

CHI WEIQI

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EDUCATION

THE UNIVERSITY OF TOKYO

Ph.D. student in Information Engineering

* *SPRING GX scholarship project student / Young Researcher's Encouragement Award, IEEE VTS*

TOKYO, JAPAN

Apr. 2024 – Present

TOKYO INSTITUTE OF TECHNOLOGY

Master's degree in Communication Engineering

* *Super Smart Society (SSS) scholarship project student*

TOKYO, JAPAN

Oct. 2020 – Jun. 2022

RESEARCH

Learning-Based User Association for Blockage-aware mmWave V2X Networks

Apr. 2025 – current

Doctoral Research

- Developed DCC-SMAB algorithm using contextual multi-armed bandit (CMAB) RL for mmWave V2X networks optimizing with dynamic signal blockages (*paper published at IEEE VNC, 2026*).
- Developed simulation framework integrating SUMO traffic simulator and ray-tracing tools with real-world maps for realistic V2X communication data analysis (*paper published at IEICE RCS, 2025*).
- Proposed signal blockage prediction framework for mmWave V2X networks (*paper published at IEEE VTC, 2024*).

A Blockage-Aware mmWave V2X Connectivity Analysis based on MCM

Nov. 2024 – Feb. 2025

Visiting Researcher in CARISSMA, Technische Hochschule Ingolstadt, Germany

- Collaborated with Artery core development team to design and implement ETSI ITS-G5 standards-compliant blockage prediction system with cooperative awareness on Artery simulation platform.
- Developed MCM (Maneuver Coordination Message) based V2X network simulation evaluated with OMNeT++.

Measurement and Prediction of Vegetation Attenuation on mmWave channel

Sep. 2020 – Jul. 2022

Master Research & Joint Research with Rakuten Mobile, Inc.

- Designed and conducted outdoor measurement campaigns for static shadowing effects from vegetation to 5G base stations, validated results through ray-tracing simulation with propagation models (DKED, ITU-R).
- Presented research findings at Rakuten Mobile group discussions and student conferences (Best Oral Presenter).

PUBLICATION

Journal paper

[1] **Weiqi Chi**, B. Qian, and M. Tsukada, "Cooperative Blockage-Aware Dynamic Bandit for User Association in mmWave Heterogeneous Vehicular Networks," *IEEE Internet of Things Journal* (under review). [Q1, IF: 8.9]

Internation conference

[2] W. Chi and M. Tsukada, "Blockage-Aware Non-stationary Dynamic Bandit for User Association in mmWave V2X Networks," *IEEE Global Communications Conference (GLOBECOM) 2026*. (under review)

[3] **Weiqi Chi**, Xiaoyang He, and Manabu Tsukada, "Fast-Adapting V2X Networks: A Dynamic Context Clustering Multi-Armed Bandits," *IEEE Vehicular Networking Conference (VNC)*, Canada, Jun. 2026.

[4] **Weiqi Chi**, Jin Nakazato, Tomoki Murakami, Manabu Tsukada, "V2I Blockage Modeling and Performance Evaluation for Connected Autonomous Vehicle", *The IEEE 99th Vehicular Technology Conference (VTC2024-Spring)*, Singapore, Jun. 2024. (Peer Reviewed & Oral Presentation)

[5] **Weiqi Chi**, N. Keerativoranan, J. Takada, "Outdoor mmWave Band Tx Localization Using Scattering Path under Spectrum Sharing Scenario," *13th AOTULE (Asia-Oceania Top University League on Engineering) Conference*, Daejeon, Korea, Nov. 2021 (Oral Presentation)

Domestic conference

[6] **Weiqi Chi**, N. Keerativoranan, J. Takada, "Outdoor Measurement of Millimeter-Wave Propagating Through Vegetation at 28GHz Band," *MISW Conference*, Tokyo, Japan, Aug. 2022 (Oral Presentation & Chairperson).

[7] **Weiqi Chi**, Jin Nakazato, Tomoki Murakami, Manabu Tsukada, "ミリ波帯における遮蔽対応型 V2I 通信と解決策について", in *IEICE 無線通信システム研究会*, Kyoto Institute of Technology, Mar. 2025. (Oral Presentation)

Poster

[8] **Weiqi Chi** and M. Tsukada, "Blockage-aware Multi-armed Bandits for Proactive Handover in mmWave Vehicular Networks," in Cooperative Interactive Vehicles (CIV) Summer School 2025, Geneva, Switzerland, 2025.

EMPLOYMENT HISTORY

General Test Systems Inc., Shenzhen, China

Feb. 2023 – Dec. 2023

Intern | Application engineer | OTA testing, Anechoic chamber, VNA, Area Tester

Ehime Prefectural Industrial Technology Institute, Japan

Aug. 2025

Intern | AR/VR Application Development | MRTK, Unity, C#, HoloLens2

Rakuten Mobile Inc. R&D group, drone application development, Japan

Sep. 2022

Intern | Drone application development | DJI drones operation, SDK, Android platform

SKILL

- **Programming skills:** C, C++, Python, MATLAB, NED language, HTML
- **ML Frameworks & Data processing:** Scikit-learn, NumPy, Pandas
- **Development & Tools:** Git, Docker, LaTeX, Linux/Ubuntu
- **Hardware:** Vector Network Analyzer (VNA), Spectrum Analyzer, OTA testing
- **Simulation & Modeling:**
 - *VANET & V2X:* OMNeT++, SUMO, Artery, Veins
 - *Propagation:* Wireless InSite (ray tracing), Unity, Blender
- **Language:** English (Native) , Japanese (JLPT N1) , Chinese (Native), German (Beginner)
- **Interests:** Piano, Music, Swimming, Boxing, Bouldering