Michel Bierlaire

List of Publications by Year
in descending order

146 papers	7,321 citations	47006 47 h-index	62596 80 g-index
150 all docs	150 docs citations	150 times ranked	4948 citing authors

#	Article	IF	Citations
1	Hybrid Choice Models: Progress and Challenges. Marketing Letters, 2002, 13, 163-175.	2.9	482
2	Discrete choice models of pedestrian walking behavior. Transportation Research Part B: Methodological, 2006, 40, 667-687.	5.9	442
3	Discrete Choice Methods and their Applications to Short Term Travel Decisions. Profiles in Operations Research, 1999, , 5-33.	0.4	372
4	Specification, estimation and validation of a pedestrian walking behavior model. Transportation Research Part B: Methodological, 2009, 43, 36-56.	5.9	203
5	A probabilistic map matching method for smartphone GPS data. Transportation Research Part C: Emerging Technologies, 2013, 26, 78-98.	7.6	163
6	Sampling of alternatives for route choice modeling. Transportation Research Part B: Methodological, 2009, 43, 984-994.	5.9	162
7	Happiness and travel mode switching: Findings from a Swiss public transportation experiment. Transport Policy, 2012, 19, 93-104.	6.6	162
8	Capturing correlation with subnetworks in route choice models. Transportation Research Part B: Methodological, 2007, 41, 363-378.	5.9	160
9	Estimation of value of travel-time savings using mixed logit models. Transportation Research, Part A: Policy and Practice, 2005, 39, 221-236.	4.2	141
10	Network State Estimation and Prediction for Real-Time Traffic Management. Networks and Spatial Economics, 2001, 1, 293-318.	1.6	138
11	The multi-objective railway timetable rescheduling problem. Transportation Research Part C: Emerging Technologies, 2017, 78, 78-94.	7.6	134
12	A Simulation-Based Optimization Framework for Urban Transportation Problems. Operations Research, 2013, 61, 1333-1345.	1.9	131
13	Forecasting the Demand for Electric Vehicles: Accounting for Attitudes and Perceptions. Transportation Science, 2014, 48, 483-499.	4.4	128
14	An Efficient Algorithm for Real-Time Estimation and Prediction of Dynamic OD Tables. Operations Research, 2004, 52, 116-127.	1.9	124
15	Simulation based population synthesis. Transportation Research Part B: Methodological, 2013, 58, 243-263.	5.9	121
16	An analytic finite capacity queueing network model capturing the propagation of congestion and blocking. European Journal of Operational Research, 2009, 196, 996-1007.	5.7	114
17	Investigating Consumers' Tendency to Combine Multiple Shopping Purposes and Destinations. Journal of Marketing Research, 1998, 35, 177.	4.8	113
18	A theoretical analysis of the cross-nested logit model. Annals of Operations Research, 2006, 144, 287-300.	4.1	112

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19	Scale Invariant Feature Transform on the Sphere: Theory and Applications. International Journal of Computer Vision, 2012, 98, 217-241.	15.6	105
20	Behavioral Priors for Detection and Tracking of Pedestrians in Video Sequences. International Journal of Computer Vision, 2006, 69, 159-180.	15.6	101
21	Investigating Consumersâ€™ Tendency to Combine Multiple Shopping Purposes and Destinations. Journal of Marketing Research, 1998, 35, 177-188.	4.8	99
22	Decision-Aiding Methodology for the School Bus Routing and Scheduling Problem. Transportation Science, 2005, 39, 477-490.	4.4	99
23	Exact and heuristic methods to solve the berth allocation problem in bulk ports. Transportation Research, Part E: Logistics and Transportation Review, 2013, 54, 14-31.	7.4	98
24	An Exact Algorithm for the Integrated Planning of Berth Allocation and Quay Crane Assignment. Transportation Science, 2013, 47, 148-161.	4.4	97
25	A general and operational representation of Generalised Extreme Value models. Transportation Research Part B: Methodological, 2006, 40, 285-305.	5.9	94
26	Income and distance elasticities of values of travel time savings: New Swiss results. Transport Policy, 2008, 15, 173-185.	6.6	91
27	Route choice modeling with network-free data. Transportation Research Part C: Emerging Technologies, 2008, 16, 187-198.	7.6	89
28	Passenger centric train timetabling problem. Transportation Research Part B: Methodological, 2016, 89, 107-126.	5.9	88
29	Characterization of input uncertainties in strategic energy planning models. Applied Energy, 2017, 202, 597-617.	10.1	87
30	A practical test for the choice of mixing distribution in discrete choice models. Transportation Research Part B: Methodological, 2007, 41, 784-794.	5.9	84
31	A branch-and-price algorithm to solve the integrated berth allocation and yard assignment problem in bulk ports. European Journal of Operational Research, 2014, 235, 399-411.	5.7	84
32	Cascade of descriptors to detect and track objects across any network of cameras. Computer Vision and Image Understanding, 2010, 114, 624-640.	4.7	82
33	Discrete choice models with multiplicative error terms. Transportation Research Part B: Methodological, 2009, 43, 494-505.	5.9	81
34	Real Time Simulation of Traffic Demand-Supply Interactions within DynaMIT. Applied Optimization, 2002, , 19-36.	0.4	74
35	Constraint-specific recovery network for solving airline recovery problems. Computers and Operations Research, 2010, 37, 1014-1026.	4.0	69
36	Train timetable design under elastic passenger demand. Transportation Research Part B: Methodological, 2018, 111, 19-38.	5.9	68

