

# WOOKJAE YANG

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## CURRENT POSITION

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2024.09.        **Assistant Professor**  
Department of Urban Policy & Administration, Incheon National University

## EDUCATION

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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

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

- 2025            [1] **Yang, W.**<sup>\*†</sup> and Kang, B., Slower Roads, Cleaner Skies? Causal Effects of Speed Limit Reduction on Air Quality Using A Spatial Quasi-Experimental Analysis, *Transport Policy*, <https://doi.org/10.1016/j.tranpol.2025.103969>
- [2] 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*, <https://doi.org/10.1080/15568318.2025.2546038>
- [3] **Yang, W.**<sup>\*</sup> 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>
- [4] 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>
- [5] **Yang, W.**<sup>\*</sup> and Han, S. (2025) Direct and Indirect Effects of Road Design Attributes on Traffic Safety, *Journal of Safety Research*, vol 93, 156-169. DOI: <https://doi.org/10.1016/j.jsr.2025.02.017>
- [6] **Yang, W.**<sup>\*†</sup>, 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. <https://doi.org/10.1080/03081060.2025.2462966>
- [7] 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>

- [8] 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>
- 2024 [9] **Yang, W.**<sup>\*\*</sup> (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), <https://doi.org/10.22645/udi.2024.12.31.03>
- [10] **Yang, W.**<sup>\*\*</sup> 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>
- [11] 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: <https://doi.org/10.1016/j.cstp.2024.101262>
- [12] 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: <https://doi.org/10.3390/infrastructures9090141>
- 2023 [13] 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>
- [14] **Yang, W.**<sup>\*\*</sup> 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: <https://doi.org/10.1007/s11116-023-10448-3>
- [15] **Yang, W.**<sup>\*</sup>, Tian, G. and Ewing, R. (2023) Impact of Corridor Highway System on Communities: Built Environment and Travel Mode Choices, *Cities*, DOI: <https://doi.org/10.1016/j.cities.2023.104467>
- [16] Hong, A. and **Yang, W.** (2023) Urban Environment and Pedestrian Safety, *Urban Health Studies*, 2(1), 27-44, DOI: [10.59013/auh.2023.2.1.003](https://doi.org/10.59013/auh.2023.2.1.003)
- 2022 [17] 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: [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000788](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000788)
- 2021 [18] **Yang, W.**<sup>\*</sup> 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](https://doi.org/10.18488/journal.31.2021.82.136.149)
- 2018 [19] Choi, M., and **Yang, W.**<sup>\*</sup> (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](https://doi.org/10.17208/jkpa.2018.02.53.1.123)
- [20] 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](https://doi.org/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] [under review] **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 Park, J., Urban Design Quality and Clinical Mental Health: A Systematic Review, *HERD: Health Environments Research & Design Journal*, <http://dx.doi.org/10.2139/ssrn.5402742>

[5] [under review] **Yang, W.\*+** and Hwang, J., Identifying 15-Minute City Clusters Shaped by Bikesharing Service Through Unsupervised Machine Learning, *Travel Behaviour and Society*

[6] [under review] **Yang, W.\*** and Kang, B., Predicting Multidimensional Factors of Injury Severity of Personal Mobility Users Using a Machine Learning Approach, *Accident Analysis and Prevention*

[7] [under review] **Yang, W.\***, Oh, S., Kang, B., and Jeong, S. A Multimodal Mobility-Based Mode Choice Modeling and Simulation for Campus Accessibility, *Transportation Research Part 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] Correlations Between Housing Price and Birth Rate: Focusing on the Moderating Effects of Hierarchical Urban Environment Factors

[5] A Longitudinal Analysis on Public Transit Ridership Declines in US Urbanized Areas

[6] Why Malawi Is Left Unwarned During Disasters: The Role of Digital Divide in Early Warning Systems

#### 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)

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- 2025 [1] **Yang, W.** and Kang, B., Slower Roads, Cleaner Skies? Causal Effects of Speed Limit Reduction on Air Quality Using a Spatial Quasi-Experimental Analysis, *Association of Collegiate School of Planning*, Oct 22-25, 2025. Minneapolis, United States.
- [2] 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.
- [3] 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.
- [4] 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 [5] 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*
- [6] 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*
- [7] **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.
- [8] 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.
- [9] 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.
- [10] [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.
- [11] [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.
- [12] [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.
- [13] [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 [14] **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.

