

CURRICULUM VITAE

Hongxi Yin, Ph.D.

Associate Professor

Sam Fox School of Design and Visual Arts, Washington University in St. Louis

Email: hongxi.yin@wustl.edu

EDUCATION

- 2006 **Ph.D. in Building Performance and Diagnostics**, Carnegie Mellon University, School of Architecture
- 1999-2000 Master Study, Historical Preservation
Louisiana State University, School of Architecture
- 1994 B.E. in Architecture
Xi'an Jiaotong University, School of Architecture and Civil Engineering, China

ACADEMIC APPOINTMENTS

- 2024-Present **Professor**
Washington University in St. Louis
Sam Fox School of Design and Visual Arts
College of Architecture and Graduate School of Architecture & Urban Design
- 2018-2024 **(Tenured) Associate Professor**
Washington University in St. Louis
Sam Fox School of Design and Visual Arts
College of Architecture and Graduate School of Architecture & Urban Design
The International Center for Energy Environment and Sustainability (InCEES)
- 2015-2017 **(Tenure-track) Associate Professor**
Washington University in St. Louis
Sam Fox School of Design and Visual Arts
College of Architecture and Graduate School of Architecture & Urban Design
The International Center for Advanced Renewable Energy & Sustainability (I-CARES)
- 2012-2014 **Associate Professor**
Southeast University, School of Architecture, Nanjing, China,
- 2008-2010 **Visiting Assistant Professor**
Purdue University, West Lafayette IN,
School of Civil Engineering, Architectural Engineering Program
- 2007-2008 **Post-Doc Research Associate**
Carnegie Mellon University, Pittsburgh PA,
College of Fine Arts, School of Architecture,
Center for Building Performance and Diagnostics
- 2006-2007 **Director**
L.D. Astorino & Associates (Current Cannon Design),
Division of Architecture and Engineering, China Market, Pittsburgh PA

- 2000-2006 Research Assistant
Carnegie Mellon University, Pittsburgh PA,
School of Architecture, Center for Building Performance and Diagnostics
College of Fine Arts
- 1994-1999 Design Architect
Beijing Design Institute, SINOPEC, Beijing, China

PROFESIONAL LEADERSHIP

- 2023-2025 Member of the Organizing Committee, Gateway Decathlon 2025
- 2023-2024 Guest Editor, The Journal of Architectural Intelligence
- 2017-2018 Director, The Steering Committee, Solar Decathlon China 2018
- 2012-2015 Chief Technology Officer (CTO), Broad Homes Industrial Group Co. Ltd.
Director, Digital Laboratory, Broad Homes Industrial Group Co. Ltd.
- 200-2012 Founder and CEO, TECO Sustainable Architecture and Engineering LLC
- 2012-2013 Site Operation Manager, Solar Decathlon China 2013, the Organizing Committee
- 2010-2013 Chair, Technical Committee for Sustainable Cities and Communities, Solar Energy
Division, American Society of Mechanical Engineers (ASME)

PUBLICATIONS

Book Chapter

1. Annual Review of Heat Transfer (2020), Chapter 5, ENERGY-SAVING TECHNOLOGIES FOR BUILDING HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS, Pages 147-204. Ming Qu, Xiaoli Liu, Zhiyao Yang, Feng Wu, Liang Shi, Xiaobing Liu, Tao Zhang, Yi Jiang, Hongxi Yin, [DOI: 10.1615/AnnualRevHeatTransfer.2019029887](https://doi.org/10.1615/AnnualRevHeatTransfer.2019029887)

Journal Papers, Peer Reviewed, Since 2018

1. Chaudhary, K., Pan, A., Yin, H. et al. The PreDI matrix-a common terminology for offsite construction: definition, verification, and demonstration in environmental impact studies. ARIN 3, 32 (2024). [DOI: 10.1007/s44223-024-00069-w](https://doi.org/10.1007/s44223-024-00069-w)
2. Junhao Li, Huzefa Jawadwala, Annika Pan, JungHo Jeon, Yi-Chun Lin, Meghdad Hasheminasab, **Hongxi Yin***, Ayman Habib, Hubo Cai & Ming Qu (2022) Digital Reconstruction and Restoration of Architectural Heritage: Samara House, Technology|Architecture + Design, 6:2, 232-245, [DOI: 10.1080/24751448.2022.2116243](https://doi.org/10.1080/24751448.2022.2116243)
3. Tong, Peihao, **Hongxi Yin***, Zhifang Wang, and Ian Trivers. 2022. "Combining Stormwater Management and Park Services to Mitigate Climate Change and Improve Human Well-Being: A Case Study of Sponge City Parks in Shanghai" Land 11, no. 9: 1589. <https://doi.org/10.3390/land11091589>
4. Han, D., **Yin, H.***, Qu, M., Zhu, J., Wickes, A., Qu, M., (2020). Technical Analysis and Comparisons of Formwork-making Methods for Customized Prefabricated Buildings: 3D Printing and Conventional Methods, Journal of Architectural Engineering, Volume 26, [https://doi.org/10.1061/\(ASCE\)AE.1943-5568.0000397](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000397)
5. Li Li, **Hongxi Yin***, Ang Li, Ming Qu, Technology Advancements and Prospects of Zero Energy Solar Houses: Technical Review of Solar Decathlon China 2018, Journal of Times + Architecture, March 2019
6. **Hongxi Yin***, Ming Qu, Haiyan Zhang & Ye Chan Lim (2018) 3D Printing and Buildings: A Technology Review and Future Outlook, Technology|Architecture + Design, 2:1, 94-