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37	The total demand scale: a new measure of quality for static and dynamic origin–destination trip tables. Transportation Research Part B: Methodological, 2002, 36, 837-850.	5.9	67
38	Real-time management of berth allocation with stochastic arrival and handling times. Journal of Scheduling, 2017, 20, 67-83.	1.9	66
39	Attitudes towards mode choice in Switzerland. Disp, 2013, 49, 101-117.	0.4	65
40	Bayesian Demand Calibration for Dynamic Traffic Simulations. Transportation Science, 2011, 45, 541-561.	4.4	64
41	A macroscopic loading model for time-varying pedestrian flows in public walking areas. Transportation Research Part B: Methodological, 2014, 69, 60-80.	5.9	64
42	Discrete Choice Models with Applications to Departure Time and Route Choice. , 2003, , 7-37.		61
43	A Bayesian approach to detect pedestrian destination-sequences from WiFi signatures. Transportation Research Part C: Emerging Technologies, 2014, 44, 146-170.	7.6	60
44	Integrating a heterogeneous fixed fleet and a flexible assignment of destination depots in the waste collection VRP with intermediate facilities. Transportation Research Part B: Methodological, 2016, 84, 256-273.	5.9	58
45	Taste heterogeneity and latent preferences in the choice behaviour of freight transport operators. Transport Policy, 2013, 30, 77-91.	6.6	57
46	Decision support for strategic energy planning: A robust optimization framework. European Journal of Operational Research, 2020, 280, 539-554.	5.7	57
47	The estimation of generalized extreme value models from choice-based samples. Transportation Research Part B: Methodological, 2008, 42, 381-394.	5.9	55
48	On iterative algorithms for linear least squares problems with bound constraints. Linear Algebra and Its Applications, 1991, 143, 111-143.	0.9	53
49	An empirical comparison of travel choice models that capture preferences for compromise alternatives. Transportation, 2013, 40, 549-562.	4.0	52
50	Dynamic network loading: A stochastic differentiable model that derives link state distributions. Transportation Research Part B: Methodological, 2011, 45, 1410-1423.	5.9	47
51	A systematic review of machine learning classification methodologies for modelling passenger mode choice. Journal of Choice Modelling, 2021, 38, 100221.	2.3	45
52	Normalization and correlation of cross-nested logit models. Transportation Research Part B: Methodological, 2007, 41, 795-808.	5.9	43
53	Probabilistic Multimodal Map Matching With Rich Smartphone Data. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2015, 19, 134-148.	4.2	41
54	Meuse: An origin-destination matrix estimator that exploits structure. Transportation Research Part B: Methodological, 1995, 29, 47-60.	5.9	40

