

Jaeyoung Ha

Landscape Architecture Program, School of Design | Virginia Tech
122D Burruss Hall | VA 24061
Tel: 540-231-5487 | jaeyoung@vt.edu

EDUCATION

- December 2022 **Ph.D., Environmental Design and Planning:** Landscape Architecture and Regional & Community Planning, Kansas State University, Manhattan, Kansas, United States
•Dissertation: Linking Spatial Characteristics of Urban Green Space and Mental Well-being: Green Space Biodiversity and Landscape Spatial Patterns
- February 2018 **MLA, Landscape Architecture: Urban Design Concentration,** Seoul National University, Seoul, South Korea
•Thesis: A study on crowd congestion in an urban plaza event: A case study of a candlelight rally in Gwanghwamun Square
- February 2013 **BS, Landscape Architecture,** Pusan National University, Busan, South Korea

SUMMARY OF ACADEMIC AND PROFESSIONAL EXPERIENCES

- 2022 - Present **Assistant Professor,** Landscape Architecture Program, School of Design, College of Architecture, Arts, and Design, Virginia Tech
- 2022 Spring **Research Mentor,** Natural Resources and Environmental Sciences (NRES), Kansas State University
- 2021-2022 **Graduate Research Assistant,** Department of Landscape Architecture and Regional & Community Planning, Kansas State University
- 2020-2021 **Instructor,** Department of Landscape Architecture and Regional & Community Planning, Kansas State University
- 2021 Summer **Research Assistant,** Lee Kum Sheung Center for Health and Happiness Harvard T.H. Chan School of Public Health, Harvard University
- 2018-2021 **Graduate Teaching Assistant,** Department of Landscape Architecture and Regional & Community Planning, Kansas State University
- 2016-2017 **Graduate Research Assistant,** Department of Landscape Architecture, Seoul National University
- 2013-2016 **Landscape Architect and Urban Planner,** Dohwa Engineering*, Department of City Planning and Landscape Architecture & Leisure (*Nationally ranked, #1 engineering firm in South Korea)

RESEARCH INTEREST

- **Mental wellbeing:** mental health/wellbeing, restorative environments, social and environmental justice
- **Regional climate and environment:** climate change mitigation, disaster resilience design and planning
- **Planning and design:** landscape planning and design, urban design, environment-behavior
- **Immersive environment:** virtual reality (VR), augmented reality (AR)
- **Ecology:** landscape ecology, landscape pattern, biodiversity, ecological design and planning
- **Spatial analysis:** remote sensing, geographical information system (GIS)
- **Big data analysis:** machine learning, big data management, data crawling

PUBLICATIONS

Peer reviewed journal articles

Ha, J and Kim, H, and, With, K (2022). Urban green spaces alone are not enough: A landscape analysis linking the spatial distribution of urban green space to mental health, *Landscape and Urban Planning*, SCIE, SSCI [Impact Factor: 6.142].

<https://doi.org/10.1016/j.landurbplan.2021.104309>

Ha, J and Kim, H (2021). The restorative effects of landscape biodiversity: Assessing visual and auditory perceptions among university students, *Urban Forestry & Urban Greening*, SCIE, SSCI [Impact Factor: 4.537].

<https://doi.org/10.1016/j.ufug.2021.127259>

Ha, J and Kim, S (2017). Congestion patterns found in a massive rally in a square: With a case study on the candlelight rally in Gwanghwamun Square, *Journal of the Urban Design Institute of Korea*

Manuscripts in Preparation

Ha, J, Kim, H, and Alam, M. M., (**in prep.**). How we perceive biodiversity: Visual and auditory cues in the restorative process. Target journal: *Landscape and Urban Planning*.

Ha, J and Kashem, S. B (**in prep.**). Literature Review: The application of AR-GIS in environmental design and planning. Target journal: *Landscape and Urban Planning*.

Alam, M. M., Skabelund, L. R., Gibson, Michael D., and **Ha, J** (**in prep.**). A Green Roof's Influence In Building Energy Performance: Quantifying Urban Heat Island Indicators In The U.S. Target journal: *Great Plains. Energy and Buildings*.

Kim, H and **Ha, J** (**in prep.**). Enhancing rural-to-urban disaster resilience by integrating social, spatial and digital network. Target journal: *Urban Climate*.

Ha, J and Kim, H (**in prep.**). Urban flooding simulation for decision making process in early stage of design using the virtual reality. Target journal: *Multimodal Technologies and Interaction*.

Choi, H, **Ha, J**, Lee, S and Song, Y (**in prep.**). Determining impacts of changes in 3D urban morphologies on land surface temperature using bi-temporal airborne laser scanning. Target journal: *Remote Sensing of Environment*.