- 111, [DOI: 10.1080/24751448.2018.1420968](https://doi.org/10.1080/24751448.2018.1420968)
7. Xiaoli Liu, Ruchita Jani, Esther Orisakwe, Conrad Johnston, Piotr Chudzinski, Ming Qu, Brian Norton, Niall Holmes, Jorge Kohanoff, Lorenzo Stella, **Hongxi Yin**, Kazuaki Yazawa, State of the art in composition, fabrication, characterization, and modeling methods of cement-based thermoelectric materials for low-temperature applications, *Renewable and Sustainable Energy Reviews*, Volume 137, 2021, 110361, ISSN 1364-0321, <https://doi.org/10.1016/j.rser.2020.110361>
 8. Jani R, Holmes N, West R, Gaughan K, Liu X, Qu M, Orisakwe E, Stella L, Kohanoff J, **Yin H**, Wojciechowski B., Characterization and Performance Enhancement of Cement-Based Thermoelectric Materials. *Polymers (Basel)*. 2022 Jun 7;14(12):2311. [DOI: 10.3390/polym14122311](https://doi.org/10.3390/polym14122311). PMID: 35745887; PMCID: PMC9254742.
 9. Xiaoli Liu, Kazuaki Yazawa, Ming Qu, Orkan Kurtulus, Brian Norton, Niall Holmes, Ruchita Jani, Jorge Kohanoff, Lorenzo Stella, Conrad Johnston, **Hongxi Yin**, Experimental performance evaluation of a convective thermoelectric building envelope for building heating and cooling, *Energy and Buildings*, Volume 273, 2022, 112376, ISSN 0378-7788, <https://doi.org/10.1016/j.enbuild.2022.112376>
 10. Orisakwe, E.N., Johnston, C.S., Jani, R.J., Liu, X., Stella, L., Kohanoff, J.J., Holmes, N., Norton, B., Qu, M., **Yin, H.**, & Yazawa, K. (2022). Thermoelectric properties of cement composite. analogues from first principles calculations. 2022-11-30, [DOI:arxiv-2211.17128](https://arxiv.org/abs/2211.17128)
 11. Ming Qu, Omar Abdelaziz, Zhiming Gao, **Hongxi Yin**, Isothermal membrane-based air dehumidification: A comprehensive review, *Renewable and Sustainable Energy Reviews*, Volume 82, Part 3, 2018, Pages 4060-4069, ISSN 1364-0321, <https://doi.org/10.1016/j.rser.2017.10.067>.

Before 2018

12. M. Qu, O. Abdelaziz, X. Sun b, H. Yin, Aqueous solution of [EMIM][OAc]: Property formulations for use in air conditioning equipment design, *Applied Thermal Engineering* 124 (2017) 271–278
13. M. Qu, O. Abdelaziz, H. Yin, New configurations of a heat recovery absorption heat pump integrated with a natural gas boiler for boiler efficiency improvement, *Energy Conversion and Management* 87 (2014) 175–184
14. H. Yin, M. Qu, D. H. Archer. Model Based Experimental Performance Analysis of a Microscale LiBr-H₂O Steam Fired Double Effect Absorption Chiller, *Journal of Applied Thermal Engineering*,30(13) , pp. 1741- 1750, May 2010.
15. M. Qu, H. Yin, D. H. Archer. A Solar Thermal Cooling and Heating System for a Building: Experimental and Model Based Performance Analysis and Design, *Journal of Solar Energy*, 84(2), pp.166-182, February 2010.
16. M. Qu, H. Yin, D.H. Archer. Experimental and Model Based Performance Analysis of a Linear Parabolic Trough Solar Collector, *Journal of Solar Energy Engineering*, 84(2), pp.166-182, September 2010.

