# **WOOKJAE YANG**

#### **CURRENT POSITION**

2024.09. Assistant Professor

Department of Urban Policy & Administration, Incheon National University

**EDUCATION** 

2019 - 2023 University of Utah

Doctor of Philosophy

Department of City and Metropolitan Planning, College of Architecture

Academic advisor: Reid Ewing

2015 - 2017 Seoul National University

Master of City Planning

Department of Environmental Planning, Graduate School of Environmental Studies

Academic advisor: Mack-Joong Choi

2008 - 2012 Konkuk University

**Bachelor of Science** 

Department of Architecture, College of Architecture

#### **PUBLICATIONS**

Peer-Reviewed Journal Articles (\* First author, † Corresponding author)

2025

- [1] Kalantari, H., **Yang, W.** and Ewing, R. Can E-scooters connect first and last-mile of public rail transit? Lessons learned from intercept user survey in Utah, *International Journal of Sustainable Transportation*, <a href="https://doi.org/10.1080/15568318.2025.2546038">https://doi.org/10.1080/15568318.2025.2546038</a>
- [2] **Yang, W.**\* and Chang, J. A Quasi-Experimental Study of Light Rail Transit on Jobs-Housing Balance by Regional Typology: A Case Study of South Korea, *Journal of Transport Geography*, vol 124, 104173. https://doi.org/10.1016/j.jtrangeo.2025.104173
- [3] Chang, J., Jeong, S., and **Yang, W.** Which Vehicle Type is More Responsive to Traffic Information Provided on Local Roads? *European Transport Research Review*, 17(20). https://doi.org/10.1186/s12544-025-00716-x
- [4] **Yang, W.**\* and Han, S. (2025) Direct and Indirect Effects of Road Design Attributes on Traffic Safety, *Journal of Safety Research*, vol 93, 156-169. DOI: <a href="https://doi.org/10.1016/j.jsr.2025.02.017">https://doi.org/10.1016/j.jsr.2025.02.017</a>
- [5] **Yang, W.**\*\*, Kim, K., and Kim, J. (2025) Shared Dockless E-Scooter and Built Environment Near Los Angeles Metro Stations: Its Nonlinear Relationship Using Machine Learning Approach, *Transportation Planning and Technology*, 1-22. <a href="https://doi.org/10.1080/03081060.2025.2462966">https://doi.org/10.1080/03081060.2025.2462966</a>
- [6] Azin, B., Ewing, R., Yang, W.<sup>†</sup>, Promy, N., Kalantari, H., and Tabassum, N. (2025) Urban Arterial Lane Width versus Speed and Crash Rates: A Comprehensive Study for Road Safety, *Sustainability*, 17(2), 682. https://doi.org/10.3390/su17020628
- [7] Ewing, R., Ameli, H., Tabassum, N., Kalantari, H., **Yang, W.**, and Promy, N. (2025) Ways of Increasing Transit Ridership-Lessons Learned from Successful Transit Agencies, *Case Studies on Transport Policy*, vol.19, DOI: https://doi.org/10.1016/j.cstp.2024.101362

20	24
Zυ	124

- [8] **Yang, W.**\*+ (2024) Can Bus Rapid Transit (BRT) Improve Regional Economic Activities? Evidence from Business Sales of Intermountain Region, United States, *Journal of Urban Science*, 13(2), <a href="https://doi.org/10.22645/udi.2024.12.31.03">https://doi.org/10.22645/udi.2024.12.31.03</a>
- [9] **Yang, W.**\*† and Ewing, R. (2024) Unlocking the Role of Shared Dockless E-Scooters in First-and Last-Mile Connectivity to Public Rail Transit: A Quasi-Experimental Study of Los Angeles, *Travel Behavior and Society*, vol. 37, DOI: https://doi.org/10.1016/j.tbs.2024.100869
- [10] Kim, J., Ewing, R., Yang, W., and Kalantari, H. (2024) Short and Mid-Term Effect of the Streetcar on Vehicle-Vehicle (and Vehicle-Pedestrian) Crash Rate on the Adjacent Street, *Case Studies on Transport Policy*, vol.17, DOI: <a href="https://doi.org/10.1016/j.cstp.2024.101262">https://doi.org/10.1016/j.cstp.2024.101262</a>
- [11] Ewing, R., Yang, W.<sup>†</sup>, Promy, N., Kaniewska, J., and Tabassum, N. (2024) Selective State DOT Lane Width Standards and Guidelines to Reduce Speeds and Improve Safety, *Infrastructures*, DOI: <a href="https://doi.org/10.3390/infrastructures9090141">https://doi.org/10.3390/infrastructures9090141</a>

