

HYUN WOO “CHRIS” LEE, Ph.D., LEED AP BD+C

Professor

Holder of P.D. Koon Professorship in Construction Management

Undergraduate Program Coordinator

Department of Construction Management (CM)

College of Built Environments (CBE)

University of Washington

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<https://scholar.google.com/citations?user=nQE56v0AAAAJ&hl=en>

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

Ph.D., Engineering and Project Management Program in Civil Engineering May 11, 2012

Dissertation title: *Application of Target Value Design to Energy Efficiency Investments*

PhD committee co-chairs: Profs. Iris D. Tommelein & Glenn Ballard

M.S., Engineering and Project Management Program in Civil Engineering May 22, 2004

SEOUL NATIONAL UNIVERSITY, Seoul, Korea

B.S. in Engineering (Architectural Engineering) Feb 26, 1999

ACADEMIC POSITIONS

Professor	University of Washington (UW)	2026 to date
P.D. Koon Professorship in Construction Management		2019 to date
Member Faculty	Mobility Innovation Center	2023 to date
Affiliated Faculty	Clean Energy Institute	2017 to date
Associate Professor	University of Washington (UW)	2019 to 2026
Visiting Professor	KAIST (Korea Advanced Institute of Science and Technology)	2022 to 2023
Assistant Professor	University of Washington (UW)	2016 to 2019
Assistant Professor	Oregon State University (OSU)	2012 to 2015
Graduate Student Researcher	University of California, Berkeley	2009 to 2012
Graduate Student Instructor	University of California, Berkeley	2006
Graduate Student Researcher	University of California, Berkeley	2004 to 2005

INDUSTRY EXPERIENCE

Faculty Intern	Lease Crutcher Lewis, Seattle, WA	Summer 2017
Senior Estimator/Engineer	Shimmick Construction, Oakland, CA	2007 to 2010
Project Engineer	Tutor Perini Corporation, Las Vegas, NV	2006 to 2007
Consulting Intern	Peck & Hiller Company, Palo Alto, CA	2004
Field Engineer	Sambu Construction, Seoul, Korea	1999 to 2002

HONOR AND AWARDS

CBE Outstanding Faculty Award	2025
Best Papers Award at ARES 2021	2021
ASC Regional Teaching Award	2018
Excellence in Academic Research (UW CM)	2016, 2017, 2018
BE Collaboration Innovative	2017
2015 Outstanding Reviewer (<i>Journal of Construction Engineering and Management</i>)	2016
NSF Travel Grant (CEC 2014)	2014
Early Career Award (ELECTRI International)	2013
Best Papers Award at IGLC 18	2010
1st Prize in Student Competition for Supply Chain Management, UC Berkeley	2004
Student CAD Competition, Seoul, Korea	
1st Prize in Presentation	1997
2nd Prize in Animation, and 3rd Prize in Presentation	1996

CLASSES TAUGHT

CM588	Construction Operations and Productivity	UW	2024 to date
CM586	Utility Systems Construction	UW	2020 to date
CM540	Sustainable Construction	UW	2017 to date
CM410	Construction Estimating II	UW	2016 to date
CM331	Construction Estimating I	UW	2016 to date
CM311	Construction Documents	UW	2020 to 2023
BE405/505&498/598	Data Center Design Studio/Seminar	UW	2020
URBDP498/ENGR497, 297	Vertically Integrated Projects (co-teaching)	UW	2017
CEM342	Construction Estimating II	OSU	2013 to 2015
CE420/520	Engineering Planning	OSU	2014 to 2015
CCE529	Lean Construction	OSU	2012 to 2015
CCE102	Problem-solving and Technology	OSU	2013

EXTERNAL PROFESSIONAL SERVICE

Advisory Board, Lean Construction Journal	2020 to date
Assistant Specialty Editor (Case Studies), Journal of Construction Engineering and Management	2015 to date
Associate Editor, Journal of Built Environments	2017 to 2019
Associate Editor, Journal of Construction Engineering and Project Management	2015 to 2016
Journal Reviewer	
ASCE Journal of Construction Engineering and Management	
ASCE Journal of Management in Engineering	
ASCE Journal of Professional Issues in Engineering Education and Practice	
Construction Management and Economics	
Automation in Construction	
International Journal of Construction Education and Research	
Canadian Journal of Civil Engineering	
KSCE Journal of Civil Engineering	
Building Research & Information	

Safety Science
 Energy Efficiency
 Journal of Cleaner Production
 Sustainable Cities and Society
 Journal of Building Engineering
 Energy Research & Social Science
 International Journal of Geo-Information
 Travel Behaviour and Society
 Applied Geography
 Advances in Engineering Software
 Journal of Empirical Legal Studies

Reviewer, Grant Application for National Center for Sustainable Transportation at UC Davis 2024, 2025
 International Scientific Committee Member, 10th International Conference on Innovative Production
 and Construction 2024 (IPC 2024) 2023 to 2024
 Session Chairs, ASCE International Conference on Computing in Civil Engineering (I3CE 2023) 2023
 Reviewer, ASCE 2022 Construction Research Congress (CRC 2022) 2021
 Reviewer, ASCE 2020 Construction Research Congress (CRC 2020) 2019
 Session Chair, New Frontiers in Construction Conference (CERC) 2016 to 2017, 2019
 Reviewer, [Construction Solutions](#), CPWR 2018
 Session Moderator, ASCE 2018 Construction Research Congress (CRC 2018) 2018
 Reviewer, ASCE 2014 Construction Research Congress (CRC 2014) 2013
 Education Committee, KACEPMA (Korean American Construction Engineering and Project Management Association) 2012 to 2013
 Reviewer, 5th International Conference on Construction Engineering and Project Management 2012
 Workshop Coordinator, Project Production Systems Laboratory (P2SL) 2011 to 2012
 Reviewer, ASCE 2012 Construction Research Congress (CRC 2012) 2011
 Reviewer, 18th Annual Conference of the International Group for Lean Construction (IGLC 18) 2010

PROFESSIONAL AFFILIATIONS

Member, American Society of Civil Engineers (ASCE)
 Member, ASCE Construction Research Congress
 Academic Member, Lean Construction Institute
 Member, International Group for Lean Construction
 Member, Korean-American Scientists and Engineering Association
 Member, Korean-American Construction Engineering and Project Management Association (KACEPMA)
 Member, Korea Construction Engineers Association

UNIVERSITY/COLLEGE SERVICE

CM Undergraduate Program Coordinator	UW	2023 to date
CM Undergraduate Committee Chair	UW	2023 to date
CIAC Undergraduate Subcommittee	UW	2021 to date
CM Undergraduate Admission Committee Chair	UW	2022 to 2023
CBE LEADS Program – Inaugural Cohort	UW	2023
Royalty Research Fund (RRF) Reviewer	UW	2023
CM Undergraduate Admission Committee Member	UW	2020 to 2021
CBE College Council	UW	2019 to 2022

CBE Curriculum Committee	UW	2019 to 2022
Real Estate Dept Chair Search Committee	UW	2021 to 2022
CBE Cohort Hire Search Committee	UW	2021
CIAC Event Subcommittee	UW	2021
CM Assistant Prof Search Committee	UW	2021
CBE Curriculum Committee Co-Chair	UW	2019 to 2020
Reviewer, EarthLab Innovation Grant Program	UW	2020
Faculty Advisor for MCA Student Team	UW	2016 to 2019
Affiliated Faculty Advisor for UW Solar	UW	2017 to 2019
CERC Steering Committee	UW	2016 to 2017
School Head Search Committee	OSU	2014
Graduate Committee	OSU	2013 to 2014
Strategic Planning Committee	OSU	2012 to 2013

CERTIFICATIONS

LEED AP BD+C (11107379-AP-BD+C)	2018
FE/EIT in Civil Engineering (California)	2006
FE in Architectural Engineering, 1 st Degree (Korea)	1999

RESEARCH GRANTS AND PROJECTS

CURRENT PROJECTS

Funding Agency & Timeline	PI (and Co-PIs)	Title	Total Budget
Washington State Labor and Industries Jan 2026 to date	PI: Lee, H.W. Co-PI: Darko, A.; Wu, L.; Mackey, M.	SAFE-AI Guide: Best Practices for AI-Enhanced Construction Safety Planning for Small Businesses	\$173,164
Washington State Department of Transportation Sept 2025 to date	PI: Lee, H.W. Co-PI: Berney, R.; Wu, L.; Treece, B.	Shore Power: Partnerships to Provide eMobility Options at the Bremerton Ferry Terminal for a Greener Future	\$200,000
Port of Seattle Aug 2025 to date	Phase A PI: MacKenzie, D; Phase B PI: Lee, H.W. Co-PI: Treece, B.	Taxi and Transportation Network Company (TTNC) Electrification Policy Guidance	\$137,614

