

AMY A. KIM

Curriculum Vitae

Civil and Environmental Engineering
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EDUCATIONAL HISTORY

Texas A&M University, College Station, TX

PhD, Civil Engineering

May 2014

Dissertation: A Comparative Analysis of Predicting Energy Savings from Energy Service Projects

Illinois Institute of Technology, Chicago, IL

MS, Civil Engineering

December 2008

Thesis: Performance of MBE/DBE/WBE Construction/CM Firms in Transportation Projects

University of Illinois, Urbana-Champaign, IL

BS, Architectural Studies

May 2001

EMPLOYMENT HISTORY

University of Washington

Seattle, WA, USA

Assistant Professor, Civil and Environmental Engineering (2014-present)

Primera Engineers

Chicago, IL, USA

Project Engineer (2007-2009)

DLA Architects, Ltd.

Itasca, IL, USA

Architect (2006-2007)

Earth Tech (now part of AECOM)

Oakbrook, IL, USA

Architect (2001-2005)

AWARDS AND HONORS

Husky Green Award, 2019, University of Washington
Health in Buildings Roundtable (HiBR) Scholar, 2018, National Institutes of Health
Outstanding Faculty Mentor Award, 2015, University of Washington Department of Civil & Environmental Engineering
Best Paper Award, 2015, CSCE International Construction Specialty Conference (1st place)
New Scholar Program Fellow, 2014, Construction Industry Institute
Civil Engineering Teaching Fellowship for Doctoral Candidates, 2012, Texas A&M University
Urban/Beavers Fellowship, 2012, Texas A&M University
Williams Brothers Construction Fellowship, 2012, Texas A&M University
Outstanding Graduate Student Award, 2012, Texas A&M University
Greenbuild International Conference Multimedia Visual Competition, 2011, USGBC (2nd place)
Williams Brothers Construction Fellowship, 2011, Texas A&M University
Peter C. Forster Fellowship, 2009, Texas A&M University
Primera Engineers Education Scholarship, 2008, Primera Engineers
Regional Chapter Scholarship, 2007, Construction Management Association of America Chicago
Dean's Fellowship, 2006, Illinois Institute of Technology
Outstanding Service Award, 2004, Construction Specification Institute

AFFILIATIONS AND OTHER APPOINTMENTS

Affiliated Faculty, The Henry M. Jackson School of International Studies, Southeast Asia Center, University of Washington. 2018 – present.

PUBLICATIONS

¹Graduate students for whom I am primary advisor, ²postdoc I co-advise, ³other students for whom I advised, ⁴industry partners, and ⁵colleagues.

Refereed archival journal publications

1. Medal, L.¹, Sunitiyoso, Y.⁵, & Kim, A. (Accepted) Prioritizing Decision Factors of Energy Retrofit for Facilities Portfolio Management. *Journal of Management in Engineering*.
2. Chen, C.⁵, Yilmaz, S.⁵, Pisello, A.⁵, De Simone, M.⁵, Kim, A., Hong, T.⁵, Bandurski, K.⁵, Bavaresco, M.⁵, Liu, P.⁵, & Yimin, Z.⁵ (2020) The Impacts of Building Characteristics, Social Psychological and Cultural Factors on Indoor Environment Quality Productivity Belief. *Building and Environment*, 185, 107189.
<https://doi.org/10.1016/j.buildenv.2020.107189>

3. Berawi, M. A.⁵, Aprianti, L., Saroji, G., Sari, M., Miraj, P., & Kim, A. A. (2020). Land Value Capture Modeling in Residential Area Using Big Data Approach Method. *Engineering Journal*, 24(4), 249-259. <https://doi.org/10.4186/ej.2020.24.4.249>
4. Kim, A., Wang, S.², McCunn, L.⁵, & Sadatsafavi, H.⁵ (2020). Impact of Office Modernization on Environmental Satisfaction: A Naturalistic Field Study. *Frontiers in Built Environment*, 6, 58. <https://doi.org/10.3389/fbuil.2020.00058>
5. Kim, A., Medal, L.¹, Wang, S.², & Larson, T.⁵ (2020). Indoor and Outdoor Concentrations of Particulate Matter in an Airport Terminal Building: A Pilot Study at Soekarno-Hatta International Airport in Indonesia. *Buildings*, 10(2), 25. <https://doi.org/10.3390/buildings10020025>
6. Kim, A., & Reed, D.⁵ (2020). Interdisciplinary Approach to Building Functionality for Weather Hazards. *Risk Analysis*, Early View. <https://onlinelibrary.wiley.com/doi/abs/10.1111/risa.13450>
7. Kim, A., Sunitiyoso, Y.⁵, & Medal, L.¹ (2019). Understanding Facility Management Decision Making for Energy Efficiency Efforts for Buildings at a Higher Education Institution. *Energy and Buildings*, 199, 197-215. <https://doi.org/10.1016/j.enbuild.2019.06.044>
8. Kim, A., Wang, S.², McCunn, L.⁵, Prozuments, A.¹, Swanson, T.⁴, & Lokan, K.⁴ (2019). Commissioning the Acoustical Performance of an Open Office Space Following the Latest Healthy Building Standard: A Case Study. *Acoustics*, 1(3), 473-492. <https://doi.org/10.3390/acoustics1030027>
9. Kim, A., Wang, S.², & McCunn, L.⁵ (2019). Building Value Proposition for Interactive Lighting Systems in the Workplace: Combining Energy and Occupant Perspectives. *Journal of Building Engineering*, 24, 00752. <https://doi.org/10.1016/j.jobe.2019.100752>
10. Hessami, A.⁵, Savafa, V.⁵, Kim, A., & Ford, D.⁵ (2019). Evaluating Planning Strategies for Prioritizing Projects in Sustainability Improvement Programs. *Construction Management and Economics*, Early View. <https://doi.org/10.1080/01446193.2019.1608369>
11. Sadatsafavi, H.⁵, Kim, A., Anderson, S., & Bishop, P.⁴ (2019). Scenario Planning Application in the US Highway Transportation Industry. *Journal of Infrastructure Systems*, 25(2), 05019002. [https://doi.org/10.1061/\(ASCE\)IS.1943-555X.0000474](https://doi.org/10.1061/(ASCE)IS.1943-555X.0000474)
12. Kim, A., Wang, S.², Kim, J.⁵, & Reed, D.⁵ (2019). Indoor/Outdoor Environmental Parameters and Window-opening Behavior: A Structural Equation Modeling Analysis. *Buildings*, 9(4), 94. <https://doi.org/10.3390/buildings9040094>
13. Kim, A., Reed, D.⁵, Choe, Y.⁵, Wang, S.², & Recart, C.¹ (2019). New Building Cladding System Using Independent Titled BIPV Panels with Battery Storage Capability. *Sustainability*, 11(20), 5547. <https://doi.org/10.3390/su11205546>
14. Bramono, N.¹, Kim, A., & Berawi, M. A.⁵ (2019). Preliminary Framework for Expediting Energy Efficiency Retrofits (EERs) Using Alternative Financing in Indonesian Cities. *CSID Journal of Infrastructure Development*, 20(1), 50-61. <https://doi.org/10.32783/csid-jid.v2i1.36>
15. Kosonen, H.¹, Kim, A., Gough H.⁵, Mikola, A.⁵, & Vahala, R. A.⁵ (2019). Comparative Study on Rapid Wastewater Treatment Response to Refugee Crisis. *Global Challenges*, 3(1), 189-199. <https://doi.org/10.1002/gch2.201800039>

