

Ludovic Leclercq

List of Publications by Year in descending order

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120
papers

3,545
citations

101496

36
h-index

168321

53
g-index

125
all docs

125
docs citations

125
times ranked

1612
citing authors

#	ARTICLE	IF	CITATIONS
1	A mechanism to describe the formation and propagation of stop-and-go waves in congested freeway traffic. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 4519-4541.	1.6	197
2	Microscopic modeling of the relaxation phenomenon using a macroscopic lane-changing model. <i>Transportation Research Part B: Methodological</i> , 2008, 42, 511-522.	2.8	174
3	Macroscopic Fundamental Diagrams: A cross-comparison of estimation methods. <i>Transportation Research Part B: Methodological</i> , 2014, 62, 1-12.	2.8	155
4	Macroscopic urban dynamics: Analytical and numerical comparisons of existing models. <i>Transportation Research Part B: Methodological</i> , 2017, 101, 245-267.	2.8	110
5	Traffic noise spectrum analysis: Dynamic modeling vs. experimental observations. <i>Applied Acoustics</i> , 2010, 71, 764-770.	1.7	101
6	Estimating MFDs in simple networks with route choice. <i>Transportation Research Part B: Methodological</i> , 2013, 57, 468-484.	2.8	99
7	The Hamiltonâ€“Jacobi partial differential equation and the three representations of traffic flow. <i>Transportation Research Part B: Methodological</i> , 2013, 52, 17-30.	2.8	81
8	Capacity drops at merges: An endogenous model. <i>Transportation Research Part B: Methodological</i> , 2011, 45, 1302-1313.	2.8	80
9	Capacity Drops at Merges: an endogenous model. <i>Procedia, Social and Behavioral Sciences</i> , 2011, 17, 12-26.	0.5	77
10	Dynamic macroscopic simulation of on-street parking search: A trip-based approach. <i>Transportation Research Part B: Methodological</i> , 2017, 101, 268-282.	2.8	72
11	Macroscopic traffic dynamics with heterogeneous route patterns. <i>Transportation Research Part C: Emerging Technologies</i> , 2015, 59, 292-307.	3.9	71
12	Hybrid approaches to the solutions of the â€œLighthillâ€“Whithamâ€“Richardsâ€“model. <i>Transportation Research Part B: Methodological</i> , 2007, 41, 701-709.	2.8	70
13	Fundamental Diagram Estimation Through Passing Rate Measurements in Congestion. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2009, 10, 355-359.	4.7	68
14	From heterogeneous drivers to macroscopic patterns in congestion. <i>Transportation Research Part B: Methodological</i> , 2010, 44, 299-308.	2.8	68
15	Accounting for traffic speed dynamics when calculating COPERT and PHEM pollutant emissions at the urban scale. <i>Transportation Research, Part D: Transport and Environment</i> , 2018, 63, 588-603.	3.2	67
16	Relaxation Phenomenon after Lane Changing. <i>Transportation Research Record</i> , 2007, 1999, 79-85.	1.0	66
17	Revealing the day-to-day regularity of urban congestion patterns with 3D speed maps. <i>Scientific Reports</i> , 2017, 7, 14029.	1.6	64
18	Comparing bus holding methods with and without real-time predictions. <i>Transportation Research Part C: Emerging Technologies</i> , 2018, 87, 197-211.	3.9	57