SUBMITTED, DECISION PENDING

Agency & Submission Date	PI (and Co-PIs)	Title	Total Budget
Washington State Labor and Industries June 2026	PI: Lee, H.W. Co-PI: Darko, A.; Wu, L.; Mackey, M.	Beyond Compliance: Unlocking Safety Intelligence Through Meaningful Leading Indicators for Small Contractors Selected for award; expected to start in Winter 2027	\$174,887
Arnold Ventures June 2026	PI: Lee, H.W. Co-PI: Treece B.; Migliaccio, G.	When Cost Estimates Become Commitments: Early Cost Lock-In and Inflation Risk in U.S. Transportation Projects	\$199,698

		Selected for award; expected to start in Summer 2027	
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PAST PROJECTS

Funding Agency & Timeline	PI (and Co-PIs)	Title	Total Budget
CBE Research Summer 2026	PI: Lee, H.W.	Student Publication Support Grant	\$3,375
RE Endowment Fund June 2025 to March 2026	PI: Dermisi, S. Co-PI: Lee, H.W.	Evaluating the Impact of Heat Pump Adoption on Energy and Rental Performance in Seattle's Multifamily Housing Sector	\$45,000
UW College of Built Environments INSPIRE Fund March 2025 to March 2026	PI: Lee, H.W. Co-PI: Wu, L.	Equitable Public Electric Vehicle Charging in Seattle: A Baseline Data Mining Approach for Public Capital Planning	\$5,000
National Research Foundation of Korea Sep 2024 to Aug 2025	PI: Jeon, B.J. Advisor: Lee, H.W.	[Postdoc Research] Development of a Fatigue Risk Evaluation and Management System in Construction Project	\$43,824
UW Clean Energy Institute July 2024 to June 2025	PI: Wu, L. Co-PI: Lee, H.W.; Stevenson, D.	Equitable Public Electric Vehicle Charging Infrastructure Expansion—From the Tribal Community Perspective	\$47,608
King County Metro, Sound Transit, Seattle City Light Jan 2023 – Dec 2024	PI: Whittington, J. Co-PI: Lee, H.W., Berney, R.	Electrified Mobility Hubs: A Blueprint for the Future of Transit Infrastructure	\$130,000
King County Metro May 2023 – Oct 2023	PI: Lee, H.W.	Evaluation of a Public/Private Partnership (P3) Model for Bus Base Electrification	\$85,000
UW Global Innovation Fund (and American Indonesian Cultural and Educational Foundation) May 2022 – Sept 2023	PI: Lee, H.W. Co-PI: Dermisi, S.; Burpee, H.; Bramono, N.; External: Berawi, M.A.	Mitigating Effects of Future Pandemics with the Use of Risk-Responsive Building Codes: A Developing Country Framework	\$6,088
UW College of Built Environments INSPIRE Fund March 2022 – March 2023	PI: Lee, H.W. Co-PI: Dermisi, S.; Burpee, H.; Bramono, N.	Investigating the Health Requirements and Risk-Responsiveness Criteria in Office Building Codes for Mitigating COVID-19 and Future Airborne Diseases	\$5,000
Washington State Labor and Industries July 2020 – March 2022	PI: Lee, H.W. Co-PI: Gambatese, J.; Stuart, J.; Foley, K.	Developing a Prevention through Design (PtD) Guide for Mechanical/Electrical/Plumbing Worker Safety	\$173,779

UW College of Built Environments INSPIRE Fund March 2021 – Feb 2022	PI: Lee, H.W. Co-PI: Min, Y.	Investigating Energy Justice in Washington State in Terms of Photovoltaic (PV) Systems and Electric Vehicle (EV) Chargers	\$5,000
Google Sept 2020 – Oct 2021	PI: Kriegh, J. Co-PI: Lee, H.W.; Whittington, J.	Launching a Sustainable Data Center for the Future	\$49,900
Washington State Labor and Industries July 2019 – July 2021	PI: KCSC SME: Lee, H.W.	Cultural and Linguistically Competent Health and Safety Education and Outreach to Korean-American Businesses and Workers	\$148,695
UW Population Health Institute July 2020 – May 2021	PI: Dermisi, S. Co-PI: Lee, H.W. Collaborators: Kim, Y.; Whittington, J.; Proksch, G.	Economic Impact of Office Workplace Transformation due to COVID-19: How Can Buildings and Surrounding Areas Recover?	\$24,959
CPWR Sep 2018 - Nov 2019	PI: Lee, H.W. Co-PI: Gambatese, J.	Prevention through Design (PtD) to Make Solar-Ready Houses Safe for Solar Workers	\$29,154
Washington State Labor and Industries April 2018 - Sep 2019	PI: Lee, H.W. Co-PI: Gambatese, J.; Kim, Y.-W.; Stuart, J.	Develop a Lean Practice Manual for Improving the Safety of Electrical Construction Workers	\$149,827
UW Transportation Oct 2018 - June 2019	PI: Whittington, J. Co-PI: Lee, H.W.; Dermisi, S.	UW Transportation Electrification and Solar Study	\$53,259
RERI-LBNL-DOE Jun 2018 - May 2019	PI: Dermisi, S. Co-PI: Lee, H.W.; Choi, Y.	Effect of Energy Benchmarking and Disclosure on Office Building Marketability	\$49,915
Pankow-Skanska-Oregon DEQ Jan 2018 - Jan 2019	PI: Simonen, K. Co-PI: Lee, H.W.	Life Cycle Assessment (LCA) for Low Carbon Construction Commercial Office Building MEP & Interiors Data	\$40,000
UW College of Built Environments Jan 2017 - Feb 2018	PI: Lee, H.W. Co-PI: Dermisi, S.	Impact of Energy Benchmarking and Disclosure on the Performance of Office Buildings	\$14,000
CPWR Aug 2016 - Sep 2017	PI: Lee, H.W. Co-PI: Gambatese, J.	Applying Prevention through Design (PtD) to Solar Systems in Small Buildings	\$29,470
Skanska Jan - July 2017	PI: Dossick, C.S. Co-PI: Lee, H.W.	Preconstruction BIM Workflow	\$61,178
Oregon DOT July 2015 - March 2017	PI: Gambatese, J. Co-PI: Lee, H.W.	Work Zone Intrusion Alert Technologies: Assessment and Practical Guidance	\$239,327
PacTrans Jan 2015 - Nov 2016	PI: Lee, H.W. Co-PI: Arocho, I.	Fault Tree Analysis for Accident Prevention in Transportation Infrastructure Projects	\$29,999
US Army Corps of Engineers Nov 2015 - Sep 2016	PI: Dossick, C.S. Co-PI: Lee, H.W.	BIM to BUILDER Data Transfer	\$150,000

PacTrans July 2013 - March 2015	PI: Lee, H.W.	Investigating the Feasibility of Using QR (Quick Response) Codes for Construction Document Control in Highway Construction	\$20,000
ELECTRI International Aug 2013 - Jan 2015	PI: Lee, H.W.	Exploring the Opportunities for Applying Lean Principles to Electrical Prefabrication	\$7,000
City University of Hong Kong Feb 2013 - Jan 2014	PI: Kim, Y	Establishing Interdisciplinary Research Collaboration for Developing Sustainable Design Methods of Urban Housing Redevelopment	\$15,000
Oregon DOT Sep 2012 - Nov 2013	PI: Trejo, D.	Anti-stripping Additives for Reducing the Moisture Sensitivity of HMAC Mixtures	\$177,738

RECOGNIZED PROPOSALS – NOT ADVANCED TO EXECUTION

Agency & Submission Date	PI (and Co-PIs)	Title	Total Budget
CPWR December 2018	PI: Lee, H.W. Co-PI: Gambatese, J.; Kim, Y.-W.; Osburn, L.	Alignment of Lean and Safety for Improving Safety Culture <i>(Advanced to finalist stage)</i>	\$570,893
Kunwon Engineering December 2013	PI: Lee, H.W. Co-PI: Park, K.	Benchmarking Best Practices of US Construction Management Business <i>(Selected for award; not implemented due to budget cuts)</i>	\$140,000
Oregon Watershed Enhancement Board October 2013	PI: Halama, J. Co-PI: Lee, H.W.	Watershed Restoration Benefit/Assessment/Prioritization Project Management Model <i>(Selected for award; not implemented due to budget cuts)</i>	\$195,480
US DOE April 2013	PI: Earth Advantage Co-PI: Lee, H.W.	DE-FOA-0829-1553: Energy Efficiency <i>On-Ramp</i> for Small Buildings <i>(Advanced to finalist stage)</i>	\$5,300,000
Construction Industry Institute March 2013	PI: Gambatese, J. Co-PI: Lee, H.W.	Statement of Qualifications and Interest for “Adapting Your Organization to Benefit from New Technology and Innovation” <i>(Received a top evaluation score; not awarded due to topic area not being prioritized for funding)</i>	\$200,000

