Kathrina Simonen, FAIA, SE

Mithun-Russell Family Foundation Endowed Professor of Sustainability Professor of Architecture. University of Washington ksimonen@uw.edu www.lifecyclelab.org

Bio

Kathrina (Kate) Simonen is a Professor of Architecture at the University of Washington and founder and board chair of the nonprofit Carbon Leadership Forum. Licensed as an architect and structural engineer, she connects significant professional experience in high performance building design and technical expertise in environmental life cycle assessment, she works to accelerate the transformation of the building sector to radically reduce the greenhouse gas emissions attributed to materials (also known as embodied carbon) used in buildings and infrastructure. Her academic group, the Life Cycle Lab, focuses on pursuing critical research to advance life cycle assessment (LCA) data, methods and approaches to enable optimization of materials, buildings and infrastructure.

She is an honorary fellow of the UK's Institution of Structural Engineers and was named Engineering News Record Top 25 Newsmaker in 2020 for her impact rallying industry to reduce embodied carbon. Taking an entrepreneurial approach to academic work she helped launch two successful nonprofits, CLF and Building Transparency; spur two embodied carbon commitment programs, SE2050 and MEP 2040; convene a growing network of volunteer led regional CLF Hubs and facilitate cross organizational collaborations such as the ECHO Project.

I. Career Overview

Education

1992 Master of Architecture University of California, Berkeley University of California, Berkeley (Structural Engineering & 1991 Master of Science Mechanics of Materials) 1989 Bachelor of Science University of Colorado, Boulder (Architectural Engineering)

Academic Appointments

University of Washington		Department of Architecture
-	2020-	Professor
	2020-2022	Chair
	2014-2020	Associate Professor
	2009-2014	Assistant Professor
California College of the Arts		Department of Architecture
	2000-2009	Associate Professor
	2000-2009	Technology Curriculum Coordinator
	1995-2000	Adjunct Lecturer
Professional	Practice	

Sole Proprietor	2000-2011	Simonen Design/Operation Architecture, San Francisco, CA
Project Architect	1997-2000	EHDD Architects, San Francisco, CA
Project Engineer	1995-1997	Tipping Mar Structural Engineers, Berkeley, CA
Engineer	1992-1995	DASSE Design, San Francisco, CA

Engineer/Drafter 1985-1991 Various firms in San Francisco, New York, and Helsinki (summers)

Professional Registration

Architect	2000-	California C27675
Structural Engineer	1997-	California SE4201
	2009-	Washington SE
	2001-2002	Washington SE
Civil Engineer	1994-	California C052801

Awards and Honors (selected)

- 2024 Elevation to the American Institute of Architect's College of Fellows (FAIA)
- 2022 Honorary Fellow of the UK's Institute of Structural Engineers (FiStructE, hon.)
- 2021 American Society of Civil Engineers, Charles Pankow Award
- 2020 Technology | Architecture + Design (TAD Journal) Research Contribution Award for "Benchmarking the Embodied Carbon of Buildings.
- 2019 Engineering News Record Top 25 Newsmaker Award

II. Creative Achievement, Research and Scholarship

IIA. Publications

Regarding author order, authors are listed in order of contribution, except the Principal Investigator (PI). If not the primary author, the PI is listed last (typ. 2021 and later).

Books and Book Chapters

- De Wolf, C., Simonen, K., Ochsendorf, J. (2018). Initiatives to Report and Reduce Embodied Carbon in Buildings in North America. In C. De Wolf, F. Pomponi, & A. Moncaster (Eds.), Embodied Carbon in Buildings: Measurement, Management, and Mitigation. Springer.
- De Wolf, C., Rodriguez, B.X., Simonen, K. (2017) Counting Carbon: What We Know and How We Know It. In King, B (Ed.). *The New Carbon Architecture: Building to Cool the Climate*. New Society Press.
- Simonen, K. (2014). *Life Cycle Assessment: Pocket Architecture Technical Design Series.* Routledge.

