Curriculum Vitae

Personal Information
Ming Hu
Associate Professor and Associate Dean, School of Architecture, University of Notre Dame
Concurrent Associate Professor, Civil and Environmental Engineering and Earth Science, University of Notre Dame
Affiliate Faculty, ND Energy, University of Notre Dame
Affiliate Faculty, Lucy Family Institute for Data & Society, University of Notre Dame
Clinic Associate Professor, School of Architecture, Planning, Historic Preservation, University of Maryland
Fellow, Rockefeller Foundation (2019-2020)
Fellow, Fulbright Finland (2020-2021)
Fellow, Jefferson Science Fellow, National Academies of Sciences Engineering Medicine (2022-2023)
E-mail: mhu1@nd.edu

OVERVIEW OF SIGNIFICANT ACTIVITIES

Research
- **3 book published**
- **3 book chapter published** (peer reviewed).
- **49 peer-reviewed journal paper**
- **55 peer-reviewed conference paper**
- **12 competitive national grants and 11 university grants,** as a principal investigator (PI), Co-PI or Senior Personnel, with total funding of $21,173,965.
- **26 invited talks (off campus, including keynote speech)**.

Teaching
- **17 Courses** (including 9 new courses)
- **Serve on 24 graduate student committees**, include chairing 12 committees
- **1 national teaching award** from AIAS / ACSA
- **Serve as research advisor and provide finical support to 18** students
- **5 teaching-related grants** of $ 26,500

Service
- **Board members,** Architecture Research Center Consortium (ARCC).
- **Editorial Board Member,** for 4 green building and sustainable design journals
- **Topic/Guest Editorial,** for 5 environment-health journals
- **Conference Session Chair,** for 2 international conferences

ACADEMIC AND PROFESSIONAL POSITIONS

July 2023 -present	**Associate Professor** **Associate Dean**	University of Notre Dame School of Architecture
June 2021 -May 2023	**Associate Professor**	University of Maryland School of Architecture, Planning, Preservation
August 2022 – August 2023	**Visiting Associate Professor**	Chaminade University of Honolulu Department of Environmental + Interior Design

May 2020 -Present	**Director**	Built Environment Decarbonization Analysis (BEDA) Lab School of Architecture, Planning, Preservation University of Maryland
May 2021 -Present	**Co-director**	Brain, Architecture & Virtual Reality (BRAVR) Lab School of Architecture, Planning, Preservation University of Maryland
August 2016 -May 2021	**Assistant Professor**	University of Maryland School of Architecture, Planning, Preservation
2015-2016	**Director of Academic Engagement**	The American Institute of Architects
2014-2015	**Assistant Professor**	Architecture Program Institute of Sustainability Rochester Institute of Technology, Rochester, NY
2014-Present	**Co-founder**	HMK Design Consulting, LLC
2012-2015	**Lecture**	School of Architecture, Catholic University of America, DC
2008-2014	**Senior Project Designer/ Associate / BIM Coordinator**	HOK, Inc. Washington D.C
2003-2008	**Project Designer**	Torti Gallas and Partners, CHK. Silver Spring, MD

EDUCATION

Ph.D.	University of Maryland, College of Engineering, Department of Civil and Environmental Engineering, College Park, MD, USA Major: Department of Civil and Environmental Engineering Dates: 2019 – 2022
M. Arch	University of Notre Dame, School of Architecture, Notre Dame, IN Major: Architecture Dates: 2001 – 2003
M. Arch	Tsinghua University, School of Architecture, Beijing, China Major: Architecture Dates: 1998 – 2001
B. Arch.	Southeast University, School of Architecture, Nanjing, China Major: Architecture Dates: 1993 – 1998

PROFESSIONAL CERTIFICATIONS, LICENSES, AND MEMBERSHIPS

Licensed Architect	District of Columbia, License # ARC102800	2015 – present
Licensed Architect	State of Maryland, License # 17876	2014 - present
Licensed Architect	New York State, License # 033140	2010 – present
LEED AP BD+C	Credential ID: 10084488-AP-BD+C	2003 – Present
Member	International Association of Building Physics	2017– Present
Member	Building Technology Educators Society (BTES)	2016– Present
Member	Society of Building Science Educator (SBSE)	2014– Present
Board Member	Architectural Research Centers Consortium (ARCC)	2015– Present
Member	Environmental Design Research Association (EDRA)	2018– Present
Member	The American Institute of Architects	2012– Present

RESEARCH, SCHOLARLY, CREATIVE AND / OR PROFESSIONAL ACTIVTIES

H- index: 19, Citation:879 (since 2018, source: Google Scholar)

A. Books and Book Chapters

A1	2023	Book Author (original)	***Green Building Costs: The Affordability of Sustainable Design***. *Routledge*, August 2023. (ISBN 9781032328089)
A2	2023	Book Chapter (Invited)	Chapter Title: ***Green Construction Workforce Training using Virtual Reality****;* Book Title: Automation in Construction toward Resilience: Robotics, Smart Materials & Intelligent Systems (Publisher: *Routledge*; Editor: Ehsan Noroozinejad Farsangi, Mohammad Noori, Tony U.Yang, Paulo B. Lourence, Paulo Gardoni, Izuru Takewaki, Eleni N. Chatzi, Shaofan Li). ISBN 9781032350868.
A3	2022	Book Chapter (Invited)	Chapter Title: ***Mobile Testing Facilities Inspired by Origami Science****;* Book Title: Architectural Factors for Infection and Disease Control (Publisher: *Routledge*; Editor: AnnaMarie Bliss, Dak Kopec). ISBN 9781032102672. https://doi.org/10.4324/9781003214502
A4	2020	Book Author (original)	***Smart Technologies and Design for Healthy Built Environments***. Springer, September 2020. https://www.springer.com/gp/book/9783030512910

A5	2020	Book Chapter (Invited)	Chapter Title: ***Embodied Environmental Impact of Existing Building Stock;*** Book Title: Examining the Environmental Impacts of Materials and Buildings (Publisher: ***IGI Global***; Editor: Blaine Brownell). DOI: 10.4018/978-1-7998-2426-8
A6	2019	Book Author (original)	***Net Zero Building: Predicted and Unintended Consequences***. Routledge. April 2019. DOI:10.4324/9781351256520
A7	2011	Book Translator	*The Architecture of Community by* Leon Krier. (English – Chinese) China Architecture and Building Press.

B. Refereed Journal Paper[1]

Journal Articles (***49 papers published***)

*(: my students / advisees; *corresponding author)*

B49	2023	Jakub Świerzawski*, **Ming Hu**, Justyna Kleszcz, Piotr Kmiecik Dieu Merci Kamate*. " The potential of higher education institutions as catalysts for revitalization in urban planning: a case study of a medical simulation center at the workers' housing estate of donnersmark ironwokers in Zavrze". *Journal Środowisko Mieszkaniowe -Housing Environment.* Craow University of Technology. *https://housingenvironment.edu.pl/images/Nr%2044/HE_44_Swierzawski_2023-10-25.pdf*
B48	2023	**Hu, Ming***. "Is Sustainability costly? Empirical evidence from built projects" *Journal of Green Building* (2023) 18(3),61-80. College Publishing. https://doi.org/10.3992/jgb.18.3.61
B47	2023	**Hu, Ming***. Jakub Swierzawski, Justyna Kleszca, Piotr Kimecik. "What are the concerns with New European Bauhaus initiative? Vernacular knowledge as the primary driver to sustainable future" *Next Sustainability* (2023). Elsevier. (*Journal Impact Factor 3.7*). https://doi.org/10.1016/j.nxsust.2023.100004
B46	2023	**Hu, Ming***. "Exploring low-carbon design and construction techniques: lessons from vernacular architecture" *Climate* (2023). MDPI . (*Journal Impact Factor 3.7*). https://doi.org/10.3390/cli11080165
B45	2023	Kyeezu Kim, Brian T., Joyce1, Drew R., Nannini1, Yinan Zheng., Penny Gordon-Larsen., James M. Shikany, Donald M. Lloyd-Jones, **Hu, Ming**, Mark J. Nieuwenhuijsen, Douglas E. Vaughan, Kai Zhang*, Lifang Hou. "Inequalities in urban greenness and epigenetic aging: different associations by race and neighborhood socioeconomic status." *Science Advances* (2023), 9 (26). *Journal Impact Factor 14.136*). DOI:10.1126/sciadv.adf8140
B44	2023	Lou, Jiehong.; Borjigin, Sachraa,; Tang, Connie., Saadat, Yalda., **Hu, Ming.,** Niemeier Deb. "Facility design and worker justice: COVID-19 transmission in meatpacking plants." *American Journal of Industrial Medicine* (2023), 1 (15). Wiley. (*Journal Impact Factor 2.61*). http://doi.org/10.1002/ajim.23510

[1] Refer to document "Reputation of Publication" for detailed explanation of impact factor, and publishing venue)

B43 2023 **Hu, Ming***. "Strategies and technologies of life cycle-embodied carbon reduction from the building and construction sector: a review." *Journal of Architectural Engineering* (2023). American Society of Civil Engineers. (*Journal Impact Factor 1.82*).

B42 2023 **Hu, Ming***. Junghwa Suh, Camryn Pedro. "An integrated framework for preservation of Hawaii Indigenous Culture: Leaning from vernacular knowledge." *Buildings* (2023), 13 (5). MDPI. (*Journal Impact Factor 3.324*). https://doi.org/10.3390/buildings13051190

B41 2023 **Hu, Ming***. Kai Zhang, Quynh Camthi Nguyen, Tolga Tasdizen. "The effects of passive design on indoor thermal comfort and energy savings for residential buildings in hot climates: a systematic review." *Urban Climate* (2023). Elsevier. (*Journal Impact Factor 6.97*). https://doi.org/10.1016/j.uclim.2023.101466

B40 2023 **Hu, Ming***. "A look at residential building stock in the United States – mapping life cycle embodied carbon emission and other environmental impact." *Sustainable Cities and Society* (2023). Elsevier. (*Journal Impact Factor 10.696*). https://doi.org/10.1016/j.scs.2022.104333

B39 2022 Ding, Yu., Pang, Zhenqian., Lan, Kai; Yao, Yuan; Panzarasa, Guido; Xu, Lin; Ricco, Marco; Rammer, Douglas; Zhu, J.Y; **Hu, Ming.,** Pan, Xuejun; Li, Teng; Burget, Lingo and Hu, Liangbing. "Emerging engineered wood for building applications." *Chemical Review* (2022). ACS Publications. (*Journal Impact Factor 60.62*). https://doi.org/10.1021/acs.chemrev.2c00450

B38 2022 **Hu, Ming***. Kai Zhang, Quynh Camthi Nguyen, Tolga Tasdizen, Krupali Uplekar Krusche "A multistate study in housing factors influential to heat-related illness in the United States." *International Journal of Environmental Research and Public Health* (2022). MDPI. (*Journal Impact Factor 3.39*). DOI: 10.3390/ijerph192315762

B37 2022 **Hu, Ming***. "An evaluation of the retrofit net zero building performance: life cycle energy, emission and cost." *Building Research & Information* (2022). Routledge,Taylor & Francis. (*Journal Impact Factor 5.322*). https://doi.org/10.1080/09613218.2022.2142497

B36 2022 Yue, Xiaohe., Antonietti, Anne., Alirezaei, Mitra; Tasdixen, Tolga; Li, Dapeng; Nguyen, Leah; Mane, Heran; Sun, Abby; **Hu, Ming.,** Whitaker, Ross and Nquyen, Quynh. "Using convolutional neural networks to derive neighborhood built environments from goolge street view images and examine their assoications with health outcomes." *International Journal of Environmental Research and Public Health* (2022). MDPI. (*Journal Impact Factor 3.39*).

