Yuki Oyama

Personal Data

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Work Experience

since 04/2024	**Associate Professor** Department of Civil Engineering, The University of Tokyo
04/2021–03/2024	**Associate Professor** Department of Civil Engineering, Shibaura Institute of Technology
04/2020–03/2021	**Assistant Professor** Department of Civil Engineering, Shibaura Institute of Technology
10/2019–03/2020	**Project Assistant Professor** Research Center for Advanced Science and Technology, The University of Tokyo
10/2017–09/2019	**Research and Teaching Associate** Transport and Mobility Laboratory (TRANSP-OR), École Polytechnique Fédérale de Lausanne (EPFL)
04/2017–09/2017	**Research Fellow (PD)** Japan Society for the Promotion of Science (JSPS), Tokyo Institute of Technology
04/2014–03/2017	**Research Fellow (DC1)** Japan Society for the Promotion of Science (JSPS), The University of Tokyo

Visiting Researcher

since 04/2022	**Visiting Associate Professor** Ehime University, Urban Design Center Matsuyama
since 04/2020	**Senior Visiting Researcher** Research Center for Advanced Science and Technology, The University of Tokyo
11/2016–03/2017	**Visiting Scholor** Transport and Mobility Laboratory (TRANSP-OR), École Polytechnique Fédérale de Lausanne (EPFL)
05/2014–03/2015	**Visiting Researcher** Ehime University, Urban Design Center Matsuyama

Scientific Education

03/2017	Ph.D in Engineering Behavior in Networks Studies Unit (Supervisor: Eiji Hato) Department of Urban Engineering, The University of Tokyo
03/2014	M.Sc. in Engineering Behavior in Networks Studies Unit (Supervisor: Eiji Hato) Department of Urban Engineering, The University of Tokyo
03/2012	B.Sc. in Engineering Environmental Design Laboratory (Supervisor: Mikiko Ishikawa) Department of Urban Engineering, The University of Tokyo

Peer-reviewed Journal Papers

(∗: Corresponding author; # Students supervised by me.)

International Journal Papers

1. Okazaki, R., **Oyama, Y.**∗, Imura, N., Nishinari, K. (2025) Evaluating choice-based demand management strategies for day-to-day home delivery planning. *Research in Transportation Economics* **113**: 101615.
2. Parady, G.∗, Chikaraishi, M., **Oyama, Y.** (2025) A walker's paradise ain't a driver's hell: Evaluating the causal effect of temporary road pedestrianization on traffic conditions of surrounding roads. *Journal of Transport Geography* **127**: 104269.
3. **Oyama, Y.**∗, Akamatsu, T.∗ (2025) A market-based efficient matching mechanism for crowdsourced delivery systems with demand/supply elasticities. *Transportation Research Part C: Emerging Technologies* **174**: 105110.
4. Akamatsu, T.∗, **Oyama, Y.**∗ (2024) A fluid-particle decomposition approach to matching market design for crowdsourced delivery systems. *Transportation Research Part C: Emerging Technologies* **166**: 104738.
5. **Oyama, Y.**∗, Murakami, D., Krueger, R. (2024) A hierarchical Bayesian logit model for spatial multivariate choice data. *Journal of Choice Modelling* **52**: 100503.
6. **Oyama, Y.**∗, Murakami, S., Chikaraishi, M., Parady, G. (2024) Designing pedestrian zones within city center networks considering policy objective trade-offs. *Transportation Research Part A: Policy and Practice* **185**: 104119.
7. **Oyama, Y.**∗ (2024) Spatial city image and its formative factors: A street-based neighborhood cognition analysis. *Cities* **149**: 104898.
8. **Oyama, Y.**∗ (2024) Global path preference and local response: A reward decomposition approach for network path choice analysis in the presence of visually perceived attributes. *Transportation Research Part A: Policy and Practice* **181**: 103998.
9. **Oyama, Y.**∗, Fukuda, D., Imura, N., Nishinari, K. (2024) Do people really want fast and precisely scheduled delivery? E-commerce customers' valuations of home delivery timing. *Journal of Retailing and Consumer Services* **78**: 103711.
10. Parady, G.∗, **Oyama, Y.**, Chikaraishi, M. (2023) Text-aided Group Decision-making Process Observation Method (x-GDP): A novel methodology for observing the joint decision-making process of travel choices. *Transportation*.
11. **Oyama, Y.**∗ (2023) Capturing positive network attributes during the estimation of recursive logit models: A prism-based approach. *Transportation Research Part C: Emerging Technologies* **147**: 104014.
12. Parady, G.∗, Suzuki, K., **Oyama, Y.**, Chikaraishi, M. (2023) Activity detection with Google Maps Location History data: factors affecting joint activity detection probability and its potential application on real social networks. *Travel Behaviour and Society* **30**: 344-357.
13. **Oyama, Y.**∗, Hara, Y.∗, Akamatsu, T.∗ (2022) Markovian traffic equilibrium assignment based on network generalized extreme value model. *Transportation Research Part B: Methodological* **155**: 135-159.
14. **Oyama, Y.**∗, Hato, E. (2019) Prism-based path set restriction for solving Markovian traffic assignment problem. *Transportation Research Part B: Methodological* **122**: 528-546.
15. **Oyama, Y.**∗, Hato, E. (2018) Link-based measurement model to estimate route choice parameters in urban pedestrian networks. *Transportation Research Part C: Emerging Technologies* **93**: 62-78.
16. **Oyama, Y.**∗, Hato, E. (2017) A discounted recursive logit model for dynamic gridlock network analysis. *Transportation Research Part C: Emerging Technologies* **85**: 509-527.