Peer Reviewed Conference Articles, Since 2018

17. Annika Pan, Wenqi Lai, Haixin Zhou, Sebastian Bernal, Kaden Chaudhary, Amanda Ridings, **Hongxi Yin***, A Literature Review of WAAM and Future Application in Buildings, June 2023, ACSA 111th Annual Meeting | IN COMMONS, St. Louis, MO
18. Mingliang Li, **Hongxi Yin***, Ming Qu, Ian Trivers, Outdoor Comfort in Public Spaces, a Critical Review, 2022, International High Performance Buildings Conference, West Lafayette, IN

19. Zhu, Jian & Yang, Heewoong & Ge, Wenjun & Qu, Ming & **Yin, Hongxi***. (2020). Printing Architecture: How Additive Manufacturing Methodologies are Posited to Transform Building Construction? February 2020, DOI:10.35483/ACSA.AM.108.16, Conference: 2020 ACSA Annual Conference, San Diego
20. Liu, X., Qu, M., Yazawa, K., Kohanoff, J., Chudzinski, P., Stella, L., Norton, B., Holmes, N., Jani, R., & **Yin, H. (2022)**. Performance Modeling and Analysis of a Thermoelectric Building Envelope for Space Heating. Technological University Dublin. DOI: 10.21427/RQBQ-7680
21. Dennis Dine, **Hongxi Yin***, Ming Qu, Alex Wong, The Built Environment and Stroke Rehabilitation: Needs and Approach Review, Expanding the View, 2021, 109th ACSA Annual Meeting
22. Huzefa Jawadwala, Robert Tian, **Hongxi Yin***, Ming Qu, Xiaoli Liu, Niall Holmes, Jorge Kohanoff, Ruchita Jani, Thermal Comfort: Radiant Systems - A Review of Experimental-based thermal comfort research in radiation systems, 2021, 109th ACSA Annual Meeting
23. **Yin, H. ***, Zhu, J., Wang, B. (2019). Design-Build: A Real-World Experimental Pedagogy for Architectural Education, 107th ACSA Annual Meeting, Pittsburgh

Before 2018

24. Hsi-Chuan Wang, Hongxi Yin, Compactness and Quality of Life: Applying Regression Analysis on American Cities
25. H. Yin, H. Cai, H. Lv, M. Qu, G. Ao, N. Li. The Design Analysis of a Water-sourced District Heating and Cooling System for a Neighborhood Development Project, Proceedings of ASME 5th International Conference on Energy Sustainability 2011, Washington DC, August 2011.
26. J. Lei, B. Long, H. Yin. The Benefits of LEED-ND to Chinese Chongqing Village Development, Chinese Urban Planning Annual Conference, September 20-22, 2011.
27. H. Yin, W. Wen, M. Qu, and G. Ao. The Comparative Study of Compact Development and Green Open Spaces in LEED-ND and Chinese Urban Planning Standards, Proceedings of ASME 5th International Conference on Energy Sustainability 2011, Washington DC, August 2011
28. Y. Hu, D.H. Archer, H. Yin. Design and Model Based Performance Analysis of a District Energy Supply System, Proceedings of ASME 3rd International Conference on Energy Sustainability 2009, Vol. 2, pp.187-196, San Francisco CA, June 27-30, 2009.
29. H. Yin, D. H. Archer. The Measured Performance and Model Based Analysis of a 16 kW Absorption Chiller, 9th International Energy Agency (IEA), Heat Pump Conference, Zürich, Switzerland, May2008.
30. M. Qu, D.H. Archer, H. Yin. Experiment-based Performance Analysis of a Solar Absorption Cooling and Heating System in Carnegie Mellon University: Proceedings of ASME 2nd International Conference on Energy Sustainability 2008, ES2008, v 2, pp: 583-590, Jacksonville FL, June 27-30, 2008.
31. H. Yin, M. Qu, D. H. Archer. The Heat Transfer Characteristics of A 16 kW Steam Driven Double Effect Absorption Chiller: Proceedings of ASME 2nd International Conference on Energy Sustainability 2008, ES2008, Vol. 1, pp: 637-649, Jacksonville FL June 27-30, 2008.
32. M. Qu, D. Archer, H. Yin. Solar Absorption Cooling and Heating System in the Intelligent Workplace: Proceedings of the Energy Sustainability Conference 2007, pp:647-655, Long Beach, CA June 27-30, 2007.
33. M. Qu, D.H. Archer, H. Yin. A Linear Parabolic Trough Solar Collector Performance Model: Proceedings of the Energy Sustainability Conference 2007, pp: 663-670, Long Beach CA, June 27-30, 2007.