B35 2022 **Hu, Ming***. "Embodied carbon emissions of the residential building stock in the United States and the effectiveness of mitigation strategies." *Climate* (2022). MDPI. (*Journal Impact Factor 4.70*). https://doi.org/10.3390/cli10100135

B34 2022 **Hu, Ming***. Skibniewski MJ. "The impact of the design team characteristics on the sustainable building construction cost: structural equation model analysis." *Architectural Engineering and Design Management* (2022). Taylor & Francis. (*Journal Impact Factor 2.57*). https://doi.org/10.1080/17452007.2022.2068497

B33 2022 Li He; Baode Xue; Bo Wang; Ce Liu; David Gimeno Ruiz de Porras, George L. Delcos; **Hu, Ming;** Bin Luo; Kai Zhang. "Impact of high, low, and non-optimum temperatures on chronic kidney disease in changing climate, 1990-2019: a global analysis." *Environmental Research* (2022):113172. Elsevier. (*Journal Impact Factor 8.431*). *DOI*: 10.1016/j.envres.2022.113172

B32 2022 **Hu, Ming***. Eero Nippala, Kari Kallioharju & Sofie Pelsmakers. "Monte Carlo simulation approach to understand the cost variance for energy retrofit projects: comparative study of Finland and the United States." *Construction Management and Economics* (2022). Taylor & Francis. (*Journal Impact Factor 4.056*). DOI: 10.1080/01446193.2022.2034906

B31 2022 **Hu, Ming***. "Response to another look at "2019 energy benchmarking data for LEED-certified buildings in Washington, D.C: Simulation and reality." *Journal of Building Engineering* (2022), 46 (46), 103694. Elsevier. (*Journal Impact Factor 5.318*). https://doi.org/10.1016/j.jobe.2021.103694

B30 2022 **Hu, Ming***, Sofie Pelsmakers, Terttu Vaino, Paula Ala-Kotila "Multifamily Building Emery Retrofit Comparison Between The United States And Finland." *Energy & Buildings* (2022), 11685: Elsevier. (*Journal Impact Factor 7.13*). https://doi.org/10.1016/j.enbuild.2021.111685

B29 2021 **Hu, Ming***, Nora Wang Esram. "The Status of Embodied Carbon in Building Practice and Research in the United States: A Systematic Investigation." *Sustainability* (2021), 13 (23), 12961. MDPI. (*Journal Impact Factor 3.883*). https://www.mdpi.com/2071-1050/13/23/12961

B28 2021 **Hu, Ming***. "Beyond Operational Energy Efficiency: A Balanced Sustainability Index from a Life Cycle Consideration." *Sustainability* (2021), 13 (20). MDPI. (*Journal Impact Factor 3.883*). https://doi.org/10.3390/su132011263

B27 2021 **Hu, Ming***, Skibniewski MJ. "Green Building Construction Cost Surcharge." *Journal of Architectural Engineering*, *27*(4), 04021034. Taylor & Francis. https://doi-org.proxy-um.researchport.umd.edu/10.1061/(ASCE)AE.1943-5568.0000506

B26 2021 **Hu, Ming***, Skibniewski MJ. "A Review of Building Construction Cost Research: Current Status, Gaps and Green Buildings". Green Building & Construction Economics (2021), 2(1):1-17. https://doi.org/10.37256/gbce.212021768

B25 2021 **Hu, Ming***, Madlen Simon, Spencer Fix, Anthony A. Vivino, Edward Bernat. "Exploring a sustainable building's impact on occupant mental health and cognitive function in virtual environment". *Scientific Report,* (2021), (11): Nature. (*Journal Impact Factor 4.996*). https://doi.org/10.1038/s41598-021-85210-9

B24 2020 **Hu, Ming***, Jennifer Roberts, Gesine Pryor Azevedo, David Milner. "The role of built and social environmental factors in Covid-19 transmission: A look at America's capital city". *Sustainable cities and Society* (2020), (4): Elsevier. (*Journal Impact Factor 10.696*). https://doi.org/10.1016/j.scs.2020.102580

B23 2020 **Hu, Ming***, and Jennifer Roberts . "Built Environment Evaluation in Virtual Reality Environments – A Cognitive Neuroscience Approach". *Urban Science* (2020), 4(4): 48. MDPI. https://doi.org/10.3390/urbansci4040048

B22 2020 **Hu, Ming***, and David Milner. "Factors influencing existing medium-sized commercial building energy retrofits to achieve the net zero energy goal in the united states". *Building Research and Information* (2020):1-22. Taylor & Francis. *(Journal Impact Factor 4.779)*

doi.org/10.1080/09613218.2020.1798208

B21 2020 **Hu, Ming***, and David Milner. "Visualizing the research of embodied energy and environmental impact research in the building and construction field: a bibliometric analysis." *Development in the Built Environment* (2020): S2666-1659(20)30006-5. ***(****Journal Impact Factor 5.563)* doi.org/10.1016/j.dibe.2020.100010

B20 2020 **Hu, Ming *.** "Life-cycle embodied performance index- the relationship between embodied energy, embodied carbon and environmental impact". *Energies* (2020):13-8, 1905. MDPI. **(***Journal Impact Factor 3.004)* **doi.org/10.3390/en13081905**

B19 2020 Phelan, P., Wang, N., **Hu, M.,** & Roberts, J. D. "Sustainable, Healthy Buildings & Communities." Building and Environment (2020):174. Elsevier. (*Journal Impact Factor 6.92*). doi.org/10.1016/j.buildenv.2020.106806

B18 2020 **Hu, Ming***, and Jennifer D. Roberts. "Connections and Divergence between Public Health and Built Environment-A Scoping Review." *Urban Science* (2020): 4-1. (*Journal Impact Factor 2.33)* doi.org/10.3390/urbansci4010012

B17 2019 **Hu, Ming *.** "Life-cycle environmental assessment of energy retrofit on an campus scale". *Building Research and Information* (2019):1-22. Taylor & Francis. ***(****Journal Impact Factor 5.322)* DOI: 10.1080/09613218.2019.1691486

B16 2019 **Hu, Ming*.** "Building Impact Assessment – a combined life cycle assessment and multi-criteria decision analysis framework". *Resource, Conservation and Recycling. 150, 104410.*Elsevier. (*Journal Impact Factor 12.68)* doi.org/10.1016/j.resconrec.2019.104410

B15 2019 **Hu, Ming *.** "A Review of Life Cycle Research of the Built Environment at Different Scales: a citation analysis using big data". *Journal of Green Building* (2019). 14(3), 63-80 doi.org/10.3992/1943-4618.14.3.63

B14 2019 **Hu, Ming***. "Cost-Effective Options for the Renovation of an Existing Education Building toward the Nearly Net-Zero Energy Goal—Life-Cycle Cost Analysis." *Sustainability* (2019), 11(8). MDPI. (*Journal Impact Factor 3.889)* doi.org/10.3390/su11082444

B13 2019 **Hu, Ming*,** and Mitchell Pavao-Zuckerman. "Literature Review of Net Zero and Resilience Research of the Urban Environment: A Citation Analysis Using Big Data." *Energies* (2019)8. MDPI. (*Journal Impact Factor 3.004)* DOI: 10.3390/en12081539

B12 2019 **Hu, Ming***. "Does Zero Energy Building Cost More?–An Empirical Comparison of the Construction Costs for Zero Energy Education Building in United States." *Sustainable Cities and Society* (2019): 324-334. Elsevier. (*Journal Impact Factor 10.696)* https://doi.org/10.1016/j.scs.2018.11.026

B11 2019 Liang,Jin*, Yueming Qi ang **Ming Hu**. "Mind the energy performance gap: Evidence from green commercial buildings" *Resources, Conservation and Recycling 141(2019):364-377*, Elsevier. (*Journal Impact Factor 12.68)* https://doi.org/10.1016/j.resconrec.2018.10.021
(my research responsibility for this paper is to conduct literature review and define the research gap, I have contributed to the final editing of the paper)

B10 2018 **Hu, Ming***, and Yueming Qiu. "A comparison of building energy codes and policies in the USA, Germany, and China: progress toward the net-zero building goal in three countries." *Clean Technologies and Environmental Policy* (2018): 1-15. (*Journal Impact Factor 4.52)7* DOI: 10.1007/s10098-018-1636-x

B9 2018 **Hu, Ming***. "BIM-Enabled Pedagogy Approach: Using BIM as an Instructional Tool in Technology Courses." *Journal of Professional Issues in Engineering Education and Practice,* 145, no. 1 (2018): 05018017. (*Journal Impact Factor 2.025)* https://doi.org/10.1061/(ASCE)EI.1943-5541.0000398

B8 2018 **Hu, Ming***. "Optimal Renovation Strategies for Education Buildings—A Novel BIM–BPM–BEM Framework. *Sustainability*. MDPI (2018): 10(9):3287. (*Journal Impact Factor 3.332)* doi.org/10.3390/su10093287

B7 2018 **Hu, Ming***; and Roger Chen. "A Framework for Understanding Sense of Place in an Urban Design Context." *Urban Science*, MDPI, no. 2 (2018): 34. doi:10.3390/urbansci2020034

B6 2018 Roberts, Jennifer D*., **Ming Hu**, Brit Irene Saksvig, Micah L. Brachman, and Casey P. Durand. "Examining the Influence of a New Light Rail Line on the Health of a Demographically Diverse and Understudied Population within the Washington, DC Metropolitan Area: A Protocol for a Natural Experiment Study." *International Journal of Environmental Research and Public Health* 15, no. 2 (2018): 333. ***(****Journal Impact Factor 2.948)* doi:10.3390/ijerph15020333
(my research responsibility for this paper is to contribute to the theoretic framing of the paper, draft/write the portion related to build environment quality and sense of community/place)

B5 2018 **Hu, Ming*.** "Dynamic life cycle assessment integrating value choice and temporal factors—A case study of an elementary school." *Energy and Buildings* 158 (2018): 1087-1096 ". *Energy and Buildings,* Elsevier. (*Journal Impact Factor 5.879)* https://doi.org/10.1016/j.enbuild.2017.10.043

B4 2017 Zhuang, J., **Hu, M*.,** & Mousapour, F. "Value-Driven Design Process: A Systemic Decision-Making Framework Considering Different Attribute Preferences from Multiple Stakeholders" Online Journal of American Society of Mechanical Engineers (ASME): special issue of the ASME *Journal of Solar Energy Engineering dedicated to Buildings of the Future*. ISSN:0199-6231. (*Journal Impact Factor 2.384)* doi: 10.1115/1.4035059
(Led the research design and data collection effort and wrote the literature review. Collaborated on the introduction, interoperation of model results. And wrote parts of discussion and conclusion. Responded to reviewer feedback.)