National Journal Papers (in Japanese)

17. Kizaki, R., Yaginuma, H.∗, **Oyama, Y.**, Terabe, S., Suzuki, Y. (2024) Dynamic pedestrian route choice model considering street landscape and spatial characteristics. *Journal of Japan Society of Civil Engineers D3 (Infrastructure Planning and Management)* **80**(20): 24-20064.

18. Okamura K., **Oyama, Y.**, Chikaraishi, M., Takami, K., Parady, G.* (2024) Modeling collective decisions on eating-out location choice. *Journal of the City Planning Institute of Japan* 59(3): 1675–1682 (in Japanese).
19. Tojo, T.#, **Oyama, Y.*** (2022) A deep learning model for building type estimation based on building names. *Journal of the City Planning Institute of Japan* **57**(3): 1025-1032. (in Japanese)
20. Matsumura, K.#, **Oyama, Y.*** (2022) Efficiency analysis of a capacitated MaaS system focusing on different payment schemes. *Journal of the City Planning Institute of Japan* **57**(3): 666-673. (in Japanese)
21. Murakami, S.#, **Oyama, Y.*** (2022) Optimal location of pedestrian streets based on a multimodal equilibrium assignment model. *Journal of the City Planning Institute of Japan* **57**(3): 622-629. (in Japanese)
22. Ikegami, T.#, **Oyama, Y.*** (2021) Proposal of an activity-based elderly mobility index focusing on public transportation convenience. *Journal of the City Planning Institute of Japan* **56**(3): 563-570. (in Japanese)
23. **Oyama, Y.***, Hato, E. (2017) Structural estimation for route choice models considering link specificity of measurement error variances. Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management) 73(5): I_597-I_608 (in Japanese).
24. **Oyama, Y.***, Hato, E. (2017) Stochastic assignment in time-structured networks. Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management) 73(4): 186-200 (in Japanese).
25. **Oyama, Y.***, Hato, E. (2017) Pedestrian activity-based network design based on multi-objective programming. Journal of the City Planning Institute of Japan 52(3): 810-817 (in Japanese).
26. **Oyama, Y.**, Hato, E.* (2017) Route choice analysis in a disaster network using generalized recursive logit model. JSTE Journal of Traffic Engineering 3(5): 1-10 (in Japanese).
27. **Oyama, Y.***, Hato, E. (2016) Pedestrian activity assignment problem with time-space constraint and path correlation. Journal of the City Planning Institute of Japan 51(3): 680-687 (in Japanese).
28. **Oyama, Y.***, Fukuyama, S., Hato, E. (2014) A study on mechanisms of short trip generations using discrete-continuous model based on activity-needs. Journal of the City Planning Institute of Japan 49(3): 375-380 (in Japanese).
29. **Oyama, Y.**, Hato, E.* (2013) Move-stay choice model using Voronoi-based overlay networks. Journal of the City Planning Institute of Japan 48(3): 1107-1112 (in Japanese).
30. **Oyama, Y.**, Hato, E.* (2012) Route choice model based on continuity of streetscapes. Journal of the City Planning Institute of Japan 47(3): 643-648 (in Japanese).

