, 2673, 41-51.	1.0	17

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37	Available sight distance on existing highways: Meeting stopping sight distance requirements of an aging population. Accident Analysis and Prevention, 2018, 112, 56-68.	3.0	19
38	A Fully Automated Approach to Extract and Assess Road Cross Sections From Mobile LiDAR Data. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3507-3516.	4.7	26
39	Feasibility of extracting highway vertical profiles from LiDAR data. Canadian Journal of Civil Engineering, 2018, 45, 418-421.	0.7	14
40	Intervention analysis of the safety effects of a legislation targeting excessive speeding in Canada. International Journal of Injury Control and Safety Promotion, 2018, 25, 212-221.	1.0	4
41	Automated Extraction of Horizontal Curve Attributes using LiDAR Data. Transportation Research Record, 2018, 2672, 98-106.	1.0	26
42	Network Level Clearance Assessment using LiDAR to Improve the Reliability and Efficiency of Issuing Over-Height Permits on Highways. Transportation Research Record, 2018, 2672, 45-56.	1.0	10
43	Automated assessment of vertical clearance on highways scanned using mobile LiDAR technology. Automation in Construction, 2018, 95, 260-274.	4.8	25
44	A perceptual forward collision warning model using naturalistic driving data. Canadian Journal of Civil Engineering, 2018, 45, 899-907.	0.7	18
45	A Voxel-Based Method for Automated Detection and Mapping of Light Poles on Rural Highways using LiDAR Data. Transportation Research Record, 2018, 2672, 274-283.	1.0	16
46	Are school zones effective in reducing speeds and improving safety?. Canadian Journal of Civil Engineering, 2018, 45, 1084-1092.	0.7	9
47	Sun Glare: Network Characterization and Safety Effects. Transportation Research Record, 2018, 2672, 79-92.	1.0	8
48	Multivariate linear intervention models with random parameters to estimate the effectiveness of safety treatments: Case study of intersection device program. Accident Analysis and Prevention, 2018, 120, 114-121.	3.0	6
49	Assessing Stopping and Passing Sight Distance on Highways Using Mobile LiDAR Data. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	41
50	Relationship between road safety and mobile photo enforcement performance indicators: A case study of the city of Edmonton. Journal of Transportation Safety and Security, 2017, 9, 195-215.	1.1	8
51	Automated Highway Sign Extraction Using Lidar Data. Transportation Research Record, 2017, 2643, 1-8.	1.0	40
52	Operating Speed Models for Tangent Segments on Urban Roads. Transportation Research Record, 2017, 2618, 91-99.	1.0	11
53	Automated extraction of road features using LiDAR data: A review of LiDAR applications in transportation. , 2017, , .		22
54	Scheduling resources in a mobile photo enforcement program. , 2017, , .		1

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55	Investigating Distance Halo Effects of Mobile Photo Enforcement on Urban Roads. Transportation Research Record, 2017, 2660, 30-38.	1.0	5
56	Investigating Time Halo Effects of Mobile Photo Enforcement on Urban Roads. Transportation Research Record, 2017, 2660, 39-47.	1.0	7
57	Factors Affecting Classification of Road Segments into High- and Low-Speed Collision Regimes. Transportation Research Record, 2017, 2659, 98-105.	1.0	0
58	Beforeâ€“After Safety Evaluation Using Full Bayesian Macroscopic Multivariate and Spatial Models. Transportation Research Record, 2016, 2601, 128-137.	1.0	13
59	Using GIS to interpret automated speed enforcement guidelines and guide deployment decisions in mobile photo enforcement programs. Transportation Research, Part A: Policy and Practice, 2016, 86, 141-158.	2.0	6
60	Operating a mobile photo radar enforcement program: A framework for site selection, resource allocation, scheduling, and evaluation. Case Studies on Transport Policy, 2016, 4, 218-229.	1.1	13
61	Exploring the association between speed and safety: A path analysis approach. Accident Analysis and Prevention, 2016, 93, 32-40.	3.0	64
62	Lesson learned from the application of intersection safety devices in Edmonton. Accident Analysis and Prevention, 2016, 94, 127-134.	3.0	4
63	Towards setting credible speed limits: Identifying factors that affect driver compliance on urban roads. Accident Analysis and Prevention, 2016, 95, 138-148.	3.0	29
64	A full Bayes before-after study accounting for temporal and spatial effects: Evaluating the safety impact of new signal installations. Accident Analysis and Prevention, 2016, 94, 52-58.	3.0	16
65	Multivariate random parameters collision count data models with spatial heterogeneity. Analytic Methods in Accident Research, 2016, 9, 1-15.	4.7	111
66	Factors influencing the safety of urban residential collector roads. Journal of Transportation Safety and Security, 2016, 8, 230-246.	1.1	5
67	Full Bayesian Mixed-Effect Intervention Model for Beforeâ€“After Speed Data Analysis. Transportation Research Record, 2015, 2513, 11-20.	1.0	5
68	Before-and-After Empirical Bayes Evaluation of Automated Mobile Speed Enforcement on Urban Arterial Roads. Transportation Research Record, 2015, 2516, 44-52.	1.0	15
69	Multivariate Full Bayesian Hot Spot Identification and Ranking. Transportation Research Record, 2015, 2515, 1-9.	1.0	17
70	Effects of spatial correlation in random parameters collision count-data models. Analytic Methods in Accident Research, 2015, 5-6, 28-42.	4.7	38
71	Full Bayesian evaluation of the safety effects of reducing the posted speed limit in urban residential area. Accident Analysis and Prevention, 2015, 80, 18-25.	3.0	31
72	Multilevel models to analyze before and after speed data. Analytic Methods in Accident Research, 2015, 8, 33-44.	4.7	9