B3 2017 **Hu, Ming***. "Balance between energy conservation and environmental impact: Life-cycle energy analysis and life-cycle environmental impact analysis*." Energy and Buildings* 140 (2017): 131-139*,* Elsevier. (*Journal Impact Factor 5.879)* doi.org/10.1016/j.enbuild.2017.01.076

B2 2017 **Hu, Ming*.** "Assessment of effective energy retrofit strategies and related impact on indoor environmental quality: a case study of an elementary school in the State of Maryland." *Journal of Green Building* 12, no. 2 (2017): 38-55. doi.org/10.3992/1943-4618.12.2.38

B1 2017 **Hu, Ming***, Peter Cunningham, and Sarah Gilloran. "Sustainable design rating system comparison using a life-cycle methodology." *Building and Environment* 126 (2017): 410-421.Elsevier. (*Journal Impact Factor 6.92)*

https://doi.org/10.1016/j.buildenv.2017.10.010

C. Perspectives, Opinions, and Letters

E1 2017 Intersections – Academia and Industry, Research and Practice. AIA Philadelphia Journal

D. Peer-reviewed Conference Proceedings *(54 published papers)*

F55 2023 Swieerzawski, Jakub**; Ming Hu**. "The transformation of post-industrial heritage: culture, urban, energy and environmental benefit: case study from Zabrze, Poland" (6 pages). Proceedings of Amp Prague-Heritages: Past and Present- Built and Social. June 28-June 30, 2023. Prague, Czech Republic.

F54 2023 **Hu, Ming.** "A look at residential building stock in the United States- mapping life cycle embodied carbon emission and environmental impact" (8 pages). Proceedings of 2023 ARCC Annual Meeting. April 13-April 16, 2023. Dallas, Taxes. Acceptance rate 36%.

F53 2023 **Hu, Ming.** "Understanding of occupant wellbeing in sustainable built environment – a mindfulness framework" (6 pages). Proceedings of 2023 ARCC Annual Meeting. April 13-April 16, 2023. Dallas, Taxes. Acceptance rate 36%.

F52 2023 **Hu, Ming.** "A new building life-cycle embodied performance index" (6 pages). Proceedings of 111th ACSA Annual Meeting. March 30-April 1, 2023. St. Louis, Missouri. Acceptance rate 39%.

F51 2023 **Hu, Ming.** "Energy retrofit in cold and very cold climate comparison" (6 pages). Proceedings of 111th ACSA Annual Meeting. March 30-April 1, 2023. St. Louis, Missouri. Acceptance rate 39%.

F50 2023 **Hu, Ming,** Junghwa Suh, Matthew Higgins. "Āina-based design indigenous communities: two case studies " (4 pages). Proceedings of 2023 ACAA/EAAE Teachers Conference: Educating the Cosmopolitan Architect. June 22-24, 2023. Reykjavik, Iceland. Acceptance rate 39%.

F49 2023 Suh, Junghwa, **Ming Hu,** Matthew Higgins. "Āina-based design solution for indigenous communities in Hawaii: a pedagogy approach?" (4 pages). Proceedings of 13th International Conference on the Constructed Environment. May 17-19, 2023. University of University of Hawai'i at Mānoa, School of Architecture, Honolulu, Hawaii.

F48 2022 Wang, Nora**, Ming Hu**. "Embodied Carbon Building Codes: Are we ready?" (6 pages). Proceedings of 2022 ACEEE Summer Study on Energy Efficiency in Buildings. August 20-26, 2022. Pacific Grove, CA.

F47 2022 **Hu, Ming**. "Not all green budlings are made equal: green building construction cost premium" (8 pages). Proceedings of ACSA 100 Annual Meeting. August 20-26, 2022. (online). Acceptance rate 25%.

F46 2022 **Hu, Ming**. "Beyond operational energy efficiency: a balanced sustainability index from a life cycle consideration" (8 pages). Proceedings of ARCC-EAAE 2022 Conference. March 2-5, 2022. Miami, US.

F45 2022 **Hu, Ming**. "Existing multifamily building stock energy use and building code comparison between the United States and Finland" (8 pages). Proceedings of ARCC-EAAE 2022 Conference. March 2-5, 2022. Miami, US.

F44 2021 Vandergoot, Janna**, Ming Hu**, Naomi Sachs, P. Jacob Bueno De Mesquita. "Biomimetic design in a cross-disciplinary classroom." (8 pages). Proceedings of 2021 ACSA Teachers Conference: Curriculum for Climate Agency: Design (in) Action. US (Virtual), June 24-25, 2021. Acceptance rate 35%.

F43 2021 **Hu, Ming**. *"Origami inspired, self-assembling clinic for combating coronavirus."* (8 pages). Proceedings of Royal Architecture Institute of Canada / Institute royal d'architeccture du Canada. (online), July 17, 2021.

F42 2021 **Hu, Ming,** Madlen Simon, Spencer Fix, Anthony Vivino, Edward Bernat. *"Nexus between sustainable buildings and human health: a neuroscience approach."* (8 pages). Proceedings of ACSA 109 Annual Conference. US (online), March 24-26, 2021. Acceptance rate 31%

F41 2021 **Hu, Ming.** *"Visualizing the research of embodied energy and environmental impact research in the building and construction field: a bibliometric analysis"* (8 pages). Proceedings of ACSA 109 Annual Conference. US (online), March 24-26, 2021. Acceptance rate 31%

F40 2021 **Hu, Ming.** *"LEED-certified buildings versus Non-LEED certified buildings: a deep dive into the performance"* (8 pages). Proceedings of ARCC 2021. Organized by Architecture Research Centers Consortium , Tucson, US (online), April 7-10, 2021. Acceptance rate 45%

F39 2021 **Hu, Ming.** *"Built and social environment impact on COVID-19 transmission"* (8 pages). Proceedings of ARCC 2021. Organized by Architecture Research Centers Consortium , Tucson, US (online), April 7-10, 2021. Acceptance rate 45%

F38 2021 **Hu, Ming.** *"Assessment of deep façade retrofit solutions for housing"* (8 pages). Proceedings of ARCC 2021. Organized by Architecture Research Centers Consortium , Tucson, US (online), April 7-10, 2021. Acceptance rate 45%

F37 2021 **Hu, Ming.** *"2019 Energy benchmarking data for LEED-certified buildings in Washington, D.C: Simulation V.S. Reality"* (8 pages). Proceedings of Building Simulation 2021. Organized by International Building Performance Simulation Association, Copenhagen, Denmark. August 25-27, 2021. Online and In-person. Acceptance rate 32%

F36 2021 **Hu, Ming.** *"Housing deep façade retrofit options: a holistic life cycle assessment"* (3 pages). Proceedings of Building Simulation 2021. Organized by International Building Performance Simulation Association, Copenhagen, Denmark. August 25-27, 2021. Online and In-person. Acceptance rate 32%

F35 2020 **Hu, Ming.** *"How Much Does Zero Energy Building Cost"* (7 pages), Proceedings of 2020 EAAE-ARCC International Conference & 2nd VIBRArch. November 11-14, 2020. Online. Acceptance rate 46%

F34 2020 Simon, Madlen, **Hu, Ming** and Edward Bernat *"Nexus between sustainable buildings and human health: a neuroscience approach ."* (8 pages), Proceedings of 2020 EAAE-ARCC International Conference & 2nd VIBRArch. November 11-14, 2020. Online. Acceptance rate 46%

F33 2020 **Hu, Ming.** *"A Review of Life Cycle Research of the Built Environment at Difference Scales – A Citation Analysis Using Big Data."* (7 pages), Proceedings of 2020 EAAE-ARCC International Conference & 2nd VIBRArch. November 11-14, 2020. Online. Acceptance rate 46%

F32 2020 **Hu, Ming.** *"How Much Does Zero Energy Building Cost?"* (7 pages), Proceedings of 2020 ACSA Annual Conference. San Diego, USA, June 12-14, 2020. Acceptance rate 26%

F31 2020 **Hu, Ming**. *"A Bibliometric Review of Life Cycle Research of the Built Environment."(7* pages), Proceedings of 2020 ACSA Annual Conference. San Diego, USA, June 12-14, 2020. Acceptance rate 26%

F30 2020 Simon, Madlen and **Ming Hu**. *"Emerging Methodology to Inform Design Evaluation: Mind the Perception"* (4 pages), Proceedings of 2020 ACSA Annual Conference. San Diego, USA, June 12-14, 2020. Acceptance rate 26%

F29 2019 **Hu, Ming.** *"A BIM-enabled pedagogical approach."* (9 pages), Proceedings of 2019 Reynolds Symposium: Education by Design. University of Oregon, October 18 – 19, 2019. https://doi.org/10.21428/f7d9ca02.3bc0e95c

F28 2019 **Hu, Ming.** *"Existing Energy Performance and The Potential of Tole of Simulation in School Building Design."* (5 pages), Proceedings of Building Simulation 2019. Organized by International Building Performance Simulation Association, Rome, Italy. September 2-4, 2019. Acceptance rate 28%. http://www.ibpsa.org/proceedings/BS2019/BS2019_210336.pdf

F27 2019 **Hu, Ming**. *"A BIM-enabled pedagogy approach – using building information modeling as an instructional tool in technology courses."* (6 pages), Proceedings of Building Simulation 2019. Organized by International Building Performance Simulation Association, Rome, Italy. September 2-4, 2019. Acceptance rate 28% http://www.ibpsa.org/proceedings/BS2019/BS2019_210333.pdf

F26 2019 **Hu, Ming.** *"Optimized Renovation Strategies of Education Building."* (7 pages), Proceedings of Building Simulation 2019. Organized by International Building Performance Simulation Association, Rome, Italy. September 2-4, 2019. Acceptance rate 28%

F25 2019 **Hu, Ming.** *"Emerging Methodology to Inform Design Evaluation: Mind the Perception."* (8 pages), Proceedings of 2019 Building Technology Educators' Society Conference. University of Massachusetts Amherst , June 19 – 22, 2019.