Peer Reviewed Journal Publications

- Ashtiani, M.Z, Huang, M., Lewis, M, Palmeri, J., Simonen, K. (2024). "Greenhouse Gas Emissions Inventory from Roadway Construction: Case Study for the Washington State Department of Transportation," *Transportation Research Record*, 0(0) <u>https://doi.org/10.1177/03611981241233278</u>
- Waldman, B., Huang, M., Simonen, K. (2020). "Embodied carbon in building materials: A framework for quantifying EPD data quality", *Buildings and Cities*, <u>https://journal-buildingscities.org/articles/10.5334/bc.31/</u>

- Rodriguez, B.X.*, Huang, M.*, Lee, H.W., Simonen, K., 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*
- Adhikari, P., Mahmoud, H., Xie, A., Simonen, K, Ellingwood, B. (2020), "Life-cycle cost and carbon footprint analysis for light-framed residential buildings subjected to tornado hazard", *Journal of Building Engineering*
- Ianchenko, A., Simonen, K., Barnes, C. (2020), Residential Building Lifespan and Community Turnover," *Journal of Architectural Engineering.*
- Huang, M., Simonen, K. (2020) "Comparative environmental analysis of seismic damage in buildings," *Journal of Structural Engineering*, 146, Issue 2 (February 2020). https://doi.org/10.1061/(ASCE)ST.1943-541X.0002481
- Ganguly, I., Pierobon, F., Huang, M., Simonen, K. (2019), "Environmental benefits of using hybrid CLT structure in midrise non-residential construction: An LCA based comparative case study in the US PNW," *Journal of Building Engineering*, Volume 26, November 2019, p. 100862. <u>https://doi.org/10.1016/j.jobe.2019.100862</u>
- Rodriguez, B.X, Simonen, K., Huang, M., De Wolf, C. (2019), "A Taxonomy for Whole Building Life Cycle Assessment (WBLCA)," *Smart and Sustainable Built Environments*, Volume 8, No. 3, pp. 190-205. <u>https://doi.org/10.1108/SASBE-06-2018-0034</u>
- Simonen, K., Huang, M., Aicher, C., Morris, P. (2018), "Embodied Carbon as a Proxy for the Environmental Impact of Earthquake Damage Repair," Energy and Buildings, Volume 164, 1 April 2018, pp. 131-139 <u>https://10.1016/j.enbuild.2017.12.065</u>
- Simonen, K., Rodriguez, B.X., De Wolf, C. (2017), "Benchmarking the Embodied Carbon of Buildings", Technology | Architecture + Design, 1(2).
- Simonen, K. (2014), "Iterating Structures: Teaching Engineering as Design", Journal of Architectural Engineering, 10.1060/(ASCE).1943-5568.0000152,05014003.
- Cooper, J., Fava, J., Simonen, K., Boyd, S., Baer, S. (2012), "Status of North American Life Cycle Inventory Data," *Journal of Industrial Ecology*, 16(3), 287-289.

Professional Reports (select recent)

- Ashtiani, M., Palmeri, J., Simonen, K. (2024). *End of Life Modeling and Data in North American Whole Building Life Cycle Assessment Tools*. Carbon Leadership Forum, University of Washington. Seattle, WA.
- Kalsman, M., Lambert, M., Lewis, M., Simonen, K. (2024). *Northeast U.S. & Canada Embodied Carbon Policy Case Studies*. Carbon Leadership Forum. <u>https://doi.org/10.6069/Q8K9-</u> <u>ED23</u>
- Ashtiani, M, Lewis, M., Waldman, B., Simonen, K. (2024) *Embodied Carbon Toolkit for Roadway Infrastructure.* Carbon Leadership Forum. Three publications hosted at <u>https://carbonleadershipforum.org/clf-roadway-infrastructure-toolkit/</u>
- Lewis, M., Waldman, B., Carlisle, S., Benke, B., and Simonen, K. (2023). *Advancing the LCA Ecosystem: A Policy-Focused Roadmap for Reducing Embodied Carbon*. Carbon Leadership Forum, University of Washington. Seattle, WA.
- Waldman, B., Hyatt, A., Carlisle, S., Palmeri, J., and Simonen, K. (2023). 2023 Carbon Leadership Forum North American Material Baselines, Baseline Report. Carbon

Leadership Forum, University of Washington. Seattle, WA. April 2023. http://hdl.handle.net/1773/49965