16. Kim, A., Sadatsafavi, H.⁵, Medal, L.¹, & Ostergren, M.⁴ (2018). Impact of Communication Sources for Achieving Campus Sustainability. *Resources Conservation and Recycling*, 139, 366-376. <https://doi.org/10.1016/j.resconrec.2018.08.024>
17. Kosonen, H.¹, & Kim, A. (2018). Mental Model Approach to Wastewater Treatment Plant Project Delivery During Emergency Response. *Journal of Construction Engineering and Management*, 144(6), 05018005. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001488](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001488)
18. McCunn, L.⁵, Kim, A., & Feraco, J.³ (2018). Reflection on Retrofit: Organizational Commitment, Perceived Productivity and Controllability in a Building Lighting Project in the United States. *Energy Research & Social Science*, 38, 154-164. <https://doi.org/10.1016/j.erss.2018.02.002>
19. Kim, A., McCunn, L.⁵, & Lew (Feraco), J.³ (2017). Successful Change-Management Practices for Retrofit Projects: A Case Study. *Journal of Management in Engineering*, 33(4), 05017001. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000519](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000519)
20. Kim, A., Sadatsafavi, H.⁵, Anderson, S., & Bishop, P.⁴ (2017). Preparing for the Future of Transportation Construction: Strategies for State Transportation Agencies. *Journal of Management in Engineering*, 33(3), 04016045. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000494](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000494)
21. Kosonen, H.¹, & Kim, A. (2017). Advancement of Behavioral Energy Interventions in Commercial Buildings. *Facilities*, 35(5/6), 367-382. <https://doi.org/10.1108/F-04-2016-0044>
22. Wang, S.³, Kim, A., & Johnson, E.⁴ (2017). Understanding the Deterministic and Probabilistic Business Cases for Occupant Based Plug Load Management Strategies in Commercial Buildings. *Applied Energy*, 191, 398-413. <https://doi.org/10.1016/j.apenergy.2017.01.082>
23. Wang, S.³, Kim, A., & Reed, D.⁵ (2017). Embedded Distribution Systems for Enhanced Energy Resilience. *Journal of Solar Energy Engineering – Transaction of the ASME*, 139(1), 011005. <https://doi.org/10.1115/1.4035063>
24. Sadatsafavi, H.⁵, Kim, A., & Soucek, M.K.⁴ (2016). Impact of Roles and Affiliations on End-Users' Acceptance of ERP Implementation in a Large Transportation Agency. *Journal of Management in Engineering*, 32(6), 05016018. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000458](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000458)
25. Kim, A., Sadatsafavi, H.⁵, & Soucek, M.K.⁴ (2016). Effective Communication Practices for Implementing ERP for a Large Transportation Agency. *Journal of Management in Engineering*, 32(3), 04015049. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000415](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000415)
26. Kim, A., Haberl, J., & Anderson, S. (2016). Comparison between Current Industry Methods and an Energy Simulation Model for Quantifying Energy Service Projects. *Journal of Architectural Engineering*, 22(2), 04015016. [https://doi.org/10.1061/\(ASCE\)AE.1943-5568.0000192](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000192)
27. Kim, A., Anderson, S., & Haberl, J. (2016). Current Industry Methods of Quantifying Energy Service Projects: Key Findings and Lessons Learned. *Journal of Architectural Engineering*, 22(2), 04015015. [https://doi.org/10.1061/\(ASCE\)AE.1943-5568.0000191](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000191)
28. Kim, A., & Arditi, D. (2010). Performance of MBE/DBE/WBE Construction firms in Transportation Projects. *Journal of Construction Engineering and Management*, 136(7), 768-777. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0000182](https://doi.org/10.1061/(ASCE)CO.1943-7862.0000182)

29. Kim, A., & Arditi, D. (2010). "Performance of minority firms providing construction management services in the US transportation sector." *Construction Management and Economics*, 28(8), 839-851. <https://doi.org/10.1080/01446193.2010.483331>