F24 2019 **Hu, Ming.** *"Energy Performance in School Buildings – A Review."* (6 pages), Proceedings of 2019 Building Technology Educators' Society Conference. University of Massachusetts Amherst , June 19 – 22, 2019.

F23 2019 **Hu, Ming.** *"Unintended Consequences of Current Net Zero Energy Building Practice."* (9 pages), Proceedings of 2019 ARCC Annual Conference. Toronto, Canada, May 29- June 1, 2019.

F22 2019 Simon, Madlen and **Ming Hu**. "Mind the Perception and Emotional Response to Design: Emerging Methodology." (8 pages), Proceedings of 2019 ARCC Annual Conference. Toronto, Canada, May 29- June 1, 2019.

F21 2018 **Hu, Ming.** *"A Comparison of United States, Germany and China Building Energy Codes - their Impact on Achieving Net Zero Energy Goals."* (15 pages), Proceedings of 2018 ACEEE Summer Study on Energy Efficiency in Buildings. Organized by American Council for Energy Efficient Economy Pacific Grove, CA, August 12-17, 2018. Acceptance rate 46%

F20 2018 **Hu, Ming**. *"Are sustainable rating systems the same? - a life-cycle approach."* (8 pages), Proceedings of 2018 Building Performance Analysis Conference and SimBuild co-organized by ASHRAE and IBPSA-USA, Chicago, Illinois, September 26-28, 2018. Acceptance rate 43%

F19 2018 **Hu, Ming**. *"Status and opportunities for educational buildings – the potential of building energy simulation."* (6 pages), Proceedings of International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

F18 2018 **Hu, Ming**. *"Dynamic Life Cycle Assessment Integrating Cultural Value."* (6 pages), Proceedings of International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

F17 2018 Boyu Li; **Hu, Ming** and Greg Goldstein. *"Comparison between qualitative and quantitative measurement in assessing thermal comfort in an elementary school."* (6 pages), International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

F16 2018 **Hu, Ming**. *"Net Zero and Resilience: Similarities and Divergence."* (7 pages), Proceedings of 2018 ARCC –EAAE International Conference, Philadelphia, PA, May 16-19, 2018. Acceptance rate 34%

F15 2018 Simon, Madlen and **Hu, Ming**. *"Infusing Technology Driven Design Thinking in Architectural Education: Two Case Studies."* (8 pages), Proceedings of 2018 ARCC –EAAE International Conference, Philadelphia, PA, May 16-19, 2018. Acceptance rate 34%

F14 2018 **Hu, Ming**. *"New Framework and Methodology for Energy Efficiency and Indoor Environment Quality Improvement: A Case Study of an Elementary School*." Proceedings of 8th Constructed Environment, Detroit, MI, May 24-25, 2018.

F13 2017 **Hu, Ming.** *"Performance Driven Structural Design – Biomimicry in Structure."* (7 pages), Proceedings of 105 ACSA Annual Conference, Detroit, MI, March 24-26, 2017. Acceptance rate 46%

F12 2017 **Hu, Ming.** *"Responsive System – a Prototype for Building Performance."* (4 pages), Proceedings of 105 ACSA Annual Conference, Detroit, MI, March 24-26, 2017. Acceptance rate 46%

F11 2017 **Hu, Ming.** *"Comprehensive review of ecological impact from built environment – A life cycle approach of integration of buildings and urban context."* (4 pages), Proceedings of 2017 ARCC Annual Conference, Salt Lake City, UT, June 15-17, 2017.

F10 2017 Simon, Madlen and **Hu, Ming**. *"Value by Design-systematic design decision making in design decision making in the architectural design process."* (8 pages), Proceedings of 2017 ARCC Annual Conference, Salt Lake City, UT, June 15-17, 2017.

F9 2017 **Hu, Ming**. *"The Art of Performance – driven Design – Biomimicry and Structure."* (8 pages), Proceedings of 2017 Building Technology Educators' Society, Des Moines, IA, June 8-10, 2017. Acceptance rate 56%

F8 2016 **Hu, Ming**. *"Life Cycle Assessment for Historic Building Reuse: Is Existing Building the Greenest Building?"* (6 pages), The 10th EAAE/ARCC Conference, Lisbon, Portugal, June 15–18, 2016. Published by Taylor & Francis.

F7 2016 **Hu, Ming**. *"Net-positive building in institution context,"* (4 pages), 2016 ACEEE Sumer Study on Energy Efficiency in Buildings, Organized by American Council for Energy Efficient Economy. Pacific Grove, CA, August 21-26,2016.

F6 2016 **Hu, Ming**. *"Is Eco-district the new model of Utopia? – Exam the sustainable development through the lenses of Utopia,"* (4 pages), 2016 ACEEE Sumer Study on Energy Efficiency in Buildings, Organized by American Council for Energy Efficient Economy. Pacific Grove, CA, August 21-26,2016.

F5 2015 **Hu, Ming**. *"The Significance of Nanotechnology in Architectural Design,"* (4 pages), The Architectural Research Center Consortium Conference, ARCC 2015 Research Conference, Chicago, Illinois, April 6 – 9, 2015, "Future of Architectural Research," Perkins + Will/University of Massachusetts

F4 2015 **Hu, Ming.** *"Life Cycle Assessment for Building Reuse,"* (8 pages), The Faculty of Architecture Research Unit International Conference, 8th FARU International Conference 2015, Sri Lanka, December 11–12, 2015 "Making built environments responsive", University of Moratuwa.

F3 2014 **Hu, Ming.** *"Performance-Based Design Strategy and Parametric Design Goal Setting,"* (4 pages), 102 Annual Meeting of ASSOCIATION OF COLLEGIATE SCHOOL OF ARCHITECTURE, 2014, April 10-12 Miami, FL.

F2 2013 **Hu, Ming**. *"Performance-Based Design,"* (4 pages), 18th International Conference of the Associate of Computer-Aided Architectural Design Research in Asia, May 15-18, Singapore.

F1 2013 **Hu, Ming.** *"Natural Ventilation and Façade Design for Super High-rise Building in Subtropics Region in China,"* (6 pages), 2013 ACSA Fall Conference (Association of Collegiate Schools of Architecture, October 17-19, Fort Lauderdale, FL

E. Peer-reviewed Conference Presentations *(33 presentations)*

G33 2023 **Hu, Ming.** *"Embodied carbon reduction strategies and techniques"* AEI 2023 Conference Climate Conscientiousness and Resilience / The Need for Integrated Building Solutions. Denver, Colorado. April 12-14, 2023

G32 2022 **Hu, Ming.** "*Digital Twins: Computer vision-based research in built environment"* Makeover Montgomery 5, Wheaton, Maryland. September 24-25.

G31 2019 Simon, Madlen; **Hu, Ming;** Justin Benjamin. "*D4: Data-Driven Design Decisions. - A Cognitive Neuroscience Approach."* 2019 Mavric Conference, 2019, Washington D.C. USA. September 17-18,

G30 2019 **Hu, Ming**. *"Human-centered design evaluation in virtual reality environments – a cognitive neuroscience approach."* Presentation of OB-19:4th International Symposium on Occupant Behavior & 2nd Expert Meeting of IEA EBC Annex 79, San Antonio, USA. March 13-15, 2019.

G29 2018 **Hu, Ming**. *"Dynamic Life Cycle Assessment Integrating Cultural Value."* International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

G28 2018 Boyu Li; **Hu, Ming** and Greg Goldstein. *"Comparison between qualitative and quantitative measurement in assessing thermal comfort in an elementary school."* International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

G27 2018 Simon, Madlen and **Hu, Ming**. *"Infusing Technology Driven Design Thinking in Architectural Education: Two Case Studies."* 2018 ARCC –EAAE International Conference, Philadelphia, PA, May 16-19, 2018. Acceptance rate 34%.

G26 2018 **Hu, Ming**. *"Net Zero and Resilience: Similarities and Divergence."* (7 pages), Proceedings of 2018 ARCC –EAAE International Conference, Philadelphia, PA, May 16-19, 2018. Acceptance rate 34%

G25 2018 **Hu, Ming**. *"Status and opportunities for educational buildings – the potential of building energy simulation."* International Building Physics Conference 2018 (IBPC2018), Syracuse, NY, September 23-24, 2018. Acceptance rate 36%

G24 2018 **Hu, Ming**. *"New Framework and Methodology for Energy Efficiency and Indoor Environment Quality Improvement: A Case Study of an Elementary School."* 8th Constructed Environment, Detroit, MI, May 24-25, 2018.

G23 2018 **Hu, Ming** and Hiro Iseki *"Smart Parking for Smart and Sustainable Cities."* 2018 Makeover Montgomery 4 conference, Silver Spring, MD, May 9-11, 2018.

G22 2018 **Hu, Ming.** *"Using BIM as an active teaching and learning tool in Building Material education."* 10th International Materials Education Symposium, Cambridge University, UK. April 12-13, 2018.

G21 2017 **Hu, Ming.** "Value-Driven Design Process; A Systematic Decision-Making Framework Considering Different Attribute Preferences from Multiple Stakeholders." *Clean Energy for the World's Electricity Grids*, Geneva, Switzerland, November 20-22, 2017.

G20 2017 **Hu, Ming** and Boyu Li. "Energy Retrofit Strategies and Related Impact on Indoor Quality." *Engineering Green 2017*, USGBC Maryland, Baltimore, MD, October 24, 2017.

G19 2017 **Hu, Ming.** "Measure the environmental benefit of adaptive reuse of existing building." 2017 Smart and Sustainable Campus Conference. College Park, MD, June 15-17, 2017.

G18 2017 **Hu, Ming.** "New Sustainable Frontier- Ecological Economics." 2017 World Transportation Convention. Beijing, China, June 06-07, 2017.

G17 2017 **Hu, Ming.** "Life Cycle Energy and Impact Assessment and Indoor Environmental Quality for K-12 Buildings." *NSF sponsored workshop Beyond Visualization: A Roadmap to The Next Generation Building Design Environment for Sustainability*, New Orleans, LA, May 10-12, 2017.

G16 2017 **Hu, Ming** and Anica Landrenea *"Is Existing Building the Greenest Building."* 2017 AIA Convention, Orlando, Florida, April 14-16, 2017.

G15 2017 **Hu, Ming.** *"Measure the environmental benefit of adaptive reuse of existing building."* 12th Annual Smart and Sustainable Campuses Conference, College Park, MD. March 27-28, 2017.

G14 2016 **Hu, Ming.** *"Life Cycle Analysis of Adaptive Reuse: Is Existing Building the Greenest Building?"* 2016 Engineering Green 2016, USGBC Maryland. Washington DC, November 2, 2016.