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55	Modeling Learning in Route Choice. Transportation Research Record, 2007, 2014, 1-8.	1.9	39
56	Metropolis–Hastings sampling of paths. Transportation Research Part B: Methodological, 2013, 48, 53-66.	5.9	39
57	A dynamic network loading model for anisotropic and congested pedestrian flows. Transportation Research Part B: Methodological, 2017, 95, 149-168.	5.9	38
58	Choice probability generating functions. Journal of Choice Modelling, 2013, 8, 1-18.	2.3	36
59	Multi–objective airport gate assignment problem in planning and operations. Journal of Advanced Transportation, 2014, 48, 902-926.	1.7	36
60	Integrating psychometric indicators in latent class choice models. Transportation Research, Part A: Policy and Practice, 2014, 64, 135-146.	4.2	35
61	Robust real-time pedestrians detection in urban environments with low-resolution cameras. Transportation Research Part C: Emerging Technologies, 2014, 39, 113-128.	7.6	35
62	Probabilistic speed–density relationship for pedestrian traffic. Transportation Research Part B: Methodological, 2016, 89, 58-81.	5.9	35
63	Simulation and optimization: A short review. Transportation Research Part C: Emerging Technologies, 2015, 55, 4-13.	7.6	34
64	Halton Sampling for Image Registration Based on Mutual Information. Sampling Theory in Signal and Information Processing, 2008, 7, 141-171.	0.2	34
65	Using semi-open questions to integrate perceptions in choice models. Journal of Choice Modelling, 2014, 10, 11-33.	2.3	32
66	Hybrid cyclicity: Combining the benefits of cyclic and non-cyclic timetables. Transportation Research Part C: Emerging Technologies, 2017, 75, 228-253.	7.6	32
67	Mitigating the impact of errors in travel time reporting on mode choice modelling. Journal of Transport Geography, 2017, 62, 236-246.	5.0	31
68	A Heuristic for Nonlinear Global Optimization. INFORMS Journal on Computing, 2010, 22, 59-70.	1.7	30
69	Analysis of Implicit Choice Set Generation Using a Constrained Multinomial Logit Model. Transportation Research Record, 2010, 2175, 92-97.	1.9	30
70	Waste collection inventory routing with non-stationary stochastic demands. Computers and Operations Research, 2020, 113, 104798.	4.0	27
71	Demand Simulation for Dynamic Traffic Assignment. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 633-637.	0.4	25
72	Location choice with longitudinal WiFi data. Journal of Choice Modelling, 2016, 18, 1-17.	2.3	25

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73	Exogenous priority rules for the capacitated passenger assignment problem. Transportation Research Part B: Methodological, 2017, 105, 19-42.	5.9	25
74	Integrating advanced discrete choice models in mixed integer linear optimization. Transportation Research Part B: Methodological, 2021, 146, 26-49.	5.9	25
75	Correcting for endogeneity due to omitted attitudes: Empirical assessment of a modified MIS method using RP mode choice data. Journal of Choice Modelling, 2016, 20, 1-15.	2.3	24
76	Specification of the cross-nested logit model with sampling of alternatives for route choice models. Transportation Research Part B: Methodological, 2015, 80, 220-234.	5.9	23
77	Assessing the usage and level-of-service of pedestrian facilities in train stations: A Swiss case study. Transportation Research, Part A: Policy and Practice, 2016, 89, 106-123.	4.2	23
78	Solving Noisy, Large-Scale Fixed-Point Problems and Systems of Nonlinear Equations. Transportation Science, 2006, 40, 44-63.	4.4	22
79	Disaggregate models with aggregate data: Two UrbanSim applications. Journal of Transport and Land Use, 2010, 3, .	1.2	22
80	Pedestrians Choices. , 2009, , 1-26.		21
81	The study of the unidirectional quay crane scheduling problem: complexity and risk-aversion. European Journal of Operational Research, 2017, 260, 613-624.	5.7	21
82	Network design of a transport system based on accelerating moving walkways. Transportation Research Part C: Emerging Technologies, 2017, 80, 310-328.	7.6	21
83	On The Overspecification of Multinomial and Nested Logit Models Due to Alternative Specific Constants. Transportation Science, 1997, 31, 363-371.	4.4	20
84	Vehicle sharing systems: A review and a holistic management framework. EURO Journal on Transportation and Logistics, 2021, 10, 100033.	2.2	20
85	Development of Prototype Urbansim Models. Environment and Planning B: Planning and Design, 2010, 37, 344-366.	1.7	19
86	An Integrated Airline Scheduling, Fleeting, and Pricing Model for a Monopolized Market. Computer-Aided Civil and Infrastructure Engineering, 2014, 29, 76-90.	9.8	19
87	Overcapacity in European power systems: Analysis and robust optimization approach. Applied Energy, 2020, 259, 113970.	10.1	19
88	Bayesian estimation of mixed multinomial logit models: Advances and simulation-based evaluations. Transportation Research Part B: Methodological, 2020, 131, 124-142.	5.9	18
89	Vessel scheduling with pilotage and tugging considerations. Transportation Research, Part E: Logistics and Transportation Review, 2021, 148, 102231.	7.4	18
90	Estimation of Pedestrian Origin-Destination Demand in Train Stations. Transportation Science, 2017, 51, 981-997.	4.4	17