Conference proceedings and other non-journal articles

- **Fully refereed publications**

1. Wang, S.², Larson, T.⁵, & Kim, A. (Accepted) Predicting Fine and Coarse PM Concentrations in Well-mixed Indoor Air for a Large Office Building using Regression Models. *The 16th Conference of the International Society of Indoor Air Quality & Climate*. Seoul, Korea. November, 2020.
2. Wang, S.², Sadatsafavi, H.⁵, Larson, T.⁵, & Kim, A. (Accepted) Characterization of Indoor Air Quality in a Government Office Building using Principal Component Analysis. *The 16th Conference of the International Society of Indoor Air Quality & Climate*. Seoul, Korea. November, 2020.
3. Wang, S.², Prozuments, A.¹, & Kim, A. (Accepted) Indoor Air Exposure on Construction Workers during an Office Interior Retrofit Project. *The 16th Conference of the International Society of Indoor Air Quality & Climate*. Seoul, Korea. November, 2020.
4. Reed, D.⁵, Larson, T.⁵, & Kim, A. (Accepted) Bottom-Up Approach to Building Functionality. *The Seventh Asian-Pacific Symposium on Structural Reliability and Its Applications (APSSRA2020)*. Tokyo, Japan. October, 2020.
5. Recart, C.¹, & Kim, A. Systematic Review of Hygrothermal Computation Tools for New and Existing Buildings. *ACEEE – 2020 Summer Study on Energy Efficiency in Buildings*. Los Angeles, CA. August, 2020.
6. Recart, C.¹, Kim, A., & Dossick, C.⁵ Measurements and Verification (M&V) Guidelines for Weatherization Plus Health Program. *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
7. Horn, E.¹, Kim, A., & Dodd, M.⁵ Pursuing Positive Water Quality Outcomes in a Healthy & Sustainable Built Environment. *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
8. Medal, L.¹, & Kim, A. Context-Driven Factors for Implementing Energy Efficiency Retrofit in a Portfolio of Buildings. *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
9. Prozuments, A.¹, Kim, A., & Borodinecs, A.⁵ Evaluation of the Building Stock Thermal Performance Under Various Building Code Compliance Scenarios: The Case of Latvia. *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
10. Sadatsafavi, H.⁵, Kim, A., Anderson, S.⁵, & Bishop, P.⁴ Using Scenario Planning for Identifying Major Future Trends and Their Implications for State Transportation Agencies. *International Conference on Sustainable Infrastructure*. New York, New York. October, 2017.
11. Sadatsafavi, H.⁵, Shepley, M.⁵, Kim, A., & Huynh, H.¹ How Do Green Healthcare Facilities Perform Financially When Compared to Non-Green Hospitals Overtime? Results from a National Database. *International Conference on Sustainable Infrastructure*. New York, New York. October, 2017.

12. Medal, L.¹, & Kim, A. Synthesizing the Heuristic Rules of Prioritizing Energy Resource Conservation Measure in Portfolio of Buildings. *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
 13. Kosonen, H.¹, & Kim, A. Managing Wastewater During Refugee Crisis – Comparing the Lessons Learned from Finland and Jordan. *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
 14. Coffland, M.¹, Kim, A., Sadatsafavi, H.⁵, & Uber, M.⁴ Improved Data Storage for Better Safety Analysis and Decision Making in Large Construction Management Firms. *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
 15. Kosonen, H.¹, & Kim, A. Towards a Holistic Perspective on Environmentally Sustainable Behavior: A Method for Linking Travel Attitudes with Electricity Consumption Data. *Construction Research Congress*. San Juan, Puerto Rico. June, 2016.
 16. Kosonen, H.¹, & Kim, A. Quantifying Plug Load Energy Use in a LEED Gold Building – Lessons Learned in the Installation Phase. *Construction Research Congress*. San Juan, Puerto Rico. June, 2016.
 17. Kim, A., Wang, S.³, & Reed, D.⁵ Thermal Comfort Assessment through Measurements in a Naturally Ventilated LEED Gold Building. *5th International/11th Construction Specialty Conference*. Vancouver, Canada. June, 2015.
 18. Kosonen, H.¹, & Kim, A. The Feasibility of Plug-load Monitoring and Energy-saving Interventions in Residential and Office Buildings on the University of Washington Campus. *5th International/11th Construction Specialty Conference*. Vancouver, Canada. June, 2015. [**BEST PAPER AWARD]
 19. Yeon, J.⁵, Walewski, J.⁵, & Kim, A. IPRA Tool Compatibility Test for the International Nuclear Power Plant Construction. *51st ASC Annual International Conference*. College Station, Texas. September, 2015.
 20. Kim, A., Faghihi, V.⁵, Hessami, A.⁵, & Ford, D.⁵ Designing Perpetual Sustainability Improvement Programs for Built Infrastructures. *30th International Conference of the System Dynamics Society*. St. Gallen, Switzerland. July, 2012.
- **Refereed by abstract only**
1. Kosonen, H.¹, & Kim, A. Rainwater System to Concrete Laboratory – An Interdisciplinary Approach to Sustainability Education. *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.

Journal issues edited

McCunn, L. & Kim, A. Special Issue on Environmental Psychology and the Built Environment, *Journal of Frontiers in Built Environment*, 6 articles spread over 2019-2020. [Link: https://www.frontiersin.org/research-topics/9810/environmental-psychology-and-the-built-environment#overview](https://www.frontiersin.org/research-topics/9810/environmental-psychology-and-the-built-environment#overview)

[Editorial]

McCunn, L. J., & Kim, A. (2020). Environmental Psychology and the Built Environment. *Frontiers in Built Environment*, 6, 133.

Patents submitted and/or awarded

Preliminary patent application through UW, *BPPL: Building Perma-Power Link*, submitted 2016, with D.A. Reed.

Record on Innovation (ROI) through UW, *Micro IEQ Sensor Bundles for Continuous Monitoring*, submitted 2020, with B. Lagesse.