PUBLICATIONS

PEER-REVIEWED JOURNAL PUBLICATIONS

1. Lee, H.W., Osburn, L., Treece, B., and Trieu, H. (2026). “Advancing Transit Facility Electrification through Public-Private Partnerships: Lessons and Frameworks for U.S. Agencies.” *Built Environment Project and Asset Management*.
2. Min, Y. and Lee, H.W. (2024). “Adoption Inequalities and Causal Relationship between Residential Electric Vehicle Chargers and Heat Pumps.” *ASCE Journal of Construction Engineering and Management*, 04024025.
3. Min, Y. and Lee, H.W. (2024). “Quantifying Clean Energy Justice: Impact of Solarize Programs on Rooftop Solar Disparities in the Pacific Northwest.” *Sustainable Cities and Society*, 105287.
4. Wang, Y., Hu, S., Lee, H.W., Tanga, W., Shen, W., and Qianga, M. (2023). “To Achieve Goal Alignment by

- Interorganizational Incentives: Case Study of A Hydropower Project.” *Buildings*, 13(9), 2258.
5. Shang, L., Dermisi, S., Choe, Y., Lee, H.W., and Min, Y. (2023). “Assessing the Office Building Marketability Before and After the Implementation of Energy Benchmarking and Disclosure Policies – Lessons Learned from Major US Cities.” *Sustainability*, 15(11), 8883.
 6. Min, Y. and Lee, H.W. (2023). “Characterization of Vulnerable Communities in Terms of the Benefits and Burdens of the Energy Transition in Pacific Northwest Cities.” *Journal of Cleaner Production*, 135949.
 7. Min, Y., Lee, H.W., and Hurvitz, P.M. (2023). “Clean Energy Justice: Different Adoption Characteristics of Underserved Communities in Rooftop Solar and Electric Vehicle Chargers in Seattle.” *Energy Research and Social Science*, 96(1), 102931.
 8. Osburn, L., Lee, H.W., and Gambatese, J. (2022). “Formal Prevention through Design (PtD) Process and Implementation for Mechanical/Electrical/Plumbing Worker Safety.” *ASCE Journal of Management in Engineering*, 38(5), 05022011.
 9. Choi, S., Kim, S., Kwak, M., Park, J., Park, S., Kwak, D., Lee, H.W., and Lee, S. (2022). “Would You Trust Driverless Service?: Formation of Pedestrian's Trust and Attitude using Non-verbal Social Cues.” *Sensors*, 22(7), 2809.
 10. Su, S., Li, X., Zhu, C., Lu, Y., and Lee, H.W. (2021). “Dynamic Life Cycle Assessment: A Review of Research for Temporal Variations in Life Cycle Assessment Studies.” *Environmental Engineering Science*, 38(11).
 11. Wang, Y., Lee, H.W., Tang, W., Whittington, J., and Qiang, M. (2021). “Structural Equation Modeling for the Determinants of International Infrastructure Investment: Evidence from Chinese Contractors.” *Journal of Management in Engineering*, 37(4), 04021033.
 12. Choi, K., Bae, J., Yin, Y., and Lee, H.W. (2021). “ACT2: Time-Cost Tradeoffs of Alternative Contracting Method.” *ASCE Journal of Management in Engineering*, 37(1), 04020091.
 13. Droguett, B. X. R., Huang, M., Lee, H.W., Simonen, K., and Ditto, J. (2020). “Mechanical, Electrical, Plumbing and Tenant Improvements Over the Building Lifetime: Estimating Material Quantities and Embodied Carbon for Climate Change Mitigation.” *Energy and Buildings*, 226, 110324.
 14. Nnaji, C., Karakhan, A., Gambatese, J., and Lee, H.W. (2020). “Case Study to Evaluate Work Zone Safety Technologies in Highway Construction.” *Practice Periodical on Structural Design and Construction*, 25(3), 05020004.
 15. Lee, Y.-C., Shariatfar, M., Rashidi, A., Lee, H.W. (2020). “Evidence-Driven Sound Detection for Prenotification and Identification of Construction Safety Hazards and Accidents.” *Automation in Construction*, 113, 103127.
 16. Ho, C., Lee, H.W., and Gambatese, J. (2020). “Application of Prevention through Design (PtD) to Improve the Safety of Solar Installations on Small Buildings.” *Safety Science*, 125, 104633.
 17. Nnaji, C., Gambatese, J., Lee, H.W., and Zhang, F. (2020). “Improving Construction Work Zone Safety Using Technology: A Systematic Review of Applicable Technologies.” *Journal of Traffic and Transportation Engineering*, 7(1), 61-75.
 18. Gomez Cunha, L.A., Fardhosseini, M.S., Lee, H.W., and Choi, K. (2020). “Analyzing Investments in Flood Protection Structures: A Real Options Approach.” *International Journal of Disaster Risk Reduction*, 43(2), 101377.
 19. Shang, L., Lee H.W., Dermisi, S., and Choe, Y., (2020). “Impact of Energy Benchmarking and Disclosure Policy on Office Buildings.” *Journal of Cleaner Production*, 250, 119500.
 20. Park, K., Lee, H.W., Lee, S.-H., and Choi, K. (2019). “Project Risk Factors Facing Construction Management Firms.” *International Journal of Civil Engineering*, 17(3), 305-321.
 21. Lee, H.W., Harapanahalli, B.A., Nnaji, C., Gambatese, J., and Kim, J. (2018). “Feasibility of using QR Codes in

- Highway Construction Document Management.” *Transportation Research Record: Journal of the Transportation Research Board*, 2672(26), 114-123.
22. Kim, J., Lee, H.W., Bender, W., and Hyun, C. T. (2018). “A Model for Collecting Replacement Cycles of Building Components: A Hybrid Approach of Indirect and Direct Estimations.” *Journal of Computing in Civil Engineering*, 32(6), 04018051.
 23. Nnaji, C., Gambatese, J., and Lee, H.W. (2018). “Work Zone Intrusion: Technology to Reduce Injuries & Fatalities.” *Professional Safety*, 63(4), 36-41.
 24. Nnaji, C., Lee, H.W., Karakhan, A., and Gambatese, J. (2018). “Developing a Decision-Making Framework to Select Safety Technologies for Highway Construction.” *Journal of Construction Engineering and Management*, 144(4), 04018016.
 25. Shakouri, M., Lee, H.W., and Kim, Y.-W. (2017). “A Probabilistic Portfolio-based Model for Financial Valuation of Community Solar.” *Applied Energy*, 191(1), 709-726.
 26. Gambatese, J., Pestana, C., and Lee, H.W. (2016). “Investigation of Alignment between Lean Principles and Practices and Worker Safety Behavior.” *Journal of Construction Engineering and Management*, 04016083.
 27. Choi, K. and Lee, H.W. (2016). “Deconstructing the Construction Industry: A Spatiotemporal Clustering Approach to Profitability Modeling.” *Journal of Construction Engineering and Management*, 04016051.
 28. Shakouri, M. and Lee, H.W. (2016). “Mean-Variance Portfolio Analysis Data for Optimizing Community-based Photovoltaic Investment.” *Data in Brief*, 6(1), 840-842.
 29. Choi, K., Lee, H.W., Bae, J., and Bilbo, D. (2016). “Time-Cost Performance Effect of Change Orders from Accelerated Contract Provisions.” *Journal of Construction Engineering and Management*, 142(3), 04015085.
 30. Kim, T.-H., Lee, H.W., and Hong, S.-W. (2016). “Value Engineering for Roadway Expansion Project over Deep Thick Soft Soils.” *Journal of Construction Engineering and Management*, 142(2), 05015014.
 31. Choi, K., Lee, H.W., Mao, Z., Lavy, S., and Ryoo, B.Y. (2016). “Environmental, Economic, and Social Implications of Highway Concrete Rehabilitation Alternatives.” *ASCE Journal of Construction Engineering and Management*, 142(2), 04015079.
 32. Shakouri, M., Lee, H.W., and Choi, K. (2015). “PACPIM: New Decision-Support Model of Optimized Portfolio Analysis for Community-Based Photovoltaic Investment.” *Applied Energy*, 156(1), 607-617.
 33. Choi, K., Kim, Y.H., Bae, J., and Lee, H.W. (2015). “Determining Future Maintenance Costs for Low-Volume Highway Rehabilitation Projects.” *Journal of Computing in Civil Engineering*, 04015055.
 34. Lee, H.W., Tommelein, I.D., and Ballard, G. (2015). “Target-Setting Practice for Loans for Commercial Energy Retrofit Projects.” *Journal of Management in Engineering*, 31(3), 04014046.
 35. Lee, H.W., Oh, H., Kim, Y., and Choi, K. (2015). “Quantitative Analysis of Warnings in Building Information Modeling (BIM).” *Automation in Construction*, 51(3), 23-31.
 36. Xing, G., Kim, Y., and Lee, H.W. (2014) “Life-cycle Cost Analysis of Using Rainwater Harvesting Systems in Hong Kong Residential Buildings.” *Journal of The Korean Housing Association*, 25(3), 53-62.
 37. Park, K., Lee, H.W., and Kim, C.-D. (2014). “Developing User Interfaces of Modules for Mobile PMIS Based on Demand Analysis.” *Journal of the Korea Institute of Building Construction*, 14(3), 244-251. [In Korean]
 38. Park, K., Lee, H.W., and Kim, C.-D. (2014). “Assessment of Risk Management Practices of CM Enterprises: The Need for an Enterprise-level Risk Management Framework.” *Journal of the Korea Institute of Construction Engineering and Management*, 15(3), 66-73. [In Korean]