2023

- [12] Han, S., Choi, M., and **Yang, W.**<sup>†</sup> (2023) Analysis on the Change of Motorbike Crashes After COVID-19 Pandemic, *Journal of Korean Society of Transportation*, 41(7), DOI: https://doi.org/10.7470/jkst.2023.41.7.824
- [13] Yang, W.\*† and Ewing, R. (2023) Examining the Nonlinear Effects of Neighborhoods Housing + Transportation Affordability on Shared Dockless E-Scooter Ridership Using Machine Learning Approach. *Transportation*, DOI: <a href="https://doi.org/10.1007/s11116-023-10448-3">https://doi.org/10.1007/s11116-023-10448-3</a>
- [14] **Yang, W.**\*, Tian, G. and Ewing, R. (2023) Impact of Corridor Highway System on Communities: Built Environment and Travel Mode Choices, *Cities*, DOI: <a href="https://doi.org/10.1016/j.cities.2023.104467">https://doi.org/10.1016/j.cities.2023.104467</a>
- [15] Hong, A. and **Yang, W.** (2023) Urban Environment and Pedestrian Safety, *Urban Health Studies*, 2(1), 27-44, DOI: <u>10.59013/auh.2023.2.1.003</u>

2022

[16] Kim, K., Yang, W.<sup>†</sup> and Brewer, S. (2022) Analyzing Change in Business Activity before, during, and after Autonomous Shuttle Bus Service in the Old Las Vegas Downtown Area, *Journal of Urban Planning and Development,* 148(1). DOI: <a href="https://doi.org/10.1061/(ASCE)UP.1943-5444.0000788">https://doi.org/10.1061/(ASCE)UP.1943-5444.0000788</a>

2021

[17] Yang, W.\* and Oh, D. (2021) Can Sustainable Tourism Be More Sustainable? -Lessons Learned from Albergo Diffuso in Italy and East Asia, *Journal of Tourism Management Research*, 8(2), 136-149. DOI: 10.18488/journal.31.2021.82.136.149

2018

- [18] Choi, M., and **Yang, W.**\* (2018) Physical, Economic, and Social Effects of Commercial Gentrification in Residential Area, *Journal of Korea Planning Association*, 53(1), 123-136. DOI: 10.17208/jkpa.2018.02.53.1.123
- [19] Park, J., and Yang, W.<sup>†</sup> (2018) A Study on the Effectiveness of Overseas Construction Projects Using Official Development Assistance (ODA). Time Series Analysis (VECM) of S. Korea ODA 1991-2015, *Journal of Korea Contents Association*, 18(6), 144-154. DOI: 10.5392/JKCA.2018.18.06.144

Under Review (\* First author, † Corresponding author)

- [1] [revise and resubmit] Hong, A., **Yang, W.**, and Choi., D. Healthy Aging in Place: A Review of Environmental Barriers, *Journal of Planning Literature*
- [2] [under review] **Yang, W.\***, Han, S., and Bae, H., Perceived Safety vs. Actual Safety: Evidence from ESRA Survey of Road Users in South Korea, *Analytic Methods in Accident Research*

