

Byungjoo Choi, Ph.D.

CONTACT INFORMATION	711 Sanhakwon Department of Architectural Engineering Ajou University Suwon, Gyeonggi, 16499, Republic of Korea	Office: +82 (031) 219-2494 Fax: +82 (031) 219-2945 E-mail: bchoi@ajou.ac.kr http://www.smartconstructionlab.com
RESEARCH INTERESTS	<ul style="list-style-type: none">• Smart construction (Artificial Intelligence, Big Data, Sensing Technologies, VR/AR, etc.)• Organizational studies in construction projects• Off-site construction & Modular Integrated Construction• Construction safety and health• Smart building system and technologies• Construction robotics and automation	
EDUCATION	University of Michigan, Ann Arbor, MI, USA <i>Doctoral of Philosophy, Civil Engineering (Construction Management)</i> Apr. 2018 <ul style="list-style-type: none">• Dissertation: The Role of Socio-Cognitive Process in Construction Workers' Safety Behavior• Dissertation Committee: Dr. SangHyun Lee (Advisor/Chair), Dr. Vineet R. Kamat, Dr. Carol C. Menassa (Dept. of Civil and Environmental Engineering (CEE)), and Dr. Richard P. Bagozzi (Stephen M. Ross School of Business) <i>Certificate of Graduate Studies, Complex Systems</i> Dec. 2017 Seoul National University, Seoul, Korea <i>Master of Science, Architectural Engineering (Construction Management)</i> Feb. 2014 <ul style="list-style-type: none">• Thesis: 4D BIM-Based Workspace Planning Process for Building Construction• Advisor: Dr. Hyun-Soo Lee <i>Bachelor of Science, Architecture</i> Feb. 2007 <ul style="list-style-type: none">• Minor: Business Administration	
ACADEMIC AND PROFESSIONAL EXPERIENCE	Ajou University, Suwon, Gyeonggi, Korea <i>Associate Professor, Department of Architect and Architectural Engineering</i> 2023 – present <i>Vice Department Chair, Department of Architect and Architectural Engineering</i> 2023 – 2025 <i>Assistant Professor, Department of Architect and Architectural Engineering</i> 2019 – 2023 Southern Illinois University, Edwardsville, IL, USA <i>Assistant Professor, Department of Construction</i> 2018 – 2019 University of Michigan, Ann Arbor, MI, USA <i>Post-doctoral Research Associate, Dynamic Project Management Group</i> 2018 – 2018 <i>Graduate Student Research Assistant, Department of CEE</i> 2014 – 2018 <i>Graduate Students Instructor, Department of CEE</i> 2016 – 2017 Seoul National University, Seoul, Korea <i>Graduate Research Assistant, Department of Architectural Engineering</i> 2012 – 2014 DL Engineering & Construction, Co., Ltd., Seoul, Korea <i>Assistant Manager, Green-Bio Research Complex Construction Project</i> 2011 – 2012	

Field Engineer, Dealim International House Construction Project 2009 – 2010
Field Engineer, Garden 5 tools Building Construction Project 2007 – 2008

Hyundai Engineering & Construction Co., Ltd., Seoul, Korea
Summer Intern 2006 – 2006

Republic of Korea Army, Seoul, Korea
Military Service, Infantry 2002 – 2004

TEACHING AT
AJOU UNIVERSITY

SARC 854 “Construction Operation System Simulation” Spring, 2019–present
Fundamentals of computer simulations in construction engineering and management. Topics include Monte-Carlo simulation, Discrete Event Simulation, System Dynamics, and Agent-Based Modeling

SARC 504 “Machine Learning Basics” Fall, 2021–present
Theoretical understanding and practical applications of various machine learning methods including linear model, decision trees, ensemble methods, kernel methods, support vector machine, clustering, etc. in Architecture, Engineering, and Construction

SARC 502 “Engineering Data Analysis” Fall, 2019–present
Advanced statistical analysis methods for graduate students including multiple linear regression, logistic linear regression, multi-level modeling, and structural equation modeling

ARE 496 “Simulations in AEC” Spring, 2021–present
Understanding of smart construction technologies adopted in practice. Topic includes Building Information Model (BIM) applications, Laser scanning, Photogrammetry, etc.

ARCH 491 “Architectural Engineering Integrated Design Practice” Spring, 2019–present
Capstone Design Course in Architectural Engineering. Students are provided with an opportunity to integrate and apply their knowledge acquired so far to solve a specific engineering problem.

ARCH 470 “Building Cost Management” Spring, 2019–present
Fundamentals of construction estimating and bidding process for construction engineer, Topics include quantity takeoff, unit cost pricing, bidding, conceptual cost estimating, etc.

ARCH 396 “Building Information Modeling” Fall, 2025–present
Fundamentals and applications of Building Information Modeling, 4D, 5D, and nD, Interoperation, coordination, collaboration, communication of project-related information, Integrated Project Delivery (IPD)

ARCH 373 “Construction Management Practice” Fall, 2019–present
Fundamentals and applications of construction schedule management. The topics include Work Breakdown Structure, Network Scheduling, Resource Leveling, Schedule Monitoring and Control, etc.

ARCH 372 “Building Construction Practice” Fall, 2021–present
Fundamentals of building construction practice. Students learn how to develop construction plans for reinforcement concrete work and waterproof work using a real construction project.

CMAT 107 “Statistical Research & Analysis” Fall, 2019–2023

Fundamentals of statistical analysis required for engineering students. Topics include: basic concepts of probability, sampling distributions, confidence intervals, statistical inference, regression analysis.

TEACHING AT SOUTHERN ILLINOIS UNIVERSITY **CNST 451 “Estimating and Bidding”** Fall, 2018
 Fundamentals of construction estimating and bidding process. Topics include quantity takeoff, unit cost pricing, bidding, conceptual cost estimating, etc.

CNST 341 “Plans and Specifications” Fall, 2018
 Introduction to plans and specification in construction projects for pre-construction and construction phases of projects.

