Jun Wang

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Specialize in urban design and transportation planning
Research Interests:
- Retrofitting suburbia and sustainable community strategies
- Generative community design
- Multi-modal mobilities and disruptive transportation technologies
- Micro agent-based simulation and application in urban design
- Social and environmental equity in transportation planning
- Autonomous vehicles for shared mobilities
- Travel demand forecasting
- Spatial analysis for evidence-based design approaches

Awarded $7,500 American Public Transportation Foundation Board of Directors Fellowship
Won EDRA 52 Best Student Paper Award with Suburban Sustainable Community study
Won $15,000 prize at Shanghai Urban Design Challenge
Exhibited at Wuhan Architecture/Design Biennale
Graduated with "Best Urban Designer" award from Georgia Tech
Instructed undergraduate and graduate architecture / urban design studios

I. EDUCATION

Georgia Institute of Technology (Gatech)
Doctor of Philosophy in Architecture, Urbanism July 2025
- Minor in Traffic Engineering
- Dissertation title: Urban Design in The Era of Autonomous Vehicles – Preparing Cities For A Self-Driving Future
- Advisor: Professor Ellen Dunham-Jones

Master of Science Geographic Information System Technology Spring 2021
Master of Science Urban Design Summer 2020

Huazhong University of Science and Technology (HUST)
Bachelor of Engineering City and Regional Planning Spring 2019

II. PUBLICATIONS AND RESEARCH PROJECTS

A. Published Peer-Reviewed Papers

10. **Wang, J.,** Park, S., Akar, G. (2025). Is the Environmental Kuznets Curve Still Relevant in the Modern Context? – Insights From Air Pollutants in Chinese Cities. Managing Global Transitions. ISSN 1854-6935. (Under production).
9. Zha, Y., **Wang, J.**, Dunham-Jones, E. (2025). Is the impact of post-pandemic Work-From-Home (WFH) on commercial business performance moderated by built environment features? Evidence from large-scale mobile phone data.

Environment and Planning B: Urban Analytics and City Science. (Under Production)

8. **Wang, J.**, Wang, K., & Zhao, Y. (2025). Identifying potential upgradable bus stop locations with on-demand shuttle ridership with VIA data in Jersey City. Transportation Research Part A: Policy and Practice, 196, 104480. https://doi.org/10.1016/j.tra.2025.104480
7. **Wang, J.,** Dunham-Jones, E., & Akar, G. (2024). Exploring the influence of driver's presence on passengers' willingness level to take autonomous taxis–Evidence from Seattle metropolitan area. Case Studies on Transport Policy, 16, 101212. https://doi.org/10.1016/j.cstp.2024.101212
6. **Wang, J.,** & Zha, Y. (2024). Do urban form characteristics perpetuate disparities of pandemic-induced mobility changes? Evidence from Fulton County, Georgia. Travel Behaviour and Society, 36, 100803. https://doi.org/10.1016/j.tbs.2024.100803
5. **Wang, J.** (2023). Interrogating Smart City Practices - The Sidewalk Labs Quayside Project. Carolina Planning Journal, Vol. 48, pp. 26 - 31. https://cpj.unc.edu/back-issues/volume-48/
4. **Wang, J.**, Oh, Y., Sankararaman, N., Broesicke, O. A., Maxim, A., Zha, Y., ... & Dunham-Jones, E. (2023). Quantitative Evaluation Method for Retrofitting Suburbia Practice. Resilient and Responsible Smart Cities: The Path to Future Resiliency, pp. 81-100. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-20182-0_7
3. **Wang, J.**, Kim, I., & Rana, S.B. (2021). Optimal Strategy for Autonomous-Vehicle-Dedicated Lane Deployment on Freeway with City Planning and Market as Driving Force. International Conference on Intelligent Transport Systems, pp. 206-227. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-97603-3_15
2. **Wang, J.** (2021). Why Did Sidewalk Labs's Quayside Project Fail? The Practical and Institutional Difficulties of Smart City Practice. Bernasconi, C., Blume, L., et. al. Proceedings of EDRA52 Detroit: Just environments: Transdisciplinary border crossings, pp. 167 - 172. Environmental Design Research Association. ISBN 979-8-9855428-0-6
1. Liu, H., Zheng, T., **Wang, J.** (2020). Research On The Characteristics Of The Spatial Arrangement Of Basic Urban Public Service Facilities From A Diversity Perspective: A Case Study Of Wuhan. Journal of Urban and Regional Planning, Vol. 12(2), pp. 102-117.

