

CURRICULUM VITAE

Katsuya SAKAI

Assistant Professor

Department of Civil Engineering

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EDUCATION

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| Oct. 2012–Sep. 2015 | Doctor of Engineering, Department of Civil Engineering,
Tokyo Institute of Technology, Japan
“Pareto-Improving Pricing Based on Tradable Bottleneck Permits
Scheme for Managing Congestion at a Single Bottleneck”
supervised by Prof. Yasuo Asakura |
| Apr. 2011–Sep. 2012 | Master of Engineering, Department of Civil Engineering,
Kobe University, Japan
“Travel Time Prediction and Evaluation by Statistical Approach” (in
Japanese)
supervised by Prof. Takamasa Iryo |
| Apr. 2007–Mar.2011 | Bachelor of Engineering, Department of Civil Engineering,
Kobe University, Japan |

WORK EXPERIENCE

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| Feb. 2019–Present | Assistant Professor,
National Taiwan University, Taiwan |
| Apr. 2017–Jan. 2019 | Academic Researcher,
Kobe University, Japan |
| Aug. 2016–Dec.2016 | Visiting Researcher,
Institute for Transport Studies (ITS) in University of Leeds, UK
hosted by Dr. Ronghui Liu |

Oct. 2015–Mar. 2017	Research Fellowship for Young Scientists (PD), Japan Society for the Promotion of Science (JSPS)
Apr. 2015–Sep. 2015	Research Fellowship for Young Scientists (DC), Japan Society for the Promotion of Science (JSPS)

PUBLICATIONS

Peer-reviewed Journal Papers:

1. Shohei YASUDA, *Takamasa IRYO, Katsuya SAKAI; Network Aggregation Method using Vehicle Trajectory Data, *JSTE Journal of Traffic Engineering*, Vol. 6, A_310-A_316, 2020. (in Japanese)
2. *Katsuya SAKAI, Ronghui LIU, Takahiko KUSAKABE and Yasuo ASAKURA; Pareto-Improving Social Optimal Pricing Schemes Based on Tradable Bottleneck Permits for Managing Congestion at a Merging Section, *International Journal of Sustainable Transportation.*, Vol. 11, 737-748, 2017.
3. *Katsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Effects of Tradable Bottleneck Permits and Pareto Improvement under Users' Heterogeneity in Schedule Flexibility and Toll Resistance; *Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management)*, Vol.72, No.5, 2016. (in Japanese)
4. *Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Pareto Improvement by Introducing Tradable Bottleneck Permits Scheme in a Merging Network; *Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management)*, Vol.71, No.5, I_415-I_424, 2015. (in Japanese)
5. *Ryo ITABASHI, Katsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; A Location-routing Decision Model for First-aid Restoration of a Damaged Road Network, *Journal of the Eastern Asia Society for Transportation Studies*, Vol. 11, 557-565, 2015.
6. *Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Statistical Model of Travel Time Prediction Corresponding to Fluctuation of Bottleneck Capacity on Junction, *Journal of Japan Society of Civil Engineers, Ser. D3 (Infrastructure Planning and Management)*, Vol.69, No.5, I_847-I_856, 2013. (in Japanese)
7. *Kenichi MEGURO, Katsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Development of the Status Map for Integration of Ramp Metering and Information Provision, *Journal of the Eastern Asia Society for Transportation Studies*, Vol. 10, 1776-1785, 2013.
8. *Katsuya SAKAI, Takahiko KUSAKABE, Chong WEI, Yasuo ASAKURA; Statistical Analysis on Performance of Travel Time Interval Prediction Models, *Journal of Japan Society of Civil*

Engineers, Ser. D3 (Infrastructure Planning and Management), Vol.68, No.5, I_1297-I_1308, 2012. (in Japanese)

Conference papers with review:

9. Takahiko KUSAKABE and oKatsuya SAKAI; Fundamental performance features of one-way vehicle sharing system with self-driving vehicles as an urban transportation mode, *The 2019 Annual Conference of the International Transportation Economics Association (ITEA)*, Paris, 2019.6
10. oKatsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Effects of Partial Implementation of Tradable Bottleneck Permits Scheme on Departure Time Choice Equilibrium, *6th International Symposium on Dynamic Traffic Assignment (DTA)*, Sydney, 2016.6
11. oRyo ITABASHI, Katsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; A Location-routing Decision Model for First-aid Restoration of a Damaged Road Network, *The 11th International Conference of Eastern Asia Society for Transportation Studies*, Cebu, 2015.9
12. oKatsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Analysis of tradable bottleneck permits scheme when marginal utility of toll cost changes among drivers, *Transportation Research Procedia*, Vol. 10 (18th Euro Working Group on Transportation, EWGT), pp.5160, Delft, 2015.7
13. oKashin SUGISHITA, Katsuya SAKAI and Yasuo ASAKURA; Vulnerability Assessment for Cascading Failures in Interdependent Networks, *3rd Symposium of the European Association for Research in Transportation (hEART)*, Leeds, 2014.9
14. oKatsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Statistical Model for Travel Time Prediction Corresponding to Fluctuation of Bottleneck Capacity, *Transport Research Arena*, Paris, 2014.4
15. Kenichi MEGURO, oKatsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Development of the Status Map for Integration of Ramp Metering and Information Provision, *The 10th International Conference of Eastern Asia Society for Transportation Studies*, Taipei, 2013.9
16. oKatsuya SAKAI, Takahiko KUSAKABE and Yasuo ASAKURA; Travel Time Prediction by Bayesian Statistics Approach, *International Symposium on Recent Advances in Transport Modelling (OPTIMUM)*, Kingscliff, 2013.4