TEACHING AT UNIVERSITY OF MICHIGAN **Coursera Construction Engineering and Management MasterTrack** 2018
Course Advocate (Instructor: Dr. SangHyun Lee)
 • Course 1: Construction Project Planning, Scheduling, and Control
 • Course 2: Construction Safety and Human Factors

CEE 532 “Construction Project Engineering” Fall, 2017
Guest Lecturer (Instructor: Dr. SangHyun Lee)
 • Systems thinking, System Dynamics (SD) modeling and simulation, and dynamic relationships of productivity, quality and rework (2 weeks session)

CEE 431 “Construction Contracting” Fall, 2016 – Winter, 2017
Graduate Student Instructor (Instructor: Dr. Rasha Stino)
 • Unit cost estimating, scheduling, and lump sum bidding proposal preparation

Undergraduate Research Opportunity Program Fall, 2016 – Fall, 2017
Graduate Student Research Mentor (Instructor: Dr. SangHyun Lee)
 • Mentee: Linwei Zhang and Logan Suarez Parmer (Undergraduate Engineering Student)

HONORS AND AWARDS **Outstanding Research Faculty Award**, Ajou University 2025
Outstanding Research Award, Ajou University 2025
Outstanding Service Award, Ajou University 2025
Outstanding Paper Award, AIK Annual Conference 2024
Outstanding Paper Award, KICEM Annual Confernece 2024
Outstanding Research Faculty Award, Ajou University 2024
Outstanding Research Award, Ajou University 2024
Best Paper Award, Supervisor, KICEM Annual Conference 2023
Outstanding Paper Award, KICEM Annual Conference 2023
Outstanding Research Faculty Award, Ajou University 2023
Outstanding Reviewer, Journal of Construction Engineering and Management 2023
Outstanding Research Award, Ajou University 2023
Best Paper Award, Int’ Conference on Construction Applications of Virtual Reality 2022
Outstanding Paper Award, KICEM Annual Conference 2022
Outstanding Research Faculty Award, Ajou University 2022

Best Lecture Award , Ajou University	2022
Outstanding Paper Award , KICEM Annual Conference	2021
Outstanding Research Award, Supervisor , KICEM Annual Conference	2021
Outstanding Reviewer , Journal of Construction Engineering and Management	2020
Merit Paper Award, Supervisor , KICEM Annual Conference	2020
Outstanding Research Faculty Award , Ajou University	2020
Outstanding Research Award , Ajou University	2020
Outstanding Reviewer , Journal of Construction Engineering and Management	2018
CEE Departmental Nomination for the ProQuest Distinguished Dissertation Award , University of Michigan	2018
The Richard and Eleanor Towner Prize for Distinguished Academic Achievement , University of Michigan	2018
CEE Departmental Nomination for the Richard and Eleanor Towner Prize for Outstanding PhD Research , University of Michigan	2017
Rackham Predoctoral Fellowship , University of Michigan	2017
<ul style="list-style-type: none"> This is a prestigious university-wide fellowship that “supports outstanding doctoral students who are actively working on dissertation research that is unusually creative, ambitious and risk-taking.” It provides tuition, stipend, and benefits for one year. 	
2nd award in Engineering Graduate Research Symposium , University of Michigan	2016
The Honor Society of Phi Kappa Phi , University of Michigan Chapter	2016
Tau Beta Phi, The Engineering Honor Society , Michigan Gamma Chapter	2015
Chi Epsilon, The Civil Engineering Honor Society , University of Michigan Chapter	2015
Academic Poster Session Finalist , Construction Industry Institute Annual Conference	2015
John L. Tishman Fellowship , University of Michigan	2014
<ul style="list-style-type: none"> This is a prestigious inter-departmental fellowship that provides tuition, stipend, and benefits for promising first-year students. 	
Merit Scholarship , Seoul National University	2012–2013
1st award in the Parsons Brinkerhoff’s CM Competition , Parsons Brinkerhoff Korea	2012
Merit Scholarship , Seoul National University	2005–2006

BOOKS & BOOK
CHAPTERS

[B2] **Choi, B.** 2021. “Factory Production of Modular Construction” *Introduction to Modular Construction* , Goomiseokuan (in Korean)

[B1] **Choi, B.**, Seo, J. O., and Kim, E. 2020. “Construction Project Management” *Construction Management* , Goomiseokuan (in Korean)

REFEREED
JOURNAL PAPERS
(INTERNATIONAL)

(* my graduate student advisees, ** my undergraduate student advisee, ***my post-doctoral fellow advisee)

[J41] **Yoo, J., Hwang, S., Seo, J., and **Choi, B.** (2025) “Feasibility of Neckband Wearable 360° Cameras for Proximity Warning System on Construction Sites” , *Journal of Construction Engineering and Management*, (in review, Corresponding author)

[J40] *Choi, H., Kim, J., and **Choi, B.** (2025) “Framework for Developing a 3D Structural As-Built Model for Aging Buildings Using Machine Learning and Laser Scanning” , *Engineering, Construction*

and *Architectural Management*, (in review, Corresponding author)

[J39] *Baek, J., *Ban, J., Kim, H., Kim, D., and **Choi, B.** (2025) “Dual-stream Transformer-based Activity Classification for Off-Site Construction Productivity Analysis” *Automation in Construction*, (Accepted, Corresponding author)

[J38] *Ban, J., Kim, T., Kim, D., and **Choi, B.** (2024) “Experimental Study on the Feasibility of VR-generated Synthetic Data for Automated Productivity Monitoring in Modular Construction”, *Automation in Construction*, Vol. 178, 1064312 (Corresponding author)

[J37] Jeong, D., Kim, K., Hwang, S., Ryu, J., and **Choi, B.** (2025) “Assessing the Efficiency of Specialty Contractors in the Construction Industry Using DEA and Tobit Regression”, *Journal of Asian Architecture and Building Engineering*, Vol. 24, 100001 (Corresponding author)

[J36] Seo, W., **Choi, B.**, and Kim, J. (2025) “Machine-learning algorithm for room labeling in architectural plans”, *Science and Technology for the Built Environment* (accepted)

[J35] Lee, M., **Choi, B.**, Hwang, S. (2025) “Automatic Method to Predict Visual Pleasantness and Unpleasantness of Streetscape and Identify Key Micro-scale Components for Improving Pedestrian Environment”, *Developments in the Built Environment*, Vol. 22, 100652

[J34] Oh, S., Hong, S., **Choi, B.**, Ham, Y., and Kim, H. (2025) “Integrating Text Parsing and Object Detection for Automated Monitoring of Finishing Works in Construction”, *Automation in Construction*, Vol. 174, 106139

[J33] Saffari, S. F., Kim, D., and **Choi, B.** (2025) “Robotization of Miniature-Scale Radio-Controlled Excavator: A New Medium for Construction- Specific DNN Data Generation”, *IEEE Access*, Vol. 13, pp. 17054-17067

[J32] Bae, J., **Choi, B.**, Krupka, E., and Lee, S. (2025) “Harnessing Project Identity and Safety Norms to Promote Construction Workers’ Safety Behavior: Field Intervention Study”, *Journal of Construction Engineering and Management*, Vol. 151, No. 3, 14923

