# Michel Bierlaire

List of Publications by Year
in descending order



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|---|---|---|---|
| 146 papers | 7,321 citations | 50170 46 h-index | 62479 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. | 1.9 | 482 |
| 2 | Discrete choice models of pedestrian walking behavior. Transportation Research Part B: Methodological, 2006, 40, 667-687. | 2.8 | 442 |
| 3 | Discrete Choice Methods and their Applications to Short Term Travel Decisions. Profiles in Operations Research, 1999, , 5-33. | 0.3 | 372 |
| 4 | Specification, estimation and validation of a pedestrian walking behavior model. Transportation Research Part B: Methodological, 2009, 43, 36-56. | 2.8 | 203 |
| 5 | A probabilistic map matching method for smartphone GPS data. Transportation Research Part C: Emerging Technologies, 2013, 26, 78-98. | 3.9 | 163 |
| 6 | Sampling of alternatives for route choice modeling. Transportation Research Part B: Methodological, 2009, 43, 984-994. | 2.8 | 162 |
| 7 | Happiness and travel mode switching: Findings from a Swiss public transportation experiment. Transport Policy, 2012, 19, 93-104. | 3.4 | 162 |
| 8 | Capturing correlation with subnetworks in route choice models. Transportation Research Part B: Methodological, 2007, 41, 363-378. | 2.8 | 160 |
| 9 | Estimation of value of travel-time savings using mixed logit models. Transportation Research, Part A: Policy and Practice, 2005, 39, 221-236. | 2.0 | 141 |
| 10 | Network State Estimation and Prediction for Real-Time Traffic Management. Networks and Spatial Economics, 2001, 1, 293-318. | 0.7 | 138 |
| 11 | The multi-objective railway timetable rescheduling problem. Transportation Research Part C: Emerging Technologies, 2017, 78, 78-94. | 3.9 | 134 |
| 12 | A Simulation-Based Optimization Framework for Urban Transportation Problems. Operations Research, 2013, 61, 1333-1345. | 1.2 | 131 |
| 13 | Forecasting the Demand for Electric Vehicles: Accounting for Attitudes and Perceptions. Transportation Science, 2014, 48, 483-499. | 2.6 | 128 |
| 14 | An Efficient Algorithm for Real-Time Estimation and Prediction of Dynamic OD Tables. Operations Research, 2004, 52, 116-127. | 1.2 | 124 |
| 15 | Simulation based population synthesis. Transportation Research Part B: Methodological, 2013, 58, 243-263. | 2.8 | 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. | 3.5 | 114 |
| 17 | Investigating Consumers' Tendency to Combine Multiple Shopping Purposes and Destinations. Journal of Marketing Research, 1998, 35, 177. | 3.0 | 113 |
| 18 | A theoretical analysis of the cross-nested logit model. Annals of Operations Research, 2006, 144, 287-300. | 2.6 | 112 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Scale Invariant Feature Transform on the Sphere: Theory and Applications. International Journal of Computer Vision, 2012, 98, 217-241. | 10.9 | 105 |
| 20 | Behavioral Priors for Detection and Tracking of Pedestrians in Video Sequences. International Journal of Computer Vision, 2006, 69, 159-180. | 10.9 | 101 |
| 21 | Investigating Consumersâ€™ Tendency to Combine Multiple Shopping Purposes and Destinations. Journal of Marketing Research, 1998, 35, 177-188. | 3.0 | 99 |
| 22 | Decision-Aiding Methodology for the School Bus Routing and Scheduling Problem. Transportation Science, 2005, 39, 477-490. | 2.6 | 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. | 3.7 | 98 |
| 24 | An Exact Algorithm for the Integrated Planning of Berth Allocation and Quay Crane Assignment. Transportation Science, 2013, 47, 148-161. | 2.6 | 97 |
| 25 | A general and operational representation of Generalised Extreme Value models. Transportation Research Part B: Methodological, 2006, 40, 285-305. | 2.8 | 94 |
| 26 | Income and distance elasticities of values of travel time savings: New Swiss results. Transport Policy, 2008, 15, 173-185. | 3.4 | 91 |
| 27 | Route choice modeling with network-free data. Transportation Research Part C: Emerging Technologies, 2008, 16, 187-198. | 3.9 | 89 |
| 28 | Passenger centric train timetabling problem. Transportation Research Part B: Methodological, 2016, 89, 107-126. | 2.8 | 88 |
| 29 | Characterization of input uncertainties in strategic energy planning models. Applied Energy, 2017, 202, 597-617. | 5.1 | 87 |
| 30 | A practical test for the choice of mixing distribution in discrete choice models. Transportation Research Part B: Methodological, 2007, 41, 784-794. | 2.8 | 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. | 3.5 | 84 |