- [3] [revise and resubmit] **Yang, W.**\*+ and Kang, B., Traffic Calming Measure Versus Pedestrian Safety Facility: Assessing Injury Risk Reduction Effects in School Zones, *International Journal of Urban Sciences*
- [4] [under review] **Yang, W.**\*+ and Kang, B., Slower Roads, Cleaner Skies? Causal Effects of Speed Limit Reduction on Air Quality Using A Spatial Quasi-Experimental Analysis, *Transport Policy*
- [5] [under review] **Yang, W.**\*+ and Park, J., Urban Design Quality and Clinical Mental Health: A Systematic Review, *Cities*, <a href="http://dx.doi.org/10.2139/ssrn.5402742">http://dx.doi.org/10.2139/ssrn.5402742</a>

## Manuscript in Preparation

- [1] What Causes Severe and Fatal Micromobility Injuries? Focus on Built Environment, Risk, and Exposure
- [2] Environmental Correlates of Pedestrian Safety: The Role of Exposure and Risk
- [3] A Meta-Regression Analysis of Built Environment Factors Influencing Shared Micromobility Trips
- [4] Rethinking Accessibility of A 15-Minute City Shaped by Bikesharing Services
- [5] A Multimodal Mobility-Based Mode Choice Modeling and Simulation for Campus Accessibility
- [6] Correlations Between Housing Price and Birth Rate: Focusing on the Moderating Effects of Hierarchical Urban Environment Factors
- [7] Predicting Crash Severity of Personal Mobility Using Multi-Level Factors and Machine Learning Approach

## Research Institute Quarterly Journal Periodicals

2024 [1] Housing + Transportation Affordability and Shared Dockless E-scooter Ridership, Propbix, Vol. 16, p. 32-40.

2023 [2] Smart Technology for Preventing Drunk Driving through Implementation of the Infrastructure Investment and Jobs Act in the United States, *The Korea Transport Institute, KOTI Vision Zero Brief*, Vol.10 No.1, p 6-8.

2022 [3] United States Road Design and Safety Guidelines for Pedestrian Crowds, *The Korea Transport Institute, KOTI Vision Zero Brief*, Vol.9 No.4, p 6-9.

- [4] Motorcycle Safety and Road Design Policy in the United States, *The Korea Transport Institute, KOTI Vision Zero Brief*, Vol.9 No.3, p 2-6.
- [5] Road Design Guidelines for Traffic Safety in the United States, *The Korea Transport Institute, KOTI Vision Zero Brief*, Vol.9 No.2, p 2-5.
- [6] Shared Street and Policy Implications in the United States, *The Korea Transport Institute, KOTI Vision Zero Brief* Vol.9 No.1, p 2-5.

### **CONFERENCE PRESENTATIONS** (\* Presenting author)

2025

[1] Kang, B. and **Yang, W.**, Slower Roads, Cleaner Skies? Causal Effects of Speed Limit Reduction on Air Quality Using a Spatial Quasi-Experimental Analysis, *Korean Society of Transportation Conference*, Sep 25-27, 2025. Jeju, Korea.

[2] Oh, S. and **Yang, W.**, A Multimodal Mobility-Based Mode Choice Modeling and Simulation for Campus Accessibility, *Korean Society of Transportation*, Sep 25-27, 2025. Jeju, Korea.

[3] Hwang, J. and **Yang, W**., Rethinking Accessibility of A 15-Minute City Shaped by Bikesharing Services, *Korean Society of Transportation Conference*, Sep 25-27, 2025. Jeju, Korea.