[J31] Kim, H., Lee, G., Ahn, H., and **Choi, B.** (2024) “Interpretable general thermal comfort model based on physiological data from wearable bio sensors: Light Gradient Boosting Machine (LightGBM) and SHapley Additive exPlanations (SHAP)”, *Building and Environment* Vol. 266, 112127 (Corresponding author)

[J30] Hong, S., **Choi, B.**, Ham, Y., Jeon, J., and Kim, H. (2024) “Massive-Scale construction dataset synthesis through Stable Diffusion for Machine learning training”, *Advanced Engineering Informatics*, Vol 62, Part C, 102866

[J29] Baek, F., Kim, D., Lee, G., **Choi, B.**, and Lee, S. (2024) “Effect of Human Emotional Responses on Human-Robot Team Productivity in Construction”, *Automation in Construction*, Vol. 166, 105608 (**Invited Paper from article at the International Conference on Construction Applications of Virtual Reality 2022**)

[J28] *Baek, J., Kim, D., and **Choi, B.** (2024) “Deep learning-based automated productivity monitoring for on-site module installation in off-site construction”, *Developments in the Built Environment*, Vol. 18, 100382 (Corresponding author)

[J27] *Moon, S., Kim, S., and **Choi, B.** (2024) “Comparative feasibility study of physiological signals from wristband-type wearable sensors to assess occupants’ thermal comfort”, *Energy and Buildings*, Vol. 308, 114032 (Corresponding author)

- [J26] Kim, Y., Ahn, S., **Choi, B.**, Choi, M., and Hwang, S. (2023) “Enhancing pedestrian perceived safety through walking environment modification considering traffic and walking infrastructure” *Frontiers in Public Health*, Vol 11-2023, 1326468
- [J25] *Choo, H., Lee, B., Kim, H., and **Choi, B.** (2023) “Automated detection of construction work at heights and deployment of safety hooks using IMU with a barometer” *Automation in Construction*, Vol 147, 104714 (Corresponding author)
- [J24] Seo, W., **Choi, B.**, Shin, D., and Kim, J. (2023) ”Development of a quality management system for precast concrete factories”, *Journal of Civil Engineering and Management*, Vol. 29, No. 5, 475–486
- [J23] *Choo, H., Lee, B., Kim, J., and **Choi, B.** (2023) “Discovering pathways to the improve maintainability of multifamily residential building remodeling projects: importance applicability analysis” *Sustainable Cities and Society*, Vol 89 (2023), 104335 (Corresponding author)
- [J22] *Shin, J. and **Choi, B.** (2022) “Design and Implementation of Quality Information Management System for Modular Construction Factory” *Buildings*, Vol. 12, No. 5, 654 (Corresponding author)
- [J21] ***Yoon, J., Kim, K., and **Choi, B.** (2022) “Integrated framework for quantifying and applying nonworking days to planning and scheduling for determining reasonable construction time”, *Journal of Management in Engineering* Vol. 34, No. 2, 04022023 (Corresponding author)
- [J20] **Choi, B.** and Lee, S. (2022) “The psychological mechanism of construction workers’ safety participation: The social identity theory perspective” *Journal of Safety Research*, Vol. 82, 194–206
- [J19] *Shin, J., *Moon, S., Cho, B. H., Hwang, Sand **Choi, B.** (2022) ”Extended technology acceptance model to explain the mechanism of modular construction adoption” *Journal of Cleaner Production* Vol. 342, 130963 (Corresponding author)
- [J18] Lee, M., Hwang, S., Park, Y., and **Choi, B.** (2021) “Factors affecting bike-sharing system demand by inferred trip purpose: Integration of clustering of travel patterns and geospatial data analysis” *International Journal of Sustainable Transportation* Vol. 126, No. 9, 847–860
- [J17] Lee, G., **Choi, B.**, Jebelli, H., and Lee, S. (2021) “Assessment of construction workers’ perceived risk using physiological data from wearable sensors: A machine learning approach” *Journal of Building Engineering* Vol. 42, 10284 (Corresponding author)
- [J16] Nam, S., ***Yoon, J., Kim, K., and **Choi, B.** (2020) ”Optimization of prefabricated components in housing modular construction” *Sustainability*, Vol. 12, No. 24, 10269 (Corresponding author)
- [J15] Lee, G., **Choi, B.**, Jebelli, H., Ahn, C., and Lee, S. (2020) “Noise Reference Signal-Based Denoising Method for EDA Collected by Multimodal Biosensor Wearable in the Field” *Journal of Computing in Civil Engineering*, Vol. 34, No 6, 04020044 (**Invited Paper from article at the 2019 ASCE International Workshop on Computing in Civil Engineering**)
- [J14] Lee, G., **Choi, B.**, Jebelli, H., Ahn, C., and Lee, S. (2020) “Wearable Biosensor and Hotspot Analysis-based Framework to Detect Stress Hotspots for Advancing Elderly’s Mobility” *Journal of Management in Engineering*, Vol. 36, No. 3, 04020010
- [J13] Lee, G., **Choi, B.**, Jebelli, H., Ahn, C., and Lee, S. (2020) “Wearable Biosensor and Collective Sensing-based Approach for Detecting the Elderly’s Environmental Barriers” *Journal of Computing*

in Civil Engineering, Vol.34, No. 2, 04020002

[J12] Jebelli, H., **Choi, B.**, and Lee, S. (2019) “Application of Wearable Biosensors to Construction Sites II: Assessing Workers’ Physical Demand” *Journal of Construction Engineering and Management*, Vol. 145, No. 11, 040180

[J11] Jebelli, H., **Choi, B.**, and Lee, S. (2019) “Application of Wearable Biosensors to Construction Sites. I: Assessing Workers’ Stress” *Journal of Construction Engineering and Management*, Vol. 145, No. 12 040179

[J10] Ahn, C., Lee, S., Sun, C., Jebelli, H., Yang, K., and **Choi, B.** (2019) “Wearable Sensing Technology Applications in Construction Safety and Health” *Journal of Construction Engineering and Management*, Vol. 145, No. 11, 03119007

[J09] **Choi, B.**, Jebelli, H., and Lee, S. (2019) “Feasibility Analysis of Electrodermal Activity (EDA) Acquired from Wearable Sensors to Assess Construction Workers’ Perceived Risk” *Safety Science*, Vol. 115, 110

[J08] Shen, W., **Choi, B.**, Tang, W., and Lee, S. (2018) “How to Improve Interface Management Behaviors in EPC Projects? : Roles of Formal Practices and Social Norms” *Journal of Management in Engineering*, Vol. 34, No. 6, 04018032