G13 2016 **Hu, Ming.** *"Is Existing Building the Greenest Building?-BIM for Life Cycle Assessment."* 16th International Conference on Computing in Civil and Building Engineering (ICCCBE2016). Osaka International Convention Center, Osaka, Japan. July 6-8, 2016.

G12 2016 **Hu, Ming.** *"Is Eco-district the new Model of Utopia- Exam the sustainable development through the lenses of Utopia"* Architecture, Culture, Sprit Forum ACS 8 Symposium: Utopia, Architecture, and Spirituality, New Harmony, Indiana, June 23 – 26, 2016.

G11 2016 **Hu, Ming**. *"Life Cycle Assessment for Historic Building Reuse: Is Existing Building the Greenest Building?"* The 10th EAAE/ARCC Conference, Lisbon, Portugal, June 15–18, 2016. Published by Taylor & Francis.

G10 2016 **Hu, Ming.** *"Quantify Biophilic Design Elements: Research on LEED Certified Academic Buildings."* AIA Convention 2016. Philadelphia, PA. May 19-21, 2016.

G9 2016 **Hu, Ming.** *"Life Cycle Analysis of Adaptive Reuse: Is Existing Building the Greenest Building?"* Sixth International Conference on the Constructed Environment and the Constructed Environment Knowledge Community. University of Arizona, Tucson. April 2-4, 2016.

G8 2016 **Hu, Ming.** "*What Architects should be learning in the schools? - Three Models of Sustainable Design Teaching and Learning."* 12th International Conference on Environmental, Cultural, Economic & Social Sustainability, Portland, Oregon, Jan 21-23, 2016.

G7 2015 **Hu, Ming.** *"The Application of Nanotechnology." 2015 SBSE Retreat REGIONS and LOCALITIES,* Portland, OR. June 16-19, 2015.

G6 2015 **Hu, Ming.** *"The Pioneer of Architecture Education and Research in China." 18th UIFA Congress,* Washington DC, July 29, 2015

G5 2014 **Hu, Ming.** *"Morphogenesis Design Process – Digital-Biomorphic Design."* 5th International Conference on the Constructed Environment, 2014, October 16-17, University of Pennsylvania, Philadelphia, PA.

G4 2014 **Hu, Ming.** *"Design Sustainable Community."* The Inaugural Asian Conference on the Arts, Humanities and Sustainability. December 5th, 2014. PRESDA Foundation, Hiroshima, Japan.

G3 2013 **Hu, Ming.** *"Scholar-Official Culture and Tradition of Urban Development in China."* Urbanism, Spirituality and Well-being Symposium, June 06-09, Cambridge, MA. (Sponsored by The Forum for Architecture, Culture and Spirituality, the Harvard Divinity School, and the Harvard School of Public Health).

G2 2013 **Hu, Ming.** "*ZERO ENERGY FOR HIGH-RISE BUILDING: Challenges and Strategies."* BESS-SB13 CALIFORNIA (Building Enclosure Sustainability Symposium / Sustainable Buildings. June 24-25, 2013. Pomona, California.

G1 2012 **Hu, Ming.** *"Form Follow Performance: Case Studies of Daylight Design and Computer Simulation."* 2nd International Conference for Sustainable Design, Engineering and Construction, November 7-9, 2014. Fort Worth, TX

F. Peer-reviewed Conference Poster Presentations (5 presentations)

H1 2020 Simon, Madlen., **Hu, Ming**., Edward Bernat. *"Nexus between sustainable buildings and human health: a neuroscience approach."* The Academy of Neuroscience of Architecture Conference, Online, September 14-25, 2020.

H2 2018 Simon, Madlen and **Hu, Ming**. *"EEG Monitoring of User Experience in Controlled Virtual Environments: emerging methodology to Inform Design Decision-making."* The Academy of Neuroscience of Architecture Conference, La Jolla, California, September 20-22, 2018.

H3 2018 **Hu, Ming.** *"Evolution of Net Zero Building,"* 2018 ARCC –EAAE International Conference, Philadelphia, PA, May 16-19, 2018.

H4 2017 **Hu, Ming**., Madlen Simon, "Design Evaluation for Complex Problems." 105th ARCC Annual Conference, Salt Lake City, UT, June 15-17, 2017.

H5 2017 **Hu, Ming**. *"Decipher the Sense of Place."* 2017 ARCC Annual Conference, Salt Lake City, UT, June 15-17, 2017.

H6 2016 **Hu, Ming**. "Use life cycle assessment and risk assessment tools to oversee the development of nanomaterials in building industry". 2016 TechConnect World Innovation Conference, Washington DC. May 22-May 25, 2016.

G. Peer-reviewed Panels

2016 Special Focus Session- "Value by Design –New Frontiers for Architecture." (Moderator). 104th ACSA Annual Meeting, Seattle, WA. March 17-19, 2016.

Workshops

I1 2017 Beyond Visualization: A Roadmap to The Next Generation Building Design Environment for Sustainability, New Orleans, LA. May 10-12, 2017.

I2 2018 NSF CMMI Career Proposal Writing Workshop, Charlotte, NC, March 25-27, 2018

H. Non-Peer-reviewed Technical Report

J5 2021 Esram, NW., **and Hu, Ming**. *"Knowledge Infrastructure: The Critical path to Advance Embodied Carbon Building Codes."* American Council for an Energy-Efficient Economy. Washington, DC.

J4 2020 **Hu, Ming**. *"Net Zero Energy Retrofit Initiative."* Annual project report to the Office of Sustainability, University of Maryland

J3 2018 **Hu, Ming**. *"How old is our Campus? – measure the environmental benefit of adaptive reuse of the existing building."* Annual project report to the Office of Sustainability, University of Maryland

J2 2018 **Hu, Ming** and Jennifer Roberts. *"Healthy Building for Today and Tomorrow".* Annual project report to the U.S. National Science Foundation.

J1 2017 Roger Chen and **Hu, Ming.** "*Building a Sense-of-Place in an Information Era: Accessibility, Connectivity and Travel,"*
Project report to the University Transportation Center – Region 2.
http://www.utrc2.org/sites/default/files/Final-Report-Building-a-Sense-of-Place.pdf

INVITED PRESENTATIONS / TALKS AND KEYNOTE SPEECHES

Keynote Speech (Invited)

2023.01.29 *"Computer vision-based research in built environment."* Sustainability GEN-4 Post COP 27 Conference 2023. Organized by MSA University, Egypt, and University of Greenwich, London, the Green Building & Construction Economics Journal, Singapore. (online)

2023.01.22 *"Assessing built environmental impact using alternative big data."* Civil, Architectural and Environmental Engineering Virtual 2023. (online)

2022.10.26 *"Beyond operational energy efficiency: a balanced sustainability index from a life cycle consideration." New Horizon Lecture Series.* Journal of Green Building. (online)

2021.05.20 *"Net Zero Energy Building: predicted and unintended consequences."*
4th International Conference of Contemporary Affairs in Architecture and Urbanism. Alanya Hamdullah Emin Pasa University, Alanya, Turkey. (online)

2020. 09.26 *"Net Zero Energy Building: predicted and unintended consequences." Annual Lecture Series* Morgan State University, Baltimore, Maryland.

2020.06.05 *"Net Zero Energy Building and Carbon Neutral Development."*
Congress on Earth and Environmental Sciences. Zurich Switzerland, June 05-06, 2020.

2019.12.19 *"Net Zero Energy Building."*
Montgomery County Faith Alliance for Climate Solutions. Rockville, Maryland.

2019.10.12 *"Retrofit the Existing Building to be Net Zero Energy."*
MD Green Building Council. Baltimore, Maryland.

2018.06.21 *"Net zero to Net positive: pathway and obstacles."*
Metropolitan Washington Council of Governments. Washington D.C.

2017. 06.06 *"New Sustainable Frontier- Sustainability Design and Construction."*
2017 World Transportation Convention: Construction Engineering and Project Management Session. Beijing, China.

2017.05.16 *"Layer Cultural Influence – Architecture in Asia."*
Maryland Department of Housing and Community Development. Annapolis, Maryland

2016.01.11 *"Rethink Teaching Pedagogy Using Integrated Technology."*
AIA TAP Building Connections Congress. Washington D.C.

2015. 11.05 *"Decision Making and Creativity – in Architectural Design and Education."*
University at Buffalo, The Department of Industrial and System Engineering.

Invited Presentations, Seminar and Talks

2022.08.21 *"The development of Near Zero Energy Building in the US." (Speaker).* Singapore-China International Training Center. Online.

2022.05.24 *"Decarbonize built environment." (Speaker).* University of Miami, College of Engineering and School of Architecture.

2021.11.15 *"Bridge the gaps of AEC education by teaching students the concept of Embodied Carbon Emission: a life cycle perspective." (Speaker).* NSF-Funded Virtual Workshop on Next Generation Learning-Centered Environment for Architecture, Engineering, and Construction (AEC). Online, https://aec-learning.com/workshop-1.html

2021.09.28 *"Sustainable Building's Impact Through the Lens of Neuroscience." (Speaker).* University of Maryland Brain & Behavior Institute. College Park, Maryland. In-person.

2021.04.15 *"Built and Social Environment Impact on COVID-19 Transmission." (Presenter). 2021 USCA Research Symposium.* Online, Organized by University of Southern California, School of Architecture.

2021.03.10 *"Comparison of building energy consumption in United States and Finland." (Presenter and Panelist).*
Urbano Network: London, United Kingdom

2021.03.04 *"Carbon Neutral Development and Zero Impact Design." (Presenter).*
Department of Energy and Process Engineering, Norwegian University of Science and Technology, Norwegian.

2021.02.03 *"Sustainability, Health and Smart Technology as a Driver Towards Better Built Environments." (Presenter).*
University of Tampere, Faculty of Built Environment, Tampere, Finland

2020.10.19 *"Health and Design." (Panelist).*
University of Calgary, Salutogenesis Institute: The Joy of Life. Calgary, Canada.

2020.01.10 *"Net Zero Energy Building: Predicated and Unintended Consequences." (book talk).*
Nanjing University, School of Architecture and Planning. Nanjing, China.

2019.11.22 *"Net Zero Energy Building: Predicated and Unintended Consequences." (book talk).*
University of Pennsylvania, Weitzman School of Design, Philadelphia, PA.

2019.10.28 *"Net Zero Energy Building: standard and case studies."*
Pacific Link Group, Consultant of Education Research Department. College Park, Maryland.

2019.09.16 *"Net Zero Energy Building: predicted and unintended consequences."*
Smart City Digital Twin Convergence Workshop. Sponsored by NSF, Georgia Technology Institute.

2019. 02.24 *"Net zero energy building, healthy building and smart building."*
Rockefeller Foundation Bellagio Residency Program. Bellagio, Italy.

2018.01.10 *"Building Code and Policy Impact on the Future of Carbon Neutral in China."*
Nankai University, College of Environmental Science. Tianjing, China.