39. Lee, H.W., Choi, K., and Gambatese, J. (2014). "Real Options Valuation of Phased Investments in Commercial Energy Retrofits under Building Performance Risks." *Journal of Construction Engineering and Management*, 140(6), 05014004.
40. Lee, H.W., Anderson, S., Kim, Y., and Ballard, G. (2013). "Advancing the Impact of Education, Training, and Professional Experience on Integrated Project Delivery." *Practice Periodical on Structural Design and Construction*. 19, SPECIAL ISSUE: Construction Engineering: Leveraging Project and Career Success, 8-14.
41. Lee, H.W., Tommelein, I.D., and Ballard, G. (2013). "Energy-related Risk Management in Integrated Project Delivery." *Journal of Construction Engineering and Management*, 139(12), A4013001.
42. Choi, K., Haque, M.E., Lee, H.W., Cho, Y.K., and Kwak, Y.H. (2013). "Macroeconomic Labor Productivity and Its Impact on Firm's Profitability." *Journal of the Operational Research Society*, 64(8), 1258-1268.
43. Lee, H.W., Tommelein, I.D., and Ballard, G. (2012). "Design of an Infrastructure Project Using a Point-based Methodology." *Journal of Management in Engineering*, 28(3), 291-299.
44. Kim, Y. and Lee, H.W. (2010). "Analyzing User Costs in a Hospital: Methodological Implication of Space Syntax to Support Whole-life Target Value Design." *Lean Construction Journal*, 2010 Issue, 55-65.

PEER-REVIEWED CONFERENCE PUBLICATIONS

1. Ning, S., Alidu, A.-R., Lee, H.W. and Dermisi, S., (2026). "A Scalable Data-Driven Method for Mapping Building Electrification: Hybrid Rule-Based and Machine Learning Classification of Heat-Pump Adoption." *The 2026 ASCE International Conference on Computing in Civil Engineering (i3CE 2026)*, Incheon, Korea.
2. Alidu, A.-R. and Lee, H.W. (2026). "Data-Driven Framework for Equitable Placement of Level Two Curbside Electric Vehicle Charging Stations." *The 2026 ASCE International Conference on Computing in Civil Engineering (i3CE 2026)*, Incheon, Korea.
3. Alidu, A.-R. and Lee, H.W. (2026). "A Computational Framework for Life-Cycle Cost Analysis of Electric Vehicle Charging Infrastructure" *The 2026 ASCE International Conference on Computing in Civil Engineering (i3CE 2026)*, Incheon, Korea.
4. Ning, S., Alidu, A.-R., Dermisi, S., and Lee, H.W. (2026). "The 'Green Premium' in Occupancy: Impact of Heat Pump Retrofits on Multifamily Vacancy Rates." *The 41st Annual Meeting of the American Real Estate Society (ARES 2026)*, March 24-28, Sandestin, FL. [Abstract Only]
5. Acheampong, M., Darko, A., and Lee, H.W. (2025). "Scan-to-BIM Process Framework for Energy Retrofits of Academic Facilities." *The Global Forum for Sustainable Built Environment Research Conference (SURE-Built 2025)*, University of Johannesburg, South Africa.
6. Vasudeva, C., Lee, H.W., and Dermisi, S. (2025). "Risk-Based Screening Tool for Selecting Existing Seattle Commercial Office Buildings for Conversion to Multifamily Residential." *CSCE Construction Specialty Conference / ASCE Construction Research Congress (CRC) 2025*, July 28-31, Montreal, Canada.
7. Jeon, B. and Lee, H.W. (2025). "Analyzing Significant Keywords Relationships in Construction Safety Based on OSHA's Accident Reports." *CSCE Construction Specialty Conference / ASCE Construction Research Congress (CRC) 2025*, July 28-31, Montreal, Canada.
8. Ning, S., Whittington, J., Berney, R., Lee, H.W., and Treece, B. (2025). "Implementing Electrified Mobility Hubs: A Case Study from the Puget Sound Area." *Western Economic Association International (WEAI), 100th Annual Conference*, June 20-24, San Francisco, CA, USA.
9. Bramono, N., Wu, L., and Lee, H.W. (2025). "Examining the Risk-Responsiveness Levels of the US Building Codes for Healthier and Safer Future Building Practices." *CIB World Building Congress WBC2025*, May 19-23, Purdue University, West Lafayette, IN, USA.

10. Lee, H.W., Osburn, L., Treece, B., Trieu, H.K., and Min, Y. (2025). "Best Practices in Applying Public-Private Partnership (P3) to US Transit Facility Electrification." *CIB World Building Congress WBC2025*, May 19-23, Purdue University, West Lafayette, IN, USA.
11. Ning, S., Chen, C.-W., Lee, H.W., Berney, R., and Whittington, J. (2024). "Implementing Electrified Mobility Hubs: A Case Study from Puget Sound Area." *Association of Collegiate School of Planning, 64th Annual Conference*, November 7-9, Seattle, WA, USA.
12. Min, Y., Lee, H.W., Bramono, N., and Mayfield, E. (2024). "Characteristics of Early Adopters and Their Followers of Rooftop Solar, Electric Vehicles, and Heat Pumps." *2024 Construction Research Congress (CRC 2024)*, March 20-23, Des Moines, IA, 76-85.
13. Bramono, N., Burpee, H., Dermisi, S., Min, Y., and Lee, H.W. (2024). "Benchmarking Healthy Building Requirements in Mitigating Airborne Transmission Diseases such as COVID-19: Identifying the Gaps between Current Codes and Building Rating Tools." *2024 Construction Research Congress (CRC 2024)*, March 20-23, Des Moines, IA, 769-779.
14. Wiggins, M., Lee, H.W., and Echenagucia, T.M. (2024). "Concurrent Modeling of Embodied Carbon and Construction Costs for Mass Timber Construction." *2024 Construction Research Congress (CRC 2024)*, March 20-23, Des Moines, IA, 165-174.
15. Min, Y. and Lee, H.W. (2022). "Characterization of Energy Vulnerability in terms of Energy Resilience and Energy Dependence in the Pacific Northwest Cities." *US-KOREA Conference 2022 (UKC 2022)*, Washington, DC.
16. Hochstatter, K., Borhani, A., Pratama, L., Gautam, B., Aziz, A.A., Lee, H.W., Saeidi, S. and Dossick, C. (2022). "Preparing Students for Construction Management Technology Curriculum." *2022 ASCE Annual Conference & Exposition*, Minneapolis, MN.
17. Fardhosseini, M.S., Ojha, A., Habibnezhad, M., Jebelli, H., Lee, H.W. (2022). "An Optimal Resource Allocation Strategy for Retrofitting Unreinforced Masonry Buildings in the Pre-Disaster Stage." *2022 Construction Research Congress (CRC 2022)*, March 9-12, Arlington, VA, 1077-1085.
18. Dermisi, S., Lee, H.W., Whittington, J., Proksch, G., Rajendran, V., Sun, F., and Kim, Y. (2021). "Impact of Social Distancing on Office Building Occupancy and Fallout Effect of Occupant Spending Power." *The Association of Collegiate Schools of Planning Annual Conference (ACSP 2021)*, October 21-24, Miami, FL.
19. Dermisi, S., Lee, H.W., Whittington, J., Proksch, G., Rajendran, V., Sun, F., and Kim, Y. (2021). "How Can Different Levels of Social Distancing Affect Office Building & Market Occupancy?" *The 37th Annual Meeting of the American Real Estate Society (ARES 2021)*, March 17-21, Nevada, NV. [Abstract Only]
20. Pratama, L., Fardhosseini, S., Dossick, C., Habibnezhad, M., Jebelli, H., and Lee, H.W. (2020). "BIM-GIS Implementation for Rebuilding after Disaster: A Critical Evaluation." *37th CIB W78 Information Technology for Construction Conference (CIB W78)*, 112-120.
21. Min, Y. and Lee, H.W. (2020). "Social Equity of Clean Energy Policies in Electric-Vehicle Charging Infrastructure Systems." *2020 Construction Research Congress (CRC 2020)*, Tempe, AZ.
22. Fardhosseini, M.S., Karji, A., Dossick, C.S., Lee, H.W., Jebelli, H., and Beatty, S. (2020). "The Cost-Effectiveness of Integrating Digital Fabrication for Concrete Formwork." *2020 Construction Research Congress (CRC 2020)*, Tempe, AZ.
23. Fardhosseini, M.S., Habibnezhad, M., Jebelli, H., Migliaccio, G., Lee, H.W., and Puckett, J. (2020). "Recognition of Construction Workers' Physical Fatigue Based on Three-axis Accelerometer Embedded in a Smartphone." *2020 Construction Research Congress (CRC 2020)*, Tempe, AZ.
24. Xie, Y., Lee, Y.-C., Shariatfar, M., Zhang, Z., Rashidi, A., Lee, H.W. (2019). "Historical Accident and Injury Database-driven Audio-based Autonomous Construction Safety Surveillance." *The 2019 ASCE International Conference on Computing in Civil Engineering (i3CE 2019)*, Atlanta, GA.