- [15] 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.
- [16] 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.
- [17] 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.
- 2021 [18] **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.
- [19] 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.
- 2020 [20] **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

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Incheon National University | Principal Investigator

2025 – 2026 [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, *National Police Agency*

2023 – 2004 [12238208700] Regional Traffic Safety Index Measurement, *National Police Agency*

Metropolitan 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, *Utah Department of Transportation (UDOT)*, URL: <https://trid.trb.org/View/2427467>

2021 – 2022 [UT 22-8095] Transportation Benefits and Costs of Reducing Lane Widths on Urban and Rural Arterials, *Utah Department of Transportation (UDOT)*, URL: [https://rosap.nli.bts.gov/view/dot/74632/dot\\_74632\\_DS1.pdf](https://rosap.nli.bts.gov/view/dot/74632/dot_74632_DS1.pdf)

2021 – 2022 How to Prevent Transit Ridership Decline in the Wasatch Front Regions? Lessons From Successful Regions, *Utah Department of Transportation (UDOT)*

2021 – 2022 [UTA-21-P00044] Impact of Streetcar Operation on Traffic and Land Use Changes, *Utah Department of Transportation (UDOT)*

2020 – 2022 [NITC-RR-1386] Understanding the Impact of Decentralizing Homeless Services on Transportation and Mobility in Salt Lake County, *National Institute for Transportation and*

*Communities (NITC)*, URL: <https://nitc.trec.pdx.edu/research/project/1386> \*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), *National Institute for Transportation and Communities (NITC)*, DOI: [10.15760/trec.269](https://doi.org/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, *National Institute for Transportation and Communities (NITC)*, URL: <https://rosap.nhtl.bts.gov/view/dot/61925> \*partial participation: surveyor
- 2019 – 2021 [NCHRP 08-124] Quantifying the Impacts of Corridor Management, *National Cooperative Highway Research Program (NCHRP)*, URL: <http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4561>
- 2019 – 2020 [TCRP J-11/Task 36] An Update on Public Transportation's impacts on Greenhouse Gas Emissions, *Transit Cooperative Research Program (TCRP)*, DOI: [10.17226/26103](https://doi.org/10.17226/26103)

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-cheok Korea Fisheries and Port Agency
- 2017 A Study on the Development of an Overseas Construction Housing Project, Korea Housing Institute Research (KHIR)

### Dissertation Committee

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

### AWARDS, GRANTS, AND FELLOWSHIPS

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- 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

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- 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

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2023 – present **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)  
 2023 – present **Urban Design Institute of Korea Future City Infrastructure Research Committee**, Urban Design Institute of Korea  
 2022 – 2023 **Faculty Search Committee**, Department of City and Metropolitan Planning, University of Utah  
 2022 – 2023 **Ph.D. Admission Committee**, Department of City and Metropolitan Planning, University of Utah  
 2021 – 2022 **Student Advisory Committee**, Department of City and Metropolitan Planning, University of Utah  
 2021 **ACSP Student Volunteer**, Association of Collegiate Schools of Planning (ACSP)  
 2012 – 2014 **Army Officer**, Defense Installation Agency at Ministry of National Defense, S. Korea.  
 2010 – 2012 **ROTC (Reserved Officers' Training Corps)**, Ministry of National Defense, S. Korea.

#### PROFESSIONAL SKILLS

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Statistical Analysis	R, SPSS, E-views, HLM
Spatial Analysis	ArcGIS, ArcMap, QGIS
Documentation	Microsoft Office (PowerPoint, Excel, MS Word)
Design Tool	AutoCAD, Photoshop, Illustrator, InDesign, SketchUp