2017.12.28 *"Life Cycle Assessment of Built Environment."*
Nanjing University, School of Architecture and Planning. Nanjing, China.

2017. 12.20 *"Net Zero and Net Positive Building."*
International Conference on Clean Energy for World's Electricity Grids. Geneva, Switzerland.

2017.02.25 *"Integrated Design Process and Technologies for Early Design in International Projects".*
Del E. School of Construction, Ira A. Fulton Schools of Engineering, Arizona State University.

On-Campus Invited Talk / Presentation

2023.11.28 *"Energy Poverty, Mental Health and Low-income Family"*
Housing & Common Good Research Lab, University of Notre Dame (CSC 30953-01)

2023.10.31 *"Net Zero Energy Building Design and Construction."*
Sustainability Minor. Sustainability: Principles and Practice, University of Notre Dame (SUS 20010)

2020.11.03 *"Net Zero Energy Building."*
Measuring Sustainability in Architecture Class, University of Notre Dame (ARCH 430)

2020.10.28 *"Life Cycle Assessment in Built Environment."*
UMD Global Stewards: Project Based Data practicum at the Nexus of Food, Energy, Water (FEW) Systems, University of Maryland.

2020.05.04 *"This is your brain on green buildings."*
Brain and Behavior Initiative, University of Maryland.

2019. 09.18 *"A Conversation with Ming Hu."*
Speaking of Books: Conversations with Campus Authors, University of Maryland.

2019. 03.27 *"A Tomb with a View: The Mount of Olives Funerary Monuments Survey."*
Michelle Smith Collaboratory for Visual Culture, University of Maryland.

2018.11.06 *"Net Zero Energy Building."*
Measuring Sustainability in Architecture Class (ARCH 430)

2018.03.19 *"The Drive towards Healthier Building - Influence of Public Health of Sustainable Design."*
School of Public Health, University of Maryland, College Park, MD

2018.02.19 *"Biomimicry in Structure."*
Design in Practice (ARCH 270)

2017.11.29 *"A Comparison of United States, Germany and China Building Energy Codes and Policies - their Impact on Achieving Net Zero Energy Goal."*
Center of Global Sustainability, School of Public Policy, University of Maryland.

2017.09.21 *"UMD at Home and In the World: Sustainability."*
University of Maryland, The Office of Faculty Affairs

2017.04.03 *"Balance between Energy Efficiency and Environmental Impact."*
National Center for Smart Growth, School of Architecture, Planning and Preservation, University of Maryland.

2017.10.30 *"Energy and Health: net zero energy and net zero impact building."*
Measuring Sustainability in Architecture Class (ARCH 430)

INVITED STUDIO REVIEW/CRITICS

2021.12.21 2nd Year Graduate Student Studio Project Final Presentation "Ecology, Technology, and Design".
University of Pennsylvania, Department of Architecture, USA

2020.10.19 1st Year Graduate Student Studio Project Final Presentation "Health + Design"
Calgary University, Canada

2019.12.10 2nd Year Graduate Student Studio Project Final Presentation
Yale University, USA

SPONSORED RESEARCH AND PROGRAMS

-Grants & Contracts Received (Total funds received: $21,173,965)

September 2024- June 2025	Role: Principal Investigator **(PI)** **Lucy Family Institute for Data & Society** ($90,252 – 12 months). Housing - Health Equity Nexus: Enhancing Residential Comfort and Equity through Passive Design (HOUSE4HEALTH)"
January 2024- December 2026	Role: Principal Investigator **(PI)** **National Science Foundation** ($348,722 – 36 months). "Embodied Carbon Emission and Environmental Impact from Built Environment" Awarded: August 2023. Project period: January 2024 – December 2026
July 2023- August 2023	Role: Principal Investigator **(PI)** **ND Learning's Office of Digital Learning** ($6,000 – 1 months). "Carbon Neutral Development through Net Impact Design." Awarded: June 2023. Project period: July 2023 – August 2023
June 2023- May 2024	Role: Principal Investigator **(PI)** **University of Notre Dame, Office of Sustainability** ($49,588 – 12 months). "BUILT4COOL: mapping the heat island effect." Awarded: May 2023. Project period: June 2023 – May 2024
Jan 2023- July 2023	Role: Principal Investigator **(PI)** **American Institute of Steel Construction** ($9,000 – 7 months). "Design and Material Optimization from Whole Life Cycle Perspective Sustainable Steel Building Practice." Awarded: December 2022. Project period: January 2023 – July 2023
Jan 2023- Dec 2025	Role: Co-Principal Investigator **(Co-PI)** **Department of Energy** ($225,000 – 36 months, Total funding $200,000,000). "Carbon Sequestration and Climate Resiliency via Super Wood." Awarded: November 2022. Project period: March 2023 – March 2026
Aug 2021- Dec 2021	Role: Principal Investigator **(PI)** **District of Columbia, Department of Energy and Environment** ($109,197 – 4 months). "Three-tiered Training Model for Energy Conservation Code." Awarded: July 2021. Project period: August 2021 – December 2021
June 2020- May 2021	Role: Principal Investigator **(PI)** **VentureWell Faculty Grants (Sustainable Design)** ($10,000 – 12 months). "Nexus of Energy, Air and Water: A Biomimetic Wall for Sustainability and Human Health." Awarded: July 2020. Project period: August 2020 – July 2021
June 2020- May 2021	Role: Principal Investigator **(PI)** **University of Maryland COVID-19 Seed Grants** ($10,000 – 12 months). "Origami Inspired, Self-assembling Clinic for Combating Coronavirus." Awarded: April 2020. Project period: 1 May 2020 – September 2021

June 2020-
May 2021
Role: Co-Principal Investigator **(Co-PI)**
University of Maryland Catalyst Fund New Directions Award ($25,000 – 1 year).
"The Digital Survey of Monumental Tombs on Jerusalem's Mount of Olives."
Awarded: March 2020. Project period: 1 June 2020 – May 2021

Oct 2019
-Nov 2019
Role: Principal Investigator **(PI)**
State of Maryland ($2,800 – 1 month).
"2018 International Energy Conservation Code Checklist."
Awarded: October 2019. Project period: 1 October 2019 – November 2019

June 2019
-May 2021
Role: Senior Personnel **(SP)**
Department of Energy Building Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) ($200,000-2 years).
"Low Cost Vacuum Insulated Glass (VIG) for Retrofit of Single Pane Windows."
Awarded: April 2019. Project period: 1 June 2019 – 30 May 2021
(*Invited as senior personnel to work with Engineer team)*

June 2019
-May 2020
Role: Principal Investigator **(PI)**
University of Maryland Brain and Behavior Initiative ($75,000 – 1 year).
"Nexus between sustainable buildings and human health: A Neuroscience Approach."
Awarded: April 2019. Project period: 1 June 2019 – 30 May 2020

June 2019
-Aug 2021
Role: Principal Investigator **(PI)**
University of Maryland Sustainability Fund ($29,000 – 2 year).
"Net Zero Retrofit Initiative (NZER)."
Awarded: November 2018. Project period: Summer 2019 - Summer 2021

June 2019
-May 2020
Role: Principal Investigator **(PI)**
AIA Upjohn Research Initiative ($29,226 – 1 year).
"Nexus between sustainable buildings and human health: quantifying EEG responses to virtual environments to inform design."
Awarded: October 2018. Project period: Summer 2019 - Spring 2020.

June 2019
Role: Principal Investigator **(PI)**
National Science Foundation (NSF) Federal Travel Grant ($1000, one time).
Attended 2019 NSF sponsored Architecture Research Workshop
Awarded: May 2019. Project period: June 2019

June 2018
-Aug 2018
Role: Principal Investigator **(PI)**
MAPP Junior Faculty Research Grant, School of Architecture, Planning and Preservation University of Maryland, College Park. ($13,860 – 3 months).
"Net Zero Building: Predicted and Unintended Consequences."
Awarded: May 2018. Project period: Summer 2018.

Jan 2018
-May 2018
Role: Principal Investigator **(PI)**
University of Maryland, Office of the Senior Vice President and Provost. First-Year Research Programs (FIRE). ($1,500 – 1 year).
"Energy, Economy, and Wellbeing."
Awarded: Jan 2018. Project period: Spring 2018.

Jan 2018 -May 2020
Role: Principal Investigator **(PI)**
University Office of International Affairs, Global Classrooms Initiative ($10,000 – 3 years).
"Caron Neutral Development Through Net Zero and Net Impact Building Design."
Awarded: June 2017. Project period: 2018-2020

Jan 2017 -May 2018
Role: Principal Investigator **(PI)**
University of Maryland Sustainability Fund ($9,490 – 1 year).
"Measure the environmental benefit of adaptive reuse of existing building."
Awarded: May 2017. Project period: 2017-2018

Jan 2018 -Dec 2018
Role: Co-Principal Investigator **(Co-PI)**
University of Maryland Tier 1 Fund. ($49,902 – 1 year).
"Purple Line Outcomes on Transportation (PLOT) Study: An Examination of Pre-Purple Line Active Transportation Behaviors and Attitudes among Prince George's County Residents."
Jennifer Roberts, PI. Awarded: Dec 2017. Project period: 2018

May 2017 -June 2018
Role: Principal Investigator **(PI)**
National Science Foundation. #1746081 ($24,471 – 1 year).
"Collaborative Research: Workshop on "Health in Buildings for Today and Tomorrow."
Awarded: May 2017. Project period: Summer 2018

June 2015 -July 2016
Role: Co-Principal Investigator **(Co-PI)**
University Transportation Research Center. ($75,334 – 1.5 years).
"Building a Sense of Place in an Information Era: Accessibility, Connectivity and Travel."
PI: Roger Chen. Awarded: May 2015. Project period: 2015-2016

June 2014 -July 2015
Role: Principal Investigator **(PI)**
Oak Hill Foundation. ($10,000 – 1 year).
"Preserving Character – Transforming Purpose."
Awarded: May 2014. Project period: 2014-2015

FELLOWSHIPS, PRIZE AND AWARDS

-Fellowships

2022-2023 ***National Science Foundation (NSF)*** *CMMI Game Changer Academies (CGCA) for Advancing Research Innovation Panel Fellow.*

2022-2023 ***Jefferson Science Fellow***, National Academies of Sciences Engineering Medicine

2020-2022 ***Research Leaders Fellows Program***. University of Maryland

2020-2021 ***Advance Program***. University of Maryland

2020-2021 ***Fulbright US Scholar***. The Bureau of Educational and Cultural Affairs of the U.S Department of State.

