

RESEARCH
INTERESTS

Urban Planning Support Tool, Urban Simulation, Spatial Information
Analysis, Citizen Participation, Compact City Policy, Population Change

EDUCATION

Ph. D. 2020–2023

Department of Civil Engineering, Human Centered Urban Informatics
The University of Tokyo, Tokyo, Japan

*Thesis: Development of A Web-based Simulation Tool for Supporting
Participatory Regional Planning*

Supervisor: Yoshihide Sekimoto

Master 2017–2020

Environmental Science and Landscape Architecture
Chiba University, Chiba, Japan

*Thesis: The Urban Image of Special Wards of Tokyo based on geo-
tagged photo: Comparison between Japanese and Foreigner*

Supervisor: Isami Kinoshita

Bachelor 2013–2017

Landscape Architecture
Zhejiang University, Hangzhou, China

ACADEMIC
APPOINTMENTS

The University of Tokyo, Japan Oct. 2023–Present

Center for Spatial Information Science

Project Researcher

- Develop smart mobility digital twin platform
- Develop system for realization of urban digital twin
- Research on generative AI methodologies used in urban planning

Massachusetts Institute of Technology, USA Jan. 2023–June 2023

Media Lab, City Science Group

Visiting Student

- Multi-stakeholder urban community performance analysis
- Develop digital tool for multi-stakeholder participation in decision-making on urban development projects

Tongji University, China Oct. 2021–Oct. 2023

Tongji-MIT City Science Lab @Shanghai

Research Affiliate

- Research on the application of TUIs in urban decision support systems
- Develop planning support system for an urban renewal project
- Research on incentive mechanism and token system in decentralized autonomous organizations

The University of Tokyo, Japan Oct. 2021–Mar. 2023

SPRING GX project student

- Develop a prototype citizen-oriented simulation tool for regional plan.

The University of Tokyo, Japan *Apr. 2020–Sept. 2021*
Research Assistant, Department of Civil Engineering

Tsinghua University, China *July 2019–Oct. 2019*
Beijing City Lab
Research Intern, Department of Architecture

JOURNAL PUBLICATIONS

* indicates the corresponding author

- A cost-and-effect simulation model for compact city approaches: A case study in Japan
J. Ma*, Y. Shibuya, Y. Pang, H. Omata, Y. Sekimoto
Cities (2024) 152: 105212
- WindSR: Improving Spatial Resolution of Satellite Wind Speed Through Super-Resolution
 Kumar, T. Islam*, J. Ma, T. Kashiya, Y. Sekimoto and C. Mattmann
IEEE Access (2023) 11: 69486-69494
- Development of current estimated household data and agent-based simulation of the future population distribution of households in Japan, K. Kajiwar, J. Ma*, T. Seto, Y. Sekimoto, Y. Ogawa, H. Omata
Computers, Environment and Urban Systems (2022) 98: 101873
- Prototyping of A Citizen-oriented Regional Planning Tool to Automated Digital Design Process: A Case Study on the New Station Planning in Susono, Shizuoka Prefecture.
J. Ma*, T. Seto, H. Omata, Y. Sekimoto
Reports of The City Planning Institution of Japan (2021) 20: 277 – 283
- An Empirical Study on Role of Art to Raising City Image from the Context of Youth Perceptions: Semarang City, Indonesia
 E. Sigit*, N. Elkalam, J. Ma, I. Kinoshita
Asian Journal of Behavioral Studies (2018) 4(16): 1-17
- Should We Jump from the Perspective of Shrinking Cities to Urban Growth Divides? The Hints from the City Size Distribution in Japan Over the Past Half-Century
 X. Xu, J. Ma*, F. Seta, K. Sho
Cities, Under Review
- “Unipolar Concentration in Tokyo” Under Population Shrinking
 X. Xu, J. Ma*, F. Seta
Cities, Under Review

REFEREED CONFERENCE PAPERS & PRESENTATIONS

- Socioeconomic Disparities in Heat Exposure and Mitigation Based on Human Mobility in Indonesia and India
J. Ma, C. Torbjörnsson, C. Sun, S. Garcia, Z. Wu, Y. Shibuya, Y. Sekimoto
Netmob Data Challenge 2024 (Accepted)

- Environmental Inequality in The Global South Through The Lens Of Travel Burden
Y. Shibuya, S. Garcia, C. Torbjörnsson, Z. Wu, C. Sun, J. Ma, Y. Sekimoto
Netmob Data Challenge 2024 (Accepted)
- The Tokyo Model: How Housing Diversity Affects Urban Residential Segregation.
C. Sun, S. Garcia, J. Ma, Y. Sekimoto
Urban Transitions 2024 (Accepted)
- Navigating Work-Life Symmetry: A Multi-Stakeholder Indicator System.
J. Ma, L. A. Alonso, M. F. ElKatsha, W. Mo, Y. Sekimoto, K. Larson
2024 ACSP 64th Annual Conference (Accepted)
- Revealing the Spatiotemporal Evolutionary Characteristics, Influencing Factors and Mitigation Measures of Carbon Emission in Tokyo.
L. Liu, S. Garcia, J. Ma, E. Zeng, W. Li, Y. Shibuya, Y. Sekimoto
The 36th AESOP Annual Congress (2024)
- Unmasking Socioeconomic Disparities: A Study of Urban Segregation through the Lens of Mobile App Usage Patterns.
Y. Shibuya, S. Garcia, C. Sun, P. Yu, J. Ma, S. Yoshihide
In Abstract of Netmob 2023
- Automatic cost and effect estimation for regional planning scenarios.
J. Ma, H. Omata, Y. Shibuya, Y. Sekimoto
The 31st Annual Conference of the Association for GIS (2022)
- Development of A GIS Database to Support Regional Plan through Digital Design.
J. Ma, H. Omata, Y. Sekimoto
The 30th Annual Conference of the Association for GIS (2021)
- The Online Destination Image of Main Sightseeing Spots in Tokyo -- Based on the Photo from Flickr Shared by Foreign Tourists
J. Ma, I. Kinoshita
International Conference 2019 on Spatial Planning and Sustainable Development (2019)
- The Urban Image of Special Wards of Tokyo based on geo-tagged photo
J. Ma, I. Kinoshita
The Conference of Japan Institute of Landscape Architecture (2019)

INVITED TALKS

Building Interactive Cities: Planning Support Systems and Digital Tools for Public Engagement

CMU-UT Symposium on Urban Engineering and Informatics (Apr. 2024)

Citizen Participatory Planning Support Systems and Digital Tools

The University of Tokyo (May. 2024)

DEVELOPED TOOL Citizen Participative Regional Planning Digital Platform (2023)
Multi-stakeholder Indicator Metrics System Platform (2023)

TEACHING

Teaching Assistant:

University of Tokyo

Spring 2024: Academic Frontier Lectures (Frontiers of Research and Social Implementation in Digital Space Society)

Spring 2024: Geographic Information Systems Exercise

Spring 2024: Exercises in Spatial Information Systems

Summer 2024: Digital Space and Society Research Organization Summer School

Research Advisor:

Advised 2 graduate and 8 undergraduate students' research projects