34. H. Yin, D. H. Archer. Broad BCT 16 Absorption Chiller Performance: Steam-Driven, Double-Effect, 16- kW (4.5) Ton, Applied Research, Whole Building Design Guide, 2007, www.wbdg.org/research/chillers.php.
35. V. Hartkopf, D. H. Archer, H. Yin. A Solid Oxide Fuel Cell Based Energy Supply System for a Multipurpose Building, International Building Energy Forum, Proceedings of Shanghai International Building Energy Forum, Shanghai, China, 2003.

Book (2025)

36. The Lotus House: Changing How Building are Made, under contract

Patent

37. Tie shear connector for wall panel construction and method thereof, H. Yin*, M. Qu - US Patent App. 16/483,803, 2019

DOCTORAL STUDENT ADVISING

Candidate: Peihao Tong
Degree: Doctor of Sustainable Urbanism
Dissertation: The Multifunctionality of Sponge City Parks: Integrated Stormwater Management and Park Services in Shanghai
Status: **Graduated, July 2023**
Committee: **Hongxi Yin, Ph.D. (Chair)**, InCEES Associate Professor, Sam Fox School of Design & Visual Arts, Washington University in St. Louis
Zhifang Wang, Ph.D., Associate Professor, College of Architecture and Landscape. Architecture, Peking University
Ian Trivers, Ph.D., Coordinator, Doctor of Sustainable Urbanism Program, Sam Fox School of Design and Visual Arts, Washington University in St. Louis

Candidate: Mingliang Li
Degree: Doctor of Sustainable Urbanism
Dissertation: The Influence of Facades on Outdoor Comfort and Behavior in Urban Spaces
Status: **Pass, August 2023**
Committee: **Hongxi Yin, Ph.D. (Chair)**, InCEES Associate Professor, Sam Fox School of Design & Visual Arts, Washington University in St. Louis
Ming Qu, Ph.D., Professor, Lyles School of Civil Engineering, Purdue University
Ian Trivers, Ph.D., Coordinator, Doctor of Sustainable Urbanism Program, Sam Fox School of Design and Visual Arts, Washington University in St. Louis

Candidate: Rahav Dor
Degree: Ph.D. in Computer Science and Engineering
Dissertation: Banyan: A Decentralized Approach to Reliable Home Automation
Status: **Pass, with an Expectation to Graduate in August 2023**
Committee: **Chenyang Lu, Ph.D. (Chair)**, Fullgraf Professor, Washington University Director, AIM Institute - AI and IoT for Medicine
Editor-in-Chief, ACM Transactions on Cyber-Physical Systems
Christopher D. Gill, Professor of Computer Science and Engineering, McKelvey School of Engineering, Washington University in St. Louis
Hongxi Yin, Ph.D., InCEES Associate Professor, Sam Fox School of Design & Visual Arts, Washington University in St. Louis

William Yeoh, Associate Professor, Computer Science & Engineering,
 McKelvey School of Engineering, Washington University in St. Louis
Ning Zhang, Assistant Professor, Computer Science & Engineering, McKelvey
 School of Engineering, Washington University in St. Louis