2024

- [4] Kang, B. and **Yang, W.**, Traffic Calming Measures Versus Pedestrian Safety Facilities: Assessing Injury Severity Reduction Effects in School Zones, *Korea Planning Association Conference*, Apr 25-26, 2024. Seoul, Korea. \*Best Paper Award
- [5] Park, J. and **Yang, W.**, A Systematic Review of Urban Design Quality and Mental Health, *Urban Design Institute of Korea Conference*, Apr 18-19, 2024. Cheonahn, Korea. \*Best Paper Award
- [6] **Yang, W**.\* and Chang, J.S., A Quasi-Experimental Study of Light Rail Transit on Jobs-Housing Balance by Regional Typology: A Case Study of South Korea, *European Transportation Conference*, Sep 17-20, 2024. Antwerp, Belgium.
- [7] Chang, J., Jeong, S., and **Yang, W.** Different responses to traffic information by vehicle type: An experimental survey, *European Transportation Conference*, Sep 17-20, 2024. Antwerp, Belgium.
- [8] Azin, B., Ewing, R., Promy, N., Yang, W., Kalantari, H., and Tabassum, N. Analyzing the Relationship and Modeling Lane Width versus Speed and Crash Rates: A Comprehensive Study for Road Safety, 103rd Transportation Research Board (TRB) Annual Meeting, January 7–11, 2024. Washington DC, United States.
- [9] [TRBAM-24-04837] Ewing, R., Ameli, H., Tabassum, N., Kalantari, H., **Yang, W.**, and Promy, N. Ways of Increasing Transit Ridership- Lessons Learned from Successful Transit Agencies, 103rd Transportation Research Board (TRB) Annual Meeting, January 7–11, 2024. Washington DC, United States.
- [10] [TRBAM-24-03461] **Yang, W**., Tian, G. and Ewing, R. Impact of corridor highway system on communities: built environment and travel mode choices, *103rd Transportation Research Board (TRB) Annual Meeting*, January 7–11, 2024. Washington DC, United States.
- [11] [TRBAM-24-00520] **Yang, W.** and Ewing, R. Examining the Nonlinear Effects of Neighborhood Housing + Transportation Affordability on Shared Dockless E-Scooter Trips Using Random Forest Modeling, *103rd Transportation Research Board (TRB) Annual Meeting*, January 7–11, 2024. Washington DC, United States.
- [12] [TRBAM-24-00404] **Yang, W.** and Ewing, R. Unlocking the Role of Shared Dockless E-Scooters in First-And Last-Mile Connectivity to Metro Rail Transit: A Quasi-Experimental Study of Los Angeles, *103rd Transportation Research Board (TRB) Annual Meeting*, January 7–11, 2024. Washington DC, United States.

2022

- [13] **Yang, W.** \* and Hong, A. Micromobility Safety for Older Adults: Does the Built Environment Matter? *2022 ACSP 62nd Annual Conference*, Nov 3-6, 2022. Toronto, Canada.
- [14] Choi, D., Ewing, R., Kim, J., Kaniewska, J. **Yang, W**., and Kalantari, H. Impact of Streetcar Operation on Land Use Changes, Traffic, and Other Outcomes, *2022 ACSP 62nd Annual Conference*, Nov 3-6, 2022. Toronto, Canada.
- [15] Hong, A. and **Yang, W.**\* Neighborhood Environment Factors and Traffic Safety: Focus on Exposure and Risk, *Academy of Urban Health Conference*, October 28, 2022. Asan, S. Korea.
- [16] Sabouri, S., Ewing, R., and **Yang, W.** Public Transportation's Direct and Indirect Impacts on Vehicle Miles Traveled: Estimating Transit's Land-Use Multiplier, *Transportation Research Board 2022 Annual Meeting*, Jan 9-13, 2022. Washington D.C., United States.

- [17] Yang, W.\* and Ewing, R. Quantifying the impact of corridor management integrating transportation and land use, 2021 ACSP 61st Annual Conference, Oct 7-8 & Oct 21-23, 2021.
   [18] Ewing, R., Sabouri, S., Ameli, H., Yang, W., Kiani, F., and Kim, J. Is Transit-Oriented Development Affordable for Low- and Moderate-Income Households (in terms of H+T)? 2021 ACSP 61st Annual Conference, Oct 7-8 & Oct 21-23, 2021.
   [19] Yang, W.\* and Kim, K. Can Autonomous Bus Shuttle Increase the Level of Business Activity?
  - Panel Data Analysis Using Business License Data in Las Vegas As a Case Study, 2020 ACSP 60th Annual Conference, Nov 5 8, 2020.

