

Yusuke Hara

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APPOINTMENTS

- Postdoctoral Associate** June 2018 – present
Singapore-MIT Alliance for Research and Technology (SMART)
Future Urban Mobility IRG (Prof. Moshe Ben-Akiva)
- Assistant Professor** November 2016 – May 2018
The University of Tokyo
Graduate School of Engineering, Department of Civil Engineering
Behavior in Networks Study Unit (Prof. Eiji Hato)
- Researcher of PRESTO** October 2015 – July 2018
Japan Science and Technology Agency (JST)
Design of Information Infrastructure Technologies Harmonized with Societies
 - ♦ Research on human mobility patterns and generation mechanism of cities
 - ♦ Development of GPS trajectory analyzer
- Assistant Professor** November 2014 – October 2016
Tohoku University,
Graduate School of Information Sciences,
Transportation and Geographic Information Science Lab (Prof. Masao Kuwahara)
 - ♦ Transportation auction mechanism and preference elicitation experiments
 - ♦ Travel behavior and evacuation analysis under the disaster
 - ♦ Traffic flow pattern prediction using machine learning approaches
- Assistant Professor** October 2012 – October 2014
Tohoku University,
New Industry Creation Hatchery Center
 - ♦ Travel behavior and charging behavior analysis of electric vehicles
- Postdoctoral Researcher** April 2012 – September 2012
Japan Society for the Promotion of Science / Tohoku University
Road Transportation and Traffic Lab (Prof. Takashi Akamatsu)
 - ♦ Auction mechanism of mobility sharing

EDUCATION

PhD Urban Engineering	2009 – 2012
<i>The University of Tokyo, Japan</i>	
Thesis adviser: Eiji Hato	
M.S. Urban Engineering	2007 – 2009
<i>The University of Tokyo, Japan</i>	
Thesis adviser: Noboru Harata	
B.S. Urban Engineering	2003 – 2007
<i>The University of Tokyo, Japan</i>	

RESEARCH GRANTS

- JST, Presto, Design of Information Infrastructure Technologies Harmonized with Societies, “Urban mechanism analysis based on activity, travel behavior and facility location data”, 25,000,000 JPY (PI, 2015- 2019).
- JSPS KAKENHI Grant-in-Aid for Young Scientists (B), “Theoretical and experimental approach of mechanism design in transportation field”, 4,000,000 JPY (PI, 2013-2016).
- JSPS KAKENHI Grant-in-Aid for Special Purposes, “Dynamic price mechanism of mobility sharing system”, 2,000,000 JPY (PI, 2013-2016).
- JSPS KAKENHI Scientific Research (A), “Dynamic management methods of novelty transportation system for post Big Data era”, 1,600,000 JPY (co-PI, 2016-2020).
- JSPS KAKENHI Challenging Research, “Transportation data distribution theory for anonymity”, 1,000,000 JPY (co-PI, 2013-2015).

HONORS&AWARDS

- Best paper award of Japan Society of Civil Engineers (JSCE) Committee of Infrastructure Planning and Management, November 2017.
- 13th ITS symposium Best Poster Awards, December 2015.
- Joint Agent Workshop & Symposium 2014 Best Poster Awards, October 2014.
- 8th Kometani & Sasaki Awards, November 2012.
- JSTE Best Paper Awards, May 2012.
- CSIS DAYS Best Poster Awards, November 2011.
- CPIJ Best Poster Awards, May 2009.

PEER-REVIEWED JOURNAL PAPERS

1. Yusuke HARA, Behavioral mechanism design for transportation services: Laboratory experiments and preference elicitation cost, Transportation Research Part B: Methodological, Vol.115, pp.231-245, 2018.