[J07] Hwang, S., Jebelli, H., **Choi, B.**, Choi, M., and Lee, S. (2018) “Measuring Workers’ Emotional State during Construction Tasks Using Wearable EEG” *Journal of Construction Engineering and Management*, Vol. 144, No. 7, 04018050

[J06] **Choi, B.** and Lee, S. (2018) “An Empirically Based Agent-Based Model of the Socio-Cognitive Process of Construction Workers’ Safety Behavior” *Journal of Construction Engineering and Management*, Vol. 144, No. 2, 04017102

[J05] **Choi, B.**, Hwang, S., and Lee, S. (2017) “What Drives Construction Workers’ Acceptance of Wearable Technologies in the Workplace?: Indoor Localization and Wearable Health Devices for Occupational Safety and Health” *Automation in Construction*, Vol. 84, 31-41

[J04] **Choi, B.**, Ahn, S., and Lee, S. (2017) “Construction Workers’ Group Norms and Personal Standards Regarding Safety Behavior: Social Identity Theory Perspective” *Journal of Management in Engineering*, Vol. 33, No. 4, 04017001

[J03] **Choi, B.** and Lee, S. (2017) “Role of Social Norms and Social Identifications in Safety Behavior of Construction Workers. II: Group Analyses for the Effects of Cultural Backgrounds and Organizational Structures on Social Influence Process” *Journal of Construction Engineering and Management*, Vol. 143, No. 5, 04016125

[J02] **Choi, B.**, Ahn, S., and Lee, S. (2017) “Role of Social Norms and Social Identifications in Safety Behavior of Construction Workers. I: Theoretical Model of Safety Behavior under Social Influence” *Journal of Construction Engineering and Management*, Vol. 143, No. 5, 04016124

[J01] **Choi, B.**, Lee, H.S., Park, M., Cho, Y. K., and Kim, H. (2014) “Framework for Work-Space Planning Using Four-Dimensional BIM in Construction Projects” *Journal of Construction Engineering and Management*, Vol. 140, No. 9, 04014041

REFEREED
JOURNAL PAPERS
(DOMESTIC)

[D05] Kim, H., Hwang, S., Kim. S., and **Choi, B.**, (2025) “AHP-Based Analysis of Accident Risk Factor Importance According to Construction Safety Management Level Evaluation Items: Establishing Stakeholder-Specific Safety Management Strategies” *Journal of Construction Safety*

Vol. 1, No. 1, pp. 1 - 6

[D04] Kim, H., Hwang, S., **Choi, B.**, and Lee, S. (2023) “An agent-based model of the effects of group norms and project identification on construction workers’ safety behavior” *Journal of Construction and Robotics* Vol. 2, No. 3, pp. 1 - 8

[D03] Oh, J., Kim, H., **Choi, B.**, and Kim, S. (2022) “Development of Energy Conservation Measures for Office Buildings by Analyzing Monthly Energy Use Patterns” *Journal of Architecture Institute of Korea* Vol. 38, No. 5, pp. 139 - 148

[D02] Kim, T., Park, S., **Choi, B.**, Kang, Y., Park K., Jeong, W., and Koo, C. (2022) “A Survey of Perception Differences Among University Students, Professors, and Practitioners on the Construction Technologies in the Fourth Industrial Revolution” *Korean Journal of Construction Engineering and Management*, Vol. 23, No. 3, pp. 095 - 103

[D01] **Choi, B.** Lee, H.S., Park, M., Kim, H., and Hwang, S. (2013) “4D BIM Based Workspace Planning Process in Building Construction Project.” *Korean Journal of Construction Engineering and Management*, Vol. 14, No. 5, pp. 175–187

REFEREED
CONFERENCE
PAPERS
(INTERNATIONAL)

(* my graduate student advisees, ** my undergraduate student advisee, ***my post-doctoral fellow advisee)

[C13] Park, F., Kim, D., Lee, G., **Choi, B.**, and Lee, S. (2022) “Emotional Response Modeling for Human-Robot Collaboration in Construction” *22nd International Conference on Construction Applications of Virtual Reality (CONVR2022)*, Seoul, Korea, (**Best Paper Award**)

[C12] **Choi, B.** and Lee, S. (2021) “Impact of the Dynamicity of Workgroup Changes on Social Influence of Construction Workers’ Safety Behaviors” *International Conference on Computing in Civil Engineering*, Orlando, FL

[C11] **Choi, B.**, Lee, G., and Lee, S. (2019) “Assessing Workers’ Perceived Risk During Construction Task Using A Wristband-Type Bio-Sensor” *Creative Construction Conference*, Budapest, Hungary

[C10] Lee, G., **Choi, B.**, Ahn, C., and Lee, S. (2019) “Feasibility of Wearable-Based Collective Sensing to Detect Environmental Barriers for Facilitating the Elderly’s Mobility” *International Conference on Smart Infrastructure and Construction*, Cambridge, United Kingdom

[C09] Lee, G., **Choi, B.**, Jebelli, H., Ahn, C., and Lee, S. (2019) “Reference Signal based Method to Remove Respiration Noise in Electrodermal Activity (EDA) Collected from the Field” *International Workshop on Computing in Civil Engineering*, Atlanta, GA

[C08] Jebelli, H., Choi, B., Kim, H., and Lee, S. (2018) “Feasibility Study of a Wristband-type Wearable Sensor to Understand Construction Workers’ Physical and Mental Status” *Construction Research Congress*, New Orleans, LA

[C07] Shen, W., **Choi, B.**, Lee, S., and Tang W. (2018) “Effects of Formal Practices and Teamwork on Interface Management Performance in Large-Scale Construction Projects” *Construction Research Congress*, New Orleans, LA

[C06] **Choi, B.** and Lee, S. (2017) “Impact of the Strictness and Cohesiveness of Management Feedback on Construction Workers’ Safety Behavior – Agent-Based Modeling and Simulation” *International Conference on Simulation and Modeling Methodologies, Technologies and Applications*, Madrid, Spain

[C05] **Choi, B.** and Lee, S. (2017) “Modeling the Effect of a Socio-Psychological Process on Construction Workers’ Safety Behavior” *International Workshop on Computing in Civil Engineering*, Seattle, WA

[C04] **Choi, B.** and Lee, S. (2016) “How Social Norms Influence Construction Workers’ Safety Behavior: A Social Identity Perspective” *Construction Research Congress*, San Juan, Puerto Rico

[C03] **Choi, B.,** Ahn, S., and Lee, S. (2015) “Understanding Group Norms Influence and Social Identification Influence in on Construction Workers Safety Behavior” *12th International Organization, Technology, and Management in Construction Conference*, Primosten, Croatia

[C02] Ahn, S., **Choi, B.,** and Lee, S. (2013) “Investigation on Construction Workers’ Social Norms and Managers’ Desired Norms Regarding Absence: Preliminary Results from a Norm Elicitation Technique” *CSCE International Construction Specialty Conference*, Vancouver, Canada.