Peer-reviewed International Conferences

1. Huang, H.K.#, Okazaki, R.#, **Oyama, Y.** (2025) Balancing Efficiency and Service: A Marginal Cost Approximation Approach to Multi-Period Vehicle Routing in E-Commerce Logistics. The IEEE International Conference on Intelligent Transportation Systems (ITSC) 2025.
2. Okazaki, R.#, **Oyama, Y.** (2025) User-based time slot pricing for day-to-day home delivery with routing cost approximations. Transportation Research Board Annual Meeting 2025.
3. Imamura, K.#, **Oyama, Y.** (2025) Optimal loading space locations for walkable cities. Transportation Research Board Annual Meeting 2025.
4. Gramsch-Calvo, B., Okamura, K., Takami, K., **Oyama, Y.**, Chikaraishi, M., Axhausen, K.W., Parady, G. (2025) Going the extra mile: Estimating the willingness to travel to meet with friends using a joint destination choice model. Transportation Research Board Annual Meeting 2025.
5. **Oyama, Y.** (2024) Pedestrians' local responses to visual streetscape quality: A comparative analysis of walking behavior across different urban contexts. Urban Transitions 2024, Sitges, Spain.
6. Parady, G., Chikaraishi, M., **Oyama, Y.** (2024) Optimization-enriched Interactive Street Network Design (i-SND): A novel methodology for human-centric urban transportation planning. Urban Transitions 2024, Sitges, Spain. [Poster]
7. Fujiwara, K., **Oyama, Y.**, Chikaraishi, M., Fujiwara, A. (2024) Pedestrian dynamics and their policy implications for urban public space design. Urban Transitions 2024, Sitges, Spain.