2. Yosuke KAWASAKI, Yusuke HARA, Masao KUWAHARA, State-Space Model for Traffic State Estimation of a Two-Dimensional Network, *Journal of Disaster Research*, Vol.13, No.2, pp.326-337, 2018.
3. Yusuke HARA, Junpei SUZUKI, Masao KUWAHARA, Network-wide Traffic State Estimation using a Mixture Gaussian Graphical Model and Graphical Lasso, *Transportation Research Part C: Emerging Technologies*, Vol.86, pp.622-638, 2018.
4. Yusuke HARA, Eiji HATO, A car sharing auction with temporal-spatial OD connection conditions, *Transportation Research Part B*, article in press, 2017.
5. Yusuke HARA, The Experimental Approach for Effect of Preference Elicitation Mechanism on The Efficiency of Auction, *Journal of JSCE D3*, Vol.73, pp.1119-1128, 2017.
6. Yosuke KAWASAKI, Yusuke HARA, Masao KUWAHARA, Construction of Traffic State Estimation Method of The Two-Dimensional Network by State-Space Model Considering Route Choice, *Journal of JSCE D3*, Vol.73, pp.940-959, 2017.
7. Yusuke HARA, Eiji HATO, Analysis of dynamic decision-making in a bicycle-sharing auction using a dynamic discrete choice model, *Transportation*, article in press, 2017
8. Yosuke KAWASAKI, Yusuke HARA, Masao KUWAHARA, Real-time Monitoring of Dynamic Traffic States by State-Space Model, *Transportation Research Procedia*, Vol.21, pp.42-51, 2017.
9. Yosuke KAWASAKI, Masao KUWAHARA, Yusuke HARA, Takuma MITANI, Atsushi TAKENOUCHI, Takamasa IRYO, Junji URATA, Investigation of Traffic and Evacuation Aspects at Kumamoto Earthquake and the Future Issues, *Journal of Disaster Research*, Vol.12, No.2, pp.272-286, 2017.
10. Yosuke KAWASAKI, Yusuke HARA and Masao KUWAHARA, Construction of Estimation Method of Inflow/outflow Vehicle Number in the Interval by State-Space Model and Probe Trajectory, *Journal of JSCE D3*, Vol.72, p.I_1123-I_1132, 2016.
11. Kazuya INAGAKI, Yusuke HARA and Masao KUWAHARA, A Latent Structure Analysis of a City Center using Spatial and Categorical Co-occurrence Information of Facilities, *Journal of JSCE D3*, Vol.72, p.I_473-I_485, 2016.
12. Yosuke KAWASAKI, Yusuke HARA, Takuma MITANI, Masao KUWAHARA, Real-time Simulation of Dynamic Traffic Flow with Traffic Data Assimilation Approach, *Journal of Disaster Research*, Vol.11, No.2, pp.246-254, 2016.
13. Yusuke HARA, Yohei HANAOKA and Masao KUWAHARA, Traffic State Interpolation of Unobserved Road Links by Accumulated Data Using the Relationships of Links in Road Network, *JSTE Journal of Traffic Engineering*, Vol.2, No.1, pp.1-10, 2016.
14. Yusuke HARA, Behavior Analysis using Tweet Data and Geo-tag Data under Natural Disaster, *Transportation Research Procedia*, Vol.11, pp.399-412, 2015.
15. Yusuke HARA, A Study of the Efficiency of Preference Elicitation for a Transportation Service Auction, *Journal of JSCE D3*, Vol.71, No.5, pp.I_951-I_959, 2015.

16. Kazuya INAGAKI and Yusuke HARA, A latent structure analysis of city center using spatial and categorical co-occurrence information based on urban function, *Journal of the City Planning Institute of Japan*, Vol.50, No.3, pp.663-669, 2015.
17. Yusuke HARA, Masao KUWAHARA, Traffic Monitoring immediately after a Major Natural Disaster as Revealed by Probe Data - a Case in Ishinomaki after the Great East Japan Earthquake, *Transportation Research Part A: Policy and Practice*, Vol.75, pp.1-15, 2015.
18. Peng fei WANG, Kentaro WADA, Takashi AKAMATSU, Yusuke HARA, An Empirical Analysis of Macroscopic Fundamental Diagrams for Sendai Road Networks, *Interdisciplinary Information Sciences*, Vol. 21, No. 1, pp.49-61, 2015.
19. Yohei HANAOKA, Yusuke HARA, Shun KATAOKA and Masao KUWAHARA, The estimation method and validation of traffic state estimation using long term probe data in Bangkok, 12th ITS symposium Peer-Review Proceedings, CD-ROM, 2014.
20. Yusuke HARA and Takashi AKAMATSU, Stochastic User Equilibrium Traffic Assignment with a Network GEV Based Route Choice Model, *Journal of JSCE D3*, Vol.70 No.5, pp.I_611-I_620, 2014.
21. Yusuke HARA and Eiji HATO, Design of A Tradable Permit Mechanism for Mobility-Sharing and Its Solution Algorithm, *Journal of JSCE D3*, Vol.70, No.4, pp.198-210, 2014.
22. Yusuke HARA and Masao KUWAHARA, Map Matching Algorithm for Sparse Trajectory Data, *JSTE journal*, Vol.33, 2013.
23. Yusuke HARA, Returning-Home Analysis in Tokyo Metropolitan Area at the Time of the Great East Japan Earthquake using Twitter Data, *Journal of Natural Language Processing*, Vol.20, No.3, pp.315-334, 2013.
24. Yusuke HARA and Eiji HATO, Dynamic Reservation System on Mobility Sharing Network, *Journal of JSCE D3*, Vol.67, No.5, pp.509-519, 2011.
25. Yusuke HARA, Eiji HATO, Trading Behavior Analysis of Tradable Permits Mechanism under Uncertainty, *Journal of Japan Transportation Engineering*, Vol.46, No.2, pp.59-68, 2011.
26. Yusuke HARA and Eiji HATO, Participation-Usage Frequency Model of EV Sharing Services and Service Price Design, *Journal of the City Planning Institute of Japan*, Vol.45, No.3, pp.445-450, 2010.