Abstracts, letters, non-refereed papers, technical reports

Reports

1. Kim, A., Wang, S.², Medal, L.¹, & Sadatsafavi, H.⁵ *Linear Scheduling Evaluation and Best Practices Development Phase I Report*. Prepared for Washington State Department of Transportation. August, 2019.
2. Kim, A., & Wang, S.³ *Bellevue City Hall - Fitwel Certification*. Prepared for the City of Bellevue. April, 2018.
3. Kim, A., & Wang, S.³ *Bellevue City Hall Indoor Air Quality Assessments*. Prepared for the City of Bellevue. July, 2017.
4. *Phase II Special Report for Task 7.1: Prepare for Visioning Workshop to the NCHRP on Project NCHRP 20-83(03) Long-Range Strategic Issues Affecting Preservation, Maintenance, and Renewal of Highway Infrastructure*. Prepared for the NCHRP 20-83(03) Panel Committee. June, 2014.
5. *Phase I Interim Report to the National Cooperative Highway Research Program (NCHRP) on Project NCHRP 08-88 Effective Project Scoping Practices to Improve On-time and On-budget delivery of Highway Projects*. Prepared for the NCHRP 08-88 Panel Committee. June, 2013.
6. *Phase II Special Report for Task 6: Prepare Transportation-Area White Paper Visions to the NCHRP on Project NCHRP 20-83(03) Long-Range Strategic Issues Affecting Preservation, Maintenance, and Renewal of Highway Infrastructure*. Prepared for the NCHRP 20-83(03) Panel Committee. April, 2013.
7. *Phase I Interim Report to the National Cooperative Highway Research Program (NCHRP) on Project NCHRP 20-83(03) Long-Range Strategic Issues Affecting Preservation, Maintenance, and Renewal of Highway Infrastructure*. Prepared for the NCHRP 20-83(03) Panel Committee. January, 2012.

Other significant research dissemination (web sites, software, Wikis, etc.)

Research Gate: https://www.researchgate.net/profile/Amy_Kim17

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars.

1. Civil and Environmental Engineering Water Seminar (UW CEE 500). *Human-centric and Performance-driven Strategies for the Built Environment*. Seattle, WA. May 28, 2020.
2. Ecological Design and Planning (UW LARCH 563). *The Relationship Between Buildings and Sustainable Sites*. Seattle, WA. May 8, 2020.

3. Food Systems Seminar (Food Systems in the Age of Climate Change, UW School of Public Health Nutritional Sciences Program). Panel member for *Ecological Life Support Systems: Climate Change and Natural Resources*. Seattle, WA. January 28, 2020.
4. Construction Management Graduate Seminar (UBC CIVL 597-005). *Decision Making in Building Energy Efficiency*. Vancouver, Canada. November 27, 2019.
5. Cost Risk Estimating Management (CREM) Community of Practice Meeting. *Linear Scheduling Tools and Performance Metrics Assessment*. Washington State Department of Transportation, Vancouver, WA. June 12, 2019.
6. Fulbright Joint-Research Seminar. *Decision Making in Building Retrofits for Energy Efficiency*. Institut Teknologi Bandung. Jakarta, Indonesia. February 6, 2019.
7. Naval Facilities Engineering Command Seminar. *UW Energy Security/Resilience Presentation*. US Navy. Everett, WA. October 12, 2018.
8. Center for Sustainable Infrastructure Development Seminar Series. *Better Health through Better Building*, University of Indonesia. Jakarta, Indonesia. March 15, 2018.
9. Campus Engineering & Operations. *Lighting Retrofits in the UW Tower*. University of Washington. Seattle, WA. March 2, 2018.
10. Center for Sustainable Infrastructure Development Seminar Series. *Future Green Buildings in the Context of Smart Cities*. University of Indonesia. Jakarta, Indonesia. March 20, 2017.
11. King County Sustainable Cities Roundtables. *Healthy Building Certification and Standards*. Bellevue, WA. February 15, 2018.
12. Center for Sustainable Infrastructure Development – Focus Group Workshop. *Green Building – Global Perspective*. University of Indonesia. Jakarta, Indonesia. March 21, 2017.
13. 2nd NIAC Workshop on Urban Science & Engineering. *Understanding the Impact of Human Decision-making and Behavior on Sustainable Infrastructure Management*. Seattle, WA. February 2, 2016.

Presentations given at conferences. (presenter names in bold)

¹Graduate students for whom I am primary advisor, ²postdoc I co-advise, ³other students for whom I advised, ⁴industry partners, and ⁵colleagues.

1. **Recart, C.**¹, & Kim, A. “Systematic Review of Hygrothermal Computation Tools for New and Existing Buildings.” *ACEEE – 2020 Summer Study on Energy Efficiency in Buildings*. Los Angeles, CA. August, 2020.
2. Kim, A., & **Reed, D.**⁵ “Performance-Based Design Approach to Building Functionality.” *Engineering Mechanics Institute Conference*. New York, New York. May, 2020.
3. **Recart, C.**¹, Kim, A., & Dossick, C.⁵ “Measurements and Verification (M&V) Guidelines for Weatherization Plus Health Program.” *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
4. **Medal, L.**¹, & Kim, A. “Context-Driven Factors for Implementing Energy Efficiency Retrofit in a Portfolio of Buildings.” *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
5. **Prozuments, A.**¹, Kim, A., & Borodinecs, A.⁵ “Evaluation of the Building Stock Thermal Performance Under Various Building Code Compliance Scenarios: The Case of Latvia.” *ASCE- Construction Research Congress*. Tempe, Arizona. March, 2020.
6. **Medal, L.**¹, & Kim, A. “Understanding Decision Making for Building Energy Efficiency at a Higher Education Institution.” *2019 The Association for the Advancement of Sustainability in Higher Education Conference & Expo*. Spokane, Washington. October, 2019.