FUNDED RESEARCH PROPOSALS

- 2023-2024 **\$50,000, PI**, Here and Next, Strategic Planning Early-Stage Demonstration Project, Washing University in St. Louis
- 2023-2024 **\$25,000**, McDonnell 2022 Global Incubator Seed Grants, Improving Sustainability of Stormwater Management Through International Collaboration and Learning: How Can St. Louis Learn from China’s Sponge City Initiative?
Investigators: Hongxi Yin (PI), Ian Trivers (Co-PI), Washington University in St. Louis, Zhifang Wang, Peking University
- 2022-2023 **\$50,000, PI**, U.S. Department of Energy, Solar Decathlon Build Challenge 2023
- 2021-2022 **\$2,000, Faculty Advisor**, Third Place Award, Heritage Documentation Programs, HABS, National Park Services, Project: Samara (HABS IN-247), Location: West Lafayette, Indiana
- 2022 **\$2,500, Faculty Advisor**, American Institute of Steel Construction (AISC) Undergraduate Research Fellowship, The Development and Demonstration of Wire-Arc Additive Manufacturing (WAAM) in Structural Connections for Buildings
- 2022, **\$5,000**, InCEES, Travel Grants to support five student leaders of Solar Decathlon Build Challenge to compete in National Renewable Energy Laboratory (NREL), Denver
- 2018-2022 **\$89,766, Hongxi Yin (PI)**, National Science Foundation (NSF), Collaborative Research: US-Ireland: Thermoelectric Concrete Envelope (ThermoConc), Environmental Sustainability, PD 17-7643. Intellectual Merit: (1) identify optimal design and control of ThermoConc and establish mathematical models, (2) characterize the new TE concrete and evaluate the performance of ThermoConc, and (3) assess tech-eco benefits of ThermoConc. Broader Impact: To develop novel approaches, methodologies, and technology breakthroughs for building to meet societal, environmental, and economic needs.
- 2018 PI, Solar Decathlon China 2018,
\$100,000, the Research and Demonstration of a Prototype 3D Printing House, Industrial Support,
\$15,000, Whirlpool China
about \$200,000, Industrial Contractual In-kind construction service and material donations
- 2017 **\$50,000, PI**, Course and Curriculum Development, PCI Foundation for Developing Innovative Instructional Models in Architectural Design Studios of Solar Decathlon House
- 2015-2017 **PI**, Solar Decathlon 2017
\$100,000, U.S. Department of Energy
\$300,000, Washington University in St. Louis
about \$200,000, Industry Non-contractual In-kind donations
- 2017 **\$5,000, Faculty Advisor**, Sponsored Summer Intern, I-CARES
- 2016-2017 **\$25,000, PI**, A Human Computer Interactive (HCI) Design-Supporting Tool for Energy-Efficient Precast Sustainable Buildings, I-CARES

UNDER-REVIEW RESEARCH PROPOSALS

2023 **\$275,000, Co-PI**, U.S. DOE 2023 Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT), *Low-cost compatible Smart TEs-Embedded Heat Pump System*, University Participant: Purdue University

Selected for Award, but not Granted Research Proposal

2020 **\$999,832, PI**, U.S. DOE 2019 Advanced Building Construction (ABC), *Autonomous Onsite 3D Printing and Robotic Building Construction (A-3D-PRO)*, Industry Participant: Afnitas

NOT FUNDED RESEARCH PROPOSALS

2023 **\$400,000, PI**, National Science Foundation, Proposal Title: *Collaborative Research: ECO-CBET: Expediting Building Decarbonization through Coupling Nano-porous Thermoelectric with Active Insulation in Building Envelope*

2021 **PI, \$ 3.75 million**, U.S. DOE 2020 Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT), *Enabling Demand Flexibility, Energy Efficiency, and Indoor Air Quality via Intelligently controlled Fresh Air Battery (I-FAB) Coupled with SSLC*, Collaborating with Purdue University and Texas A&M University

2020 **Co-PI, \$3,750,000**, National Science Foundation, *GOALI: FMRG: Additive Manufacturing for Future Sustainable Buildings Using Ecofriendly Cementitious and Reinforcing Material*, University participants: Purdue University, Washington University in St. Louis, University of Illinois at Chicago, Industry participant: Afnitas

2021 Co-PI, \$6.5 million, U.S. Department of Energy, Connected Communities, DE-FOA-0002064, *Scalable coMmunity based virtuAl power planT (SMART)*, PI, WashU ESE Bruno Sinopoli, Industrial Participant: AMEREN

2019 **Co-PI, \$150,000**, National Science Foundation, *Collaborative Research: FW-HTF-P: Human-centered Smart Workplaces for Future Older Designers to Enhance Fluid Cognition*, Collaborating with Purdue University

2019 Co-PI, \$2,303,641, U.S. DOE 2019 Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT), *Adversarial-Machine-Learning aware Adaptive Building (AMLAB) Controls for Cybersecurity and Optimal Operation*, University Participant: Purdue University

COURSE TAUGHT

Washington University in St. Louis, Instructor

Fall 2023	Seminar	Creating a Resilient City: The Gateway South
	Course	Environmental System I
Spring 2023	Seminar	Wellness in Buildings
	Seminar	Solar Decathlon Competition
Fall 2022	Undergraduate Studio	211: Introduction to Design Processes III
	Course	Environmental System I
Spring 2022	Graduate Studio	Solar Decathlon Conceptual Design (With SOM)
	Seminar	Carbon Neutrality in Architectural Design
Fall 2021	Undergraduate Studio	311, Architectural Design I