- Kalsman, M., Lewis, M., Simonen, K. (2023). *Pacific Coast Collaborative: Embodied Carbon Policy Case Studies*. Carbon Leadership Forum, University of Washington. Seattle, WA. <u>https://hdl.handle.net/1773/49771</u>
- Ashtiani, M., Lewis, M., Huang, M., Simonen, K. (2023). Greenhouse Gas Emissions Inventory from Construction of Washington State Department of Transportation Roadways. Carbon Leadership Forum, University of Washington, Seattle, WA. <u>http://hdl.handle.net/1773/49963</u>
- Huang, M., Lewis, M., Escarcega, P., Escarcega, E., Torres, M., Waterstrat, H., Kinder-Pyle, I., Simonen, K. (2022). *Buy Clean Buy Fair Washington Project: Final Report*. Carbon Leadership Forum and Washington State Department of Commerce.
- Benke, B., Lewis, M., Carlisle, S., Huang, M., and Simonen, K. (2022). Developing an Embodied Carbon Policy Reduction Calculator. Carbon Leadership Forum, University of Washington. Seattle, WA. <u>https://hdl.handle.net/1773/48566</u>
- Carlisle, S., Waldman, B., DeRousseau, M., Miller, L., Ciavola, B., Lewis, M., and Simonen, K. (2022). *Buy Clean California Limits: A Proposed Methodology for Setting Industry-Average GWP Limits for Steel, Mineral Wool, and Flat Glass.* Carbon Leadership Forum, University of Washington. Seattle, WA. <u>https://hdl.handle.net/1773/48600</u>
- Lewis, M., Huang, M., Carlisle, S. Simonen, K. (2021), *AIA-CLF Embodied Carbon Toolkit for Architects*, Carbon Leadership Forum and AIA National. Three publications and website resource. <u>https://carbonleadershipforum.org/clf-architect-toolkit/</u>
- Lewis, M., Huang, M., Simonen, K. (2021), "Embodied Carbon Toolkit for Building Owners" Website resource. <u>https://carbonleadershipforum.org/clf-owner-toolkit/</u>
- Kriegh, J., Magwood, C., Srubar, W., Lewis, M., Simonen, K. (2021). Transformative Carbon-Storing Materials: Accelerating an Ecosystem Report. <u>https://hdl.handle.net/1773/48126</u>
- Carlisle, S., Waldman, B., Lewis, M., and Simonen, K. (2021). "Carbon Leadership Forum Material Baseline Report, (version 2)", Carbon Leadership Forum, University of Washington. Seattle, WA. July 2021. https://digital.lib.washington.edu/researchworks/handle/1773/47141
- Simonen, K. Huang, M., Ganguly, I., Pierobon, F., Chen, C.X. (2019), *Life Cycle Assessment of Katerra's Cross-Laminated Timber (CLT) and Catalyst Building*, Report Prepared for Katerra Available at: <u>http://carbonleadershipforum.org/projects/katerra/</u>
- Simonen, K., Huang, M., Rodriguez, B.X. (2019), *Life Cycle Assessment of a Commercial Tenant Improvement Project*, Report prepared or WeWork, Available at: http://carbonleadershipforum.org/projects/wework/
- Simonen, K., Dilegge, T., Huang, M., Ditto, J. (2019), *Buy Clean Washington Study,* Report prepared for the State of Washington Available at: <u>http://carbonleadershipforum.org/buyclean-washington/</u>
- Huang, M., Simonen, K., Ditto, J. (2019), *Life Cycle Assessment of Tenant Improvement in Commercial Office Buildings*, Available at: <u>http://carbonleadershipforum.org/projects/lca-of-mep-and-ti/</u>
- Rodriguez, B.X., Lee H.W., Simonen, K., Huang, M. (2019), *Life Cycle Assessment of Mechanical, Electrical, and Plumbing in Commercial Office Buildings*, Available at: <u>http://carbonleadershipforum.org/projects/lca-of-mep-and-ti/</u>

NSF (2019) Concrete Product Category Rule: NSF V1. (Simonen, K.: committee chair and lead author). Available at: <u>https://www.nrmca.org/sustainability/EPDProgram/Downloads/NSF_PCR_CONCRETE2</u> 019.pdf

Databases & Software

- Northcott, P., Smedley, S., Davies, D., Simonen, K. (2019) The Embodied Carbon in Construction Calculator (EC3 Tool). Developed in support of a grant managed by the Charles Pankow Foundation. Now hosted by an independent nonprofit, Building Transparency. Available at www.buildingtransparency.org.
- Simonen, K., Rodriguez, B.X., Barrera, S., Huang, M. (2017), *CLF Embodied Carbon Benchmark Database*, Database in support of Embodied Carbon Benchmark Study: LCA for Low Carbon Construction, Available at <u>http://hdl.handle.net/1773/38017</u>
- Simonen, K., Rodriguez, B.X., Li, S. (2017), *CLF Embodied Carbon Benchmark Data Visualization.* Online data visualization in support of Embodied Carbon Benchmark Study: LCA for Low Carbon Construction, Available at www.carbonleadershipforum.org/data-visualization/