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91	Robust Optimization for Strategic Energy Planning. Informatica, 2016, 27, 625-648.	2.7	17
92	A master-slave approach for object detection and matching with fixed and mobile cameras. , 2008, , .		16
93	Introducing a preliminary consists selection in the locomotive assignment problem. Transportation Research, Part E: Logistics and Transportation Review, 2015, 82, 217-237.	7.4	16
94	Modelling human perception of static facial expressions. Image and Vision Computing, 2010, 28, 790-806.	4.5	14
95	Estimation of Bid Functions for Location Choice and Price Modeling with a Latent Variable Approach. Networks and Spatial Economics, 2014, 14, 47-65.	1.6	14
96	Evaluating the predictive abilities of mixed logit models with unobserved inter- and intra-individual heterogeneity. Journal of Choice Modelling, 2021, 41, 100323.	2.3	14
97	A unified framework for rich routing problems with stochastic demands. Transportation Research Part B: Methodological, 2018, 114, 213-240.	5.9	13
98	Discrete Choice Models for Static Facial Expression Recognition. Lecture Notes in Computer Science, 2006, , 710-721.	1.3	13
99	Within-Individual Variation in Preferences. Transportation Research Record, 2013, 2382, 92-101.	1.9	12
100	Revisiting the route choice problem: A modeling framework based on mental representations. Journal of Choice Modelling, 2016, 19, 1-23.	2.3	12
101	Sample and Pixel Weighting Strategies for Robust Incremental Visual Tracking. IEEE Transactions on Circuits and Systems for Video Technology, 2013, 23, 898-911.	8.3	11
102	Are commuter air taxis coming to your city? A ranking of 40 cities in the United States. Transportation Research Part C: Emerging Technologies, 2021, 132, 103392.	7.6	11
103	Associations Generation in Synthetic Population for Transportation Applications. Transportation Research Record, 2014, 2429, 38-50.	1.9	10
104	Design and analysis of control strategies for pedestrian flows. Transportation, 2021, 48, 1767-1807.	4.0	10
105	Dynamic facial expression recognition with a discrete choice model. Journal of Choice Modelling, 2011, 4, 95-148.	2.3	9
106	Electrification of urban mobility: The case of catenary-free buses. Transport Policy, 2019, 80, 39-48.	6.6	9
107	A two-stage route optimization algorithm for light aircraft transport systems. Transportation Research Part C: Emerging Technologies, 2019, 100, 259-273.	7.6	9
108	Assisted specification of discrete choice models. Journal of Choice Modelling, 2021, 39, 100285.	2.3	9