[C01] Kim, H., Park, M., Lee, H.S. and **Choi, B.** (2012) “Automated Information Retrieval for Hazard Identification in Construction Site” *International Workshop on Computing in Civil Engineering*, LA, CA.

REFEREED
CONFERENCE
PAPERS
(DOMESTIC)

[DC07] *Ban, J. and **Choi, B.** (2024) “The Feasibility Analysis of Utilizing Virtual Reality Synthetic Data for Productivity Monitoring in Modular Construction” *Architecture Institute of Korea Annual Conference*, Gyeongju, Korea (in Korean) (**Outstanding Paper Awards**)

[DC06] **Choi, H., Park, H., and **Choi, B.** (2024) “Machine Learning-based Development of 3D As-built Structural Models for Maintenance of Aging Buildings” *Korean Institute of Construction Engineering and Management Annual Conference*, Jeju, Korea (in Korean)(**Outstanding Paper Awards**)

[DC05] **Jeon, I. and **Choi, B.** (2023) “Role of Management Factors in Shaping Organizational Citizenship Behavior : The Mediating Effect of Project Identification” *Korean Institute of Construction Engineering and Management Annual Conference*, Sokcho, Korea (in Korean)

[DC04] **Ban, J., *Baek, J., Seo, J., and **Choi, B.** (2023) “Feasibility Analysis of Synthetic Data Generated by Virtual Reality for Computer Vision-Based Productivity Monitoring in Modular Construction” *Korean Institute of Construction Engineering and Management Annual Conference*, Sokcho, Korea (in Korean) (**Outstanding Paper Awards**)

[DC03] **Baek, J., **Lee, J., and **Choi, B.** (2022) “Computer Vision-based Automated Productivity Monitoring System of On-Site Module Installing Task” *Korean Institute of Construction Engineering and Management Annual Conference*, Seoul, Korea (in Korean) (**Outstanding Paper Awards**)

[DC02] *Choo, H. and **Choi, B.** (2021) “A Preliminary Study of Design Strategy Development for Improving the Maintainability of Remodeling of the Apartment Building Projects Using Importance-Applicability Analysis (IAA)” *Korean Institute of Construction Engineering and Management Annual Conference*, Gyeongju, Korea (in Korean) (**Outstanding Paper Awards**)

[DC01] **Choi, B.,** Lee, H.S., Park, M., and Hwang, S. (2012) “Analysis of Collaborative Relationship between Predecessors and Successors in Construction Project Using System Dynamics” *Korean Institute of Construction Engineering and Management Annual Conference*, Daegu, Korea (in Korean).

INVITED SEMINARS
AND WORKSHOPS

[S10] **Choi, B.** (2024) “AI-Based Automated Productivity Monitoring of On-Site Construction in Off-Site Construction Projects”, Council on Tall Buildings and Urban Habitat Korea Annual

Conference, Seoul, Korea

[S09] **Choi, B.** and Ban, J. (2024), “Utilizing VR Synthetic Data for AI-based On-Site Construction Productivity Monitoring for Off-Site Construction”, Korean Institute of Construction Engineering and Management Annual Conference, Jeju, Korea

[S08] **Choi, B.** (2024), “Strategies for Promoting Field-Oriented R&D and Overcoming Barriers to Practical Application”, Construction Vision Forum, Seoul, Korea

[S07] Baek, J., Jeon, I., and **Choi, B.** (2023) “Quantitative Analysis of Indirect Advantages of Off-Site Construction: A Focus on Schedule Compression and Safety Improvement in Modular Construction”, Korean Society of Automation and Robotics in Construction (KSARC) 2023 Convention Conference, Sejong, Korea

[S06] **Choi, B.** (2020) “Wearable Technologies for Safety and Health Management in Construction Sites”, Dankook University, YongIn, Korea

[S05] **Choi, B.** (2019) “A Machine Learning Model for Classification of Construction Workers’ Risk Perception Using Wearable Bio Sensors” *KIBIM Annual Conference*, Korea Institute of Building Information Modeling (KIBIM), Seoul, Korea

[S04] **Choi, B.** (2019) “Wearable Technologies for Construction Safety and Health Management” *KICEM Forum*, Korea Institute of Construction Engineering and Management (KICEM), Seoul, Korea

[S03] **Choi, B.**, and Lee, S. (2017) “The Role of Socio-Cognitive Mechanism in Construction Workers’ Safety Behavior” *Engineering Graduate Research Symposium*, University of Michigan, Ann Arbor, MI, U.S.

[S02] **Choi, B.**, and Lee, S. (2016) “Effects of Socio-Cognitive Process on Construction Workers’ Unsafe Behavior” *Engineering Graduate Research Symposium*, University of Michigan, Ann Arbor, MI, U.S.

[S01] **Choi, B.**, and Lee, S. (2015) “Social Influence on Construction Workers’ Safety Behavior: The Role of Social Norms and Social Identities” *Construction Industry Institute Annual Conference 2015*, CII, Boston, MA, U.S.

PATENT

[P04] Construction site risk assessment work automation system and method thereof (pending), Application No. 10-2024-0186797 2024

[P03] Tower crane auxiliary system and its control method, Korean Intellectual Property Office (pending), Application No. 10-2023-0122403 2023

[P02] Apparatus and method for detecting defects in buildings based on machine learning, Korean Intellectual Property Office, No. 10-2758051 2025

[P01] System for detecting safety hook fastening based on wearable sensor for high altitude sk workers and method thereof, Korean Intellectual Property Office, No. 10-2669992 2024

SOFTWARE APPLICATIONS

[A03] Structural Dimension Prediction Software for Building Structural Members, Korea Copyright Association No. C-2023-053987 2023

[A02] Web-based Modular Construction Quality Management System, Korea Copyright Association