Oral presentations:

17. oKatsuya SAKAI, Yuta KOYAMA, Shohei YASUDA, Takamasa IRYO; Investigations of Electronic Toll Collection (ETC) 2.0 system -validation of map matching algorithm and analysis of spatial deviation in observed data-, *ISTS&IWTDCS*, Matsuyama, 2018.8

18. ○Shohei YASUDA, Takamasa IRYO, Yuta KOYAMA, Katsuya SAKAI; Characteristics of ETC2.0 probe data compared to road traffic census data, *ISTS&IWTDCS*, Matsuyama, 2018.8
19. ○Kashin SUGISHITA, Katsuya SAKAI, Takamasa IRYO, Yasuo ASAKURA; Intentional Removals of Nodes and Links to Avoid Gridlock, *Proceedings of Infrastructure Planning*, Tokyo, 2018.6 (in Japanese)
20. ○Yuta KOYAMA, Katsuya SAKAI, Takamasa IRYO, Yasuo ASAKURA; Intentional Removals of Nodes and Links to Avoid Gridlock, *Proceedings of Infrastructure Planning*, Tokyo, 2018.6 (in Japanese)
21. ○Katsuya SAKAI, Takahiko KUSAKABE; Traffic congestion analysis model for sightseeing places with departure time choice equilibrium model, *31st Annual Conference of ARSC (Applied Regional Science Conference)*, Tokyo, 2017.11 (in Japanese)
22. ○Katsuya SAKAI; The Welfare Effects of Tradable Bottleneck Permits Scheme with Heterogeneous Income Profiles, *28th Annual Conference of ARSC (Applied Regional Science Conference)*, Naha, 2014.11 (in Japanese)
23. ○Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Pareto Improvement by Introducing Tradable Bottleneck Permits Scheme in a Merging Network, *Proceedings of Infrastructure Planning*, Vol. 50, Tottori, 2014.11 (in Japanese)
24. ○Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Pareto Improvement and Introducing Tradable Bottleneck Permits Scheme in a Network with Merging Section, *49th Annual Conference of Infrastructure Planning*, Sendai, 2014.6 (in Japanese)
25. ○Katsuya SAKAI, Yasuo ASAKURA; Travel Time Prediction Method for an Urban Expressway Using the Input Flow and the Capacity at the Bottleneck, *Proceedings of Infrastructure Planning*, Vol. 48, Osaka, 2013.11 (in Japanese)
26. ○Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Accuracy Verification of Statistical Travel Time Prediction Focusing on Merging Section in Urban Expressway, *30th Conference of Japan Road Association*, Tokyo, 2013.10 (in Japanese)
27. ○Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Statistical Model of Travel Time Prediction Corresponding to Fluctuation of Bottleneck Capacity on Junction, *Proceedings of Infrastructure Planning*, Vol. 46, Saitama, 2012.11 (in Japanese)
28. ○Katsuya SAKAI, Chong WEI, Takahiko KUSAKABE, Yasuo ASAKURA; Statistical Analysis on Performance of Travel Time Prediction, *Proceedings of Infrastructure Planning*, Vol. 44, Gifu, 2011.11 (in Japanese)

Poster presentations:

29. ○Katsuya SAKAI, Takahiko KUSAKABE; Departure time choice equilibrium model considering the utility change in the sightseeing spot, *Proceedings of Infrastructure Planning*,

Tokyo, 2018.6 (in Japanese)

30. ○Shohei YASUDA, Katsuya SAKAI, Takamasa IRYO; Evaluation the Stability of Bottleneck Capacity in a Traffic Corridor Using Probe Vehicle Data, *Proceedings of Infrastructure Planning*, Tokyo, 2018.6 (in Japanese)
31. ○Katsuya SAKAI, Takahiko KUSAKABE, Yasuo ASAKURA; Effects of Tradable Bottleneck Permits on Pareto Improvement Under Users' Heterogeneity in Schedule Flexibility and Toll Resistance, *Proceedings of Infrastructure Planning*, Vol. 51, Fukuoka, 2015.6 (in Japanese)
32. ○Katsuya SAKAI, Chong WEI, Takahiko KUSAKABE, and Yasuo ASAKURA; Prediction of Travel Time with its Reliability Information by Statistical Approach, *The 16th International Conference of Hong Kong Society for Transportation Studies*, Hong Kong, 2011.12