| 32 | Cascade of descriptors to detect and track objects across any network of cameras. Computer Vision and Image Understanding, 2010, 114, 624-640. | 3.0 | 82 |
| 33 | Discrete choice models with multiplicative error terms. Transportation Research Part B: Methodological, 2009, 43, 494-505. | 2.8 | 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. | 2.4 | 69 |
| 36 | Train timetable design under elastic passenger demand. Transportation Research Part B: Methodological, 2018, 111, 19-38. | 2.8 | 68 |

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| 37 | The total demand scale: a new measure of quality for static and dynamic originâ€“destination trip tables. Transportation Research Part B: Methodological, 2002, 36, 837-850. | 2.8 | 67 |
| 38 | Real-time management of berth allocation with stochastic arrival and handling times. Journal of Scheduling, 2017, 20, 67-83. | 1.3 | 66 |
| 39 | Attitudes towards mode choice in Switzerland. Disp, 2013, 49, 101-117. | 0.8 | 65 |
| 40 | Bayesian Demand Calibration for Dynamic Traffic Simulations. Transportation Science, 2011, 45, 541-561. | 2.6 | 64 |
| 41 | A macroscopic loading model for time-varying pedestrian flows in public walking areas. Transportation Research Part B: Methodological, 2014, 69, 60-80. | 2.8 | 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. | 3.9 | 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. | 2.8 | 58 |
| 45 | Taste heterogeneity and latent preferences in the choice behaviour of freight transport operators. Transport Policy, 2013, 30, 77-91. | 3.4 | 57 |
| 46 | Decision support for strategic energy planning: A robust optimization framework. European Journal of Operational Research, 2020, 280, 539-554. | 3.5 | 57 |
| 47 | The estimation of generalized extreme value models from choice-based samples. Transportation Research Part B: Methodological, 2008, 42, 381-394. | 2.8 | 55 |
| 48 | On iterative algorithms for linear least squares problems with bound constraints. Linear Algebra and Its Applications, 1991, 143, 111-143. | 0.4 | 53 |
| 49 | An empirical comparison of travel choice models that capture preferences for compromise alternatives. Transportation, 2013, 40, 549-562. | 2.1 | 52 |
| 50 | Dynamic network loading: A stochastic differentiable model that derives link state distributions. Transportation Research Part B: Methodological, 2011, 45, 1410-1423. | 2.8 | 47 |
| 51 | A systematic review of machine learning classification methodologies for modelling passenger mode choice. Journal of Choice Modelling, 2021, 38, 100221. | 1.2 | 45 |
| 52 | Normalization and correlation of cross-nested logit models. Transportation Research Part B: Methodological, 2007, 41, 795-808. | 2.8 | 43 |
| 53 | Probabilistic Multimodal Map Matching With Rich Smartphone Data. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2015, 19, 134-148. | 2.6 | 41 |
| 54 | Meuse: An origin-destination matrix estimator that exploits structure. Transportation Research Part B: Methodological, 1995, 29, 47-60. | 2.8 | 40 |

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|---|---|---|---|
| 55 | Modeling Learning in Route Choice. Transportation Research Record, 2007, 2014, 1-8. | 1.0 | 39 |
| 56 | Metropolisâ€“Hastings sampling of paths. Transportation Research Part B: Methodological, 2013, 48, 53-66. | 2.8 | 39 |
| 57 | A dynamic network loading model for anisotropic and congested pedestrian flows. Transportation Research Part B: Methodological, 2017, 95, 149-168. | 2.8 | 38 |
| 58 | Choice probability generating functions. Journal of Choice Modelling, 2013, 8, 1-18. | 1.2 | 36 |
| 59 | Multiâ€objective airport gate assignment problem in planning and operations. Journal of Advanced Transportation, 2014, 48, 902-926. | 0.9 | 36 |
| 60 | Integrating psychometric indicators in latent class choice models. Transportation Research, Part A: Policy and Practice, 2014, 64, 135-146. | 2.0 | 35 |
| 61 | Robust real-time pedestrians detection in urban environments with low-resolution cameras. Transportation Research Part C: Emerging Technologies, 2014, 39, 113-128. | 3.9 | 35 |
| 62 | Probabilistic speedâ€“density relationship for pedestrian traffic. Transportation Research Part B: Methodological, 2016, 89, 58-81. | 2.8 | 35 |