REFEREED CONFERENCES

1. Yusuke HARA, The Relationship between The Efficiency of Auction and Preference Elicitation Cost based on Experimental Approach, 6th Symposium of the European Association for Research in Transportation (hEART2017), Haifa, Israel, September 2017.
2. Anna TAKAYASU, Yusuke HARA, Masao KUWAHARA, A study of the effect of the social network topology on the information propagation speed, 6th Symposium of the

- European Association for Research in Transportation (hEART2017), Haifa, Israel, September 2017.
3. Yusuke HARA, Eiji HATO, A car sharing auction with temporal-spatial OD connection conditions, 22nd International Symposium on Transportation and Traffic Theory (ISTTT), Chicago, US, July 2017.
 4. Yusuke HARA, Koji MATSUDA, Masao KUWAHARA, Naoaki OKAZAKI and Kentaro INUI, Estimating Traffic States and Identifying Their Causes and Effects through Probe and Social Media Data Analysis, 21st HKSTS International Conference, Hong Kong, China, December 2016.
 5. Yosuke KAWASAKI, Yusuke HARA, Masao KUWAHARA, Construction of real-time traffic state estimation method of a two-dimensional network by data assimilation, ASIA-PACIFIC ECONOPHYSICS CONFERENCE 2016 - Big Data Analysis and Modeling toward Super Smart Society - (APEC-SSS 2016), Tokyo, Japan, August,2016.
 6. Kazuya INAGAKI, Yusuke HARA and Masao KUWAHARA, An Empirical Analysis on the Structure of Facility Accumulations by Comparison of 8 Cities, ASIA-PACIFIC ECONOPHYSICS CONFERENCE 2016 - Big Data Analysis and Modeling toward Super Smart Society - (APEC-SSS 2016), Tokyo, Japan, August,2016.
 7. Yosuke KAWASAKI, Yusuke HARA and Masao KUWAHARA, Real-time Monitoring of Dynamic Traffic States by State-Space Model, International Symposium of Transport Simulation International Workshop on Traffic Data Collection and its Standardization (ISTS and IWTDCS'16), Jeju, Korea, July, 2016.
 8. Kazuya INAGAKI, Yusuke HARA and Masao KUWAHARA, Latent structural analysis of a city center using the spatial and categorical co-occurrence of facilities, 13th International Conference on Design & Decision Support Systems in Architecture and Urban Planning (DDSS2016), Eindhoven, The Netherlands, June, 2016.
 9. Yosuke KAWASAKI, Yusuke HARA and Masao KUWAHARA, Traffic state estimation method based on data assimilation, 22nd ITS World Congress, Bordeaux, France, October 2015.
 10. Masao KUWAHARA, Yusuke HARA and Takeshi OHATA, Monitoring traffic congestion using probe data at Great East Japan Earthquake in 2011 and design of efficient evacuation schemes, 6th International Symposium on Transportation Network Reliability, Nara, Japan, August 2015.
 11. Momoko KATO, Yusuke HARA and Takeshi NAGAE, A Tradable Permit System for Efficient Bike-sharing and ITS Solution Method, 19th HKSTS International Conference, Hong Kong, China, December 2014.
 12. Yusuke HARA: Behavior Analysis using Tweet Data and Geo-tag Data under Natural Disaster, 10th International Conference on Transport Survey Methods, Leura, Australia, November 2014.

13. Masao KUWAHARA, Yusuke HARA: Monitoring Traffic Congestion using Probe Data at Great East Japan Earthquake in 2011, International Conference on Sichuan (5.12) Reconstruction, Hong Kong, China, November 2013.
14. Yusuke HARA, Returning-Home Analysis in Tokyo Metropolitan Area at the time of the Great East Japan Earthquake using Twitter Data, In Proceedings of the Workshop on Language Processing and Crisis Information 2013, Nagoya, Japan, October 2013.
15. Yusuke HARA, Masao KUWAHARA: Departure Time Choice and Electric Power Selling Scheme for An Electric Vehicle Society, OPTIMUM 2013 International Symposium on Recent Advances in Transport Modeling, Brisbane, Australia, April 2013.
16. Yusuke HARA, Eiji HATO: Analysis of the Tradable Permit Mechanism for Car-Sharing According to Spatial and Temporal Aspects, 17th HKSTS International Conference, Hong Kong, China, December 2012.
17. Yusuke HARA, Eiji HATO: An Optimal Price Design of Mobility Sharing Services using Participation-Usage Choice Model, 15th HKSTS International Conference, Hong Kong, China, December 2010.
18. Yusuke HARA, Eiji HATO: Implementation of Bicycle Sharing System with Tradable Permits Auction and Behavior Analysis, 12th World Conference on Transport Research (WCTR), Lisbon, Portugal, July 2010.
19. Yusuke HARA, Eiji HATO: Evaluation of an Auction Protocol in on-demand mobility services based on a response dynamics and heterogeneity, 7th Triennial Symposium on Transportation Analysis (TRISTAN), Tromso, Norway, June 2010.
20. Yusuke HARA, Eiji HATO: Theoretical behavior of mobility-sharing auction mechanism under uncertainty, Innovations in Pricing of Transportation Systems: Workshop and Conference, Orlando, USA, May 2010.