2018-2019 ***Rockefeller Fellow***. The Bellagio Center Academic Writing Residency
The Rockefeller Foundation

2017-2019 ***Global Classroom Fellow***
Global Classroom Initiative, University of Maryland

2011 ***Fellow***, Design with Natural Stone 2011
Sponsored by VERONAFIERE during MARAMOMACC
The International Exhibition Marble, Design and Technology, Italy

-Awards

2019 ***ARCC 2019 Best Paper Award***
Runner-up, for the article "Data-Driven Design Evaluation: Emerging Methodology Combining Virtual Reality Immersion and EEG Monitoring," with Madlen Simon.

2019 ***2019 Dean's Award***
School of Architecture, Plan and Preservation / University of Maryland

2019 ***AIAS/ACSA New Faculty Teaching Award***
American Institute of Architecture Student (AIAS) / Association of Collegiate Schools of Architect (ACSA) are jointly sponsoring the award to ***recognize outstanding teaching abilities*** exhibited by faculty with a maximum of 10 academic semesters or 15 quarters of full-time teaching experience. In the year of 2019, there are only **Three** new faculty teaching awards awarded among all candidates in over *200* ACSA members schools.

2019 ***AIA Maryland Design Excellence -Honor Award:*** Abu Dhahi National Oil Company Headquarters.
(I worked as project designer on this project from 2014-2016)

2018 ***CTBUH Award of Excellence Winner -Best Tall Building:***, Abu Dhahi National Oil Company Headquarters.
(I worked as project designer on this project from 2014-2016)

2016 ***AIA Washington, D.C. Excellence Award in Architecture:*** King Abdullah Petroleum Studies and Research Center Residential Community.

2010,2012 ***HOK BIM Award/ Design and Delivery:*** Abu Dhabi National Oil Company Headquarter
HOK Inc

2007, 2009 ***Excellence Award*** *(Watercolor Rendering)*
American Society of Architectural Illustrator

2003 ***Master's degree Thesis Excellence Award***
University of Notre Dame, School of Architecture

2001 ***First Prize****, National Competition of "Athlete Village Planning of International Student Olympic"*
Ministry of Construction, China

SELECTED CREATIVE WORKS / PROFESSIONAL PROJECTS

Selected Creative Works / Professional Projects

HOK (2008-2014)

2012-2014 Masherib Property Downtown Development Project. Mixed-Use, Office, Hotel, Residential, Medical Office
Doha, Qatar

2009-2014 Abu Dhabi National Oil Company Headquarter
75 Stories Office Building, LEED Gold
Abu Dhabi, United Arab Emirates

Award American Institute of Architects Maryland – Design Excellence Awards, Honor Award
Architizer A+ Awards – Commercial, Office Building High-Rise, Jury Award
Middle East Architect Awards – Highly Commended, Commercial Project of the Year

2009-2010 King Abdullah Petroleum Studies & Research Center (KAPSARC)
10 Community buildings (three apartment buildings with retail, library, dining hall, recreation center, natatorium, mosque, supermarket and bowling alley, 200 houses residential.
Riyadh, Saudi Arabia

2008-2010 District of Columbia Consolidated Lab Facility. Washington DC.

Award AIA Virginia Society – Merit Award
American Institute of Architects – Technology in Architectural Practice BIM Award
AIA Washington, DC – Merit Award
AIA Washington, DC – Presidential Citation for Sustainability
NAIOP Maryland/DC – Award of Excellence – Best Biotech / Science & Technology Project
R&D Magazine – Lab of the Year Special Mention
US Green Building Council National Capital Region Chapter – Award of Excellence / New Construction Project of the Year

2008-2010 ACell Expansion. Washington DC.
Al Matar Mixed Use Development. Washington DC.
Constitution Square OB3. Washington DC.
Duke Medicine Eye Clinical Bldg. Duke University, NC.

KGP Design Group, LLC (2008)

2008 Hawaii light rail system planning and station design, Hawaii.

2008 Master plan of City Business center, Manila, Philippian.

Torti Gallas and Partners (2003-2008)

2004-2005 Village of Sherlington
Mixed-Use, Residential, Commercial
Sherlington, VA

2006-2007 City Vista

Mixed-Use, Residential, Commercial
Washington, DC

2007-2008 Clarendon Center
Mixed-Use, Residential, Commercial
Clarendon, VA

Exhibition

2018 **Center for Global Sustainability exhibit at COP23**
Bonn, Germany

TEACHING (Course Taught and Innovation)

Course Taught

University of Maryland, School of Architecture, Planning and Preservation

Summer 2022 ARCH466 Building Environmental System (3 credits)
Required: undergraduate and graduate first professional degree candidate.

Summer 2020 ARCH478 Special Topic Seminar - Origami Inspired, Self-assembling Clinic (OSAC) for Combating Coronavirus (3 credits)

Fall 2020, 2019, 2018, 2017,2016 ARCH464 Architectural Structure I (3 credits)
Required: undergraduate and graduate first professional degree candidate.

- Structure I cover the basic principles of architecture structures, including the influence of geometric, sectional, and materials properties, related to flexure and shear in beam and framed systems; diagrammatic analysis of beams for bending, shear and deflection as well as the study of structural framing system for vertical and lateral loads.

Spring 2020, 019, 2018, 2017 ARCH465 Architectural Structure II (3 credits)
Required: undergraduate and graduate first professional degree candidate.

- Building upon what student learned in previous course on construction, structure and tectonics, Structure II has two goals. The first is to teach students the basic of structural engineering on three most common structure systems: wood, steel and concrete. The second and most important goal is to give students the knowledge and skills they need to take control of the structure in their architectural endeavors.

Fall 2021, 2020, 2019, 2018, 2017,2016 ARCH462 Building Method and Material (3 credits)
Required: undergraduate and graduate first professional degree candidate.

- This course focus on how building materials are manufactured and how their modular form, dimensions and intrinsic qualities influence the design process. This

course will also help students develop a fundamental understanding of the relationship of materiality to construction systems and techniques, this course will dovetail with ARCH studio to address the role of material in the production of meaningful and buildable designs.

Summer 2020, 2019, 2018 Spring 2022, 2017 — ARCH688A Carbon Neutral Development through Net Zero and Net Impact Building Design (3credits)
Elective to graduate student

- This course is composed of two parts: (1). Focus on an understanding of the Net Zero building design strategies and life cycle assessment method. (2) Focus on an understanding of Net Impact urban design/planning principles, decision making and policy making.

Spring 2018 — ARCH 418 Independent Study (2 credits)
Elective to undergraduate student

Fall 2021,2020 2017 — ARCH 611 Advanced Architecture Technology Seminar (3 credits)
Required: 2nd Year graduate first professional degree candidate

- This course focus on technology in design of buildings. Application of technological issues in building design; integration of technology in architecture; technology as a form determinant in architecture; other conceptual and philosophical issues related to the application of technology in the design, construction, and use of buildings.

Chaminade University, School of Humanities, Arts and Design, Environmental and Interior Design.

Spring 2023 — EID 471 Senior Studio – Commericial (4 credits)
Required: 4th Year undergraduate capstone project

Spring 2023 — EID 480 Special Topics - Adaptive reuse (3 credits)

Spring 2023 — EID 217 Introduction to CAD (3 credits)

Fall 2022 — EID 321 Programming & Space Planning (4 credits)
Required: 2nd Year undergraduate studio

Fall 2022 — EID 220 Building System (3 credits)

Fall 2022 — EID 384 Sustainability in Design (3 credits)

Rochester Institute of Technology, Golisano Institute of Sustainability, Department of Architecture

Spring 2015 — GSI 743 ARCH Studio – Comprehensive Studio (6 credits)
Required: 3rd Year graduate first professional degree candidate

- This design studio focus on the integration of conceptual and technical aspects of architectural form and assembly, highlighting the ways in which multiple layers of a building design are developed, coordinated and resolved.

Fall 2014 — GSI 733 ARCH Studio - Adaptive (6 credits)
Required: 3rd Year graduate first professional degree candidate

- This studio investigates the relationship between the man-made and the natural world including introductory issues of assembly and material value.

Fall 2014 GSI L763 Sustainable Building Metrics (3 credits)
Required: 3rd Year graduate first professional degree candidate

- This course focus on the measurement science, performance metrics, assessment tools, and fundamental data critical for the development and implementation of building systems associated with life-cycle operation of buildings while maintaining a healthy indoor environment.

Catholic University of America, School of Architecture

2012-2015 ARPL 331/731 Environmental Design II (3 credits)
Required: 3rd Year undergraduate and graduate first professional degree candidate

- To study major building environment control systems: HVAC, Plumbing, Electrical, Vertical Transportation system

2013-2014 ARPL 232/532 Environmental Design I (3 credits)
Required: 2nd Year undergraduate and graduate first professional degree candidate

- To develop an intuitive understanding of architectural strategies regarding shading and passive solar heating and cooling, human visual perception, electric lighting, day lighting, mechanical systems for heating and cooling, electrical power systems including low voltage, energy efficiency, and ecologically sustainable design.

2013 ARPL 402/602 Comprehensive Building Design Studio (9 credits)
Floating Critters, Workshop Instructor

- This studio explores comprehensive design and team management, simulating architectural practice. Students are challenged to include conceptual and technical aspects of architectural form and the integration of the various building assemblies and systems

Teaching Innovations (New Course Development)

2017 Spring ARCH 488/688 Net Zero and Net Impact Building (3credits)

2018 Summer ARCH 688 A Global Classroom (Sponsored jointly by the Office of International Affairs and the Office of China Affairs, University of Maryland) (3credits)

Pedagogical Innovation

2016-Present Incorporating Building Information Modeling into Material and Method course to create a new ***BIM-enabled pedagogy*** (see Teaching Philosophy and Peer reviewed journal paper–Appendix)

2016-Present Developed computer lab components for new and existing lecture and seminar course

MENTORING AND ADVISING

Advising: Research or Clinical

- **Advising Ph.D. Scholars as Primary Advisor or Committee Member**

Koray Aysin (Ph.D Pre-Candidcy) 2016-2020

- **Advising Graduate Students**

Fall 2016 Sarah Roetzel Abdulla, Nicole Avwoghoko Akpedeye, Brandon Bridge, Jennifer Ann Chorosevic, Christopher Courtney, Russell Wayne Holstine, Christiane Jones Machado, Elizabeth Smith

Spring 2017 Brandon Bridge, Ryan Banger, Keith Urio, Christiane Jones Machado

- **Advising Student Organizations**

Spring 2018 Roots Home and Abroad (faculty advisor)
Spring 2017 Student USGBC Chapter (faculty advisor)

Mentoring as Graduate Thesis Committee Chair at UMD

2022-2023 Christopher Andrew Degroff (ARCH)
Thesis title: Community Hive: Climate change as a catalyst for future urbanism

2021-2022 Alexander Pena (ARCH)
Thesis title: The Resilient Island: Revitalizing Broken Home

2020-2021 Andrew Walker (ARCH)
Thesis title: Cayler Point: Reconnecting Brooklyn with the East River Waterfront
Winner of AIA Maryland Design Excellence for Graduate Upper-Level Design