| 63 | Simulation and optimization: A short review. Transportation Research Part C: Emerging Technologies, 2015, 55, 4-13. | 3.9 | 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. | 1.2 | 32 |
| 66 | Hybrid cyclicity: Combining the benefits of cyclic and non-cyclic timetables. Transportation Research Part C: Emerging Technologies, 2017, 75, 228-253. | 3.9 | 32 |
| 67 | Mitigating the impact of errors in travel time reporting on mode choice modelling. Journal of Transport Geography, 2017, 62, 236-246. | 2.3 | 31 |
| 68 | A Heuristic for Nonlinear Global Optimization. INFORMS Journal on Computing, 2010, 22, 59-70. | 1.0 | 30 |
| 69 | Analysis of Implicit Choice Set Generation Using a Constrained Multinomial Logit Model. Transportation Research Record, 2010, 2175, 92-97. | 1.0 | 30 |
| 70 | Waste collection inventory routing with non-stationary stochastic demands. Computers and Operations Research, 2020, 113, 104798. | 2.4 | 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. | 1.2 | 25 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Exogenous priority rules for the capacitated passenger assignment problem. Transportation Research Part B: Methodological, 2017, 105, 19-42. | 2.8 | 25 |
| 74 | Integrating advanced discrete choice models in mixed integer linear optimization. Transportation Research Part B: Methodological, 2021, 146, 26-49. | 2.8 | 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. | 1.2 | 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. | 2.8 | 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. | 2.0 | 23 |
| 78 | Solving Noisy, Large-Scale Fixed-Point Problems and Systems of Nonlinear Equations. Transportation Science, 2006, 40, 44-63. | 2.6 | 22 |
| 79 | Disaggregate models with aggregate data: Two UrbanSim applications. Journal of Transport and Land Use, 2010, 3, . | 0.7 | 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. | 3.5 | 21 |
| 82 | Network design of a transport system based on accelerating moving walkways. Transportation Research Part C: Emerging Technologies, 2017, 80, 310-328. | 3.9 | 21 |
| 83 | On The Overspecification of Multinomial and Nested Logit Models Due to Alternative Specific Constants. Transportation Science, 1997, 31, 363-371. | 2.6 | 20 |
| 84 | Vehicle sharing systems: A review and a holistic management framework. EURO Journal on Transportation and Logistics, 2021, 10, 100033. | 1.3 | 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. | 6.3 | 19 |
| 87 | Overcapacity in European power systems: Analysis and robust optimization approach. Applied Energy, 2020, 259, 113970. | 5.1 | 19 |
| 88 | Bayesian estimation of mixed multinomial logit models: Advances and simulation-based evaluations. Transportation Research Part B: Methodological, 2020, 131, 124-142. | 2.8 | 18 |
| 89 | Vessel scheduling with pilotage and tugging considerations. Transportation Research, Part E: Logistics and Transportation Review, 2021, 148, 102231. | 3.7 | 18 |
| 90 | Estimation of Pedestrian Origin-Destination Demand in Train Stations. Transportation Science, 2017, 51, 981-997. | 2.6 | 17 |

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| 91 | Robust Optimization for Strategic Energy Planning. Informatica, 2016, 27, 625-648. | 1.5 | 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. | 3.7 | 16 |
| 94 | Modelling human perception of static facial expressions. Image and Vision Computing, 2010, 28, 790-806. | 2.7 | 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. | 0.7 | 14 |
| 96 | Evaluating the predictive abilities of mixed logit models with unobserved inter- and intra-individual heterogeneity. Journal of Choice Modelling, 2021, 41, 100323. | 1.2 | 14 |
| 97 | A unified framework for rich routing problems with stochastic demands. Transportation Research Part B: Methodological, 2018, 114, 213-240. | 2.8 | 13 |
| 98 | Discrete Choice Models for Static Facial Expression Recognition. Lecture Notes in Computer Science, 2006, , 710-721. | 1.0 | 13 |
| 99 | Within-Individual Variation in Preferences. Transportation Research Record, 2013, 2382, 92-101. | 1.0 | 12 |
| 100 | Revisiting the route choice problem: A modeling framework based on mental representations. Journal of Choice Modelling, 2016, 19, 1-23. | 1.2 | 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. | 5.6 | 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. | 3.9 | 11 |
| 103 | Associations Generation in Synthetic Population for Transportation Applications. Transportation Research Record, 2014, 2429, 38-50. | 1.0 | 10 |