B. Works Under Review

1. **Wang, J.,** Dunham-Jones, E., & Akar, G. (2024). Built Environment and People's Preferences in Adopting Various Autonomous Vehicle Services Using Generalized Additive Models – Seattle Metropolitan Area as Example. (Under revision)

C. Work In Progress

4. **Wang, J.;** Wang, K. & Akar, G.(2025). Trend and Pattern of Autonomous Vehicle Crashes.
3. **Wang, J.**; Park, S. NHTS Georgia Add-On Trips and The Built Environment Around Destinations – Equity Implications Explained by Machine Learning Models.
2. **Wang, J.** Urban Design Strategies for US Suburbia in the Era of Autonomous Vehicle.
1. Lanchester, Z; Dunham-Jones, E. & **Wang, J**. Best Practice Manual of Autonomous Shuttles. (Working book)

D. Book Chapters and Industry Documents

5. MetroLab Network. GenAI for Local Governments: Cybersecurity and Privacy Concerns. (2024). Retrieved June 15, 2025 from https://fas.org/wp-content/uploads/2025/05/MetroLab_AI_Cybersecurity-1.pdf.
4. MetroLab Network. GenAI for Local Governments: Community Engagement Guidance. (2024). Retrieved June 15, 2025 from https://fas.org/wp-content/uploads/2025/05/MetroLab_AI_Community-Engagement-Paper-1.pdf.
3. NYU Rudin Center for Transportation. Principles for Autonomous Urbanism. (2023). Retrieved October 20, 2024, from https://wagner.nyu.edu/impact/research/publications/principles-for-autonomous-urbanism.
2. Dunham-Jones, E., **Wang, J.,** Bharadwaj, A., Doyle IV, G., Gao, W., Jassu, J., Khalid, E. (2020). Retrofitting Suburbia's Missing Middle. SmarTech.
1. Changsha Historical Trail: Historic Building Protection and Urban Renewal. (2019). Hunan University Press, ISBN: 978-7-5667-1782-5. **(Undergraduate Thesis included)**

III. RESEARCH & PROFESSIONAL EXPERIENCE

Gatech, Graduate Research Assistant - Atlanta, GA Aug. 2019 - Present

- Assistant to Professor Ellen Dunham-Jones at School of Architecture
- Conducted primary source and secondary source research in retrofitting suburbia, machine learning in urban design, multi-modal transportation, sustainable community design, and smart city
- Drafted 5 grant proposals to NSF, GDOT, and MARTA
- Managed database of Retrofitting Suburbia cases

MetroLab Network, Research Intern – Washington, D.C. May - Aug. 2024

- Reviewed and edited UCLA Mobility COE Synthesis Innovative Transportation Technology Report
- Drafted Generative AI Local Government Policy Guide
- Created visualizations for Model Data Governance Policy And Practice Guide

Autonomous & Connected Transportation Lab & City of Peachtree Corners, Research Intern - Atlanta, GA May-Aug. 2022

- NSF (2125390) founded program
- Developed systematic deployment tools that smart and connected communities can use to achieve their sustainable travel goals
- Designed and surveyed with more than 300 responses, and analyzed the data collected
- Organized and delivered a lecture, "Autonomous Shuttle Transforming Suburban Neighborhoods", for Peachtree Corners community with 53 attendees

Clayton County Board of Commissioners, Transportation Planner - Clayton, GA
May – Oct. 2021

- Organized community surveys with 800+ respondents and analyzed the data
- Collected and analyzed road network and sidewalk data for the Smart Pedestrian Network project
- Developed a framework of the smart management system for transportation planning purposes
- Organized two county-wide community events

Redesigning Cities Podcast Series, Assistant - Atlanta, GA Aug. 2019 – Dec. 2020

- Recorded and edited video and audio files for 10 episodes
- Managed social media accounts and podcast publishing platforms for the series

Smart Planning & Design Innovating Center, Research Intern - Wuhan, China
June – Dec. 2018

- Founding member of Smart City Lab
- Applied Machine learning to identify figure elements in TOD plans
- Developed generative urban design tool that can create community plans

City Planning Department of Wuhan, Research Intern - Wuhan, China 2017 - 2018

- Designed landscape and environment improvement plan for a 21mile-Highway section of G318
- Conducted environmental and architectural impact analysis for the Historical Concession neighborhood in Hankou, Wuhan

IV. GRANTS AND FELLOWSHIPS

- American Public Transportation Foundation Board of Directors Fellowship
  Awarded 2022 with a **$7,500** scholarship
- **NSF project - SCC-IRG Track 1**: Fostering Smart and Sustainable Travel through Engaged Communities Using Integrated Multidimensional Information-Based Solutions
  Autonomous & Connected Transportation Lab, Gatech, 2022
  PI/co-PI(s): Srinivas Peeta, Omar Asensio
  Period of Contract: May – Aug. 2022
  Participated in survey and data analysis