	Course	Environmental System I
Spring 2021	Graduate Studio	The Portables
	Course	Environmental System I
Fall 2020	Graduate Studio	Rebirth of SAMARA House
	Course	Environmental System I
Spring 2020	Graduate Studio	Habilitation Learning Center
	Seminar	A Zero-Energy Elementary School (ZEES)
Fall 2019	Graduate Studio	Habilitation in Xi'an
	Course	Environmental System I
Spring 2019	Graduate Studio	3D Printing Studio
Fall 2018	Graduate Studio	Tall Building (With SOM)
	Course	Environmental System I
Summer 2018	Summer Research	The Design/Build of Lotus House
Spring 2018	Seminar	Dynamo BIM: The Design of Lotus House
Fall 2017	Graduate Studio	Sustainability Re-Thinking: A few scenarios for Tyson Research Center
Fall 2015	Studio	Solar Decathlon – Crete House Fabrication
Fall 2016	Course	Environmental System I
	Seminar	3D Printing Furniture, Design and Fabrication
Spring 2016	Seminar	Race to Zero Design Competition
Fall 2015	Studio	Solar Decathlon – Crete House Conceptual Design

Southeast University, China, Instructor

Spring 2014	Seminar	Precast Prototype Study, Structure as Space
Spring 2014	Studio	High Density Residential Housing
Fall 2013	Studio	Affordable Housing
Spring 2013	Course	Architectural Acoustics and Lighting
Spring 2013	Degree Project	A Prefabricated House with Aluminum Structure

Purdue University, Instructor

Spring 2009	Course	Architecture and Technology, School of Civil Engineering Summer Intern Green Affordable Housing Project
Summer 2009	Course	From Ideas to Innovations I, School of Engineering Education
Fall 2009	Course	From Ideas to Innovations II, School of Engineering Education

Carnegie Mellon University, Teaching Assistant

Spring 2009	Course	Advanced Building System Integration, School of Architecture
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ACADEMIC SERVICES

2023-2024	Guest Editor, Journal of Architectural Intelligence
2020-2022	Washington University in St. Louis, Here and Next, Strategic Planning Teams

Member of Working Groups:

- Environment, Climate Change, and Sustainability
- Public Health

Member of Action Team:

- Environment

2022-2023	Committee Member, Sam Fox Faculty Council
2010-2013	Chair, Technical Committee for Sustainable Cities and Communities, Solar Energy Division, ASME
2011	Session Chair, Sustainable Cities and Communities, ASME 5th International Conference on Energy Sustainability, Washington DC
2010	Track Chair, Sustainable Cities and Communities, ASME 4th International Conference on Energy Sustainability, Phoenix AZ
2009	Track Chair: Combined Energy Cycles, CHP, Combined Heating Cooling and Power (CCHP), and Heat Recovery Technologies, ASME 3rd International Conference on Energy Sustainability, San Francisco CA
2009	General Secretary, China Sustainable Building (CSB) Forum 2009, Shanghai, China
2008	Track Co-Chair: Heat Pump Systems and Technologies and Distributed and Combined Cooling Heating and Power Technologies (CCHP), ASME 2nd International Conference on Energy Sustainability, Jacksonville, FL

PUBLIC MEDIA

COVID-19 Ventilator Innovations

1. WashU Expert: The architecture of virus transmission, Researchers propose new method for treating airborne pathogens, By Liam Otten March 12, 2020, <https://source.wustl.edu/2020/03/washu-expert-the-architecture-of-virus-transmission/>
2. This portable furnace could stop coronavirus in its tracks, Researchers develop an air sterilization system that hospitals could use to kill the virus before it ever lands on a surface, 03-18-20, CORONAVIRUS, <https://www.fastcompany.com/90478242/this-portable-furnace-could-stop-coronavirus-in-its-tracks>
3. Smart Heating Solutions, Electric Heat: A Simple and Effective Approach To Fighting Covid-19, COVID-19 CAN BE INACTIVATED BY HIGH TEMPERATURE EXPOSURE*, USING PORTABLE HEATERS TO FIGHT COVID-19, <https://king-electric.com/portable-heaters-fight-covid-19/>

SAMARA House

4. Washington University in St. Louis, Newsroom, The Record, SAMARA House survey wins national architectural honors, Liam Otten, September 22, 2021, https://samfoxschool.wustl.edu/the-school/news/296-samara-house-survey-wins-national-architectural-honors?_ga=2.119958090.372810796.1689216826-678655082.1689216826
5. Indiana Landmarks, News, Safeguarding a Treasure, The National Park Service recently awarded a \$500,000 Save America's Treasures grant for repairs at Samara, the Frank Lloyd Wright-designed John and Catherine Christian House in West Lafayette, which Indiana Landmarks co-stewards with the John E. Christian Family Memorial Trust, Inc., <https://www.indianalandmarks.org/2020/10/safeguarding-a-treasure/>