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19	Cross-comparison of Macroscopic Fundamental Diagram Estimation Methods. <i>Procedia, Social and Behavioral Sciences</i> , 2011, 20, 417-426.	0.5	54
20	Moving Bottlenecks in Lighthill-Whitham-Richards Model: A Unified Theory. <i>Transportation Research Record</i> , 2004, 1883, 3-13.	1.0	53
21	Flow exchanges in multi-reservoir systems with spillbacks. <i>Transportation Research Part B: Methodological</i> , 2019, 122, 327-349.	2.8	52
22	Spatiotemporal Partitioning of Transportation Network Using Travel Time Data. <i>Transportation Research Record</i> , 2017, 2623, 98-107.	1.0	48
23	Capturing urban traffic noise dynamics through relevant descriptors. <i>Applied Acoustics</i> , 2008, 69, 1270-1280.	1.7	47
24	Calibration and validation of multi-reservoir MFD models: A case study in Lyon. <i>Transportation Research Part B: Methodological</i> , 2020, 136, 62-86.	2.8	46
25	Bounded acceleration close to fixed and moving bottlenecks. <i>Transportation Research Part B: Methodological</i> , 2007, 41, 309-319.	2.8	44
26	Improving noise assessment at intersections by modeling traffic dynamics. <i>Transportation Research, Part D: Transport and Environment</i> , 2009, 14, 100-110.	3.2	44
27	Road Capacity and Travel Times with Bus Lanes and Intermittent Priority Activation. <i>Transportation Research Record</i> , 2012, 2315, 182-190.	1.0	44
28	Can dynamic ride-sharing reduce traffic congestion?. <i>Transportation Research Part B: Methodological</i> , 2021, 145, 212-246.	2.8	44
29	Does traffic-related calibration of car-following models provide accurate estimations of vehicle emissions?. <i>Transportation Research, Part D: Transport and Environment</i> , 2015, 34, 267-280.	3.2	43
30	Estimation of regional trip length distributions for the calibration of the aggregated network traffic models. <i>Transportation Research Part B: Methodological</i> , 2019, 122, 192-217.	2.8	43
31	Perimeter gating control and citywide dynamic user equilibrium: A macroscopic modeling framework. <i>Transportation Research Part C: Emerging Technologies</i> , 2020, 111, 22-49.	3.9	43
32	Capacity drops at merges: New analytical investigations. <i>Transportation Research Part C: Emerging Technologies</i> , 2016, 62, 171-181.	3.9	41
33	Estimating MFDs, trip lengths and path flow distributions in a multi-region setting using mobile phone data. <i>Transportation Research Part C: Emerging Technologies</i> , 2020, 118, 102709.	3.9	40
34	Do microscopic merging models reproduce the observed priority sharing ratio in congestion?. <i>Transportation Research Part C: Emerging Technologies</i> , 2009, 17, 328-336.	3.9	39
35	Real-time bus route state forecasting using particle filter and mesoscopic modeling. <i>Transportation Research Part C: Emerging Technologies</i> , 2015, 61, 121-140.	3.9	39
36	A macroscopic theory for unsignalized intersections. <i>Transportation Research Part B: Methodological</i> , 2007, 41, 1139-1150.	2.8	38

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37	Regional Dynamic Traffic Assignment Framework for Macroscopic Fundamental Diagram Multi-regions Models. <i>Transportation Science</i> , 2019, 53, 1563-1590.	2.6	38
38	Dynamic noise modeling at roundabouts. <i>Applied Acoustics</i> , 2009, 70, 761-770.	1.7	37
39	Applying variational theory to travel time estimation on urban arterials. <i>Transportation Research Part B: Methodological</i> , 2015, 78, 169-181.	2.8	33
40	Estimating MFDs in Simple Networks with Route Choice. <i>Procedia, Social and Behavioral Sciences</i> , 2013, 80, 99-118.	0.5	32
41	Bi-modal macroscopic traffic dynamics in a single region. <i>Transportation Research Part B: Methodological</i> , 2020, 133, 257-290.	2.8	32
42	Macroscopic network-level traffic models: Bridging fifty years of development toward the next era. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 131, 103334.	3.9	32
43	Accounting for traffic dynamics improves noise assessment: Experimental evidence. <i>Applied Acoustics</i> , 2009, 70, 821-829.	1.7	31
44	Performance analysis for different designs of a multimodal urban arterial. <i>Transportmetrica B</i> , 2014, 2, 229-245.	1.4	30
45	Disentangling the city traffic rhythms: A longitudinal analysis of MFD patterns over a year. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 126, 103065.	3.9	30
46	Dynamic estimation of urban traffic noise: Influence of traffic and noise source representations. <i>Applied Acoustics</i> , 2008, 69, 858-867.	1.7	27
47	Simulation-based dynamic traffic assignment: Meta-heuristic solution methods with parallel computing. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2020, 35, 1047-1062.	6.3	25
48	Minimal parameter formulations of the dynamic user equilibrium using macroscopic urban models: Freeway vs city streets revisited. <i>Transportation Research Part B: Methodological</i> , 2018, 117, 676-686.	2.8	22
49	Empirical observations of multi-modal network-level models: Insights from the pNEUMA experiment. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 131, 103300.	3.9	22
50	Investigating the irregularity of bus routes: highlighting how underlying assumptions of bus models impact the regularity results. <i>Journal of Advanced Transportation</i> , 2015, 49, 358-370.	0.9	21
51	Macroscopic Traffic Dynamics Under Fast-Varying Demand. <i>Transportation Science</i> , 2019, 53, 1526-1545.	2.6	21
52	Wave Velocity Estimation through Automatic Analysis of Cumulative Vehicle Count Curves. <i>Transportation Research Record</i> , 2011, 2249, 1-6.	1.0	20
53	Cross-comparison of convergence algorithms to solve trip-based dynamic traffic assignment problems. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2020, 35, 219-240.	6.3	20
54	Clustering Approach for Assessing the Travel Time Variability of Arterials. <i>Transportation Research Record</i> , 2014, 2422, 42-49.	1.0	19