### **FUNDED RESEARCH PROJECTS**

Incheon Nation 2025 – 2026	nal University  Principal Investigator [2025-0033] Design Quality of Villa Residential Neighborhoods and Its Impacts on Mental Health
2024 – 2026	[2024-0414] A Meta-Regression Analysis of Built Environment Determinants of Shared Micromobility Trips
Seoul National	University  Postdoctoral Researcher
2023 – 2024	[RS-2023-00243873] Development of the Korea Road Assessment Program and Related Technologies, Korea Agency for Infrastructure Technology Advancement
2023 – 2024	[RS-2023-00260576] Development of traffic accident reconstruction Software for autonomous vehicle traffic accident investigation & analysis technique, <i>National Police Agency</i>
2023 – 2004	[12238208700] Regional Traffic Safety Index Measurement, National Police Agency
Metropolitan R	Research Center, University of Utah   Research Assistant
2023 – 2023	[UT22.604] Increasing Public Transportation Ridership by Integrated Transportation Planning with Micromobility Services in the State of Utah, <i>Utah Department of Transportation (UDOT)</i> , URL: <a href="https://trid.trb.org/View/2427467">https://trid.trb.org/View/2427467</a>
2021 – 2022	[UT 22-8095] Transportation Benefits and Costs of Reducing Lane Widths on Urban and Rural Arterials, <i>Utah Department of Transportation (UDOT)</i> , URL: <a href="https://rosap.ntl.bts.gov/view/dot/74632/dot">https://rosap.ntl.bts.gov/view/dot/74632/dot</a> 74632 DS1.pdf
2021 – 2022	How to Prevent Transit Ridership Decline in the Wasatch Front Regions? Lessons From Successful Regions, <i>Utah Department of Transportation (UDOT)</i>
2021 – 2022	[UTA-21-P00044] Impact of Streetcar Operation on Traffic and Land Use Changes, <i>Utah Department of Transportation (UDOT)</i>
2020 – 2022	[NITC-RR-1386] Understanding the Impact of Decentralizing Homeless Services on Transportation and Mobility in Salt Lake County, <i>National Institute for Transportation and Communities (NITC)</i> , URL: <a href="https://nitc.trec.pdx.edu/research/project/1386">https://nitc.trec.pdx.edu/research/project/1386</a> *partial participation: interviewer of semi-structured qualitative interviews
2019 – 2021	[NITC-RR-1328] Is Transit-Oriented Development Affordable for Low- and Moderate-Income Households (in terms of H+T), <i>National Institute for Transportation and Communities (NITC)</i> , DOI: 10.15760/trec.269
2019 – 2021	[NITC-RR-1218] Scooting to a New Era in Active Transportation: Examining the Use and Safety of E-scooters, <i>National Institute for Transportation and Communities (NITC)</i> , URL: <a href="https://rosap.ntl.bts.gov/view/dot/61925">https://rosap.ntl.bts.gov/view/dot/61925</a> *partial participation: surveyor

2019 – 2021 [NCHRP 08-124] Quantifying the Impacts of Corridor Management, *National Cooperative Highway Research Program (NCHRP)*,

URL: <a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4561">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4561</a>

2019 – 2020 [TCRP J-11/Task 36] An Update on Public Transportation's impacts on Greenhouse Gas Emissions, *Transit Cooperative Research Program (TCRP)*, DOI: <a href="https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4561">https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4561</a>

Smart City Lab, University of Seoul | Researcher

2019 [Smart City 1-3| 18NSPS-A150026-01] Development of Digital Twin for service virtualization of

SMART City, Korea Agency for Infrastructure Technology Advancement

[Smart City 3-4] Development of Open Data Hub Platform Based on Living Lab Model,