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109	Choice-driven dial-a-ride problem for demand responsive mobility service. Transportation Research Part B: Methodological, 2022, 161, 128-149.	5.9	9
110	Uncertainty feature optimization: An implicit paradigm for problems with noisy data. Networks, 2011, 57, 270-284.	2.7	8
111	Needed reduction in mobility energy consumption to meet the goal of a 2000-watt society. Transportation Research, Part A: Policy and Practice, 2017, 101, 133-148.	4.2	8
112	Optimizing Fueling Decisions for Locomotives in Railroad Networks. Transportation Science, 2015, 49, 149-159.	4.4	7
113	Trajectory Data Analysis on the Spatial and Temporal Influence of Pedestrian Flow on Path Planning Decision. Sustainability, 2020, 12, 10419.	3.2	7
114	Passenger-centric timetable rescheduling: A user equilibrium approach. Transportation Research Part C: Emerging Technologies, 2021, 132, 103368.	7.6	7
115	A multi-iterate method to solve systems of nonlinear equations. European Journal of Operational Research, 2007, 183, 20-41.	5.7	6
116	Dynamic network loading: a stochastic differentiable model that derives link state distributions. Procedia, Social and Behavioral Sciences, 2011, 17, 364-381.	0.5	6
117	Pedestrian-oriented Flow Characterization. Transportation Research Procedia, 2014, 2, 359-366.	1.5	6
118	Airline customers' connection time preferences in domestic U.S. markets. Journal of Air Transport Management, 2019, 79, 101688.	4.5	6
119	Bayesian Automatic Relevance Determination for Utility Function Specification in Discrete Choice Models. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 3126-3136.	8.0	6
120	An analysis of destination choice for opaque airline products using multidimensional binary logit models. Transportation Research, Part A: Policy and Practice, 2012, 46, 1641-1653.	4.2	5
121	Associations among household characteristics, vehicle characteristics and emissions failures: An application of targeted marketing data. Transportation Research, Part A: Policy and Practice, 2014, 59, 122-133.	4.2	5
122	Modeling purchases of new cars: an analysis of the 2014 French market. Theory and Decision, 2018, 84, 277-303.	1.0	5
123	Geometric Video Approximation Using Weighted Matching Pursuit. IEEE Transactions on Image Processing, 2009, 18, 1703-1716.	9.8	4
124	A tractable analytical model for large-scale congested protein synthesis networks. European Journal of Operational Research, 2012, 219, 588-597.	5.7	4
125	Data-driven spatio-temporal discretization for pedestrian flow characterization. Transportation Research Procedia, 2017, 23, 188-207.	1.5	4
126	Data-driven spatio-temporal discretization for pedestrian flow characterization. Transportation Research Part C: Emerging Technologies, 2018, 94, 185-202.	7.6	4

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127	Price-based regulation of oligopolistic markets under discrete choice models of demand. Transportation, 2022, 49, 1441-1463.	4.0	4
128	Dealing with singularities in nonlinear unconstrained optimization. European Journal of Operational Research, 2009, 196, 33-42.	5.7	3
129	On Path Generation Algorithms for Route Choice Models. , 2010, , 307-315.		3
130	Modeling investor behavior. Journal of Choice Modelling, 2012, 5, 98-130.	2.3	3
131	Estimation of discrete choice models with hybrid stochastic adaptive batch size algorithms. Journal of Choice Modelling, 2021, 38, 100226.	2.3	3
132	A Simulation-Based Heuristic to Find Approximate Equilibria with Disaggregate Demand Models. Transportation Science, 2021, 55, 1025-1045.	4.4	3
133	Object detection and matching in a mixed network of fixed and mobile cameras. , 2008, , .		2
134	Multidimensional Indicator Analysis for Transport Policy Evaluation. Transportation Research Record, 2014, 2430, 83-94.	1.9	2
135	Multiclass Speed-Density Relationship for Pedestrian Traffic. Transportation Science, 0, , .	4.4	2
136	A quasi-equilibrium approach for market clearing in land use microsimulations. Environment and Planning B: Urban Analytics and City Science, 2019, 46, 445-468.	2.0	2
137	Operational route choice methodologies for practical applications. Transportation, 2020, 47, 43-74.	4.0	2
138	Individual Mobility Analysis Using Smartphone Data. Advances in Data Mining and Database Management Book Series, 0, , 187-208.	0.5	2
139	Capturing Human Perception of Facial Expressions by Discrete Choice Modelling. , 2010, , 101-136.		1
140	Data-Driven Characterisation of Multidirectional Pedestrian Traffic. , 2016, , 43-47.		1
141	Individual Mobility Analysis Using Smartphone Data. , 0, , 332-354.		1
142	Controlling pedestrian flows with moving walkways. Transportation Research Part C: Emerging Technologies, 2022, 141, 103672.	7.6	1
143	Selected papers from the sixth Triennial symposium on transportation analysis (TRISTAN VI), Phuket, Thailand, June 11â€"15, 2007, Special Issue of Transportation Research Part C. Transportation Research Part C: Emerging Technologies, 2009, 17, 105.	7.6	0
144	Introduction to Disaggregate Demand Models. , 2017, , 48-67.		0

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145	Running Urban Microsimulations Consistently with Real-World Data. Communications in Computer and Information Science, 2012, , 181-199.	0.5	0
146	A Holistic Decision Making Framework for a Vehicle Sharing System. Communications in Computer and Information Science, 2019, , 306-314.	0.5	0