7. **Kim, A.**, Medal, L.¹, Wang, S.², & Larson, T.⁵ “Indoor and Outdoor Concentration of Particulate Matter in an Airport Terminal Building: A study at Soekarno-Hatta International Airport in Indonesia.” *Healthy Buildings 2019 Asia*. Changsha, China. October, 2019.
8. **Kim, A.**, McCunn, L.⁵, Wang, S.², & Prozumens, A.¹ “Psychoacoustical Research Pertaining to the Healthy Workspace.” *International Workshop on Putting Sustainability into Convergence: Connecting Data, People, and Systems*. Central Region, Singapore. January, 2019.
9. **Bramono, N.**¹, Kim, A., & Berawi, M.⁵ “A Preliminary Framework for Expediting Energy Efficiency Retrofits (EERs) Using Alternative Financing in Indonesian Cities.” *International Conference of Infrastructure and Sustainable Urban Development*. Jakarta, Indonesia. November, 2018.
10. **Wang, S.**², Kim, A., & Reed, D.⁵ “Risk Reduction through Building Energy Resiliency.” *Lloyd’s Day at Rice University*. Houston, TX. October, 2018.
11. Medal, L.¹, **Kim, A.**, Mohammed, A.⁵, & Miraj, P. “Understanding Global Adoption Potentials for Healthy Building Rating Systems - an International Perspective.” *The 2018 Health in Buildings for Today and Tomorrow: Making Connections Conference*. Bethesda, Maryland. July, 2018.
12. **Wang, S.**², Kim, A., Kim, J.⁵, & Reed, D.⁵ “Predictive Modeling of Window Opening Behavior of Occupants in Small Office Space.” *The 2018 Health in Buildings for Today and Tomorrow: Making Connections Conference*. Bethesda, Maryland. July, 2018.
13. **Wang, S.**², Prozumens, A.¹, Atienza, C.¹, Huy, H.¹, & Kim, A. “Monitoring the Indoor Air Exposure on Construction Workers during an Office Interior Modernization Program.” *The 2018 Health in Buildings for Today and Tomorrow: Making Connections Conference*. Bethesda, Maryland. July, 2018.
14. **Kim, A.**, & Wang, S.². “Implication of the Measurement and Verification Process of the Latest Healthy Building Standards.” *The 2018 Health in Buildings for Today and Tomorrow: Making Connections Conference*. Bethesda, Maryland. July, 2018.
15. McCunn, L.⁵, **Kim, A.**, & Feracor, J.³. “Office Building Occupants’ Response to an Advanced Human-centered, Technology-driven Lighting System.” *The 2018 Health in Buildings for Today and Tomorrow: Making Connections Conference*. Bethesda, Maryland. July, 2018.
16. **Reed, D.**⁵, Kim, A., & Wang, S.². “Using Building Functionality Metrics for Performance & Resilience Assessment of Energy Infrastructure.” *Engineering Mechanics Institute Conference 2018*. Cambridge, Massachusetts. May-June, 2018.
17. **Atienza, C.**¹, Wang, S.², & Kim, A. “Investigation of Indoor Environment Quality (IEQ) During Construction and Renovation in the UW Tower.” *UW Undergraduate Research Symposium*. Seattle, Washington. May, 2018.
18. **Kim, A.**, & Medal, L.¹. “Review of Sustainability Strategies of U.S. Universities and Federal Buildings.” *The Association for the Advancement of Sustainability in Higher Education Conference*. San Antonio, Texas. October, 2017.
19. Wang, S.³, Kim, A., & **Johnson, E.**⁴ “Analyzing the ROI of Conducting Occupant Energy Saving Intervention Using Deterministic and Probabilistic Approaches.” *Behavior, Energy & Climate Change Conference*. Sacramento, California. October, 2017.
20. **Kosonen, H.**¹, Gough, H.⁵, Kim, A., & Abu-Dalo, M.⁵ “Exploring Stakeholder Decision Practices During Azraq Wastewater Treatment Plan Startup.” *First International Conference on Water Management in Arid Land & Semi-arid Land*. Irbid, Jordan. October, 2017.
21. **Kosonen, H.**¹, & Kim, A. “Improving Decision Practices at Wastewater Treatment Plants During Crisis.” *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.

22. **Kosonen, H.¹**, & Kim, A. "Rainwater System to Concrete Laboratory-An Interdisciplinary Approach to Sustainability Education." *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
23. **Medal, L.¹**, & Kim, A. "Synthesizing the Heuristic Rules of Prioritizing Energy Resource Conservation Measure in Portfolio of Buildings." *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
24. **Coffland, M.¹**, Kim, A., Sadatsafavi, H.⁵, & Uber, M.⁴ "Improved Data Storage for Better Safety Analysis and Decision Making in Large Construction Management Firms." *6th CSCE-CRC International Construction Specialty Conference*. Vancouver, Canada. May, 2017.
25. **Wang, S.³**, Kim, A., & Johnson, E.⁴ "Analyzing the ROI of Conducting Occupant Energy Saving Intervention Using Deterministic and Probabilistic Approaches." *Production and Operations Management Society (POMS) 28th Annual Conference*. Seattle, Washington. May, 2017.
26. **Kosonen, H.¹**, & Kim, A. "Improving Decision Practices at Wastewater Treatment Plants During Crisis." *New Frontiers in Construction Conference*. Seattle, Washington. March, 2017.
27. **Medal, L.¹**, & Kim, A. "Prioritizing Energy Efficiency Investment in Buildings." *New Frontiers in Construction Conference*. Seattle, Washington. March, 2017.
28. **Gough, H. L.⁵**, Kosonen, H.¹, Callahan, C., Awawdeh, A., Abu-Ashour, J.⁵, Abu-Dalo, M.⁵, & Kim, A. "Wastewater Treatment at a Syrian Refugee Camp: Impacts of Shifting Operational Scenarios on System Performance." *Gordon Research Conference, Environmental Sciences: Water*. Holderness, New Hampshire. June, 2016.
29. **Kosonen, H.¹**, & Kim, A. "Towards a Holistic Perspective on Environmentally Sustainable Behavior: A Method for Linking Travel Attitudes with Electricity Consumption Data." *Construction Research Congress*. San Juan, Puerto Rico. June, 2016.
30. **Kosonen, H.¹**, & Kim, A. "Quantifying Plug Load Energy Use in a LEED Gold Building – Lessons Learned in the Installation Phase." *Construction Research Congress*. San Juan, Puerto Rico. June, 2016.
31. **Kim, A., Lew, J.³**, Swanson, T.⁴, Bybee, S.⁴, Eknoian, J.⁴, Kennard, S.⁴, & Quarfoth, G.⁴ "Applying Sustainability Practices to Lighting Retrofits in the UW Tower." *UW's Annual Environmental Stewardship Committee Meeting*. Seattle, Washington. April, 2016.
32. **Kosonen, H.¹**, & Kim, A. "The Feasibility of Plug-load Monitoring and Energy-savings Interventions in Office Buildings." *SustainableUW Festival (Husky Highlight: Energy and Innovation)*. Seattle, Washington. October, 2015.
33. **Lew, J.³**, & Kim, A. "Value-driven Property Investment Strategy for Indoor Lighting in the UW Tower." *SustainableUW Festival*. Seattle, Washington. October, 2015
34. **Kim, A., Wang, S.³**, & Reed, D.⁵ "Thermal Comfort Assessment Through Measurements in a Naturally Ventilated LEED Gold Building." *5th International/11th Construction Specialty Conference*. Vancouver, Canada. June, 2015.
35. **Kosonen, H.¹**, & Kim, A. "The Feasibility of Plug-load Monitoring and Energy-saving Interventions in Residential and Office Buildings on the University of Washington Campus." *5th International/11th Construction Specialty Conference*. Vancouver, Canada. June, 2015.
36. **Kim, A., Wang S.³**, & Reed, D.⁵ "Analysis of the Indoor Environment Quality for a LEED Gold Commercial Building." *Annual Conference on Environmental, Occupational, and Population Health*. Blaine, Washington. January, 2015.
37. **Kim, A., Sadatsafavi, H.⁵**, Soucek, K.⁴, & Anderson, S.⁵ "An Integrated Approach to Implementing Enterprise Resource Planning Systems for a Large Transportation Agency." *Transportation Research Board 94th Annual Meeting*. Washington, District of Columbia. January, 2015.