25. Fardhosseini, M.S., Dossick, C., Lee, H.W., DiFuria, R., Lohr, J., and Abdirad, H. (2019). "Automating the Digital Fabrication of Concrete Formwork in Building Projects: Workflow and Case Example." *The 2019 ASCE International Conference on Computing in Civil Engineering (i3CE 2019)*, Atlanta, GA.
26. Rodriguez B.X., Simonen K., Lee H.W., and Huang M. (2019). "Embodied Carbon in MEP Systems: A Simplified Life Cycle Assessment (LCA) Method for MEP Systems in Standard Commercial Office Buildings in the Pacific Northwest." *3rd International Graduate Student Symposium of the PhD Program at IIT College of Architecture*, Chicago, IL.
27. Shakouri, M. and Lee, H.W. (2018). "Economic Feasibility Analysis of Photovoltaic Systems Using Bayesian Networks." *Proc. 2018 Construction Research Congress (CRC 2018)*, New Orleans, LA, 564-573.
28. Ho, C., Lee, H.W., and Gambatese, J. (2018). "Improving the Safety in Solar Energy System Installations through Prevention through Design." *Proc. 2018 Construction Research Congress (CRC 2018)*, New Orleans, LA, 717-726.
29. Borhani, A., Dossick, C. S., Lee, H.W., and Osburn, L. (2018). "Developing a Collaboration Framework for Model-Based Estimating." *Proc. 2018 Construction Research Congress (CRC 2018)*, New Orleans, LA, 10-20.
30. Zhu, W., Lee, H.W., and Dossick, C. S. (2018). "Impact of Project Integration on Implementation of Model-based Estimating." *Proc. 2018 Construction Research Congress (CRC 2018)*, New Orleans, LA, 619-627.
31. Lee, H.W., Harapanahalli, B.A., Nnaji, C., Gambatese, J., and Kim, J. (2018). "Feasibility of using QR Codes in Highway Construction Document Management." *2018 Transportation Research Board (TRB) Annual Meeting*, Washington, DC, 17p.
32. Nnaji, C., Gambatese, J., and Lee, H.W. (2018). "Evaluating Work Zone Intrusion Alert Technology: Recommendation for Future Development." *2018 Transportation Research Board (TRB) Annual Meeting*, Washington, DC, 7p.
33. Borhani, A., Lee, H.W., Dossick, C.S., Osburn, L., and Kinsman, M. (2017). "BIM to Facilities Management: Presenting a Proven Workflow for Information Exchange." *Proc. 2017 International Workshop on Computing in Civil Engineering (IWCCE2017)*, Seattle, WA, 51-58.
34. Kim, Y.-W., Rezaqallah, K., Lee, H.W., Angeley, J. (2016). "Integrated Project Delivery in Public Projects: Limitations and Opportunity." *Proc. 24th Annual Conference of the International Group for Lean Construction (IGLC 2016)*, Boston, MA, 93-102.
35. Choi, K., Lee, H.W., Bae, J., and Ryu, K. (2015). "Investigating the Construction Industry from Key Performance Measurements." *Proc. the 6th International Conference on Construction Engineering and Project Management (ICCEPM-2015)*, Busan, S.Korea, 150-153.
36. Lee, H.W., Oh, H., Kim, Y., and Choi, K. (2014). "Investigating Warnings in Building Information Modeling." *US-KOREA Conference 2014 (UKC 2014)*, San Francisco, CA.
37. Gomez Cunha, L.A., Lee, H.W., and Leon, A. (2014). "A Real Options-based Framework to Evaluate Investments in River Flood Control under Uncertainty." *ASCE 2nd International Conference on Vulnerability and Risk Analysis and Management (ICVRAM) and 6th International Symposium on Uncertainty Modeling and Analysis (ISUMA)*, Liverpool, UK, 1465-1474.
38. Lee, H.W., Choi, K., Gambatese, J.A., and Kim, D. (2014). "Financial Valuation for Commercial Energy Retrofits under Private Risks." *2014 Construction Research Congress (CRC 2014)*, Atlanta, GA, 524-533.
39. Lee, H.W., Kim, Y., Kim, D., and Choi, K. (2013). "LEED Perception Disparities: Designers versus Non-designers." *Proc. the 5th International Conference on Construction Engineering and Project Management (ICCEPM-2013)*, 2013, Anaheim, CA, 50-55.
40. Lee, H.W., Ballard, G., and Tommelein, I.D. (2012). "Developing a Target Value Design Protocol for Commercial Energy Retrofits – PART 1." *Proc. 2012 Construction Research Congress (CRC 2012)*, Purdue University, West Lafayette, IN, 1710-1719.

41. Lee, H.W., Ballard, G., and Tommelein, I.D. (2012). “Developing a Target Value Design Protocol for Commercial Energy Retrofits – PART 2.” *Proc. 2012 Construction Research Congress (CRC 2012)*, Purdue University, West Lafayette, IN, 1720-1729.
42. Lee, H.W., Tommelein, I.D., and Ballard, G. (2010). “Lean Design Management in an Infrastructure Design-Build Project – A Case Study.” *Proc. 18th Annual Conference of the International Group for Lean Construction (IGLC 18)*, Haifa, Israel, 113-122.
43. Kim, Y. and Lee, H.W. (2010). “Analyzing User Costs in a Hospital: Methodological Implication of Space Syntax to Support Whole-life Target Value Design.” *Proc. 18th Annual Conference of the International Group for Lean Construction (IGLC 18)*, Haifa, Israel, 93-102.

TECHNICAL REPORTS

1. Lee, H.W. (2022). “Developing a Prevention through Design (PtD) Guide for Mechanical/Electrical/Plumbing Worker Safety.” Final Project Report, Safety & Health Investment Projects (SHIP) Grant Program, Washington State Department of Labor and Industries, Olympia, WA.
2. Lee, H.W. and Min, Y. (2022). “Investigating Energy Justice in Washington State in Terms of Photovoltaic (PV) Systems and Electric Vehicle (EV) Chargers.” Final Project Report. The College of Built Environments, UW, Seattle, WA.
3. Dermisi, S. and Lee, H.W. (2021). “Economic Impact of Office Workplace Transformation due to COVID-19: How Can Buildings and Surrounding Areas Recover?” Final Project Report. UW Population Health Institute, Seattle, WA.
4. Lee, H.W., Gambatese, J., Min, Y. (2019). “Prevention through Design (PtD) to Make Solar-Ready Houses Safe for Solar Workers.” Final Project Report. CPWR, Silver Spring, MD.
5. Lee, H.W. (2019). “Develop a Lean Practice Manual for Improving the Safety of Electrical Construction Workers.” Final Project Report, Safety & Health Investment Projects (SHIP) Grant Program, Washington State Department of Labor and Industries, Olympia, WA.
6. Dermisi, S., Lee, H.W., Choe, Y., Shang, L. (2019). “Effect of Energy Benchmarking and Disclosure on Office Building Marketability.” Final Project Report. Real Estate Research Institute and Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA.
7. Simonen, K., Lee, H.W., Rodriguez, B.X., Huang, M. (2019). “Life Cycle Assessment (LCA) of Office Building Mechanical Electrical and Plumbing Systems.” Final Project Report. The Charles Pankow Foundation—Skanska USA—Oregon Department of Environmental Quality.
8. Lee, H.W., Gambatese, J., Ho, C. (2017). “Applying Prevention through Design (PtD) to Solar Systems in Small Buildings.” Final Project Report. CPWR, Silver Spring, MD.
9. Borhani, A., Dossick, C. S., Lee, H.W., and Osburn, L. (2017). “MBEst: A Technical Report on Standardization of Model-based Estimating.” [Final Project Report](#). Skanska.
10. Gambatese, J., Lee, H.W., and Nnaji, C.A. (2017). “Work Zone Intrusion Alert Technologies: Assessment and Practical Guidance.” Final Project Report (#SPR 790). Oregon Department of Transportation, Salem, OR.
11. Lee, H.W. and Arocho, I. (2016). “Fault Tree Analysis for Accident Prevention in Transportation Infrastructure Projects.” Final Project Report (#2015-S-OSU-80). PacTrans. University of Washington, Seattle, WA.
12. Dossick, C. S., Lee, H.W., Borhani, A., Osburn, L., Angeley, J., and Kinsman, M. (2016). “BIM to BUILDER Workflow.” Final Project Report. US Army Corps of Engineers.
13. Lee, H.W. and Harapanahalli, B.A. (2015). “Investigating the Feasibility of Using Quick Response Codes