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73	Analyzing the severity of bicycle-motor vehicle collision using spatial mixed logit models: A City of Edmonton case study. Safety Science, 2014, 62, 295-304.	2.6	44
74	A Full Bayesian multivariate count data model of collision severity with spatial correlation. Analytic Methods in Accident Research, 2014, 3-4, 28-43.	4.7	77
75	Investigation of time and weather effects on crash types using full Bayesian multivariate Poisson lognormal models. Accident Analysis and Prevention, 2014, 73, 91-99.	3.0	77
76	Collision modification functions: Incorporating changes over time. Accident Analysis and Prevention, 2014, 70, 46-54.	3.0	28
77	The impact of lowered residential speed limits on vehicle speed behavior. Safety Science, 2014, 62, 483-494.	2.6	32
78	Investigating the safety effects of road width on urban collector roadways. Safety Science, 2014, 62, 305-311.	2.6	29
79	Assessing the Effect of Weather States on Crash Severity and Type by Use of Full Bayesian Multivariate Safety Models. Transportation Research Record, 2014, 2432, 65-73.	1.0	19
80	A framework for an on-demand dangerous goods routing support system for the metro Vancouver area. Journal of Engineering Research, 2014, 2, .	0.4	1
81	Modeling and analyzing traffic safety perceptions: An application to the speed limit reduction pilot project in Edmonton, Alberta. Accident Analysis and Prevention, 2013, 51, 156-167.	3.0	13
82	Depth-based hotspot identification and multivariate ranking using the full Bayes approach. Accident Analysis and Prevention, 2013, 50, 1082-1089.	3.0	12
83	Evaluating the Signal Head Upgrade Program in the City of Surrey. Accident Analysis and Prevention, 2013, 50, 1236-1243.	3.0	4
84	Safety performance functions using traffic conflicts. Safety Science, 2013, 51, 160-164.	2.6	174
85	An integrated speed management plan to reduce vehicle speeds in residential areas: Implementation and evaluation of the Silverberry Action Plan. Journal of Safety Research, 2013, 45, 85-93.	1.7	10
86	Assessing Mobility and Safety Impacts of a Variable Speed Limit Control Strategy. Transportation Research Record, 2013, 2364, 1-11.	1.0	48
87	Full Bayes Before-and-After Evaluation of Traffic Safety Improvements in City of Edmonton, Canada. Transportation Research Record, 2013, 2386, 189-194.	1.0	2
88	Investigating Effect of Collision Aggregation on Safety Evaluations with Models of Multivariate Linear Intervention. Transportation Research Record, 2012, 2280, 110-117.	1.0	0
89	An Investigation of the Relationship between Speed Characteristics and Collision Rate for Urban Freeway. , 2012, , .		0
90	Linear and Nonlinear Safety Intervention Models. Transportation Research Record, 2012, 2280, 28-37.	1.0	20

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91	Measuring safety treatment effects using full Bayes non-linear safety performance intervention functions. Accident Analysis and Prevention, 2012, 45, 152-163.	3.0	52
92	Measuring direct and indirect treatment effects using safety performance intervention functions. Safety Science, 2012, 50, 1125-1132.	2.6	39
93	A full Bayes multivariate intervention model with random parameters among matched pairs for beforeâ€“after safety evaluation. Accident Analysis and Prevention, 2011, 43, 87-94.	3.0	78
94	Full Bayes Approach to Before-and-After Safety Evaluation with Matched Comparisons: Case Study of Stop-Sign In-Fill Program. Transportation Research Record, 2010, 2148, 1-8.	1.0	41
95	A method to account for outliers in the development of safety performance functions. Accident Analysis and Prevention, 2010, 42, 1266-1272.	3.0	21
96	Safety performance functions with measurement errors in traffic volume. Safety Science, 2010, 48, 1339-1344.	2.6	27
97	Application of generalized link functions in developing accident prediction models. Safety Science, 2010, 48, 410-416.	2.6	21
98	Urban Arterial Accident Prediction Models with Spatial Effects. Transportation Research Record, 2009, 2102, 27-33.	1.0	92
99	Collision prediction models using multivariate Poisson-lognormal regression. Accident Analysis and Prevention, 2009, 41, 820-828.	3.0	192
100	Accident prediction models with random corridor parameters. Accident Analysis and Prevention, 2009, 41, 1118-1123.	3.0	178
101	Comparison of Two Negative Binomial Regression Techniques in Developing Accident Prediction Models. Transportation Research Record, 2006, 1950, 9-16.	1.0	68
102	Safety Evaluation of Stop Sign In-Fill Program. Transportation Research Record, 2006, 1953, 201-210.	1.0	2
103	A System to Determine Advisory Speed Limits for Horizontal Curves based on Mental Workload and Available Sight Distance. Canadian Journal of Civil Engineering, 0, , .	0.7	1
104	Impacts of Point Cloud Density Reductions on Extracting Road Geometric Features from mobile LiDAR data. Canadian Journal of Civil Engineering, 0, , .	0.7	0
105	Comparison of Two Negative Binomial Regression Techniques in Developing Accident Prediction Models. , 0, .		43