研究業績リスト / Curriculum Vitae

金沢大学　融合学域　講師　佐津川功季

2026 年 1 月 31 日

1　学術論文（査読有）

[1.1] Daijiro Mizutani, Rie Ikushima, Koki Satsukawa, Yosuke Kawasaki and Masao Kuwahara, Integrating real-time monitoring information into asset failure modeling: application to ETC facilities, *Journal of Infrastructure Systems*, 2025 (Accepted).

[1.2] Koki Satsukawa, Takamasa Iryo, Naoki Yoshizawa, Michael J. Smith and David Watling, Adjustment process of adaptive signal control strategies with route choices: a case study with Policy P0, *Transportmetrica B: Transport Dynamics*, 2025.

[1.3] Daijiro Mizutani, Shunichi Fukuyama and Koki Satsukawa, Optimal road facility spare parts location with continuum approximation, *Transportation Research Part C: Emerging Technologies*, 2025.

[1.4] Koki Satsukawa, Kentaro Wada and Takamasa Iryo, Stability analysis of a departure time choice problem with atomic vehicle models, *Transportation Research Part B: Methodological*, 2024.

[1.5] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, Queue replacement principle for corridor problems with heterogeneous commuters, *Transportation Research Part B: Methodological*, 2024.

[1.6] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, A paradox of telecommuting and staggered work hours in the bottleneck model, *Transportation Science*, 2024.

[1.7] 佐津川功季, 原祐輔, 川崎洋輔, 井料隆雅, 需要の不確実性に対する都市交通サービスのバンドル予約システムの設計, 土木学会論文集, 2024.

[1.8] Daijiro Mizutani, Yuto Nakazato, Rie Ikushima, Koki Satsukawa, Yosuke Kawasaki and Masao Kuwahara, Optimal intervention policy of emergency storage batteries for expressway facilities considering deterioration risk during lead time of replacement, *Reliability Engineering & System Safety*, 2024.

[1.9] 原祐輔, 川崎洋輔, 佐津川功季, 井料隆雅, 予約システムにおける探索行動と選好誘出の影響評価のための実験的アプローチ, 土木学会論文集, 2023.

[1.10] 佐津川功季, 水谷大二郎, 川崎洋輔, 金田威夫, 桑原雅夫, 故障時交通渋滞による経済損失を考慮した

ETC 設備の最適補修施策に関する研究, 土木学会論文集 *D3*（土木計画学）, 2022.

[1.11] Haoran Fu, Takashi Akamatsu, Koki Satsukawa and Kentaro Wada, Dynamic traffic assignment in a corridor network with multiple bottlenecks: optimum versus equilibrium, *Transportation Research Part B: Methodological*, 2022.

[1.12] Michael J. Smith, Takamasa Iryo, Richard Mounce, Koki Satsukawa and David Watling, Zero-queue traffic control, using green-times and prices together, *Transportation Research Part C: Emerging Technologies*, 2022.

[1.13] 生嶋理恵, 水谷大二郎, 佐津川功季, 川崎洋輔, 桑原雅夫, 現場技術者へのアンケート調査に基づく高速道路設備の維持管理施策の改善可能性, 土木学会論文集 *F4*（建設マネジメント）, 2022.

[1.14] Koki Satsukawa, Kentaro Wada and David Watling, Dynamic system optimal assignment with atomic users: convergence and stability, *Transportation Research Part B: Methodological*, 2022.

[1.15] 酒井高良, 赤松隆, 佐津川功季, スケジュールコストの異質性を考慮したタンデムボトルネック出発時刻選択問題, 土木学会論文集 *D3*（土木計画学）, 2021.

[1.16] Takashi Akamatsu, Takeshi Nagae, Minoru Osawa, Koki Satsukawa, Takara Sakai and Daijiro Mizutani, Model-based analysis on social acceptability and feasibility of a focused protection strategy against the COVID-19 pandemic, *Scientific Reports*, 2021.

[1.17] 水谷大二郎, 川崎洋輔, 佐津川功季, 中川岳士, 梅田祥吾, 生嶋理恵, 桑原雅夫, 利用者の経済損失を考慮した高速道路情報板の維持管理施策の簡易的評価手法, 土木学会論文集 *D3*（土木計画学）, 2021.

[1.18] Koki Satsukawa, Kentaro Wada and Takamasa Iryo, Stochastic stability of dynamic user equilibrium in unidirectional networks: weakly acyclic game approach, *Transportation Research Part B: Methodological*, 2019.