- in Highway Construction for Document Control.” Final Project Report (#2013-S-OSU-37). PacTrans. University of Washington, Seattle, WA.
14. Yang, Y. and Lee, H.W. (2014). “Exploring the Opportunities for Applying Lean Principles to Electrical Prefabrication.” Final Report, ELECTRI International, Washington, DC.
 15. Trejo, D., Porter, F., Chen, J., and Lee, H.W. (2013). “Comparison of Pelletized Lime with Other Anti-Stripping Additives.” Final Project Report. Oregon Department of Transportation, Salem, OR.
 16. Tommelein, I.D., Ballard, G., and Lee, H.W. (2011). Sections 2.3 and 3.3 of “Energy Risk Management in Commercial Mortgages: A Primer for Lenders.” Practical guideline prepared for Office of Energy Efficiency and Renewable Energy at U.S. Department of Energy.
 17. Tommelein, I.D., Ballard, G., and Lee, H.W. (2011). “Task 4: Target Value Design and Delivery Process to Incorporate Energy Efficiency Metrics.” Technical report prepared for Office of Energy Efficiency and Renewable Energy at U.S. Department of Energy.

BOOK CHAPTERS AND PROFESSIONAL BOOKLETS

1. Lee, H.W. and Gambatese, J.A. (final accept). ““Applying Prevention Through Design (PtD) to Enhance Safety in Solar Installations on Small Residential Buildings.” *Handbook of Design for Occupational Safety and Health in Construction*, Taylor & Francis.
2. Acheampong, M., Darko, A., and Lee, H. W. (2026). “Scan-to-BIM Process Framework for Energy Retrofits of Academic Facilities.” [*Facilitating Inclusivity in Multi-, Inter-, and Transdisciplinary Sustainable Built Environment Research in Emerging Economies: Inclusivity in Sustainable Built Environment Research*](#), 233. Springer Nature.
3. Lee, H.W., Treece III, B.G., and Alidu, A.-R. (2025). “[Taxi and Transportation Network Company Electrification Research – Phase B](#).” Mobility Innovation Center, University of Washington, Seattle, WA.
4. Whittington, J., Berney, R., Lee, H.W., Treece III, B.G., Ning, S., Chen, C.-W., Muiruri, K., Yue, H., and Machala, T. (2024). “[Electrified Mobility Hubs: A Blueprint for the Future of Transit Infrastructure](#).” Mobility Innovation Center, University of Washington, Seattle, WA.
5. Lee, H.W., Osburn, L., and Treece III, B.G. (2023). “[Charging Forward: Evaluating Public-Private Partnerships for Electric Bus Base Conversion to Support a Zero-Emission Fleet](#).” Mobility Innovation Center, University of Washington, Seattle, WA.
6. Foothoni, A., Lee, H.W., Connolly, B., McBride, L., and Wai-Poi, N. (2022). “[Design Delivery: What Really Works?](#)” Mithun, Seattle, WA.
7. Lee, H.W., Osburn, L., Gambatese, J., Stuart, J., and Foley, K. (2022). “[Prevention Through Design for Mechanical/Electrical/Plumbing Worker Safety](#).” Safety & Health Investment Projects (SHIP) Grant Program, Washington State Department of Labor and Industries, Olympia, WA.
8. Kriegh, J., Lee, H.W., Whittington, J., Awad, N., Aviv, D. and Ida, A. (2021). “[Launching a Sustainable Data Center for the Future](#).” Google & University of Washington, Seattle, WA.
9. Lee, H.W., Gambatese, J., Kim, Y.-W., Fardhosseini, M.S., Stuart, J., Reigelsperger, C. (2019). “[Lean and Safety Manual for Electrical Construction](#).” Safety & Health Investment Projects (SHIP) Grant Program, Washington State Department of Labor and Industries, Olympia, WA.
10. Lee, H.W., Gambatese, J., Ho, C. (2017). “[\[Safety Protocol\] Prevention through Design for Safety in Solar Installations](#).” CPWR, Silver Spring, MD.
11. Yang, Y., Lee, H.W., and Shakouri, M. (2014). “[Exploring the Opportunities for Applying Lean Principles to](#)

[Electrical Prefabrication](#).” Index #: F3406. NECA Publication, Washington, DC.

MAGAZINE ARTICLES

1. [“How can P3s help transit fleets achieve zero emissions?”](#) ASCE Civil Engineering Magazine, April 25, 2024.
2. [“An Online World That Doesn’t Destroy the Real One.”](#) Metropolis Magazine. February 17, 2022.
3. [“The internet is killing the environment. These students came up with a brilliant design fix.”](#) Fast Company. November 4, 2021.
4. [“Prevention through Design methods can make solar panel installation safer: CPWR report.”](#) Safety+Health, December 12, 2017
5. [“‘Community solar’ systems may add savings to local, cooperative energy projects.”](#) Science X – Phys.org, March 30, 2016.

PRESENTATIONS

ORAL PRESENTATIONS – CONFERENCE, SEMINAR, WORKSHOP

1. “Technology Trends in US Construction 2026.” GS E&C Beyond Innovation Training Program, Foster School of Business, University of Washington, Seattle, WA, May 8, 2026.
2. “Technology Trends in US Construction 2025.” GS E&C Beyond Innovation Training Program, Foster School of Business, University of Washington, Seattle, WA, November 12, 2025.
3. “Transforming US Construction: Advanced Technology Applications.” KNU Global Seminar, Kyungpook National University, Daegu, South Korea, June 18, 2025.
4. “Examining the Risk-Responsiveness Levels of the US Building Codes for Healthier and Safer Future Building Practices.” *CIB World Building Congress WBC2025*, Purdue University, West Lafayette, IN, USA, May 20, 2025.
5. “Best Practices in Applying Public-Private Partnership (P3) to US Transit Facility Electrification.” *CIB World Building Congress WBC2025*, Purdue University, West Lafayette, IN, USA, May 20, 2025.
6. “Shore Power: Partnerships to Provide eMobility Options at the Bremerton Ferry Terminal for a Greener Future.” Washington State Department of Transportation (WSDOT) Planning and Data Academy, March 27, 2025.
7. “Technology Trends in US Construction.” Special Lecture for GS Engineering & Construction, Foster School of Business, University of Washington, Seattle, WA, November 15, 2024.
8. “Best Practices in Applying Public-Private Partnership (P3) to US Transit Facility Electrification.” Session 4B: Exploring Alternative Fuels, the Future of Transportation, ITS Washington, Tacoma, WA, November 7, 2024.
9. “Charging Forward: Pursuing public-private partnerships for electric bus base conversion.” Washington State Transportation Commission (WSTC) Meeting, Olympia, WA, October 15, 2024.
10. “Benchmarking Healthy Building Requirements in Mitigating Airborne Transmission Diseases such as COVID-19: Identifying the Gaps between Current Codes and Building Rating Tools.” *2024 Construction Research Congress (CRC 2024)*, Des Moines, IA, March 21, 2024.
11. “Smart City.” Urban@UW + Mobility Innovation Center Hosting the German Research Foundation. September 25, 2023.
12. “Energy Benchmarking and Disclosure Policy in the US.” Department of Urban Planning and Design, University of Seoul, Korea, December 26, 2022.
13. “Confronting COVID-19: How to Develop Healthy Office Buildings.” National Agency for Administrative City

Construction, Sejong, Korea, November 30, 2022.