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55	A Macroscopic Model for Freeway Weaving Sections. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2015, 30, 464-477.	6.3	19
56	Capacity drop: a comparison between stop-and-go wave and standing queue at lane-drop bottleneck. <i>Transportmetrica B</i> , 2017, 5, 145-158.	1.4	19
57	Dynamic Traffic Modeling for Noise Impact Assessment of Traffic Strategies. <i>Acta Acustica United With Acustica</i> , 2010, 96, 482-493.	0.8	18
58	Macroscopic Fundamental Diagram for Urban Streets and Mixed Traffic. <i>Transportation Research Record</i> , 2013, 2390, 1-10.	1.0	18
59	Microscopic Simulation of Cruising for Parking of Trucks as a Measure to Manage Freight Loading Zone. <i>Sustainability</i> , 2019, 11, 1276.	1.6	17
60	Travel time and bounded rationality in travellers' route choice behaviour: A computer route choice experiment. <i>Travel Behaviour & Society</i> , 2021, 22, 59-83.	2.4	17
61	Macroscopic Traffic Dynamics with Heterogeneous Route Patterns. <i>Transportation Research Procedia</i> , 2015, 7, 631-650.	0.8	16
62	Perimeter Control as an Alternative to Dedicated Bus Lanes: A Case Study. <i>Transportation Research Record</i> , 2018, 2672, 110-120.	1.0	16
63	Validation of Macroscopic Fundamental Diagrams-Based Models with Microscopic Simulations on Real Networks: Importance of Production Hysteresis and Trip Lengths Estimation. <i>Transportation Research Record</i> , 2019, 2673, 478-492.	1.0	16
64	Improving Bus Transit in Cities with Appropriate Dynamic Lane Allocating Strategies. <i>Procedia, Social and Behavioral Sciences</i> , 2012, 48, 1472-1481.	0.5	15
65	Improving traffic network performance with road banning strategy: A simulation approach comparing user equilibrium and system optimum. <i>Simulation Modelling Practice and Theory</i> , 2020, 99, 101995.	2.2	15
66	On the optimization of the bus network design: An analytical approach based on the three-dimensional macroscopic fundamental diagram. <i>Transportation Research Part B: Methodological</i> , 2021, 149, 393-417.	2.8	15
67	Calibration of Flow-Density Relationships on Urban Streets. <i>Transportation Research Record</i> , 2005, 1934, 226-234.	1.0	15
68	Graphical solution for system optimum dynamic traffic assignment with day-based incentive routing strategies. <i>Transportation Research Part B: Methodological</i> , 2018, 117, 87-100.	2.8	14
69	Identification and characterizing of the prevailing paths on a urban network for MFD-based applications. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 127, 102953.	3.9	14
70	Calibration of Flow-Density Relationships on Urban Streets. <i>Transportation Research Record</i> , 2005, 1934, 226-234.	1.0	13
71	Continuum Approximation for Congestion Dynamics Along Freeway Corridors. <i>Transportation Science</i> , 2010, 44, 87-97.	2.6	13
72	Are vehicle trajectories simulated by dynamic traffic models relevant for estimating fuel consumption?. <i>Transportation Research, Part D: Transport and Environment</i> , 2013, 24, 17-26.	3.2	13