38. Kim, A., Wang, S.³, & Reed, D.⁵ “Indoor Environment Quality Assessment.” *Sustainable UW Festival*. Seattle, Washington. October, 2014.

Professional society memberships.

American Institute of Architects, 2001-2006, 2015-2017
 American Society of Civil Engineers, 2015-present
 American Society of Heating, Refrigerating and Air Conditioning Engineers, 2012-2016
 Construction Management Association of America, 2006-2009
 Construction Specification Institute, 2001-2006
 Illuminating Engineering Society, 2015-2016
 International Facility Management Association, 2017-2019
 Transportation Research Board, 2012-2019
 U.S. Green Building Council, 2007-present

Other

Referee / Reviewer

Publication	Reviews Completed
Springer <i>Building Simulation</i>	1 article
Springer <i>Energy Efficiency</i>	1 article
Elsevier <i>Energy Research and Social Science</i>	2 articles
emerald insight <i>Facilities</i>	2 articles
emerald insight <i>International Journal of Sustainability in Higher Education</i>	1 article
Elsevier <i>Journal of Building Engineering</i>	2 articles
ASCE <i>Journal of Management in Engineering</i>	11 articles
TRB <i>Transportation Research Record</i>	16 articles
ASCE <i>Journal of Computing in Civil Engineering</i>	2 articles
ASCE <i>Journal of Construction Engineering and Management</i>	4 articles
MDPI <i>Water</i>	1 article

GRADUATE STUDENTS

Chaired Doctoral Degrees

Student name	Dissertation Title	Completed (Year)	Current Employer
Heta Karoliina Kosonen	<i>Pathways toward Rapid Wastewater Treatment Response during the Global Refugee Crisis</i>	(2018)	UNICEF

Current Doctoral Students

Student	My Role	Status	Title or Topic
Uzma Siddiqi, PE	Chair (Co-chair D. A. Reed)	AU 2019 start	Feasibility of Large and Small Utilities for Achieving Clean Energy Transformation Act (CETA) in WA
Novi Triadi Iman Bramono ¹	Chair	AU 2019 start	Tradeoff Between Healthy Building IAQ and Building Energy Efficiency

Carolina Andrea Recart ²	Chair (Co-chair C. Dossick)	Passed qualifying exam 06/2020	<i>Building Performance Measurement of Weatherization Plus Health for Low Income Family Homes</i>
Erin Horn	Chair (Co-chair G. Proksch)	Passed qualifying exam 04/2020	<i>Food-Water-Energy Nexus in Buildings – Biocircular Buildings</i>
Lysandra Amante Medal ¹	Chair	Passed general exam 02/2020	<i>Prioritizing Energy Conservation Measures for a Portfolio of Buildings</i>

¹PhD funded 100% by the Indonesia government through Indonesia Endowment Fund for Education

²PhD funded 100% by Fulbright through Equal Opportunities Fulbright – CONICYT Scholarship

Chaired Masters Degrees

Student	My Role	Graduation Date	Thesis Title/Project Title/Coursework only	First Employer
Victory Rizzardi	Chair	SP 2020	Coursework only	Continued to PhD (@Norwegian University of Science and Technology)
Erin Horn	Chair	SP 2020	Coursework only	Continued to PhD
Uzma Siddiqi, PE	Chair	SU 2019	Coursework only	Continued to PhD (also full time at Seattle City Light)
Patricia Hunhold	Chair	SU 2019	Coursework only	Verdani partners
Shih-Chi Liu	Chair	SU 2018	Coursework only	Hathaway Dinwiddie Construction
Bitu Astaneh Asl	Co-Chair (Chair: C. Dossick)	SP 2018	<i>Value Proposition of COBie at University of Washington</i>	Continued to PhD (w/C. Dossick)
Lysandra Amante Medal ¹	Chair	SP 2017	Coursework only	Continued to PhD

Current Masters Students

Student	My Role	Status	Level of Supervision
Danielle De Castro	Chair	AU 2020 start	Thesis topic chosen: Commercial Building Energy Consumption Associated with Increased Ventilations and Filtrations
Amanda Worthy	Co-Chair (Chair: D. A. Reed)	AU 2020 start	Thesis topic being discussed

