

# Takahiro Matsunaga

## Curriculum Vitae

### Personal Information

**Name:** Takahiro Matsunaga

**Affiliation:** Department of Civil Engineering, the University of Tokyo

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### Education

#### Ph.D. in Engineering

*Since 2025.10*

Behavior in Networks Studies Unit (Supervisor: Eiji Hato)

Department of Civil Engineering, the University of Tokyo

#### M.S. in Engineering (Outstanding Paper Award)

*2024.04 – 2025.09*

Behavior in Networks Studies Unit (Supervisor: Eiji Hato)

Department of Civil Engineering, the University of Tokyo

#### B.S. in Engineering (Best Paper Award)

*2020.04 – 2024.03*

Behavior in Networks Studies Unit (Supervisor: Eiji Hato)

Department of Civil Engineering, the University of Tokyo

### Peer-Reviewed International Journal Papers (Under Review)

- [1] Takahiro Matsunaga and Eiji Hato. “MeanField Dynamics for Pedestrian Interaction in Quantized Observation-Based 3D Route Choice Modeling”. In: *Transportation Research Part C: Emerging Technologies* (). revised and resubmitted, under review.

### Peer-Reviewed National Journal Papers (in Japanese)

- [1] 松永 隆宏 and 羽藤 英二. “言語生成モデルに基づく首都圏移動活動経路の予測”. In: **都市計画論文集** (2025).
- [2] 松永 隆宏 and 羽藤 英二. “BLE 観測の不確実性を考慮した屋内 3 次元経路選択モデルの推定”. In: **都市計画論文集** 59.3 (2024), pp. 1683–1690.

### Peer-Reviewed International Conferences

- [1] Takahiro Matsunaga and Eiji Hato. “Dynamic Congestion Control in Metropolitan Railways using Generative Language Models: Approach by Bid-free Reverse Auctions”. In: *Transportation Research Board Annual Meeting (TRB 2025)*. Peer-reviewed. Washington, D.C., USA, Jan. 2026.

- [2] Takahiro Matsunaga and Eiji Hato. “Activity Generation using Panel Data of Day-to-day Activity-travel Pattern in Tokyo Metropolitan Area”. In: *The 29th International Conference of Hong Kong Society for Transportation Studies (HKSTS 2025)*. Peer-reviewed, oral presentation. Hong Kong, Dec. 2025.
- [3] Takahiro Matsunaga and Eiji Hato. “Interaction of 3D pedestrian flow in a congested railway station: Structural estimation based on Mean Field Game theory”. In: *The 12th International Conference on Pedestrian and Evacuation Dynamics (PED 2025)*. Peer-reviewed, accepted, oral presentation. Prague, Czech Republic, Sept. 2025.
- [4] Takahiro Matsunaga and Eiji Hato. “Joint Estimation of Latent OD Matrix and 3D Route Choice Model Across Railway Station Boundaries based on Manifold Learning”. In: *The 28th International Conference of Hong Kong Society for Transportation Studies (HKSTS 2024)*. Peer-reviewed, oral presentation. Hong Kong, Dec. 2024.
- [5] Takahiro Matsunaga and Eiji Hato. “Three-Dimensional Pedestrian Route Choice Model with Quantization of Observational Uncertainty”. In: *IEEE International Conference on Intelligent Transportation Systems (ITSC)*. Peer-reviewed, oral presentation. Edmonton, Canada, Sept. 2024.

## Oral Presentation without Review (in Japanese)

- [1] Takahiro Matsunaga and Eiji Hato. “Incentive Design for Congestion Control of Public Transport Demands based on Reverse Auction”. In: **土木計画学研究発表会**. 2025.
- [2] 松永 隆宏 and 羽藤 英二. “複雑な day-to-day 活動動態学習に基づく首都圏アクティビティ生成モデル”. In: **交通工学研究発表会**. 2025.
- [3] 松永 隆宏 and 羽藤 英二. “駅構内における三次元経路選択モデルの多様体推定”. In: **土木学会全国大会**. 2024.
- [4] Takeshi Suzuki, Koji Saito, Atsushi Yamazaki, Seiichiro Honda, Eiji Hato, Ryoji Ishii, and Takahiro Matsunaga. “渋谷駅山手線線路切換工事時における多様な観測データを用いた行動変容の実態分析”. In: **土木計画学研究発表会**. 2023.

## Awards

- [1] *Outstanding Master Thesis*. The Department of Civil Engineering, The University of Tokyo, 2025.
- [2] *Outstanding Research Presentation*. Japan Society of Traffic Engineers, 2025.
- [3] *Outstanding Student Paper Award*. Hong Kong Society for Transportation Studies (HKSTS), 2025.
- [4] *Best Graduation Thesis (Dean’s Award)*. The Department of Civil Engineering, The University of Tokyo, 2023.

## Fellowships

- [1] *JSPS Research Fellow (DC1)*. Japan Society for the Promotion of Science, 2026.04 -.
- [2] *SPRING GX (Support for doctoral student)*. The University of Tokyo, Fostering Advanced Human Resources to Green Transformation, 2025.10 -.
- [3] *WINGS-GLAFS (Support for master and doctoral student)*. The University of Tokyo, Institute of Gerontology, 2024.10 - 2025.09.