- Smart Community Corps Class Alumni
  Awarded **$8,000/year for 2021, 2022 and 2024**
- Brook Byers Institute for Sustainable Systems Campus Sustainability Research Grant
  Acquired in 2023 of **$1,200**
- Masonry Prize Fellowship
  Awarded 2020 with a merit-based scholarship of **$500**

V. HONORS AND AWARDS

- Gatech CETL Thank-a-Teacher Certificate 2021
  From History of Architecture I 2021 Class
- Environment Design Research Association 51st Conference Apr. 2020
  Best Student Poster Award
- Georgia EQIA Exhibition Jan.- Feb. 2020
  Artwork exhibited
- 2019 Asian Design Awards Apr. 2019
  Excellent Award
- Best Designer School of Architecture 2019-2020
- Outstanding Graduating Undergraduate Student of HUST 2019
- World Cities Day-Shanghai Forum 2018 Oct. 2018
  Urban Design plan exhibited
- China National Merit Scholarship 2015, 2016, 2017, 2018
- Shanghai Urban Design Challenge Oct. 2018
  Second Prize Award of **$15,000**
- 4th Wuhan Design Biennale Nov. 2017
  Exhibition Excellence Award
- Excellent Volunteer of HUST 2016
- Model Student of Outstanding Capacity 2015, 2016
- Outstanding Freshman Scholarship 2014

VI. CONFERENCE PRESENTATIONS

A. Paper presentation

- MetroLab Network Summit 2024 Oct. 2024
- MIT Department of Urban Studies and Planning - The 2023 Rez de Ville: In Transition seminar Sep. 2023
- Congress of New Urbanism Annual Conference 31st June 2023
- Association of Collegiate Schools of Planning Conference 2022 Nov. 2022
- Environment Design Research Association 53rd Conference June 2022
- Pandemics & The Changing Built Environment Apr. 2022
- International Conference on Intelligent Transport Systems 2021 Nov. 2021
- Future Smart City 2021 Oct. 2021
- Environment Design Research Association 52nd Conference May 2021

- International Conference on Computational Urban Planning & Urban Management June 2019

B. Poster presentation

- Brook Byers Institute Sustainability Showcase Lightning Talks Mar. 2024
- International Conference on Urban Health 2023 Nov. 2023
- Transportation Research Board Annual Meeting 102nd Jan. 2023
- Environment Design Research Association 51st Conference Apr. 2020

C. Others

- City of Atlanta LGBTQ+ Cultural Center Kennesaw State University Student Competition Jan. 2025
  Juror
- American Public Transportation Association TRANSform Conference Oct.2022
  Award recipient
- Congress of New Urbanism 30th Conference Mar. 2022
  Panelist
- World Cities Day-Shanghai Forum 2018 Oct. 2018
  Featured Speaker

VII. TEACHING AND MENTORSHIP

A. Courses at Gatech

- Retrofitting Suburbia Spring, 2025
  Head Teaching Assistant
- Architecture First Year Studio Fall, 2024
  Instructor
- Theories of Urban Design Fall, 2023
  Lecturer & Teaching Assistant
- Urban Transportation Planning Fall, 2023, 2024
  Lecturer & Teaching Assistant
- GT6000 Community | Mentorship | Support Fall, 2023
  Instructor
- Graduate Urban Design Studio Spring, 2023
  Instructor
- History of Architecture I Fall, 2020, 2021, 2022
  Head Teaching Assistant
- Retrofitting Suburbia Spring, 2022
  Teaching Assistant
- History of Urban Form Summer 2020. Spring 2021, 2022
  Head Teaching Assistant

B. Campus / Departmental Talks

- GIS and Urban Footprint Tutorial Lecture Spring 2023
  Graduate Portman Architecture Competition Studio ARCH-6040
- PhD Orientation Talk Fall, 2023

CEE-8097, invited by Dr. Adjo Amekudzi-Kennedy

- Data Visualization and Transfer on GIS and 3D Modeling Platform Workshop
  Spring 2022, 2023
  Tokyo Smart City Studio, invited by Dr. Perry Yang