Nicholas Acorn	Chair	AU 2020 start	Coursework only
David Bill	Chair	AU 2020 start	Coursework only

Other significant student supervision

Ph.D. Committees

- Jesus Conteras Ocana, UW Electrical Engineering, GSR member (Graduated SU 2018)
- Julian Yamaura UW Civil and Environmental Engineering (Graduated AU 2018)
- Miriam Hacker UW Civil and Environmental Engineering (Graduated AU 2018)
- Zeyu Wang, UW Electrical Engineering, GSR member (Graduated WN 2019)
- Aleksejs Prozuments Riga Technical University (anticipated graduation year 2021)
- Hasan Rafsanjani UW Electrical Engineering (anticipated graduation year 2022)

Graduates

- Christian Valoria PE, graduate researcher in Mech Eng. (UW Tower Indoor Air Quality), 2020-present
- Erin Horn, graduate researcher (Assessing Healthy Building Water), 2019
- Shuoqi Wang, graduate researcher (Assessing the Built Environment and Energy Savings), 2014-2017 (Continued as post-doc from 2017-present)
- James Lew/Feracor, graduate researcher (Indoor Lighting Retrofit), 2015-2017

Visiting Scholar

- Yos, Sunitiyoso, PhD (Visiting scholar at UW/Fulbright, 2018 AU quarter)

Visiting Students

- Aleksejs Prozuments (Visiting Ph.D. student at UW/Valle Scholar, 2017-2018)
- Michael Taborn, University of Michigan (Visiting MS student at UW, 2015)

Undergraduates

- Brandon Quan, undergraduate research advisor (Life Cycle Assessment of Regional Stormwater Assessment focused on Environmental Impacts), SP 2020-present
- Michael Wood, undergraduate research advisor (Life Cycle Cost Assessment of Regional Stormwater Assessment focused on Economic Evaluation), SP 2020-present
- Phillip Ovanesyan, undergraduate research co-advisor with B. Lagesse (Indoor Air Quality Assessment in the UW Tower), W 2020-present
- Colleen Hong, Washington State Academic RedShirt Program Cohort advisor (Indoor Air Quality Assessment in the UW Tower), 2019- SP 2020
- Jannah Bongato, Washington State Academic RedShirt Program Cohort advisor, 2019- SP 2020
- Rebecca Lilliquist, undergraduate research advisor (Indoor Air Quality Assessment in the UW Tower), AU 2019
- Maria Carla Beatriz Marigmen, undergraduate capstone advisor (Analyzing Sports Facilities Operations), W/SP 2018
- Casiano Atienza, Washington State Academic RedShirt Program Cohort advisor (Indoor Air Quality Assessment in the UW Tower), 2016-2018
- Hyu Huynh, undergraduate research advisor (Performance of LEED-certified Residence Halls on Operation and Maintenance Cost), 2016-2017
- Patrick Cueto, undergraduate research advisor (Sustainability Trends in Residential Construction), SP 2014

- Erik Lissak, undergraduate research advisor (Linking Travel Behavior to Building Occupant Behavior), SP 2014
- Cory Lucker, undergraduate research advisor (Reducing Plug Loads in University Buildings), SP 2014

RESEARCH ACTIVITIES

Director of the **Energy Efficient and Healthy Buildings (E2HB) Lab**. I created this lab to organize and coordinate my research activities and collaborations. Lab personnel include students, technical staff, post-docs, and faculty. Presentations by students and faculty are held on a regular basis. TAs for the Sustainable Construction and Healthy Buildings curriculum are also part of the lab. The lab has several laptops and numerous types of equipment for measuring IEQ parameters.

Funded Research

Funding Agency	Title
UW Campus Sustainability Fund	<i>Development of an On-campus Regional Stormwater Treatment Facility for the University of Washington</i>
UW Continuum College	<i>Healthy Workspaces</i>
WSDOT	<i>Linear Scheduling Evaluation and Best Practices Development</i>
NSF	<i>RAPID: Well and Profitable during Pacific Northwest Fires: Modeling I-O Air Pollution Measured by Fine and Ultra-fine Particulate Matters</i>
City of Bellevue	<i>Healthy Building (Fitwel) Certification for the City Hall Building</i>
City of Bellevue	<i>Volatile Organic Compounds (VOC) and Particulate Matter (PM) Assessment in the City Hall Building</i>
UW Global Innovation Fund	<i>Integrated Solutions for the Built Environment: A Global Perspective (Indonesia): Research</i>
NSF	<i>RAPID: Avoiding Secondary Disasters: Wastewater Treatment Design and (Re)construction during Large-Scale Disaster Response</i>
UW Campus Sustainability Fund	<i>A Rainwater System for Construction Materials Laboratory in University of Washington's More Hall</i>
UW Green Seed	<i>Value-driven Property Investing Strategy for the UW Campus – A Lighting Example</i>
Texas A&M Research Foundation	<i>Long Range Strategic Issues Affecting Preservation, Maintenance, and Renewal of Highway Infrastructure</i>

Un-sponsored research

Developing Conceptual Design of Transit Oriented Development through Added Value (United States Agency for International Development), project collaboration with University of Indonesia. 2019-present.

Impact of changed workplace design on Indoor Environmental Quality (IEQ) and employee performance and satisfaction. 2016-present.

Measurement of Air, Water, Light, and Comfort levels in a LEED Gold Building following the WELL/Fitwel healthy building standard. 2016-present.