8. Kizaki, R., **Oyama, Y.**, Terabe, S., Suzuki, Y., Yaginuma, H. (2024) Evaluation of street space development based on a pedestrian route choice model considering street landscape. The 17th International Conference on Travel Behaviour research (IATBR), Wien, Austria.
9. Safitri, N.D., **Oyama, Y.**, Chikaraishi, M. (2024) How random is route choice behavior during disaster? Inverse estimation of perceived travel time using a recursive logit model with structured variance. The 17th International Conference on Travel Behaviour research (IATBR), Wien, Austria.
10. Fujiwara, K., **Oyama, Y.**, Chikaraishi, M., Fujiwara, A. (2024) Pedestrian behavior modeling representing competitive nature between movers and stayers in urban public space: A numerical simulation. The 17th International Conference on Travel Behaviour Research (IATBR), Wien, Austria.
11. Parady, G., **Oyama, Y.**, Chikaraishi, M. (2024) Text-aided modelling of group decision-making processes: An application to eating-out destination choice. The 17th International Conference on Travel Behaviour Research (IATBR), Wien, Austria.
12. **Oyama, Y.** (2024) A link-based route choice model with decomposed reward functions: An application to walkability analysis. The 17th International Conference on Travel Behaviour research (IATBR), Wien, Austria.
13. **Oyama, Y.**, Murakami, S.[#], Parady, G., Chikaraishi, M. (2024) Designing Pedestrian Zones within City Center Networks Considering Policy Objective Trade-offs. Transportation Research Board (TRB) Annual Meeting 2024, Washington D.C., US.
14. Parady, G., Chikaraishi, M., **Oyama, Y.** (2024) A Walker's Paradise ain't a Driver's Hell: Evaluating the Causal Effect of Temporary Road Pedestrianization on Traffic Conditions of Surrounding Roads. Transportation Research Board (TRB) Annual Meeting 2024, Washington D.C., US.
15. Okazaki, R.[#], **Oyama, Y.**, Imura, N., Nishinari, K. (2023) Day-to-day delivery demand management: Evaluation based on routing efficiency and customer satisfaction. The 11th symposium arranged by European Association for Research in Transportation (hEART), Zurich, Switzerland.
16. Parady, G., **Oyama, Y.**, Chikaraishi, M. (2023) Text-aided Group Decision-making Process Observation Method (x-GDP): A novel methodology for observing the joint decision-making process of travel choices. The 11th symposium arranged by European Association for Research in Transportation (hEART), Zurich, Switzerland.
17. Fujiwara, K., **Oyama, Y.**, Chikaraishi, M., Fujiwara, A. (2023) A pedestrian model capturing trade-offs between travel and place functions of urban street space: An illustrative numerical example. The 15th International Conference of the Eastern Asia Society for Transportation Studies (EASTS 2023), Shah Alam, Malaysia. [Proceedings]
18. Okazaki, R.[#], **Oyama, Y.**, Imura, N., Nishinari, K. (2023) Evaluation of choice-based demand management strategies for day-to-day delivery planning. The 5th Bridging Transport Researchers (BTR5) conference, online.
19. Murakami, S.[#], **Oyama, Y.** (2023) Multimodal network design for the optimal placement of pedestrian streets in an urban congested network. The 18th International Conference on Computational Urban Planning and Urban Management (CUPUM), Montreal, Canada.
20. **Oyama, Y.** (2022) A prism-constrained recursive logit model to analyze positive utilities in pedestrian route choice behavior. The 16th International Conference on Travel Behaviour research (IATBR), Santiago, Chile.
21. Parady, G., **Oyama, Y.**, Chikaraishi, M. (2022) Understanding the joint decision-making process of leisure destination choices: Exploring new methodologies. The 16th International Conference on Travel Behaviour research (IATBR), Santiago, Chile. [Presentation]
22. Suzuki, K., Oyama, Y., Chikaraishi,M., Parady, G. (2021) The effectiveness of using Google Maps Location History data to detect joint activities in social networks. The 3rd Bridging Transportation Researchers (BTR) Conference, Online. [Presentation]
23. **Oyama, Y.**, Scarinci, R., Bierlaire, M. (2018) Optimal capacity location problem of parking and accelerated moving walkways to design a car-free city center. The 7th symposium arranged by European Association for Research in Transportation (hEART), Athens, Greece.
24. **Oyama, Y.**, Hato, E., Scarinci, R., Bierlaire, M. (2017) Markov assignment for a pedestrian activity-based network design problem. The 6th symposium arranged by European Association for Research in Transportation (hEART), Haifa, Israel. [Presentation]

25. **Oyama, Y.**, Hato, E. (2016) Pedestrian activity model based on implicit path enumeration. Proceedings of the 21st International Conference of Hong Kong for Transportation Studies (HKSTS), pp.331-338.
26. **Oyama, Y.**, Hato, E. (2016) A link-based map matching algorithm with structural estimation method. The 5th symposium arranged by European Association for Research in Transportation (hEART), Delft, Netherland.
27. **Oyama, Y.**, Hato, E. (2016) Incorporating destination choices into microscopic land-use dynamics modeling using longitudinal data. The 9th Triennial Symposium on Transportation Analysis (TRISTAN), Oranjestad, Aruba.
28. **Oyama, Y.**, Chikamatsu, K., Shoji, Y., Hato, E., Koga, M. (2016) Trajectory-oriented traffic management using sequential discount rate: a case study of the Great East Japan Earthquake. The 11th ITS European Congress (ERTICO), Glasgow, Scotland.
29. **Oyama, Y.**, Hato, E. (2015) Incorporating context-dependent energy into the pedestrian dynamic scheduling model with GPS data. The 14th International Conference on Travel Behaviour research (IATBR), Windsor, England. [Presentation]
30. Kokubun, A., Hato, E., **Oyama, Y.** (2013) Modeling Transformation in Neighborhood with Urban Redevelopment in Built-up Area of Tokyo Incorporating Effect of Interaction. Proceedings of International Conference on Computers in Urban Planning and Urban Management (CUPUM), Utrecht, Netherland.
31. **Oyama, Y.**, Hato, E. (2013) Mobility Design: Incorporating "Private" Public Space onto the Street for the City Conversion. Proceedings of 5th International Congress of International Association of Societies of Design Research (IASDR), pp.3235-3244.

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