| 104 | Design and analysis of control strategies for pedestrian flows. Transportation, 2021, 48, 1767-1807. | 2.1 | 10 |
| 105 | Dynamic facial expression recognition with a discrete choice model. Journal of Choice Modelling, 2011, 4, 95-148. | 1.2 | 9 |
| 106 | Electrification of urban mobility: The case of catenary-free buses. Transport Policy, 2019, 80, 39-48. | 3.4 | 9 |
| 107 | A two-stage route optimization algorithm for light aircraft transport systems. Transportation Research Part C: Emerging Technologies, 2019, 100, 259-273. | 3.9 | 9 |
| 108 | Assisted specification of discrete choice models. Journal of Choice Modelling, 2021, 39, 100285. | 1.2 | 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. | 2.8 | 9 |
| 110 | Uncertainty feature optimization: An implicit paradigm for problems with noisy data. Networks, 2011, 57, 270-284. | 1.6 | 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. | 2.0 | 8 |
| 112 | Optimizing Fueling Decisions for Locomotives in Railroad Networks. Transportation Science, 2015, 49, 149-159. | 2.6 | 7 |
| 113 | Trajectory Data Analysis on the Spatial and Temporal Influence of Pedestrian Flow on Path Planning Decision. Sustainability, 2020, 12, 10419. | 1.6 | 7 |
| 114 | Passenger-centric timetable rescheduling: A user equilibrium approach. Transportation Research Part C: Emerging Technologies, 2021, 132, 103368. | 3.9 | 7 |
| 115 | A multi-iterate method to solve systems of nonlinear equations. European Journal of Operational Research, 2007, 183, 20-41. | 3.5 | 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. | 0.8 | 6 |
| 118 | Airline customersâ€™ connection time preferences in domestic U.S. markets. Journal of Air Transport Management, 2019, 79, 101688. | 2.4 | 6 |
| 119 | Bayesian Automatic Relevance Determination for Utility Function Specification in Discrete Choice Models. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 3126-3136. | 4.7 | 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. | 2.0 | 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. | 2.0 | 5 |
| 122 | Modeling purchases of new cars: an analysis of the 2014 French market. Theory and Decision, 2018, 84, 277-303. | 0.5 | 5 |
| 123 | Geometric Video Approximation Using Weighted Matching Pursuit. IEEE Transactions on Image Processing, 2009, 18, 1703-1716. | 6.0 | 4 |
| 124 | A tractable analytical model for large-scale congested protein synthesis networks. European Journal of Operational Research, 2012, 219, 588-597. | 3.5 | 4 |
| 125 | Data-driven spatio-temporal discretization for pedestrian flow characterization. Transportation Research Procedia, 2017, 23, 188-207. | 0.8 | 4 |
| 126 | Data-driven spatio-temporal discretization for pedestrian flow characterization. Transportation Research Part C: Emerging Technologies, 2018, 94, 185-202. | 3.9 | 4 |

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| 127 | Price-based regulation of oligopolistic markets under discrete choice models of demand. Transportation, 2022, 49, 1441-1463. | 2.1 | 4 |
| 128 | Dealing with singularities in nonlinear unconstrained optimization. European Journal of Operational Research, 2009, 196, 33-42. | 3.5 | 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. | 1.2 | 3 |
| 131 | Estimation of discrete choice models with hybrid stochastic adaptive batch size algorithms. Journal of Choice Modelling, 2021, 38, 100226. | 1.2 | 3 |
| 132 | A Simulation-Based Heuristic to Find Approximate Equilibria with Disaggregate Demand Models. Transportation Science, 2021, 55, 1025-1045. | 2.6 | 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. | 1.0 | 2 |
| 135 | Multiclass Speed-Density Relationship for Pedestrian Traffic. Transportation Science, 0, , . | 2.6 | 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. | 1.0 | 2 |
| 137 | Operational route choice methodologies for practical applications. Transportation, 2020, 47, 43-74. | 2.1 | 2 |
| 138 | Individual Mobility Analysis Using Smartphone Data. Advances in Data Mining and Database Management Book Series, 0, , 187-208. | 0.4 | 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. | 3.9 | 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. | 3.9 | 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. | 0.4 | 0 |
| 146 | A Holistic Decision Making Framework for a Vehicle Sharing System. Communications in Computer and Information Science, 2019, , 306-314. | 0.4 | 0 |