[1.19] Kentaro Wada, Koki Satsukawa, Mike Smith and Takashi Akamatsu, Network throughput under dynamic user equilibrium: queue spillback, paradox and traffic control, *Transportation Research Part B: Methodological*, 2019.

[1.20] 和田健太郎, 瀬尾亨, 中西航, 佐津川功季, 柳原正実, Kinematic Wave 理論の近年の発展：変分理論とネットワーク拡張, 土木学会論文集 *D3*（土木計画学）, 2017.

[1.21] 和田健太郎, 佐津川功季, 動的配分理論による道路ネットワークの交通性能解析, 土木学会論文集 *D3*（土木計画学）, 2017.

[1.22] 佐津川功季, 和田健太郎, 単一終点ネットワークにおける動的交通量配分問題の Nash 均衡解の解法について, 土木学会論文集 *D3*（土木計画学）, 2017.

2 国際会議（査読有）

[2.1] Koki Satsukawa and Yuki Takayama, A bottleneck model with shared autonomous vehicles: Scale economies and price regulations, *The 26th International Symposium on Transportation and*

Traffic Theory (ISTTT26), Munich, Germany, July 2026 (Accepted).

[2.2] Riki Kawase, Koki Satsukawa and Toru Seo, Flexible and reliable transportation network design for emerging transportation services: multi-stage stochastic programming approach, *The 26th International Symposium on Transportation and Traffic Theory (ISTTT26)*, Munich, Germany, July 2026 (Accepted).

[2.3] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, Queue replacement approach to dynamic user equilibrium assignment with route and departure time choice, *The 26th International Symposium on Transportation and Traffic Theory (ISTTT26)*, Munich, Germany, July 2026 (Accepted).

[2.4] Sowa Suzuki, Haruki Takiguchi, Takamasa Iryo, Haruko Nakao, Koki Satsukawa, David Watling and Richard Connors, Designing pricing strategies for community-owned shared transport: An evolutionary approach, *The 29th International Conference of Hong Kong Society for Transportation Studies (29th HKSTS)*, Hong Kong, China, December 2025.

[2.5] Takeru Nihei, Takamasa Iryo and Koki Satsukawa, A distributed evolutionary algorithm for optimisation of public transport operations with mixed-capacity vehicle fleets, *The 29th International Conference of Hong Kong Society for Transportation Studies (29th HKSTS)*, Hong Kong, China, December 2025.

[2.6] Michael Smith, David Watling, Ronghui Liu, Koki Satsukawa, Takamasa Iryo and Richard Mounce, New stable responsive local gating strategies to control vehicle queues and flows in congested urban networks, *The 10th International Symposium on Dynamic Traffic Assignment (DTA2025)*, Salerno, Italy, September 2025.

[2.7] Takamasa Iryo, David Watling, Koki Satsukawa, Richard Connors, Haruko Nakao and Sowa Suzuki, Markov-chain-based model for the evolutionary process of self-financed shared mobility systems: Theoretical assessments, *The 10th International Symposium on Dynamic Traffic Assignment (DTA2025)*, Salerno, Italy, September 2025.

[2.8] Haruki Takiguchi, Sowa Suzuki, Takamasa Iryo, Koki Satsukawa and Haruko Nakao, Assessing the evolutionary process of self-financed shared mobility systems: A laboratory experimental approach, *The 10th International Symposium on Dynamic Traffic Assignment (DTA2025)*, Salerno, Italy, September 2025.

[2.9] Yuki Kosaka, Shota Tsurimoto, Masahiro Noguchi, Koki Satsukawa, Masayuki Takamura and Akihiro Nomura, Exploring optimal lifestyle modification pathway for preventing Cardiovascular disease using machine learning and pathfinding algorithms, *European Society of Cardiology Congress 2025 (ESC2025)*, Madrid, Spain, August 2025.

[2.10] Haruko Nakao, Koki Satsukawa, Takamasa Iryo, Richard Connors and Sowa Suzuki, Evolutionary process of self-financed shared mobility systems, *The Twelfth Triennial Symposium on Transportation Analysis (TRISTAN XII)*, Okinawa, Japan, June 2025.

[2.11] Koki Satsukawa, Kentaro Wada and Takamasa Iryo, Stability analysis of a departure time choice problem with atomic vehicle models, *The 25th International Symposium on Transportation*

and Traffic Theory (ISTTT25), Ann Arbor, USA, July 2024.

[2.12] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, A paradox of telecommuting and staggered work hours in the bottleneck model, *The 25th International Symposium on Transportation and Traffic Theory (ISTTT25)*, Ann Arbor, USA, July 2024.