Conferences

Ha, J and Choi, H (2023), The relationship between the spatial distribution of urban green space and crime in the city of Chicago, *Council of Educators in Landscape Architecture (CELA)*, San Antonio, TX

Alam, M. M., Skabelund, L. R., Rice, C. W., Todd, T. C., Lin, J., **Ha, J.**, Decker, A (2021). Climate Change Mitigation Potential of Green Roofs: Quantifying a green roof's capacity to sequester carbon in the Flint Hills Ecoregion, *CitiesAlive Virtual 2021 Conference*.

Ha, J and Kim, H (2021). The Relationship between Landscape and Mental Health: Single Large Versus Several Small Green Spaces, *The Environmental Design Research Association (EDRA) EDRA52 Detroit*. University of Detroit Mercy and Wayne State University.

Ha, J and Kim, H (2021). The restorative effect of landscape biodiversity by the visual and auditory exposure using VR display technology, *Council of Educators in Landscape Architecture (CELA) 100+1 | RESILIENCE Conference 2021. Virtual*.

Choi, H, **Ha, J**, Lee, S and Song, Y (2021). Impacts of changes in 3D urban morphologies on the land surface

temperature using bi-temporal airborne laser scanning, *Council of Educators in Landscape Architecture (CELA) 100+1 | RESILIENCE Conference 2021. Virtual.*

Ha, J and Kim, H (2021). Does campus biodiversity matter for students' psychological wellbeing? *The annual Capitol Graduate Research Summit (CGRS), Topeka, Kansas.*

Ha, J and Kim, H (2020). Does campus biodiversity matter for students' psychological wellbeing? *Research and State, Manhattan, Kansas.*

Ha, J and Kim, S (2017). A study on the urban and spatial characteristic of crowded area in a massive rally: A case study of candle rally in *Gwanghwamun Square*, Spring Conference, *Urban Design Institute of Korea (UDIK)*, Incheon, South Korea.

Research report

Kim, Y, Cho, S, Song, Y, Kim, S, Kim, M, Kim, P, Kim J, Lee, J, Lee, H, Jeong, J, Jae, J, Choi, H, **Ha, J**, Han, C (2019), Urban design strategies for sustainable smart city, Architecture & Urban Research Institute.

RESEARCH EXPERIENCE

Kansas State University

2021-2022 **Pilot study and workshop for enhancing rural-to-urban disaster resilience by integrating social, spatial and digital networks**

Research funded by: *National Science Foundation (\$149,813)*

PI: Dr. Kim / CO-PI: Dr. Amariuca from Computer Science / CO-PI: Dr. Natarajan from Electrical and Computer Engineering

Graduate Research Assistant

- Develop survey instrument and collecting and managing data
- Statistical analysis / writing manuscript

<https://www.disaster-resilience.k-state.edu>

2021-2022 **The application of augmented reality (AR) GIS in research and education**

PI: Dr. Kashem

Graduate Research Assistant

- Literature review
- Writing and revising manuscript

Harvard University

2021 Summer **Cities for Well-being**

Research funded by: *Lee Kum Sheung Center for Health and Happiness at Harvard University (Advisor: Professor Whitney / Dr. Nogueira)*

Research Assistant

- Proposed a regeneration plan for the wellbeing of citizens in five post-industrial cities

<https://www.hsph.harvard.edu/d-lab/who-we-are/>

TEACHING EXPERIENCE

Virginia Tech

- 2023 Fall **Instructor**
LAR 5124 Graduate Landscape Architecture Resilient Site Design
Develop course curriculum, lecture, and assignments
- 2023 Spring **Instructor**
LAR 3016 Landscape Architecture Design Studio: Site, Program, and Community II
Develop course curriculum, lecture, and assignments
- 2023 Spring **Instructor**
LAR 3164 Design in Detail: Materials, Structures, Details
Develop course curriculum, lecture, and assignments
- 2022 Fall **Instructor**
LAR 4254/5254 Landscape Architecture Theory
Develop course curriculum, lecture, and assignments
Organize group discussion
Lecture design theories relevant to landscape architectural design and related work