C. Student Mentorship

- Graduate students
  Luke Son. Effectiveness On Improving Roadway Safety of Road Diet Projects, Fall 2022
  Anu Maharjan. Flooding Risk of Nepal. Fall 2023
  Abdulrahman Alorabi. Sustainable Community Hub Design Framework, Fall 2023
- Undergraduate students
  Elizabeth Blass. Local Historical Building Study of Café Antico, Fall 2022
  Deepali Bhattacharya. The Unsung Tales of the Dixie Coca-Cola Factory Plant, Fall 2022
  Keylan Pham. Hinman Research Building Adaptive-Use, Fall 2021
  Kruthik Ravikanti. Archibald Smith Plantation Home Study, Fall 2021
  Roman Yaskulka. An Architectural Critique of Tech Tower, Fall 2021
  Niknaz Tillavaldyyeva. Continuous project guidance for History of Arch I, Fall 2021
  Andrew Obsitnik. Architectural Crituique for the Smith Residence Hall, Fall 2020
- Non-Gatech students
  Jing Liang. South China University of Technology. Spatial Distribution and Spillover Effect of New Employment in the Strategic Industries: A Case Study in Nine Cities of the Pearl River Delta, China. Summer - Fall 2023
  Qiwei Qu. Shanghai University. Spatial-temporal tourists' distribution and the Historical Buildings on Bund of Shanghai. Spring - Fall 2023
  Sitong Wu. Rutgers University. Decline of Smart City and the Nature of City Planning. Fall 2022 - Spring 2023
  Hongyu Wan. Southeast University. How Position Tracking Using Virtual Reality Helps Design Review of Commercial Architecture. Spring – Fall 2022
  Wenjing Zhang. Xi'an Jiaotong-Liverpool University. Walkability Evaluation Framework and Its Application. Spring - Fall 2022
  Yangchun Zhou. Southwest Jiaotong University. Sustainable Railway Station Oriented Development in Chengdu. Fall 2022.
  Xiaowen Su. National University of Singapore. Urban Accessibility Assessment for Elderly Residents in Singapore. Fall 2022

VIII. SERVICE

A. Paper Review

- Computational Urban Science
- Journal of Transport Geography
- Sustainable Futures
- Transportation Research Board (TRB) Annual Meeting
- Association of Collegiate Schools of Planning Annual Conference

- Environmental Design Research Association Conference
- International Society for Urban Health Conference
- ConCave International Student Seminar

B. Affiliations

- Transportation Research Board (TRB) Annual Meeting 2024
  Friend of AED40 GIS Committee. Research topic proposing. Focus area drafting. AASHTO research needs statement reviewing
- Autonomous Vehicle (AV) Place Work Group
  Founding member. Contributed to the Principles of Autonomous Urbanism
- Congress of New Urbanism
  Student member since 2021
- Emerging New Urbanists Atlanta Chapter
  Founding member since 2021
- Young Professional in Transportation Atlanta Chapter
  Member since 2021
- Concave international Ph.D. seminar 2022
  Organizer, Public outreach manager

C. Department/University Contributions

- InVenture Prize Competition 2025
  Judge
- Gatech Student Engagement and Well-Being 2023 – 2024
  Asian-American & Pacific Islander Student Support Work Group
- PURA Salary Award 2023 - 2024
  Review Committee
- Undergraduate Research Symposium Apr. 2023
  Judge
- Student Advisory Council of School of Architecture, Gatech 2021 - 2023
  Ph.D. Representative
- Concave Ph.D. Student Group of School of Architecture, Gatech 2021 - 2022
  Public Outreach
- Gatech's Student Planning Association 2019 - 2020
  Urban Design Representative
- Student International Communication Association HUST 2015 - 2017
  President
- HUST Gay Pride Team 2015 - 2017
  Manager

D. Public and Community Service

- Scottdale, DeKalb County, GA Jan. - May 2023
  Comprehensive town center and neighborhood urban design plan
- West End Neighborhood in Atlanta May - Oct. 2022
  Analyzed displacement risk caused by planned Microsoft Campus, Organized community **information session**
- City of Peachtree Corners July 2022

Organized and delivered autonomous vehicle **seminar** for 52 residents

- Clayton County Public High Schools Summer 2021
  Mentored 23 underrepresented students on smart and sustainable transportation
- Hankou Concession neighborhoods in Wuhan 2016 - 2017
  Created a Historical Building Inventory, interviewed 32 residents, and conducted spatial analysis

IX. PROFESSIONAL GROWTH AND DEVELOPMENT

A. Certificate

Tech to Teaching (T2T) Certificate 2023

- Certificate granted by Center for Teaching and Learning, Gatech.
- This program covers the foundations of teaching and learning in higher education, course design, and practice in class experiences.

B. Skills and Languages

- Technical Skills
  - Transportation simulation & modeling, Advanced spatial analysis
  - Data analysis. Data Quality Assessment, Data mining
  - Sustainable environmental design, Data visualization, Graphic design, 3D modeling, Rendering
  - Audio and video processing and editing
- Programming Languages
  - R, Python, Julia
- Software
  - ArcGIS, QGIS.
  - AutoCAD, Rhino, SketchUp, V-ray, Lumion, Enscape, Unity
  - Adobe Suite: Photoshop, Illustrator, InDesign, Premiere, Audition.
  - Tableau. Gephi. NetLogo.
- Languages
  - Fluent - Chinese, English
  - Intermediate - Italian
  - Limited working proficiency – Korean