	No. C-2021-043528	2021
	[A01] Constructability analysis program for typical floor demolition and reinforced concrete work in residential building remodeling project, Korea Copyright Association No. C-2021-023853	2021
GRANT	Next Generation Modular Construction Core Technologies for Housing Supply Innovation (Co-PI)	
	Ministry of Land, Infrastructure, and Transport of Korea	2025-2027
	Object Recognition and Path Planning Technologies for Multi-Functional Construction Robots (PI: KRW 11M)	
	Ajou Univeristy	2025-2026
	Improvement of Housing Technology Standard Strategy and Management Efficiency (Co-PI)	
	Land & Housing Corporation	2025-2026
	Development of Core Technologies for Enhancing Fire Resistance and Residential Quality to Promote the Modular Construction Industry (Co-PI)	
	Ministry of Land, Infrastructure, and Transport of Korea	2025-2028
	Development of a Deliverable Management and Verification Framework to Support BIM-Based Facility Maintenance (Co-PI)	
	Korea Authority of Land & Infrastructure Safety	2025-2027
	Development of Standard Plans for Multi-Family Reseidental Buildings Utilizing Modular Construction Method (Co-PI)	
	Korea Land and Housing Cooperation	2024-2025
	Hazard Proximity Monitoring System for Construction Sites Using Wearable 360-Degree Camera (PI: KRW 15M)	
	Ajou Univeristy	2024-2025
	Automated Job Hazard Analysis for Construction Projects Using the Large Language Model (PI: KRW 20M)	
	Ajou Univeristy	2024-2025
	Investigating Support Measures and Strategies Enhancing the Capability of the Owners in Seoul Construction Industry (Co-PI)	
	Seoul Housing & Communities Cooperation	2024-2024
	Analysis of Construction Safety Management Level Assessment Data for Predicting the Risk of Construction Accidents (PI: KRW 72M)	
	Korea Authority of Land & Infrastructure Safety	2024-2025
	Immersive-Virtual-Reality-Based Construction Safety Training Focusing on Safety-Related Social Aspects (Co-PI)	
	Research Grants Council of Hong Kong	2023-2026
	Quantification of non-cost factor of modular construction (PI: KRW 50M)	

POSCO	2023-2023
Improvement of standard process to improve the asset management of LH (Researcher) Korea Land and Housing Corporation	2023-2023
Automated Productivity Analysis Platform for Off-Site Construction using Artificial Intelligence (PI: KRW 15M) Ajou Univeristy	2022-2024
Automated HVAC control system using wearable sensors and IoT sensors (PI: KRW 14.5M) Ajou Univeristy	2022-2024
Development of the standard construction period for the postal office (Co-PI: KRW 50M) Korea Post Procurement and Construction Center	2022-2022
Development of installation guidelines for Seoul Modular School Buildings (Researcher) Seoul Metropolitan Office of Education	2022-2022
Ajou Primier 10 (Co-PI: KRW 240M) Ajou University	2022-2024
Development of the ditigal safety watch system for deteriorated buildings in the regional area (Researcher) Ministry of Land, Infrastructure, and Transport of Korea	2022-2025
Effects of built environments of office occupants' stress and satisfaction (PI: KRW 20M) Ajou University	2021-2023
Planning of the development of a guideline for school space design and management using modular construction (Researcher) Korean Institute of Educational Facility Safety	2021-2021
Remodelling Project Management of Centumcityvill Apartment Complex (Co-PI) Gosan Urban Development Co. Ltd.	2021-2023
Development of a special specification and technical guideline for modular construction projects (Co-PI) Korea Land and Housing Corporation	2020-2021
Productivity and economic improvement of smart factory technology based HSA400 /PosMAC applied modular building construction (Co-PI) POSCO	2020-2021
Development of low cost and high-efficiency technologies for vertical extension of residential buildings (Co-PI) Ministry of Land, Infrastructure, and Transport of Korea	2020-2022
Development of an innovative apartment housing production system based on off-site construction (Co-PI)	

	Ministry of Land, Infrastructure, and Transport of Korea	2020–2023
	Construction Risk Monitoring Platform Using Collective Sensing of Wearable Bio Sensors (PI: KRW 90M)	
	National Research Foundation of Korea	2020–2022
	Technical Development of Modular Construction in Mid-high-Rise Building and Higher Productivity (Co-PI)	
	Ministry of Land, Infrastructure, and Transport of Korea	2020–2021
	Development of Standard of Organization for Combined Cycle Power Plant Construction Project (Researcher)	
	East-West Power Co., Ltd	2020–2020
	Smart Construction Safety Management System (PI: KRW 60M)	
	Ajou University	2019–2021
MISCELLANEOUS SUPPORTS	Strategic plan for research excellence of the graduate school of the Department of Architecture , Ajou University, KRW 2M	2021
	Effect of Project Identification on Construction Workers’ Safety Participation , Ajou University, KRW 1M	2020
	Rackham Conference Travel Grant , University of Michigan, \$800	2017
	Rackham Conference Travel Grant , University of Michigan, \$800	2015
	Rackham Graduate Student Research Grant , University of Michigan, \$1,500	2015
MOU	Research Collaboration Agreement Construction Vision Lab, University of Toronto, Canada	2022–present
	Research Collaboration Agreement Attentive Hub, University of Alberta, Canada	2022–present
	Research Collaboration Agreement Human-Centered Intelligent System Lab, West Virginia University, USA	2022–present
	Research Collaboration Agreement Ham Research Group, Texas A&M University, USA	2022–present
	Research Collaboration Agreement Human-Centered Construction IT Lab, Hong Kong Polytechnic University, China	2020–present
CURRENT STUDENTS	Graduate Students	
	Hyunjin Park, MSc student, Ajou University	2025–present
	• Construction Robot System for Aluminum Form Disassembly Work	
	Hwangjung Choi, MSc student, Ajou University	2025–present
	• Factors Influencing the Quality of Modular Construction Projects	
	Jiyeon Ban, MSc student, Ajou University	2024–present
	• Automated progress monitoring of modular construction using synthetic data from extended reality	
	Undergraduate Students	

- Minhyeok Kim, BS student, Ajou University 2024–present
- Construction Robot System for Aluminum Form Disassembly Work
- Soohwan Bae, BS student, Ajou University 2024–present
- Automated monitoring off-site construction using VR-generated synthetic data

PREVIOUS
STUDENTS

Graduate Students

- Jongyeon Baek, MSc student, Ajou University 2023–2025
- Automated progress monitoring of on-site assembly of modular and off-site construction
 - Current position: Doosan E&C
- Heonsang Choo, MSc student, Ajou University 2020–2022
- Monitoring Construction Workers' Work at Height Using Wearable Sensors
 - Current position: Ssangyong E&C
- Jiwoong Shin, MSc, Ajou University 2020–2022
- Extended Technology Acceptance Model to Explain the Mechanism of Modular Construction Adoption
 - Current position: Shinsegae E&C

Post-doctoral fellow

- Jongsik Yoon, Ph.D., Ajou University 2020–2020
- Methodology for Quantifying and Applying Nonworking Days for Determining Reasonable Construction Time
 - Current position: Construction Engineers Policy Institute of Korea