SMOOTH House

6. Washington University in St. Louis, Newsroom, Occupational therapy clinic breaks ground in Delmar Maker District, Designed by WashU students, 'smart' building to compete in 2023 Solar Decathlon Build Challenge, By Liam Otten November 7, 2022, <https://source.wustl.edu/2022/11/occupational-therapy-clinic-breaks-ground-in-delmar-maker-district/>
7. WashU Constructing Net-Zero Occupational Therapy Facility, NOVEMBER 15, 2022, NEWS, Project Will Compete in 2023 U.S. Dept. of Energy's Solar Decathlon Build Challenge, By *KERRY SMITH, EDITOR, ST. LOUIS CONSTRUCTION NEWS AND REVIEW MAGAZINE*, <https://stlouiscnr.com/washu-building-energy-savvy-for-occupational-therapy-facility/>
8. Washington University in St. Louis, Newsroom, Class Acts: Elizabeth Saliba, Engineering senior served as key player on university track, Solar Decathlon teams, By Sara Brenes Akerman May 9, 2022 <https://source.wustl.edu/2022/05/class-acts-elizabeth-saliba/>

Lotus House

9. Changing how buildings are made, Kinga Pabjan discusses Lotus House, 3D printing and Team WashU at Solar Decathlon China, <https://source.wustl.edu/2018/08/changing-how-buildings-are-made/>
10. 3D Printed House: 25 Most Important Projects, by Lucas Carolo, Justin Haines, Jun 28, 2022, <https://all3dp.com/2/3d-printed-house-3d-printed-building/>
11. 3D printing: A model for sustainable construction? March 20, 2019, <https://global.wustl.edu/3d-printing-a-model-for-sustainable-construction/>
12. García-Alvarado, Rodrigo, Ginnia Moroni-Orellana, and Pablo Banda-Pérez. 2021. "Architectural Evaluation of 3D-Printed Buildings" Buildings 11, no. 6: 254. <https://doi.org/10.3390/buildings11060254>
13. 5, 3D Narratives, Lotus House; the 3D printed solar house, Published on September 7, 2018 by Michelle J., <https://www.3dnatives.com/en/lotus-house-3d-printed-solar-china-070920184/#!>
14. ARCHINECT News, The Lotus House Explores the Potential of 3D Printing for Sustainable Construction By Liam Otten, <https://archinect.com/news/article/150077859/the-lotus-house-explores-the-potential-of-3d-printing-for-sustainable-construction>
15. 3DPrint.com, Student Competition Team Uses 3D Printing and Design to Build Elements and Furniture for Lotus House, August 21, 2018, by Sarah Saunders, <https://3dprint.com/222986/team-washu-3d-print-lotus-house/>
16. GlobalSpec, 3D-Printed Concrete 'Lotus House' Explores Sustainable Methods of Construction, Peter Brown | August 16, 2018, <https://insights.globalspec.com/article/9615/3d-printed-concrete-lotus-house-explores-sustainable-methods-of-construction>
17. TRENDHUNTER, Flower-Shaped Printed Abodes, Laura McQuarrie, <https://www.trendhunter.com/trends/lotus-house>
18. 10, 3D Printing, WashU Builds Lotus House Sustainable 3D Printed Residence, August 16, 2018, <https://3dprinting.com/news/washu-builds-lotus-house-sustainable-3d-printed-residence/>
19. 3D Printed House: 20 Most Important Projects, November 8, 2022, <https://facfox.com/docs/kb/3d-printed-house-20-most-important-projects>

Crete House

20. HEC TV Channels, CONCRETE THINKING: THE HOUSE OF THE FUTURE? <http://www.hectv.org/watch/schankmans-st-louis/concrete-thinking-the-house-of-the-future/28769/> or <https://www.youtube.com/watch?v=woytT16nzBM&feature=youtu.be>