Website Resources

2022-	Embodied Carbon Resource Library
2022-	ECHO Project
2021-	MEP 2040 Commitment Support
2024	CLF Embodied Carbon Roadway Infrastructure Toolkit
2022	CLF Embodied Carbon Policy Toolkit
2021	AIA-CLF Embodied Carbon Toolkit for Architects
2020	CLF Wood Carbon Seminars

II.B. Presentations

Presentations related to peer-reviewed conference papers (Section I.C) are not included in this section unless the presentation was a keynote address or invited lecture or was selected for an award. Keynote addresses, presentation awards, and invited seminars are bold. Notation: Graduate students are denoted with (*); undergraduate students are denoted with (+). Distinction is made between oral and poster presentations.

Keynotes

- 2023 **Decarbonizing Structures: Structuring Decarbonization,** [150/611] Edward and Mary Allen Lecture in Structural Design, MIT Architecture, November 2, 2023, Boston, MA and Youtube.
- 2022 *Focus on the Footprint: Making Strides in Building Sustainability*, [250] Structural Engineers Foundation of Washington Fall Forum, November 30, 2022, Seattle, WA. *Building the Future: Engineering Climate Action*, [300], SEI Structures Congress, April 22, 2022 Atlanta, GA.

2020 **Network for Change: The Global Embodied Carbon Movement**, [400] Carbon Positive '20, March 2, 2020, Los Angeles, CA.

Carbon and Design, [100] AIA-ACSA Intersections Conference, Opening Keynote: September 30, 2020, online.

Carbon Optimization, [300] V-Tech, September 9, 2020, online.

2018 *Net Zero Carbon Buildings Commitment Strategy, Tactics, Tools, and Partnerships* [500] Global Climate Action Summit, Plenary Panel Moderator, September 11, 2018, San Francisco, CA.

Significant Presentations (select recent)

- 2022 Special Session Embodied Carbon and the Coming Revolution in Structural Engineering Practice: What You Need to Know, [50] SEI Structures Congress, April 22, 2022, Atlanta, GA.
- 2021 IEPR Commissioner Workshop on Building Decarbonization: Embodied Carbon and Refrigerants, [90] California Energy Commission, August 27, 2021, online.

Designing out Waste in the Built Economy / Building Materials, [100] Harvard Circular Economy Symposium, (online) April 15, 2021. (panelist)

Building as a Climate Solution, [200] ARPA-E Carbon Negative Buildings Workshop, April 23, 2021, online.

Building Decarbonization, [200] Washington Climate Assembly, January 30, 2021, online.

2020 *Towards Zero Carbon: Strategies to Reduce Embodied Carbon* [150] Greenbuild, November, 2020, Online.

Climate Risk and the Housing Market, [75] Financial Innovations Roundtable, Federal Reserve Bank of San Francisco, November 16, 2020, online.

Overview of life cycle impacts of buildings, [200] US Department of Energy Webinar, October 16, 2020, online.

2019 Stop Shying Away from WBLCA! [100] Greenbuild, November, Atlanta, GA.

Embodied Carbon: Comparing & Connecting [50] Living Products Expo, October, Nashville, TN.

Deep Dive on Embodied Carbon, [150] Buy Clean America Summit: Harnessing Government Purchasing Power to Close the Carbon Loophole, October 23rd, 2019, Washington DC. (panel member)

MATERIAL STARATEGIES: What are the new building blocks of sustainability? [200] Metropolis Perspective: Sustainability Symposium, September 13, 2019, Seattle, WA.

Embodied Carbon 101, [200] Boston Society of Architects Embodied Carbon in Buildings Conference, May 31, 2019 Boston, MA. [200]

Scaling Embodied Carbon Reductions: Inspire, Inform and Empower, [100] Summit for a Carbon-Free Future at Living Future, April 30, 2019, Seattle WA.