Graduated Undergraduate Students

- Ikhwan Jeon, BS student, Ajou University 2023–2024
- Automated job-hazard analysis using Large Language Model
 - Current position: SamwooCM Architects & Engineers
- Jaehyun Yoo, BS student, Ajou University 2023–2024
- Proximity monitoring system at construction sites using wearable 360 camera
 - Current position: Graduate School of Architectural Engineering, Sungkyunkwan University
- Jaesuk Lee, BS student, Ajou University 2021–2022
- Automated productivity monitoring of on-site module installation using computer vision
 - Current position: Hyundai Engineering
- Homin Lee, BS student, Ajou University 2020–2020
- Identify Construction Workers' Work at Height Using Wearable Sensors
 - Current position: Daewoo Engineering and Construction
- Jinho Lee, BS student, Ajou University 2020–2020
- Identify Construction Workers' Work at Height Using Wearable Sensors
 - Current position: Korea Asset Management Cooperation (Kamco)
- Hyunwoo Joo, BS student, Ajou University 2019–2019
- The Role of Project Identification in Construction Workers' Safety Behaviors
 - Current position: Hwaseong Urban Corporation
- Woncheol Lee, BS student, Ajou University 2019–2019
- Understanding Building Occupants' Thermal Comfort Using Wearable Bio Sensors
 - Current position: Kolon Global

Ph.D. Dissertation Committee

- Jaesang Seo, PhD student at Architectural Engineering, Ajou University, Korea 2023
- Development of Energy Performance Prediction Model for Neighborhood Facilities
- Young-Hoon Son, PhD student at Architectural Engineering, Ajou University, Korea 2023
- A Study of Influencing Factors for Decision-Making on Construction Contract Types: Focused on DoD Construction Aquisitions with Firm Fixed Procea and Cost Reimbursable in FAR
- Daewoon Jeong, PhD student at Architectural Engineering, Ajou University, Korea 2023
- Determinants of Efficiency of Specialty Construction Companies Using DEA and Tobit Regression Models
- Jun Young Jang, PhD student at Architectural Design and Engineering, Incheon National University, Korea 2022
- Automated Logistic Planning System for Precast Concrete Projects
- Jongsik Yoon, PhD student at Architectural Engineering, Ajou University, Korea 2020
- Activity Duration Segmentation Method (ADSM) Based Typical Duration Scheduling System
- SungHoon Nam, PhD student at Architectural Engineering, Ajou University, Korea 2019
- A Decision Support Model for Factory Production Planning through Prefabricated Components in Modular Buildings

Master Thesis Committee

- Seungmo Choi, MS student at Architectural Engineering, Ajou University, Korea 2025
- A Domain Adaptation Methodology Using Synthetic Images for Computer Vision-Based Automated Construction Progress Monitoring
- Sungsik Jeong, MS student at Architectural Engineering, Ajou University, Korea 2025
- Evolutionary Game Theory-Based Behavioral Strategy Analysis for Conflict Management of Private Construction Additional Costs
- Joonyeong Kang, MS student at Architectural Engineering, Ajou University, Korea 2025
- Seismic Performance Evaluation of a Prefabricated Steel Core System for Mid-to-High Rise Modular Buildings Using Buckling Restrained Braces(BRB)
- Jeonghwan Joo, MS student at Architectural Engineering, Ajou University, Korea 2025
- A study for the improvement of performance of diaphragm in high-rise modular building through analytical study
- Subin Bae, MS student at Architecture, Ajou University, Korea 2024
- Development of IFC/BIM Based Fire Information Management System for Proactive Response to Building Fires
- Subin Bae, MS student at Architectural Engineering, Ajou University, Korea 2023
- BIM-based development system for automatically generating the assembly sequence of PC components using Genetic Algorithm
- Mijin Kim, MS student at Architecture, Ajou University, Korea 2023
- Anthropomorphic Soft-robot Hand: Application in multi-task human-robot collaborative architecture
- Mollaeiubli Takmasib, MS student at Architecture, Ajou University, Korea 2023
- Experimental Investigation of AI Model Performance for Daylight Control using XAI
- Daseul Park, MS student at Architectural Engineering, Ajou University, Korea 2023
- Defect Information Management Systems for Aparment Buildings using Mahcine Learning

- Hyeon-Ju Shin, MS student at Architectural Engineering, Ajou University, Korea 2022
- Proposal of smart construction quality management work process in construction phase and Development of BIM-based construction quality management system framework : Focused on floor tile work
- Dahee Kim, MS student at Architectural Engineering, Ajou University, Korea 2022
- Integrated Fire Disaster Monitoring System using Building Information Modeling
- Joonho Lee, MS student at Architectural Engineering, Ajou University, Korea 2022
- Predictive model of Life Cycle Carbon Emission of Modular Buildings using Machine Learning
- Hyunjoon Kim, MS student at Architectural Engineering, Ajou University, Korea 2022
- Update the building usage profile to improve the energy consumption evaluation system
- Hyeongmin Ryu, MS student at Architectural Engineering, Ajou University, Korea 2021
- Automated structural evaluation of floor plans for remodelling of apartment housing
- Meesung Lee, MS student at Architectural and Urban System Engineering, Ewha Womans University, Korea 2019
- Study on the Factors Affecting Usage Intention of the Bike-sharing System through Users' Travel Patterns and Geospatial Data Analysis
- Honggeon Park, MS student at Architectural Engineering, Ajou University, Korea 2019
- Effect of Working Hour Reduction on Construction Project Schedule
- Wonkyung Koh, MS student at Architectural Engineering, Ajou University, Korea 2019
- Development of a Feasibility Evaluation Model for Old Apartment Remodeling with the Number of Household Increasing at the Preliminary Stage
- SooHyun Jung, MS student at Architectural Engineering, Ajou University, Korea 2019
- Development of 3D BIM based Building Fire Information Management System Prototype for Object Data Visualization

PROFESSIONAL
LEADERSHIP
AND SERVICE
ACTIVITIES

- Member**, Design Review Subcommittee, Public Procurement Service of Korea 2025–2025
- Chair**, Industry-Academic Cooperation Committee, KICS 2025–2025
- Member**, Building Committee, Gwangmyeong city 2024–2026
- Vice Chair**, Academic Research Committee, KICS 2024–2024
- Vice Chair**, Industry-Government-Academic Cooperation Committee, AIK 2024–present
- Member**, Technical Advisory Committee for Public Development Projects, KAMCO 2024–present
- Vice Chair**, International Exchange Committee, KICEM 2024–2025
- Vice Chair**, Quality Management Committee, KICEM 2024–2025
- Member**, Board of Directors, Korea Institute of Construction Safety 2024–2025
- Member**, Board of Directors, Korea Institute of Remodeling Convergence 2023–2025
- Member**, Construction Technical Review Committee, YongIn Special City 2023–present
- Member**, Technical Advisory and Review Committee for Power Building Design and Construction, KEPSCO 2023–present
- Member**, Research and Development Committee, KICEM 2022–2024
- Member**, Project Development Committee, Korea Railroad Corporation 2022–2024
- Member**, Apartment Remodeling Advisory Board, Seongnam City 2022–2024
- Member**, Technical Advisory Council, Public Procurement of Korea 2021–2023