Korea Agency for Infrastructure Technology Advancement

[2018-MOIS33-003] Developing a Disaster Evaluation System using 3D Object Oriented-Technology (OOT) with Big Data Analysis, *The Ministry of the Interior and Safety* 

Other Projects | Research Assistant

2018 Rural planning for Regional Development of Gal-Nam Village, the City of Sam-check

Korea Fisheries and Port Agency

2017 A Study on the Development of an Overseas Construction Housing Project,

Korea Housing Institute Research (KHIR)

#### **Dissertation Committee**

2025. 02.	Doctoral dissertation, Hyeongyun Ki, Seoul National University
2024. 02.	Mater's dissertation, Yonghoo Lee, Incheon National University

### AWARDS, GRANTS, AND FELLOWSHIPS

2025	Best Teaching Award, Spring 2025, The Graduate School of Incheon National University
2025	Best Teaching Award, Spring 2025, Incheon National University
2025	Best Teaching Award, Fall 2024, Incheon National University
2022 – 2023	Graduate Research Fellowship, The Graduate School, University of Utah, \$20,100 stipend +
	Graduate Tuition Benefit Program + Subsidized Health Insurance Program
2022	Research Grant, 2022 Research Funding Program by Academy of Urban Health, \$1,600
2022	Travel Grant, 2022 CMP Ph.D. Student Travel Grant, University of Utah, \$500

#### **WORK EXPERIENCES**

2023 – 2024	Postdoctoral Researcher, Transportation Studies, Graduate School of Environmental Studies,
	Seoul National University
2023 – 2024	Research Fellow, Metropolitan Research Center, University of Utah
2022	Adjunct Instructor, Department of City and Metropolitan Planning, University of Utah Asia
	Campus, CMP3270 Visual and Oral Communication, Summer 2022
2019 – 2023	Research Assistant, Metropolitan Research Center, University of Utah
2019	Researcher, Smart City Lab, University of Seoul
2015 – 2016	Construction Planning Manager (army civilian), Construction Management division, ROK-US
	Combined Forces Command, Seoul, S. Korea.
2012 – 2014	Construction Supervisor & Architectural Design Supervisor (first lieutenant officer), Defense
	Installation Agency, Ministry of National Defense, Seoul, S. Korea.
2010 – 2011	Undergraduate Research Assistant, Konkuk University, Seoul, S. Korea.

## **PROFESSIONAL & COMMUNITY SERVICE**

Peer-review journal reviewer   Transportation (Impact Factor=3.3, SSCI), Scientific Reports
(IF=3.8, SCI), BMC Public Health (IF=3.6, SCIE), Applied Sciences (IF=2.5, SCIE), International
Journal of Urban Sciences (IF=3.0, SSCI), IATSS Research (IF=3.6, SCOPUS), International Journal
of Geo-Information (IF=2.8, SCIE), Traffic Safety Research (IF=0.32, KCI)
Urban Design Institute of Korea Future City Infrastructure Research Committee, Urban Design
Institute of Korea
Faculty Search Committee, Department of City and Metropolitan Planning, University of Utah
Ph.D. Admission Committee, Department of City and Metropolitan Planning, University of
Utah
Student Advisory Committee, Department of City and Metropolitan Planning, University of
Utah
ACSP Student Volunteer, Association of Collegiate Schools of Planning (ACSP)
Army Officer, Defense Installation Agency at Ministry of National Defense, S. Korea.
ROTC (Reserved Officers' Training Corps), Ministry of National Defense, S. Korea.

## PROFESSIONAL SKILLS

Design Tool

Statistical Analysis	R, SPSS, E-views, HLM	
Spatial Analysis	ArcGIS, ArcMap, QGIS	
Documentation	Microsoft Office (PowerPoint, Excel, MS Word)	

AutoCAD, Photoshop, Illustrator, InDesign, SketchUp