21. Fox 2 TV, St. Louis, Washington University students develop competitive concrete solar home
<http://fox2now.com/2017/09/08/washington-university-students-develop-competitive-concrete-solar-home/>
22. Architectural Record, Homes for a Changing Planet on View at the 2017 Solar Decathlon,
<https://www.architecturalrecord.com/articles/13036-homes-for-a-changing-planet-on-view-at-the-2017-solar-decathlon?v=preview>
23. Inhabitat, Internet Brands Inc., This prefab concrete house harvests rainwater with food-growing vertical gardens,
<https://inhabitat.com/this-prefab-concrete-house-harvests-rainwater-with-food-growing-vertical-gardens/>
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<http://precast.org/2017/09/crete-house-future-residential-construction/>
25. Realtor Magazine, Is This House Indestructible?
<http://realtormag.realtor.org/daily-news/2017/10/03/house-indestructible>
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http://www.builderonline.com/design/projects/sustainable-concrete-home-can-stand-up-to-weather-events_o
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<http://www.samfoxschool.wustl.edu/news/11958>
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<http://www.samfoxschool.wustl.edu/news/12224>
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32. CRETE House debuts at Solar Decathlon 2017,
<https://engineering.wustl.edu/news/Pages/CRETE-House-debuts-at-Solar-Decathlon-2017.aspx>
33. Department of Energy
<https://www.solardecathlon.gov/2017/competition-team-Washington-university.html>
34. Gallery of Washington University – St. Louis,
<https://www.solardecathlon.gov/2017/photos-gallery-Washington-university.html>
35. Solar Decathlon 2017 – Bringing Concrete to the Game with CRETE House,
<https://www.giatecscientific.com/education/solar-decathlon-2017-bringing-concrete-to-the-game-with-crete-house/>
36. Student Life, WashU's CRETE House gears up for the competition,
<http://www.studlife.com/news/2017/09/21/wash-u-s-crete-house-gears-up-for-the-competition/>
37. Construction Forum St. Louis, WUSTL Architecture Students Build Concrete Energy Savings,
<http://www.constructforstl.org/wustl-architecture-students-build-concrete-energy-savings/>
38. Thermomass, WASHINGTON UNIVERSITY STUDENTS, THERMOMASS PARTNER ON CRETE HOUSE,

SELECTED PROFESSIONAL SPEAKING

- Gateway Decathlon 2025, Information Webinar, May 15, 2023
- Public Course, From Crete House to Lotus House, Solar Decathlon China 2022, 2021
- Luncheon Speech, Pacing the Way for Green Construction, Windows and Envelope Roadmap Workshop, Department of Energy, Washington D.C., April 6, 2013
- Prefabricated High-rise Building and Its Practice, eight-hour course for three consecutive days, October 28, November 8, November 9, 2012, Tsinghua University, 150 CEOs of major real estate development companies.
- Industrialized High-rise Building and Its Practice in China, August 17, 2012, Building Technologies Research, and Integration Center (BTRIC), Oak Ridge National Laboratory (ORNL),
- Jiangsu Yangzhou Construction Bureau, Green Neighborhood Re/Development (1 hour), supported by Institute for Sustainable Community (ISC) under USAID grants, September 14, 2011
- Tianjin University Green Eco Campus Planning Workshop, U.S. Experience – Green Campus and Curriculum Development (30 minutes), Invited by the President of Tianjin University, July 7, 2011
- 2011 Youth Hostel Association Annual Conference, Green Hostel Operation and Maintenance, March 24, 2011
- Guangdong Xiaolan City Low Carbon Town Redevelopment Workshop, Low Carbon Community Development (45 minutes), supported by Institute for Sustainable Community (ISC) under USAID grants, January 26, 2011
- Tsinghua University Real Estate CEO Training Workshop, Green Real Estate Development (30 minutes), November 14, 2010
- Langfang City, Green Neighborhood Development (30 minutes), supported by Vantone Great City Investment Co., September 4, 2010
- Tianjin Association of Architects, Green Neighborhood Development, Tianjin College of Urban Planning and Architecture, July 2010
- Shanghai Association of Refrigeration, Green Urban Energy Infrastructure, July 2010
- Jiangsu Mayor Training Program in Low Carbon Development Strategy, “Climate Leader Academy, Nanjing University, and Jiangsu NDRC”, about 40 Mayors and Directors of NDRC, supported by Institute for Sustainable Community (ISC) under USAID grants, July 2010
- Guangdong Mayor Training Program in Low Carbon City, “Climate Leader Academy, Zhongshan University, and Guangdong NDRC”, about 40 Mayors and Directors of NDRC, supported by Institute for Sustainable Community (ISC) under USAID grants, July 2010

HONORS & AWARDS

2022	Charles E. Peterson Prize, 3 rd Place, HABS, National Park Service
2016-2018	PCI Foundation Professor
2009	“Outstanding Track Chair,” ASME 3rd International Conference on Energy Sustainability, San Francisco CA,
2008	“Outstanding Track Chair,” ASME 2nd International Conference on Energy

Sustainability, Jacksonville FL,

- 2006 “Akram Midani Award”, Outstanding Contribution in The Erection of Mao Yisheng Statue on Carnegie Mellon Campus, School of Architecture, Carnegie Mellon University
- 2000 “Outstanding Contribution Award”, the Historic American Buildings Survey (HABS) for Pentagon Barracks of East Baton Rouge Parish, School of Architecture, Louisiana State University