Podcasts & Radio

Commercial Property Executive Sustainability Street, February 26, 2021. *Lowering Embodied Carbon: Full Speed Ahead*

KUOW debate, Seattle public radio, March 11, 2020. *That's Debatable: Washington State can decarbonize in a decade,*

Science Friday WNYC national public radio, March 28, 2020. *How the World of Building Materials is Responding to Climate Change*, <u>https://www.sciencefriday.com/person/kate-simonen/</u>

III. Project Funding

At UW since 2009, responsible for securing over \$7.6M in funding in grants and gifts

As principal investigator, 14 grants awarded, ten completed with total of over \$5.6M in funding. Through cultivating industry sponsorship and philanthropic donations have secured over \$2M in funding. Additionally participated in co-I or significant personnel on four additional grants. In addition to the pending and active grants listed here, funding has been obtained from: American Institute of Architects, Applied Technology Council, Bullit Foundation, Charles Pankow Foundation, National Science Foundation, Oregon Department of Environmental Quality, State of Washington, University of Washington, and Washington Department of Transportation. Additional industry sponsorship in amounts between \$500 and \$10,000 annual donations in support of the Carbon Leadership Forum are <u>listed online.</u>

Pending Grants

Validating and Extending Research and Education for Life Cycle Assessment (VERE-LCA)

0	0		(
Sponsor:	Environmental Protection Agency			
Award:	\$10,000,000			
Term:	2024-2029			
Team:	K. Simonen (PI), N. Maloo (Howard),	R. Ferald	(PNNL) & P.Raftery	(UC
	Berkeley) (CO-Is), M. Roberts (UC Be	rkeley) Ke	y personnel	

Awarded & Active Grants

Parametric Open Data for Life Cycle Assessment (POD|LCA)

Sponsor:	Advanced Energy Research Projects Agency (ARPA-E)
Award:	\$3,700,000 (plus cost-share)
Term:	2022-2026
Team:	K. Simonen (PI) S. Carlisle, I. Ganguly, C. Meek, T. Mendez Echenagucia,
	F. Pierobon (CO-I's), Huang, M. (key personnel)

Compiling and Benchmarking Embodied Carbon Data

^{99%} Invisible: Episode 361, Interviewed by Roman Mars, July 9, 2019. *Built on Sand* <u>https://99percentinvisible.org/episode/built-on-sand/</u>

Sponsor:	Alfred P. Sloan Foundation
Award:	\$200,000
Term:	2023-2025
Team:	K. Simonen (PI) & Y. Shen

Embodied Carbon Policy Support

Sponsor:	Anonymous Philanthropic Funder
Award:	\$500,000 over three terms
Term:	2020-2024
Team:	K.Simonen, M. Lewis, J. Palmeri, B. Waldman

Building Re-X: Data, Methodology and Design Integration Sponsor: Re-Made/NREL

Award:	\$100,000
Term:	2024
Team:	K. Simonen, M. Ashtiani (UW)

Gifts & Sponsorship

Carbon Leadership Forum Sponsorship: Unrestricted gift funding from industry sponsors and philanthropic foundations. Over \$2,000,000 (2010-Present)

IV. Teaching

University of Washington

Current regular teaching includes the following courses. Teaching commitments have been reduced since 2020 due to my position as Department Chair, teaching buy outs to support significant research grants and sabbatical.

- ARCH320-321 Intro Structures II & II (3cr): Co-Developed core undergraduate structures courses required for architecture and construction management students. +/- 100 students. Most recently taught 321 in 2020.
- ARCH 322 Intro Structures III (3cr): Lead structural design course required for architecture students. Taught annually since 2012 (except 2015 & 2017). Launched in 2021 and have run hybrid class annually creating multi-section labs for supported hands-on work. Online content undergoes significant revamp each year.
- ARCH 498 Structural Design (5cr): Developed pre-requisite free structural design course for architecture studies students and open to all. Hybrid teaching model ramps up students with fundamentals in order to achieve outcomes similar to students in the 322 course. Provides students pursuing graduate degree with equivalent 3cr semester course. Offered annually since 2021.
- ARCH 425/525 Life Cycle Assessment in Architecture (3cr): This project-based course introduces students to the fundamentals of life cycle assessment. Offered four of the last six years. Starting in 2021 the class was organized with asynchronous online lectures to enable two sections of up to 25 students each enroll in the undergraduate and graduate sections. Projects designed to enable undergraduates to enroll without pre-requisite supporting architecture studies and non-majors.