14. “Effect of Energy Benchmarking and Disclosure Policy on Office Building Marketability: US Context.” Department of Civil and Environmental Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, November 29, 2022.
15. “Path to High-Performance Green Buildings.” *Modern Method of Construction: Smart, Lean, and Green*, 3-Day Workshop for Korean Government Officials, November 12, 2019, Seattle, WA.
16. “Impact of Energy Benchmarking and Disclosure on the Performance of Office Buildings.” CBE Innovation Collaborative Presentation, March 6, 2018, Seattle, WA.
17. “Remote Sensing for Activity-Based Carbon Tracking of Construction Equipment.” *New Frontiers in Construction Conference (CERC 2016)*, March 4, 2016, Seattle, WA.
18. “Background Knowledge and Training for Integrated Project Delivery.” *New Frontiers in Construction Conference (CERC 2016)*, March 4, 2016, Seattle, WA.
19. “Investigating the Impact of Performance Risks on Energy Efficiency Investments: From Micro to Macro.” Yonsei University, July 18, 2014, Seoul, Korea.
20. “Investigating the Impact of Performance Risks on Energy Efficiency Investments: From Micro to Macro.” Seoul National University, June 30, 2014, Seoul, Korea.
21. “Financial Valuation for Commercial Energy Retrofits under Private Risks.” *2014 Construction Research Congress (CRC 2014)*, May 20, 2014, Atlanta, GA.
22. “Advancing the Impact of Education, Training, and Professional Experience on Integrated Project Delivery.” *2014 Construction Engineering Conference (2014 CEC)*, March 27, 2014, Seattle, WA.
23. “Exploring the Opportunities for Applying Lean Principles to Electrical Prefabrication.” *The 2014 ELECTRI Council*, July 22, 2013, Chicago, IL.
24. “LEED Perception Disparities: Designers versus Non-designers.” *The 5th International Conference on Construction Engineering and Project Management (ICCEPM-2013)*, January 9, 2013, Anaheim, CA.
25. “Developing a Target Value Design Protocol for Commercial Energy Retrofits – PART 2.” *2012 Construction Research Congress (CRC 2012)*, May 23, 2012, Purdue University, West Lafayette, IN.
26. “Developing a Target Value Design Protocol for Commercial Energy Retrofits – PART 1.” *2012 Construction Research Congress (CRC 2012)*, May 22, 2012, Purdue University, West Lafayette, IN.
27. “Application of Digital Quantity Takeoff to Estimating.” February 28, 2012, Clemson University, Clemson, SC.
28. “DOE Finance Research – Incorporating Energy Efficiency into Commercial Mortgage Underwriting.” *Project Production Systems Laboratory (P2SL) Annual Conference*, April 27, 2011. University of California, Berkeley, CA.
29. “Lean Design Management in an Infrastructure Design-Build Project – A Case Study.” *18th Conference of the International Group for Lean Construction (IGLC 18)*, July 14-16, 2010. Technion – Israel Institute of Technology, Haifa, Israel.
30. “Lean Design Management in Infrastructure DB Proposal Process.” *Project Production Systems Laboratory (P2SL) Annual Conference*, April 27, 2010. University of California, Berkeley, CA.

POSTER PRESENTATIONS

1. Hochstatter, K., Borhani, A., Pratama, L., Gautam, B., Aziz, A.A., Lee, H.W., Saeidi, S., and Dossick, C. (2026) “Preparing Students for Construction Management Technology Curriculum.” *2026 ASC International Conference*, San Luis Obispo, CA.

2. Muhammad, A.B.T., Lee, H.W., Darko, A., and Wu, L. (2026). “[SHIP] SAFE-AI Guide.” *From ideas to Impact: CBE Research Showcase*, College of Built Environments, University of Washington, Seattle, WA.
3. Alidu, A.-B., Huang, L., and Lee, H.W. (2026). “Modeling the Impact of Financial Incentives on Curbside EV Chargers in Seattle’s Neighborhoods: A Monte Carlo Simulation Approach.” *From ideas to Impact: CBE Research Showcase*, College of Built Environments, University of Washington, Seattle, WA.
4. Acheampong, M., Darko, A., and Lee, H. W. (2026). “Scan-to-BIM Process Framework for Energy Retrofits of Academic Facilities.” *From ideas to Impact: CBE Research Showcase*, College of Built Environments, University of Washington, Seattle, WA.
5. Wu, L., Lee, H.W., Stevenson, D., and Drennan, Z. (2025). “Equitable Tribal EV Charging Infrastructure.” UW Clean Energy Institute (CEI) Community Capstone Showcase, June 3, 2025, Seattle, WA.
6. Min, Y. and Lee, H.W. (2019). “Social Equity of Clean Energy Policies in Residential Solar.” *Energy and Society in Transition: 2nd International Conference on Energy Research and Social Science (ERSS2019)*, May 30, 2019, Tempe, AZ.
7. Rodriguez B.X., Simonen K., Lee, H.W., and Huang M. (2019). “Embodied Carbon in Heating, Ventilation and Air Conditioning (HVAC): A Simplified LCA Method for Standard and High Performance Hypothetical Office Buildings in the PNW.” *New Frontiers in Construction Conference 2019 (NFCC '19)*, March 21, 2019, Seattle, WA.
8. Fardhosseini, S., Abdirad, H., Dossick, C., Lee H.W., Difuria, R., Lohr, J., Beatty, S. (2019). “Using a Digital Fabrication Approach for Concrete Formwork in Building Projects: Workflow and Case Example.” *New Frontiers in Construction Conference 2019 (NFCC '19)*, March 21, 2019, Seattle, WA.
9. Nnaji, C., Gambatese, J., and Lee, H.W. (2018). “Evaluating Work Zone Intrusion Alert Technology: Recommendation for Future Development.” *2018 Transportation Research Board (TRB) Annual Meeting*, January 8, 2018, Washington, DC.
10. Chung, H., Lee, H.W., and Gambatese, J. (2017). “Applying Prevention through Design to the Design and Installation of Solar Energy Systems for Residential Projects.” *53rd Annual International Conference of the Associated Schools of Construction (ASC)*, April 6, 2017, Seattle, WA.
11. Lee, H.W. and Arocho, I. (2016). “Fault Tree Analysis for Accident Prevention in Transportation Infrastructure Projects.” *2016 PacTrans Regional Transportation Conference (PacTrans 2016)*, October 14, 2016, Seattle, WA.
12. Kim, Y.-W., Rezaqallah, K., Lee, H.W., Angeley, J. “Integrated Project Delivery in Public Projects: Limitations and Opportunity.” *24th Annual Conference of the International Group for Lean Construction (IGLC 2016)*, July 21, 2016, Boston, MA.
13. Shakouri, M. and Lee, H.W. “A Portfolio-Based Decision Model for Optimal Investment in Community Solar.” *2015 Graduate Research Exposition*, March 4, 2015, Portland, OR.
14. Harapanahalli, B.A. and Lee, H.W. “Quick Access to Construction Documents in Highway Construction Using Quick Response (QR) Codes.” *2015 Graduate Research Exposition*, March 4, 2015, Portland, OR.
15. Gomez, L., Lee, H.W., and Leon, A. “A Real Options-based Framework to Evaluate Investments in River Flood Control Under Uncertainty.” *2014 Graduate Research Exposition*, March 7, 2014, Portland, OR.
16. Harapanahalli, B.A. and Lee, H.W. “Quick Access to Construction Documents in Highway Construction Using Quick Response (QR) Codes.” *2014 Graduate Research Exposition*, March 7, 2014, Portland, OR.
17. Yang, Y. and Lee, H.W. “The Opportunities of Lean Principles to Electrical Prefabrication.” *2014 Graduate Research Exposition*, March 7, 2014, Portland, OR.
18. Gomez, L., Lee, H.W., and Leon, A. “A Real Options-based Framework to Evaluate Investments in River Flood Control Under Uncertainty.” *The Water Research Symposium*, May 13, 2013, Oregon State University, Corvallis, OR.

