

Shunya Tadano

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Research Interests

Robotics, Human-Robot Interaction, Computer Vision, Social Navigation, Gaze Estimation

Education

Tohoku University, Graduate School of Engineering

Sendai, Japan

Ph.D. Course in Robotics

April 2025 – Present

Research focus: Social navigation systems for human-robot interaction in crowded environments.

Advisor: Assoc. Prof. Yusuke Tamura

Tohoku University, Graduate School of Engineering

Sendai, Japan

Master of Engineering in Robotics, GPA: 3.7/4.0

April 2023 – March 2025

Thesis: "Pedestrian Trajectory Prediction Considering Visual Attention and Behavioral Uncertainty."

Iwate University, Faculty of Science and Engineering, GPA: 3.6/4.0

Morioka, Japan

Bachelor of Engineering in Systems Innovation Engineering

April 2019 – March 2023

Graduation Thesis: "Knife Operation Support System for Hemiplegic Patients Using Skeleton Estimation"

Technical Skills

Programming Languages: Python, C++, MATLAB

Robotics Frameworks: ROS/ROS2

Simulation Tools: Gazebo

Machine Learning Libraries: OpenCV, TensorFlow

Hardware Skills: Sensors such as LiDAR, RGBD-cameras, 360 degree camera, IMUs, etc.

Other Skills: CAD software (e.g., SolidWorks, OnShape), 3D printing, navigation algorithms, etc.

Publications

1. **Shunya Tadano**, Yusuke Tamura, Yasuhisa Hirata, "Collision Avoidance for Mobile Robots with Attention-Aware Cost Map Generation," *The Robotics and Mechatronics Conference 2025 (ROBOMECH2025)*.
2. **Shunya Tadano**, Yusuke Tamura, Yasuhisa Hirata, "Posture Information Integration into Pedestrian Trajectory Prediction Considering Uncertainty," in *The Robotics and Mechatronics Conference 2024 (ROBOMECH2024)*, 2024.
3. **Shunya Tadano**, Yusuke Tamura, Yasuhisa Hirata, "Pedestrian Trajectory Prediction with Pose Estimation and Monte Carlo Dropout," in *IEEE International Conference on Robotics and Automation (ICRA2024)*, *Late Breaking Result Poster*, 2024.

Awards

1st Prize, Japan-WIDE Sustainable Aviation Fuel and its Infrastructure Development, Boeing University Externship Summer Seminar 2024

National Runner Up, ARALA -Additive Robotic Attachment for Lab Automation-, JAMES DYSON AWARD 2024

Grants and Scholarships

2025 – 2028: AGS RISE Program Research Fellowship for Young Scientists —1,500,000 JPY
2023 – 2025: Sky Ōura ICT Scholarship Foundation Scholarship —2,000,000 JPY per year
2022 – 2023: 2022 Iwate Katada Foundation Bachelor's Thesis Research Grant —100,000 JPY
2021 – 2022: JGC • Saneyoshi Scholarship Association Stipend Scholarship —400,000 JPY

Languages

Japanese: Native

English: Intermediate(Business Level)

References

Assoc. Prof. Yusuke Tamura (ytamura@tohoku.ac.jp): Associate Professor, Graduate School of Engineering, Tohoku University, Japan. (Current advisor)

Prof. Yasuhisa Hirata (yasuhisa.hirata.b1@tohoku.ac.jp): Professor, Graduate School of Engineering, Tohoku University, Japan. (Laboratory Collaborator)

MISC

1. 長岡瞬, **只野竣也**, 田嶋真也, 釧持優人, “学生編集委員会取材企画：リビングロボットに訊く！「あるくメカトロウィーゴ」と歩む未来,” 日本ロボット学会誌, 43(4), 543-547, 2025. (in Japanese)
2. 釧持優人, **只野竣也**, 長岡瞬, 山本晃平, “学生編集委員会取材企画：株式会社弘栄ドリームワークス「配管くん」最先端配管点検ロボットの秘密に迫る,” 日本ロボット学会誌, 42(6), 543-547, 2024. (in Japanese)