[2.13] Koki Satsukawa, Yusuke Hara, Yosuke Kawasaki and Takamasa Iryo, A study on the design of a reservation system for urban transport services under uncertainty, *The 9th International Symposium on Transport Network Resilience (INSTR2023)*, Hong Kong, China, December 2023.

[2.14] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, Welfare impacts of remote and flexible working policies in the bottleneck model, *11th Symposium of the European Association for Research in Transportation (hEART2023)*, Zurich, Switzerland, September 2023.

[2.15] Koki Satsukawa, Takamasa Iryo, Naoki Yoshizawa, Michael J. Smith and David Watling, Adjustment process of adaptive signal control strategies with route choices: a case study with Policy P0, *9th International Symposium on Dynamic Traffic Assignment (DTA2023)*, Chicago, USA, July 2023.

[2.16] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, Queue replacement principle for corridor problems with heterogeneous commuters, *9th International Symposium on Dynamic Traffic Assignment (DTA2023)*, Chicago, USA, July 2023.

[2.17] Koki Satsukawa, Kentaro Wada and David Watling, Dynamic system optimal traffic assignment with atomic users: Convergence and stability, *The 24th International Symposium on Transportation and Traffic Theory (ISTTT24)*, Beijing, China (online), July 2022.

[2.18] Takara Sakai, Takashi Akamatsu and Koki Satsukawa, Departure time choice problems in a corridor network with heterogeneous value of schedule delay, *The 25th International Conference of Hong Kong Society for Transportation Studies (25th HKSTS)*, Hong Kong, China (online), December 2021.

[2.19] Michael J. Smith, Takamasa Iryo, Richard Mounce, Koki Satsukawa and David Watling, Zero-queue traffic control using green-times and prices together, *The 8th International Symposium on Dynamic Traffic Assignment*, Seattle, USA (online), June 2021.

[2.20] Koki Satsukawa, Kentaro Wada and Takamasa Iryo, Stochastic stability of dynamic user equilibrium in unidirectional networks: Weakly acyclic game approach, *The 23rd International Symposium on Transportation and Traffic Theory (ISTTT23)*, Lausanne, Switzerland, July 2019.

[2.21] Kentaro Wada and Koki Satsukawa, A theoretical analysis of Macroscopic Fundamental Diagram based on dynamic user equilibrium, *The 6th International Symposium on Dynamic Traffic Assignment*, Sydney, Australia, June 2016.

[2.22] Koki Satsukawa and Kentaro Wada, Effect of origin-destination structures on network performance: Some simple examples, *The 20th International Conference of Hong Kong Society for Transportation Studies (20th HKSTS)*, Hong Kong, China, December 2015.

3　寄稿・解説

[3.1] 佐津川功季, 和田健太郎, 渋滞の空間分布に基づく道路ネットワークの交通性能の解析理論, 生産研究, 71, 2, 89-95, 2019.

[3.2] 中西航, 佐津川功季, Kinematic Wave 理論のネットワーク拡張, 交通工学, 52, 4, 33-38, 2017.

4　招待講演

[4.1] 佐津川功季, 交通ネットワーク解析の最前線（招待講演・ダミー）, 第 10 回交通システムシンポジウム, 2024 年 7 月.

5　その他会議発表等

国際セミナー・ワークショップ

[5.1] 佐津川功季, Network dynamics under uncertainty (dummy), International Traffic Flow Workshop, Kyoto, Japan, March 2024.

国内会議（査読無）

[5.2] 佐津川功季, 都市交通における需要変動分析（ダミー）, 土木学会年次学術講演会, 2023 年 9 月.

6　競争的研究資金

[6.1] Grant-in-Aid for Scientific Research (C) (dummy), Japan Society for the Promotion of Science, Principal Investigator, 2024–2026, JPY 3,000,000.

[6.2] University Research Seed Fund (dummy), The University of Tokyo, Co-Investigator, 2022–2023, JPY 1,000,000.

7　共同研究実績

[7.1] 都市交通データ分析に関する共同研究（ダミー）, 民間企業 A, 研究代表, 2024–2025.

8　社会貢献

委員会等

[8.1] 交通計画委員会 委員（ダミー）, 土木学会, 委員, 2024–.

学会活動

[8.2] 学会年次大会 運営補助（ダミー）, 交通工学研究会, 運営委員, 2023.

学術査読

査読活動（ダミー）, Transportation Research Part B, Reviewer, 2024.