Member, Advisory Council, Construction Engineer Policy Institute of Korea 2021–present
Member, Research Advisory Council, Seoul Institute of Technology 2020–present
Secretary, Industry Development Committee, KICEM 2020–2021
Member, 4th Industrial Revolution Construction TF Committee, KICEM 2020–2021
Member, Magazine Publication Committee, KICEM 2020–2021
Member, Architectural Institute of Korea (AIK) 2020–present
Member, ASCE Technical Council on Computing and Information Technology (TCCIT) Visualization, Information Modeling, and Simulation (VIMS) Committee 2017–present
Member, ASCE Technical Council on Computing and Information Technology (TCCIT) Data Sensing and Analysis (DSA) Committee 2017–present
Member, American Society of Civil Engineers (ASCE) 2017–present
Member, Korea Institute of Construction Engineering and Management (KICEM) 2013–present

CONFERENCE
 ORGANIZATION
 ACTIVITIES

Organizing Committee, Building Smart Conference, buildingSMART Korea, Seoul, Korea 2025
Track Chair, 2024 Architectural Institute of Korea Autumn Conference (IT Convergence Track), Gyungju, Korea 2024
Organizing Committee, Korea Institute of Construction Safety Annual Conference 2024
Technical Committee, 10th International Conference on Construction Engineering and Project Management (ICCEPM 2024), Sapporo, Japan 2024
Organizing Committee, Building Smart Conference, buildingSMART Korea, Seoul, Korea 2023
Track Chair, Korean Institute of Construction Engineering and Management Annual Conference (Off-Site Construction Track), Seoul, Korea 2022
Scientific Committee, International Conference on Construction Applications of Virtual Reality (CONVR 2022), Seoul, Korea 2022
Organizing Committee, Building Smart Forum, buildingSMART Korea, Seoul, Korea 2022
Track Chair, Korean Institute of Construction Engineering and Management Annual Conference (Construction Innovation Track), Gyungju, Korea 2021
Track Chair, Korean Institute of Construction Engineering and Management Annual Conference (Smart Construction Track), Suwon, Korea 2020
Track Chair, Korean Institute of Construction Engineering and Management Annual Conference (Track 4), Goyang, Korea 2019

EDITORSHIP

Editorial Board Member, Buildings 2025–present
Associate Editor, Smart Construction 2024–present
Assistant Specialty Editor, “Organizational Issues” area in the Journal of Construction Engineering and Management 2022–present
Guest Editor, Special Issue on “Advances in Studies in Artificial Intelligence for Construction Management” Buildings 2025
Guest Editor, Special Issue on “Construction Site Monitoring and Optimization using Digital Twins” Smart Construction 2024
Guest Editor, Special Issue on “Sustainable Construction Management and Computer Simulation” Sustainability 2020
Topic Editor, International Journal of Environmental Research and Public Health 2020–2023

PAPER AND
PROPOSAL GRANT
REVIEW

Reviewer , Developments in Built Environment, Elsevier	2024–present
Reviewer , Sustainable Cities and Society, Elsevier	2023–present
Reviewer , Journal of Occupational Health, John Wiley & Sons	2023–present
Reviewer , Heliyon, Cell Press	2022–present
Reviewer , International Journal of Human-Computer Studies, Elsevier	2022–present
Reviewer , International Journal of Disaster Risk Reduction, Elsevier	2022–present
Reviewer , Safety Science, Elsevier	2022–present
Reviewer , Journal of Management in Engineering, ASCE	2022–present
Reviewer , Buildings, MDPI	2022–present
Reviewer , Cities, Elsevier	2021–present
Reviewer , Frontiers in Psychology, Frontiers	2021–present
Reviewer , Computers & Electrical Engineering, Elsevier	2021–present
Reviewer , Journal of Building Engineering, Elsevier	2021–present
Reviewer , Digital Signal Processing, Elsevier	2021–present
Reviewer , Intl’ Journal of Environmental Research and Public Health, MDPI	2021–present
Reviewer , Seoul Institute of Technology Grant	2020–present
Reviewer , National Research Foundation of Korea Grant	2020–present
Reviewer , Journal of Environmental Management, Elsevier	2020–present
Reviewer , Safety and Health at Work, Elsevier	2020–present
Reviewer , Sustainability, MDPI	2020–present
Reviewer , Advanced Engineering Informatics, Elsevier	2020–present
Reviewer , Advances in Civil Engineering, Hindawi	2020–present
Reviewer , Applied Science, MDPI	2019–present
Reviewer , Automation in Construction, Elsevier	2019–present
Reviewer , KSCE Journal of Civil Engineering, Springer	2019–present
Reviewer , Journal of KIBIM, Korea Institute of Building Information Modeling	2019–present
Reviewer , Sensors, MDPI	2019–present
Reviewer , Journal of Civil Engineering and Management, Techno Press	2019–present
Reviewer , Advances in Computational Design, Techno Press	2018–present
Reviewer , Journal of Computing in Civil Engineering, ASCE	2018–present
Reviewer , Journal of Construction Engineering and Management, ASCE	2017–present
Reviewer , Journal of Construction Engineering and Project Management, KICEM	2016–present

CONSULTING

University of Michigan, USA

- Technical consulting service on construction workers’ emotional responses to robots at construction sites 2023

Cambridge Innovation Consulting, UK

- Technical consulting service on the new robotic and automation solutions in Japan, Korea, China and Singapore 2016

UNIVERSITY SERVICE	Program Director , Micro Degree of AI in Architecture, Ajou Univeristy	2024–present
	Planning Committee , College of Engineering, Ajou Univeristy	2023–present
	Program Director , Architectural Engineering Program, Ajou Univeristy	2023–2025
	Basic Science and Math Committee , Ajou Univeristy	2021
	Scholarship Committee , School of Engineering, Southern Illinois University	2018
	Computer Committee , School of Engineering, Southern Illinois University	2018
	Safety Committee , School of Engineering, Southern Illinois University	2018
REFERENCES	Available upon request	