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73	Calibration of Gipps's car-following model for trucks and the impacts on fuel consumption estimation. IET Intelligent Transport Systems, 2019, 13, 367-375.	1.7	13
74	Effects of Users' Bounded Rationality on a Traffic Network Performance: A Simulation Study. Journal of Advanced Transportation, 2018, 2018, 1-20.	0.9	12
75	Minimizing network-wide emissions by optimal routing through inner-city gating. Transportation Research, Part D: Transport and Environment, 2020, 86, 102411.	3.2	12
76	Dynamic Traffic Assignment for regional networks with traffic-dependent trip lengths and regional paths. Transportation Research Part C: Emerging Technologies, 2021, 127, 103076.	3.9	12
77	Minimal Parameter Formulations of the Dynamic User Equilibrium using Macroscopic Urban Models: Freeway vs City Streets Revisited. Transportation Research Procedia, 2017, 23, 517-530.	0.8	11
78	A Sequential Clustering Method for the Taxi-Dispatching Problem Considering Traffic Dynamics. IEEE Intelligent Transportation Systems Magazine, 2020, 12, 169-181.	2.6	11
79	Modal equilibrium of a tradable credit scheme with a trip-based MFD and logit-based decision-making. Transportation Research Part C: Emerging Technologies, 2022, 139, 103642.	3.9	11
80	A Macroscopic Single-Lane Roundabout Model to Account for Insertion Delays and O-D Patterns. Computer-Aided Civil and Infrastructure Engineering, 2008, 23, 104-115.	6.3	10
81	Microscopic Dual-Regime Model for Single-Lane Roundabouts. Journal of Transportation Engineering, 2009, 135, 386-394.	0.9	10
82	Multiscale Traffic Flow Model Based on the Mesoscopic Lighthill-Whitham and Richards Models. Transportation Research Record, 2015, 2491, 98-106.	1.0	10
83	Data Assimilation Using a Mesoscopic Lighthill-Whitham-Richards Model and Loop Detector Data: Methodology and Large-Scale Network Application. Transportation Research Record, 2016, 2560, 26-36.	1.0	10
84	A traffic Flow Model for Urban Traffic Analysis: Extensions of the LWR Model for Urban and Environmental Applications. , 2002, , 393-415.		9
85	Enforcing optimal routing through dynamic avoidance maps. Transportation Research Part B: Methodological, 2021, 149, 118-137.	2.8	9
86	Capacity Drops at Merges: Analytical Expressions for Multilane Freeways. Transportation Research Record, 2016, 2560, 1-9.	1.0	8
87	Departure Time Choice Models in Urban Transportation Systems Based on Mean Field Games. Transportation Science, 2022, 56, 1483-1504.	2.6	8
88	Computational Methods for Calculating Multimodal Multiclass Traffic Network Equilibrium: Simulation Benchmark on a Large-Scale Test Case. Journal of Advanced Transportation, 2021, 2021, 1-17.	0.9	7
89	Assessing traveler compliance with the social optimum: A stated preference study. Travel Behaviour & Society, 2021, 23, 177-191.	2.4	7
90	Hybridization of a class of second order models of traffic flow. Simulation Modelling Practice and Theory, 2007, 15, 918-934.	2.2	6