Kansas State University

- 2022 Spring **Research Mentor**
BAE/DAS/GENAG 582 Natural Resources and Environmental Sciences Capstone Course
Mentor an interdisciplinary group of undergraduates in the research process
Help students to conduct some form of field work and data analysis
Lead small group discussions
Guide students to prepare a professional oral presentation, written report or research manuscript, and poster appropriate for an academic meeting
- 2021 Fall **Instructor (Course Designer and Lecturer)**
LAR741 AR/VR in Landscape Architecture
Develop course curriculum, material, and tutorials
Teach basic knowledge and skills of AR/VR modeling software
Guide real-world applications as well as a strong research platform in landscape/urban design
https://apdesign.k-state.edu/about/faculty-staff/ha_jaeyoung/
- 2021 Spring **Graduate Teaching Assistant**
LAR 740 Advanced studio
Urban Future: Designing for Climate Change Adaptation
Teach urban flooding analysis and simulation using virtual reality
Desk and mid-term/final design critiques
- 2020 Fall **Instructor (Course Designer and Lecturer)**
LAR741 AR/VR in Landscape Architecture
Develop course curriculum, material, and tutorials
Teach basic knowledge and skills of AR/VR modeling software
Guide real-world applications as well as a strong research platform in landscape/urban design
- 2020 Spring **Graduate Teaching Assistant**
LAR 898 Master's Report
Advising research design and methodology for master's thesis & report
- 2019 Fall **Graduate Teaching Assistant**
LAR 648 Advanced Studio / LAR 705 Advanced Studio
The Future of Urban Revitalization: Dialectical Approaches

Instructor for VR tutorials: The construction of urban and landscape environment in Virtual Reality
Desk and mid-term/final design critiques

2019 Spring **Graduate Teaching Assistant**
LAR 648 Advanced Studio / LAR 750 Advanced Seminar
Urban and Landscape Resilience for the Future
Desk and mid-term/final design critiques

2018 Fall **Graduate Teaching Assistant**
LAR 710 Advanced Studio / LAR 750 Advanced Seminar

INVITED LECTURES & CRITIQUES

- 2022 Spring **Invited critique for studio**, LAR 433: Landscape History and Design Studio (Instructor: Beamish, Anne), College of Architecture, Planning and Design, Kansas State University, February 15, 2022
- 2022 Spring **World Cities: Seoul**, PLAN 215: World Cities (Instructor: Rishi, Susmita), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, January 28, 2022
- 2021 Fall **Invited critique for studio**, ENVD 201: Environmental Design Studio 1 (Instructor: McNair, Michel), College of Architecture, Planning and Design, Kansas State University, November 8, 2021
- 2021 Fall **Urban green space for human wellbeing**, LAR 1264: Seeing, Understanding, Representing Landscape (Instructor: Bohannon, C. L.), Department of Landscape Architecture, Virginia Tech University, October 5, 2021
- 2021 Summer **Invited critique for studio**, ENVD 201: Environmental Design Studio 1 (Instructor: McNair, Michel), College of Architecture, Planning and Design, Kansas State University, June 25, 2021
- 2021 Summer **Metaverse world in landscape architecture and urban design**, (Instructor: Choi, Songhyun), Department of Landscape Architecture, Pusan National University, May 24, 2021
- 2021 Spring **Invited critique for studio**, ENVD 201: Environmental Design Studio 2 (Instructor: Kim, Byungsoo), College of Architecture, Planning and Design, Kansas State University, May 5, 2021
- 2021 Spring **Future urban space**, LAR 750: Advanced Seminar (Instructor: Kim, Hyung Jin), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, March 22, 2021
- 2021 Spring **World Cities: Seoul**, PLAN 215: World Cities (Instructor: Rishi, Susmita), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, March 8, 2021
- 2021 Spring **World Cities: Seoul**, URBN 20104: World Cities (Instructor: Goharipour, Hamed), Urban Studies, College of Wooster, February 18, 2021
- 2020 Fall **Invited critique for studio**, ENVD 201: Environmental Design Studio 1 (Instructor: McNair, Michel), College of Architecture, Planning and Design, Kansas State University, December 4, 2020
- 2020 Spring **World Cities: Seoul**, PLAN 215: World Cities (Instructor: Rishi, Susmita), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, April 15, 2020
- 2019 Fall **Invited critique for studio**, ENVD 201: Environmental Design Studio 1 (Instructor: Goharipour, Hamed), College of Architecture, Planning and Design, Kansas State University, November 13,

- 2019
- 2019 Spring **The history of urban planning in Seoul**, PLAN 699: Qualitative Planning (Instructor: Goharipour, Hamed), Department of Landscape Architecture and Regional & Community, Kansas State University, February 26, 2019
- 2019 Spring **World Cities: Seoul**, PLAN 215: World Cities (Instructor: Gibson, Huston J), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, February 22, 2019
- 2018 Fall **Landscape research and practice**, LAR 750: Advanced Seminar (Instructor: Kim, Hyung Jin), Department of Landscape Architecture and Regional & Community Planning, Kansas State University, December 5, 2018