WEBINAR AND PODCAST

1. “Effect of Energy Benchmarking and Disclosure Policy on Office Building Marketability: US Context.” Universiti Malaysia Perlis (UniMAP), FKTA International Webinar Series, March 15, 2023. <<https://www.youtube.com/watch?v=Tjug8uz7gVo>>
2. “Design of Solar Systems to Prevent Injuries.” Human Factors and Ergonomics Society (HFES) Webinar Series, November 2, 2022. <<https://www.hfes.org/Events/Webinars>>
3. “The Carbon Footprint of the Metaverse.” Metropolis Deep Green Podcast, Season 2; Episode 1. March 3, 2022. <<https://metropolismag.com/deep-green-podcast/>>
4. “Applying Prevention through Design (PtD) to Solar Systems in Small Buildings.” Webinar, December 13, 2017, CPWR. <<https://www.youtube.com/watch?v=nRuyKf1w2yk&feature=youtu.be>>

ADVISING

PHD COMMITTEE CHAIR (UW)

Student	Topic	Graduated
Florence Adesope	TBD	Active
Nadeem Akhtar	Interagency Planning Framework for eMobility Hubs	Active
Abdul-Razak Alidu	Multivariate Spatial-Economic Model for Planning Curbside Level Two Electric Vehicle Charging Infrastructure in Seattle, Washington State	Active
Novi T.I. Bramono	Developing a Framework for Risk-Responsive Building Codes of Office Buildings: A Healthy Building Perspective	Spring 2024
Yohan Min	Clean Energy Justice: Clean Energy Access and Vulnerable Communities toward Just Energy Transition	Spring 2022

PHD COMMITTEE MEMBER

Student	School	Title	Graduated
Idris Soliu	UW	Application of Circular Economy Principles in Construction	Active
Su Jin Park	Yonsei University	Human-Machine Interface Design of Construction Machinery Based on Scenario Generation and Accident Pattern Analysis	Autumn 2024
Sadra Fardhosseini	UW	A Quantitative Analysis Study of the Impact of Integrating Digital Technology for Formwork Fabrication on Human Factors	Spring 2021
Chung Ho	UW	Supply Chain Optimization for Prefabrication with Multiple Fabrication Shops	Spring 2019
Kasim AlOmari	OSU	Degrees of Connectivity: Systems Model for Upstream Risk Assessment	Autumn 2017

PHD GRADUATE SCHOOL REPRESENTATIVE (UW)

Student	Dept.	Title	Graduated
Heta Kosonen	Civil Engr.	Pathways toward Rapid Wastewater Treatment Response During the Global Refugee Crisis	Spring 2018

PHD EXTERNAL REVIEWER

Student	School	Title	Graduated
Sherif Mohamed Mahmoud Lashen	Queensland University of	The Role of Stakeholder Management in Energy Efficiency Outcomes of Owner-Occupied Housing in	Spring 2018

Zedan	Technology	Australia,	
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POSTDOCTORAL RESEARCHER ADVISING

Name	School	Topic	Duration
Byungju Jeon	UW	Development of a Fatigue Risk Evaluation and Management System in Construction Projects	Sept 2024 to Aug 2025
Laura Osburn	UW	Evaluation of a Public/Private Partnership (P3) Model for Bus Base Electrification	May 2023 to Oct 2023
		Developing a Prevention through Design (PtD) Guide for Mechanical/Electrical/Plumbing Worker Safety	July 2020 to Dec 2021
Jonghyeob Kim	UW	BIM-based Maintenance Information Management Model for Continuous Collection and Utilization of Maintenance Data	Aug 2016 to Dec 2017
Kyungmo Park	OSU	Investigation of Project Risk Factors Facing Construction Management Firms	Jan 2014 to Nov 2014

VISITING PHD STUDENT ADVISING (UW)

Name	Visiting From	Topic	Duration
Wonjun No	Korea Advanced Institute of Science and Technology (KAIST)	Application of Computer Vision and Machine Learning Techniques to Analyze the Movement Behaviors of Children on Urban Streets and to Develop Child-Friendly Street Designs	Jan to Feb 2024
Yunhong Wang	Tsinghua University	Determinants of International Infrastructure Investment: Evidence from Chinese Contractors	Feb to Nov 2020

MS THESIS COMMITTEE CHAIR (UW)

Student	Title	Graduated
Michael Acheampong (Co-advising with Prof. Darko)	A Case Study on Machine-Learning-Optimized Scan-to-BIM Workflows for Energy-Efficiency Retrofitting of Academic Facilities	Active
Chitika Vasudeva	To Build or Not to Build: Risk-Based Screening Tool for Selecting Existing Seattle Commercial Office Buildings for Conversion to Multifamily Residential	Winter 2025
Yong-Hyuk Oh	Optimizing Mass Timber Bay Size in terms of Costs and EC Emission	Winter 2023
Matt Wiggins	Value-Based Conceptual Modeling of Costs and Embodied Carbon for Building Structural Systems: Mass Timber Perspective	Autumn 2021
Wenqi Zhu	Impact of Project Integration on Implementation of Model-based Estimating	Autumn 2017

MS PROJECT REPORT COMMITTEE CHAIR (OSU)

Student	Title	Graduated
Bharat Harapanahalli	Investigating the Feasibility of Using Quick Response Codes for Document Management in Highway Construction	Spring 2015
Yizhe Yang	Investigating the Relationship between Lean Principles and Electrical Prefabrication	Spring 2014

MS THESIS COMMITTEE MEMBER

Student	School	Title	Graduated
Shaojia Fan	UW	Correlates of Active Commuting Frequency: Investigating the Influence of Student Characteristics on Walking and Biking to	Spring 2025

		School	
Andrew Steele	UW	Developing a Cost Framework for Smart Building Adoption	Spring 2024
Anik Das	UW	The BIM in Practice in the Real World	Spring 2024
Ritu FNU	UW	Optimization of Energy through BIM in Construction Industry	Winter 2023
Jeremy Berke	UW	Solar Ready: Harmonizing the Solar Ready Scope for Safer & More Productive Solar Deployments	Summer 2018
Christopher Mak	UW	Implementing Temporary LED Construction Lighting	Spring 2017
Xiuqing Jin	UW	Climate-Specific Life-Cycle Cost Analysis of Different HVAC Systems	Winter 2017
Mihir Bharmal	UW	Information Exchange in the Design, Construction, Operation and Maintenance of Public Transit infrastructure	Winter 2016
Chukwuma Nnaji	OSU	Framework for Measuring Construction Project Performance using Energy	Spring 2015

MS RESEARCH PAPER CHAIR (UW)

Student	Title	Graduated
Julie Knorr	Essential Factors to Consider When Evaluating Affordable Housing Renovations	Spring 2023
Chuou Zhang	Quantifying the Cost and Schedule Saving of Mass Timber Construction	Spring 2022
Zhila Mohammady	Impact of Smart Metering on Energy Consuming Behaviors	Winter 2019
Michael McKenna	Factors Contributing to the Trustworthiness of General Contractors	Autumn 2017
Vaishnavi Nevrekar	Safe Working Practices to Prevent Accidents during Solar Panel Installation on Existing Houses	Winter 2017
Matthew Reed	Implications of Autonomy for Professional Development	Winter 2017
Henrique Schuchovski	Perception of Collaboration and Compensation on Integrated Projects from the General Contractor's Perspective	Autumn 2016

MENG EXAM COMMITTEE MEMBER OR CHAIR (OSU)

Student	Graduated	Student	Graduated
Gao Han	2015	Yakun Cheng	2015
James Pritchard	2015	Ryan Sutanto	2014
Nishant Vadlamudi (Chair)	2014	Shikhar Sandeep Goel	2014
Ding Liu	2014	Tainian Chen	2014
Anthony Peressini	2013	Paul Amort	2013
Robert Coleman	2013	Tom Sideras	2013
Alex Jamerson	2013	Thaphat Lekaegkarat	2012

APPLIED RESEARCH CONSORTIUM (ARC) RESEARCH ADVISOR (UW)

Student	Department/Degree	Sponsor	Title	AY
Bobbie Koch	Architecture/MArch	7 Directions	Regenerative Place-Based Design Practices for Residential Design & Construction in Sicangu Thamakoche	2021-22
Azita Footohi	Architecture/MArch	Mithun	Design Delivery - What Really Works?	2021-22
Chuou Zhang	Architecture/MArch	ZGF	Biogenic Carbon Accounting Method for	2020-21

(Advisor-at-large)			Upstream Forest Factors	
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CM HONORS PROGRAM RESEARCH ADVISOR (UW)

Student	Title	Quarter
Henry McKinley Grandy	Discussion of the Barriers and Motivators for AI Implementation in Construction Estimating	Spring 2025

UNDERGRADUATE INDIVIDUAL STUDY ADVISOR (UW)

Student	Title	Quarter
Zachary Hoglund	Emerging Surveying Technologies	Spring 2020
Ryan Wilson	Changes on Campus: How the Triple Bottom Line is Driving New and Advanced Mechanical Strategies for Lab Spaces at the UW	Winter 2019
Zach Shoopman	Energy Services Company Project Risks	Winter 2018
Joseph Korchemniy	LEED Influences in South Lake Union (Seattle)	Winter 2018

UNDERGRADUATE CAPSTONE RESEARCH ADVISOR (UW)

Student	Department	Title	Graduated
Gigi Dawn	Environmental Studies	UW Energy Dashboard for Energy Transparency	Spring 2019