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91	Empirical MFDs using Google Traffic Data. , 2018, , .		6
92	Estimation of urban zonal speed dynamics from user-activity-dependent positioning data and regional paths. Transportation Research Part C: Emerging Technologies, 2021, 129, 103183.	3.9	6
93	A Multiclass Car-Following Rule Based on the LWR Model. , 2009, , 151-160.		6
94	Selecting Noise Source and Traffic Representations that Capture Road Traffic Noise Dynamics Near Traffic Signals. Acta Acustica United With Acustica, 2009, 95, 259-269.	0.8	5
95	Corrigendum to "Estimating MFDs in Simple Networks with Route Choice". Procedia, Social and Behavioral Sciences, 2013, 80, 960-979.	0.5	5
96	Real-time Bus Route State Forecasting Using Particle Filter: An Empirical Data Application. Transportation Research Procedia, 2015, 6, 434-447.	0.8	5
97	The Lagrangian coordinate system and what it means for two-dimensional crowd flow models. Physica A: Statistical Mechanics and Its Applications, 2016, 443, 272-285.	1.2	5
98	Heterogeneous perimeter flow distributions and MFD-based traffic simulation. Transportmetrica B, 2019, 7, 1378-1401.	1.4	5
99	Empirical Validation of Bimodal MFD Models. Frontiers in Future Transportation, 2020, 1, .	1.3	5
100	Dynamics of Flow Merging and Diverging in MFD-Based Systems: Validation vs. Microsimulation. Frontiers in Future Transportation, 2020, 1, .	1.3	5
101	Real-Time Autonomous Taxi Service: An Agent-Based Simulation. Smart Innovation, Systems and Technologies, 2020, , 199-207.	0.5	5
102	How Simplifying Urban Driving Cycles Influence Fuel Consumption Estimation?. Procedia, Social and Behavioral Sciences, 2012, 48, 1000-1009.	0.5	4
103	Unravelling travellers' route choice behaviour at full-scale urban network by focusing on representative OD pairs in computer experiments. PLoS ONE, 2019, 14, e0225069.	1.1	4
104	The reference point in dynamic Prospect-based User Equilibrium: a simulation study. Transportation Letters, 2020, 12, 513-527.	1.8	4
105	The Role of Trip Lengths Calibration in Model-Based Perimeter Control Strategies. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 5176-5186.	4.7	4
106	Regional dynamic traffic assignment with bounded rational drivers as a tool for assessing the emissions in large metropolitan areas. Transportation Research Interdisciplinary Perspectives, 2020, 8, 100248.	1.6	4
107	A Multi-agent System for Real-Time Ride Sharing in Congested Networks. Smart Innovation, Systems and Technologies, 2020, , 333-342.	0.5	4
108	"A Note on the Entropy Solutions of the Hydrodynamic Model of Traffic Flow" Revisited. Transportation Science, 2011, 45, 138-142.	2.6	3

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109	A Global Sensitivity Analysis of Dynamic Loading and Route Selection Parameters on Network Performances. <i>Journal of Advanced Transportation</i> , 2018, 2018, 1-24.	0.9	3
110	Estimation of Pollutant Emissions from the Road Traffic at a City Scale, and Its Sensitivity as Regards the Calibration of the Static Traffic Assignment Models. <i>Procedia, Social and Behavioral Sciences</i> , 2012, 48, 2091-2100.	0.5	2
111	Effect of Traffic Modeling on Control of Traffic Networks. <i>Transportation Research Record</i> , 2016, 2560, 47-56.	1.0	2
112	Clustering route choices methodology for network performance analysis. <i>Transportmetrica B</i> , 2017, 5, 191-210.	1.4	2
113	Nonlinear Model Predictive Control to Reduce Network-Wide Traffic Emission. <i>IFAC-PapersOnLine</i> , 2019, 52, 19-24.	0.5	2
114	Evolution of multimodal final user equilibrium considering public transport network design history. <i>Transportmetrica B</i> , 0, , 1-31.	1.4	2
115	Space-time clustering-based method to optimize shareability in real-time ride-sharing. <i>PLoS ONE</i> , 2022, 17, e0262499.	1.1	2
116	Capacity drops at merges: New analytical investigations. , 2014, , .		1
117	Refining trip starting and ending locations when estimating travel-demand at large urban scale. <i>Journal of Transport Geography</i> , 2021, 93, 103041.	2.3	1
118	Unravelling System Optimums by trajectory data analysis and machine learning. <i>Transportation Research Part C: Emerging Technologies</i> , 2021, 130, 103318.	3.9	0
119	Experimental assessment of traffic density estimation at link and network level with sparse data. <i>Transportmetrica B</i> , 2022, 10, 368-395.	1.4	0
120	Mode shift with tradable credit scheme: a simulation study in Lyon. <i>Transportation Research Procedia</i> , 2022, 62, 229-235.	0.8	0