PROFESSIONAL EXPERIENCE

- 2013-2016 **Project Engineer and Landscape Architect**
 Dohwa Engineering*, Department of City Planning and Landscape Architecture & Leisure Seoul, South Korea (*Nationally ranked, #1 engineering firm in South Korea)
 - Oversaw planning and designing of construction projects in urban planning, civil engineering, electronics & telecommunication, environmental assessments, transportation, architecture, and landscape architecture and also consulted with government agencies
 - Developed land-use plans and obtained construction approval
 - Created concept plans, programs, master plans, computer graphics, schematic designs, detailed designs, and construction documents

AWARDS, HONORS, GRANTS

- 2023 **Fellowship, Deans' Equity and Inclusion Initiative Cohort #3**, Dumbarton Oaks, Trustees for Harvard University, United States
- 2023 **PI, University Libraries Collaborative Research Grant**, University Libraries, USD 5,000, Virginia Tech, United States
- 2022 **PI, Scholarship of Teaching and Learning Grants**, The Center for Excellence in Teaching and Learning, USD 2,000, Virginia Tech, United States
- 2022 **New Faculty Mentoring Program Grants**, The Office of the Executive Vice President and Provost and the deans, USD 1,500, Virginia Tech, United States
- 2022 **Fellowship**, Natural Resources and Environmental Sciences Graduate Fellowship, The Natural Resources and Environmental Sciences (NRES), Kansas State University, United States
- 2021 **PI, Arts, Humanities & Social Sciences Small Grant Program**, "The Effect of Landscape Biodiversity on Mental Health Among College Students", Graduate School Council, USD 1,000, Kansas State University, United States
- 2021 **Scholarship**, Technology Support Scholarship, Graduate School Council, Kansas State University, United States
- 2021 **College of Architecture, Planning, and Design recognition**, Graduate School Council, Kansas State University, United States
- 2021 **Scholarship**, Do Sup Chung International Student Scholarship, Kansas State University, United States

- 2020 **The Top Ten Presenters**, Research and the State Graduate Student Poster Session, Graduate School Council, Kansas State University, United States
- 2020 **1st Prize**, EDRA Interdisciplinary Online Workshop
Environmental Design Research Association Student Research Network (EDRA SRN), United States
- 2012 **1st Prize**, Herald Design English Presentation Competition
Re-imagine! Herald Design Forum, South Korea
- 2012 **Prize for Excellence**, Pusan Green Landscape Architecture Exhibition Awards
KASLA in Pusan, South Korea
- 2010 **Prize for Excellence**, National Urban Forest Design Competition,
Korea Forest Service, South Korea
- 2007-2011 **University Scholarship for Academic Excellence and Achievement**
Pusan National University, Busan, South Korea

CERTIFICATIONS AND PROFESSIONAL DEVELOPMENT

- 2021 **The Future Faculty Diversity Program, Virginia Polytechnic Institute and State University (Virginia Tech)**
I have been selected to participate in the 2021 Future Faculty Diversity Program at Virginia Tech as a fellow in the Department of Landscape Architecture within the College of Architecture and Urban Studies.
- 2021 **Certificate of Achievement, Kansas State University**
Selected as one of the top 10 presenters at Research and the State.
- 2020 **Certificate of Professional Development, Graduate Student Council Professional Development Program, Kansas State University**
For successful completion of the 2019-2020 Graduate Student Council Professional Development Program that enriches graduate students' education beyond their own disciplines.
- 2012 **Licensed Engineer in Landscape Architecture, Republic of Korea**

SKILLS

Graphic Tools

Proficient in various visual representation techniques

- AutoCad, Unreal Engine 4, Rhino, SketchUp, V-ray
- Adobe Photoshop, Adobe Illustrator, Adobe InDesign

Virtual reality specialty

- Software: Unreal Engine, Twinmotion
- Hardware: VIVE HTC, Oculus

Analysis Tools

Efficient in collecting and analyzing research data

- Geography: ArcGIS, ENVI, City Engine
- Statistics: Rstudio, SPSS, SAS, Mplus, AMOS
- Landscape ecology: FRAGSTAT
- Machine learning: Python

ACTIVITIES AND SERVICES

- 2021–2022 **American Society of Landscape Architects (ASLA) Prairie Gateway**
Member

- 2021–2022 **The Environmental Design Research Association (EDRA)**
Student member
- 2021–Present **Global Landscape Architects Network**
Member
- 2021–2022 **Graduate Student Council (GSC) at Kansas State University**
Awards and recognition member
- 2019–2022 **Post-Baccalaureates of APDesign at Kansas State University**
Treasurer and founding member
- 2013–Present **Economist Study Group**
Founding member and study seminar organizer

Peer-reviewed journal Reviewer

- 2022 **Landscape and Urban Planning, Scientific Report, Landscape and Ecological Engineering,
Landscape Research Record**
Peer-reviewed journal reviewer

Conference Reviewer

- 2021 **The Environmental Design Research Association (EDRA)**
Abstract reviewer for conference EDRA 53