California College of the Arts (graduate and undergraduate integrated u.o.n.)

2008	Interdisciplinary Seminar, Solar Decathlon leadership and communication
2008	Advanced Studies in Architecture Technology, integrated practice seminar
2002, 2005	Comprehensive Design Studio
2004	Advanced Studies in Architectural Technology, digital manufacturing seminar
2001 - 2003	Integrated Building Systems, faculty lead, +/-70 students, 2 faculty
2000	Advanced Studies in Architectural Technology, architectural detailing seminar
1996 - 2006	Structures II, faculty lead, grew to +/-70 students 3 faculty
1995 - 2005	Structures I, faculty lead, grew to +/-70 students 2 faculty

University of California, Berkeley - Graduate Student Instructor

- 1991 1992 Environmental Control Systems. Architecture: teaching assistant for E. Arens, G. Brager and C. Benton. Led section, developed assignments, and graded.
- 1990 1991 Statics and Strength of Materials and Structural Design for Architects. Teaching assistant in Department of Structural Engineering and Mechanics of Materials.

Ph.D Mentorship

- 2023- Mohamed Mohamed, University of Washington CBE
- 2022- Demi Lin Fang, Massachusetts Institute of Technology.
- 2021- Mahboobeh Hemmati Gourabi, Fay Jones School of Architecture, University of Arkansas
- 2012-19 Tait Bowers, School of Forest Resources, College of the Environment, *The Next* Generation of Residential Construction:Adoption of Green Building Programs, Environmentally Certified Wood Products and the Transparency of Environmental Friendliness
- 2016-19 Barbara X. Rodriguez Droguett, College of Built Environment, University of Washington

Embodied Carbon of Heating, Ventilation, Air Conditioning and Refrigerants (HVAC+R) Systems

- 2015-19 Cindy X. Chen, School of Forest Resources, College of the Environment, University of Washington, *Environmental Assessment of the Production and End*of-Life of Cross-Laminated Timber in Western Washington
- 2016-19 Yingjun Wang, School of Civil Engineering and Environmental Science, University of Oklahoma, A Decision-Framework for Building Portfolios Towards Enhanced Resilience and Sustainability of Communities Under Natural Hazards.
- 2016-17 Catherine De Wolf, *Low Carbon Pathways for Structural Design: Embodied Life Cycle Impacts of Building Structures.* PhD Architecture: Building Technology, Massachusetts Institute of Technology. Chair John Ochsendorf

M.S. Thesis Mentorship

current Azeezah Priyota

2019 Laleh Amany, A Comparative Analysis of LCA Tools: Studying the Façade of a Campus Lab Building

M.Arch Thesis Mentorship

Current James Strand

2018	Matthew Franz, "Reworking Wenatchee: High Performance in a New & Existing
	Building"
2018	Mariel Dougoud, "Mycelium Infrastructures for Impermanent Futures"
2018	Lauren Patnoe, "Flyshare 2020"
2016	Kristen Strobel (chair), "(Mass) Timber: Structurally Optimized Timber Buildings"
2015	Mariam Hovhannisyan (chair), "Wood Cityscapes: Mass Timber Office Building"
2012	David Fish (chair), "(by)Metrics (by) Design: Building for Endurance"
2013	Laura Poulin, "Redefining 'All-Inclusive:' Integrated Tourism in the Dominican
	Republic"

Undergraduate Honors Thesis Mentorship

2015 Ezekiel Jones (chair), "Mass Timber in the Pacific Northwest"

V. Service

Committees - University of Washington (current)

2022-	CBE Climate Solutions Community of Practice (lead)
2023	UW Climate Working Group
2022-23	Architecture Strategic Planning Committee
2018-20	CoMotion Innovation Committee
2013-20	Curriculum Committee

Editorial Board Member

2010-13 Journal of Architectural Education

Memberships in Academic & Professional Organizations (current)

- 2007- Building Technology Educators Society
- 2014- American Institute of Architects (and 2000-2005)

Leadership / Committees (select)

- 2024- Cement Product Category Rule: Committee Member
- 2020-23 ASHRAE 90.2 Committee Member
- 2017-19 AIA National Materials Knowledge Working Group: Advisory member
- 2015-19 US Green Building Council: Subject Matter Expert for the Materials & Resources Technical Advisory Group Whole Building Life Cycle Assessment Subgroup
- 2018-19 Wood Product Category Rule Technical Committee