TEACHING ACTIVITIES

Courses Taught

CEE 307: Construction Engineering
 CEE 429: Sustainability in Building Infrastructure
 CEE 441: Transportation and Construction Capstone
 CESI 504: Buildings, LEED, and Energy Use
 CEE 599: Sustainable and Healthy Building in Global Context

Supervision of independent study (design projects and research)

Course	Title or Student Name	Quarter
ME 598	Christian Valoria: <i>Heat pump water heater for low-income multi-residential unit buildings</i>	Autumn, 2020
CEE 498	Rempp, Kiley: <i>Linear scheduling model in transportation project</i>	Summer, 2019
CEE 499A	Long, Guan: <i>Utilization of passive ventilation and daylight strategies in LEED rating system</i>	Spring, 2019
CEE 499A	Nicole, Wong: <i>The progression of LEED's Water efficiency credits: Balancing water efficiency and water quality</i>	Spring, 2019
CEE 600	Horn, Erin: <i>Building premise plumbing – healthy water</i>	Winter, 2019
CEE 498	Rempp, Kiley: <i>Stakeholder engagement and agreement during multimodal transportation planning process</i>	Spring, 2018
CEE 601B	Liu, Shih-Chi: <i>Internship debrief report at the Hathaway Dinwiddie Construction Company</i>	Summer, 2017
CEE 499A	Lee, Anna: <i>Project prioritization within generation operations and engineering division at the Seattle City Light</i>	Spring, 2017

List of other teaching contributions

Courses created for the Curriculum in Sustainable Construction and Healthy Buildings
 CEE 429: Sustainability in Building Infrastructure (undergraduate-level course)
 CEE 400 level: Green Building in the Global South (undergraduate/graduate-level study-abroad course)
 CESI 504: Buildings, LEED, and Energy Use (graduate-level, fully online course)
 CEE 599: Sustainable and Healthy Building in Global Context (graduate-level course)

Funding awarded for teaching

Funding Agency	Title
UW Global Innovation Fund	<i>International Capstone for Design of a Microgrid – collaboration with Indonesia</i>
Valle Faculty Exchange*	<i>Faculty exchange</i>
UW Study Abroad*	<i>Faculty-led Study Abroad Program Proposal: Green Building in the Global South (GBiGS)</i>
UW Global Innovation Fund	<i>Bridging STEM disciplines and Southeast Asian Studies: Teaching</i>

U.S. Department of Education	<i>Southeast Center Title VI grant – Study Abroad to Indonesia</i>
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*Activities postponed due to COVID-19

SERVICE

Departmental service

Faculty advisor, American Public Works Association (APWA) student chapter, 2018-present.
Member, Faculty Performance Expectations Ad Hoc Committee, 2020-present.
Member, Undergraduate Education Committee, 2018-2020.
Member, Faculty Affairs Committee, 2016-2018.
Member, Environmental Engineering Faculty Search Committee, 2014-2015.
Member, Departmental Affairs Committee, 2014-2016.

College service

Faculty mentor, UW STARS (State Academic RedShirt) students, 2016-present.

University service

Member, UW Green Building Standard Committee, 2016-2019.
Member, UW Sustainability, Plan Management Team, 2019-present.
College of Engineering representative, UW Environmental Stewardship Committee, 2019-present.
Team lead, UW Tower Fitwel Certification Team, 2018-present.

Professional society and other service

Transportation Research Board

- Standing Committee on Construction Management (AFH10). Member (2014-2019).

Journal Editorship

- ASCE Journal of Management in Engineering. Member of editorial board (2017-present).
- CSID Journal of Infrastructure Development. Member of editorial board (2018-present).
- Frontiers in Built Environment. Special guest editor (2019-2020).

Conference Activity

- The 7th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys 2020). Program committee member (2020).

Community service

Policymaker Engagement

1. Washington State Department of Commerce. *Building Efficiency and Resilience*. Olympia, WA. June 14, 2018.
2. Washington State Department of Commerce. *Building Efficiency Opportunities in the State of Washington*. Olympia, WA. April 19, 2018.
3. Bellevue School District, Office of Capital Projects. *Jing Mei Elementary School IAQ Study*. Bellevue, WA. September 29, 2017.

4. City of Bellevue, Department of Resource Conservation. *Initial Assessment of Indoor Air Quality at the Bellevue City Hall*. Bellevue, WA. June 26, 2017.
5. City of Bellevue, Department of Resource Conservation. *Quantifying the ROI for Plug Load Behavior Interventions in Bellevue City Hall*. Bellevue, WA. March 16, 2017.
6. City of Seattle, Office of Sustainability and Environment. *Recent Research Efforts in Energy Use in Commercial Buildings*. Seattle, WA. October 2, 2014.
7. US Department of Housing and Urban Development. *Recent Research Efforts in Energy Use in Residential Buildings*. Seattle, WA. August 1, 2014.

Industry Engagement

1. PAE Engineering. *Better Buildings for Better Health*. February 27, 2020. Seattle, WA.
2. Turner Construction. *Emerging Trends in Sustainable Buildings and LEED rating system*. March 23, 2017. Jakarta, Indonesia.
3. Sinar Mas Group. *Emerging Trends in Sustainable Buildings, Implications for Green Property Development in Indonesia*. March 22, 2017. South Tangerang, Indonesia.
4. T-Mobile, Corporate Real Estate. *Factors Influencing Audio Visual Technology Adoption: A Case Study at T-Mobile*. March 28, 2017. Bellevue, WA.
5. Amazon.com Inc., Corporate Real Estate, *Recent Research Efforts in Implementation of Retrofit Strategies for Portfolio of Buildings*. June 24, 2016. Seattle, WA.

Non-profit Engagement

1. The Perkins School. Volunteer for designing and advising owners on installing a rainwater catchment system for the Living Building Challenge modular unit. Seattle, WA. AU 2014.

International, national or governmental service

- Panel member, Transportation Research Board-National Cooperative Highway Research Program Synthesis Project (2018-2019)
- Member, International Energy Agency, Energy in Buildings Communities Programme Annex 79: Occupant Behaviour-centric Building Design and Operation (October 2019-September 2023)
- Member, U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Pilot Committee (January 2019 - December 2019)
- Review panelist for National Science Foundation (NSF): Environmental Engineering (2019)
- Ad hoc reviewer for National Science Foundation (NSF): Decision, Risk and Management Sciences (2020)