2019 - 2020 Dan Lorenzana (ARCH)
Thesis title: Here To Stay: Disaster, Displacement, and the Bio-Mimetic Response

2018 - 2019 Enzo Masizori (ARCH)
Thesis title: Stars to Scholars: A Proposal for the Redevelopment of an Abandoned Stadium-Brazil

2018 - 2019 Marissa Tonkay (ARCH)
Thesis title: Orchestrating Community: Unifying Community Through the Performing Arts

2018 - 2019 Kevin Garzon (ARCH)
Thesis title: Cross-Cultural Assimilation: An Intervention in Sub-Cultural Conflicts

2017 – 2018	Keith Urio (ARCH) Thesis title: A Community Gateway: Crossing the Threshold into Annapolis
2017	Abby Winter (ARCH) Thesis title: Saving the Polar Bear: The Artic, the Zoo, Education, & Bio-mimicry

Mentoring as Graduate Thesis Committee Member at UMD

2022	Sarah Fuller (ARCH)
2022	Austin Toth (ARCH)
2022	Eric Resnick (ARCH & Historical Preservation degree)
2021-2022	Awis Qazi (ARCH & Real Estate dual degree)
2020	Tochi Ohakawa (ARCH & Real Estate dual degree)
2019	Michael Delsh (ARCH) Thesis title: Oil to Island: A Platform for Re-use
2018	Peter Cunningham (ARCH) Thesis title: Un-programmed & Un-used: amplifying stadium area uses in dense urban areas
2017	Stephen Michael Pasquerello

Mentoring as Research Supervisor at UMD

Research Assistants (hired under grants, campus-wide research program)

2021 Summer -	Duong Hoang Le (hired under Venturewell fund)
2020 Summer -	David Milner (hired under Sustainability fund)
2019 Summer - 2020 Spring	David Milner (hired under Sustainability fund)
2019 Summer / Fall	Christopher Pearce (hired under DOE fund)
2018/2019 Summer	Jacques Marais (hired under BBI grant)
2017 Fall–2018 Spring	Emma Weber (hired under start-up fund)
2018 Spring-Summer	Chao-Fang Chang (College of Economics) hired through UMD FIRE program to working on "Energy, Economy, and Wellbeing" project. Fall 2018
2018 Spring-Summer	Edem Yeyoo (Department of Environmental Science and Technology)

hired through UMD FIRE program to working on "Energy, Economy, and Wellbeing" project.

2018 Summer Andrew Koenings
hired under Sustainability fund

2018 Winter Malik Johnon-Williams
hired under Sustainability fund

2017 Summer Samantha Zuber, Michael Delash
hired under start-up fund

Independent Studies (research focus)

2017-2018 Celena Yency through independent study.
Her poster submission was accepted by ARCC 2018 annual conference

2017-2018 Ricky Fairhurst through independent study
His submission to Parking Solutions Competition was selected as a finalist.

Teaching Assistants (active classroom teaching)

ARCH 462 Building Construction Materials and Methods
Casssandra Aaryn Huntington , David Moore, Talisha Jenkins – fall 2019
Adam Knoebel, David Moore – fall 2018
Joshua Kilan, Samantha Zuber, Micahel Gessner – fall 2017
Joshua Kilan, Boyu Li – fall 2016

ARCH 464 Architectural Structure I
Min Na, James Jasemer, Paris Sim – fall 2019
Min Na, James Jasemer – fall 2018
John Vogtman, Min Na – fall 2017
John Vogtman, Malik Williams – fall 2016

ARCH 465 Architectural Structure II
Kelsey Paige Winters, Andrew Walker, Matthew Rissmel – Spring 2020
Min Na, James Jasemer, Juhi, Matthew Rissmel – Spring 2019
Alia Abu-Douleh, Andrea De Carlo, Micahel Gessner – Spring 2018
John Vogtman, Malik Williams, Yoel Aleayehu, Joshua Kilan– Spring 2017

SERVICE AND LEADERSHIP

Editorships, Editorial Boards, and Reviewing Activities

- ***Editorial Board Member***

2023-2024 Topic Editor (Special Issue) Sustainability. MDPI (Impact factor 3.9). Special Issue: Net-Zero-Energy Building Solutions for Sustainability

2021-2023	Topic Editor (Special Issue)	Sustainable Cities and Society. Elsevier (Impact factor 7.587). Special Issue on Sustainable City Design
2020-	Editor	Green Building and Construction Economics. Universal Wiser Publisher. (Impact factor 1.5). http://ojs.wiserpub.com/index.php/GBCE/about/editorialTeam
2018-2020	Editor	Journal Clean Technologies and Environmental Policy. Springer. (Impact factor 3.331). https://link.springer.com/journal/10098
2018-2020	Editor	Journal of Green Building. (Included Association of Architecture School Librarians Core Periodicals List) http://www.journalofgreenbuilding.com/?code=copu-site
2020-2021	Topic Editor (Special Issue)	Sustainability, MDPI (Impact factor 3.251). "Future of Built Environment Seen from the Lens of Sustainability Science".
2018-2020	Topic Editor (Special Issue)	Buildings and Environment. Elsevier (Impact factor 6.456). "Sustainable, Healthy Buildings & Communities".
2018-2019	Topic Editor(Special Issue)	Frontier in Built Environment. "Urban Environment and Health". Impact factor 6.4.

- ***Reviewing Activities for Journals and Presses***

2022	Environmental Research: Infrastructure and Sustainability, IOPSCIENCE
2020-	Journal of Building Engineering, Elsevier
2019-	Environment & Behavior, Springer
2019-	Journal of Architecture Education, Talyor & Francis
2019-	Renewable and Sustainable Energy, Elsevier
2018 -	Journal of Green Building, College Publishing
2018-	Journal Clean Technologies and Environmental Policy, Springer
2018-	Journal of Systems Science and Systems Engineering, Springer
2016-	Building and Environment, Elsevier
2016	Journal of Civil & Environmental Engineering,
2016-	The International Journal of The Constructed Environment, CGS Scholar
2016-	Journal of Buildings

- ***Reviewing Activities for Conferences***

2020-2023	ARCC Conference. Organized by Architectural Research Center Consortium
2019	Conference of Building Simulation 2019. Organized by International Building Performance Simulation Association
2018	2018 American Council for and Energy-Efficient Economy (ACEEE) Buildings Summer Study Paper Review, Co-organized by ACEEE, August 18, 2018

2018	2018 Building Performance Analysis Conference and SimBuild, Co-organized by ASHRAE and IBPSA-USA, Chicago, IL, September 26-28, 2018
2017	ACSA 105th Annual Meeting/ Conference

Academic Service

- ***Campus Service – University***

University of Notre Dame

2023-2024	Notre Dame Research Compliance
2023-2024	Notre Dame faculty recognition working group

University of Maryland

2020-2022	Research Council

- ***Campus Service – School***

University of Notre Dame, School of Architecture

2023-2024	Research Committee Chair
2023-	Committee of Promotion and Tenure, member

University of Maryland, School of Architecture, Planning and Preservation

2022-2023	Ph.D admission review Committee Member
2021-2022	Architecture program director Search Committee member
2021- 2023	School Curriculum Committee Member
2021- 2023	ARCH Program Curriculum Committee Chair
2020- 2023	ARCH Program Committee Member
2021	APT committee
2021	Postdoc Hiring Committee
2019-2020	Faculty search Committee Member
2018	STEM Designation Task Force Group Member
2018	Digital Future Committee Member
2018	Faculty Merit Review Committee Member
2018	Scholarship Committee Member
2017 - 2018	MAPP 50th Anniversary Lecture Series Committee Member
2017 - 2018	Faculty Search Committee Member
2017 - 2023	Graduate Admission Committee Member
2017- 2023	Student Affairs Committee Member

Rochester Institute of Technology, Golisano Institute of Sustainability, Department of Architecture

2015	Master of Architecture Curriculum Committee
	Master of Architecture Admission Committee
	Bachelor of Architecture Curriculum Committee

- ***Inter-institutional, National and Regional***

Board Member Architecture Research Center Consortium	2019-2023
Board Member	2019-2021

Building Technology Educator's Society

Juror 2022
Association of Collegiate Schools of Architecture Housing Design Education Award

Juror 2018
Association of Collegiate Schools of Architecture Steel Competition

School Representative 2017-2023
Architectural Research Centers Consortium

School Counselor 2017 -2023
Association of Collegiate Schools of Architecture

Blue Ribbon Committee Member 2016 -2018
University of Notre Dame, School of Architecture Blue Ribbon Committee on Diversity

Organizer 2015
AIA/ACSA Intersections Symposium, May 13, 2015, Atlanta, GA.
"Applied Research in Architecture Education that Advances Practice"

Organizer 2016
AIA/ACSA Intersections Symposium, May 18, 2016, Philadelphia, PA.
" Innovative Technologies in Design and Delivery"

Sustainability Committee member 2012-2016
City of Rockville, Maryland

Professional Service

- ***The American Institute of Architects***

Director	Academic Engagement	2014-2016
Member	Committee of Technology in Architectural Practice	2014-Present
Member	AIA DC Technology Committee	2013- Present

- ***USGBC (United State Green Building Council)***

Member	Pilot Credits Committee	2015- Present
Member	LEED Technical Committee	2016- Present
Member	USGBC National Capital Region Chapter: Education Committee and Montgomery County Branch, Committee member	2014- 2016

- ***AIA DC Chapter***

Member	Technology Committee	2014 - 2018

International Building Code Council (ICC)

Member	2019 Group B IgCC Chapter 1 Code Development Committee	2018-2020

Community Service and Research Consulting

Track Co-Chair	Health in Buildings Roundtable Conference. Sponsored by NSF, NIH, CDC, GSA. Bethesda, MD.	2018.07.19-07.20
Member	Sustainable Energy Utility Advisory Board, Washington DC.	2017- Present
Commissioner	City of Rockville, Environmental Commission	2014-2016

International Activities

Section Chair	The 2nd International Conference for Global Chinese Academia on Energy and Built Environment (CEBE 2021). Section 8 Built Environment Design	2021, July 16-19
Section Chair	World Transportation Convention (Construction and Project Management Section)	2017-2019

OUTREACH ACTIVITIES

Media Citation

NATIONAL LIBRARY OF MEDICINE
- NLM Funding Spotlight — Jan 2023
- Video title: Evaluating U.S. Health Outcomes with Google Street View Images
- Website

MARYLAND TODAY
- Interviewed me and my collaborators for the research project and published paper (November 2022) — Jan 2023
- Article title: Uncovering connections between built environment and health
- Website

MARYLAND TODAY
- Interviewed me and my collaborators for the research project and published paper (November 2022) — Nov 2022
- Article title: The wood that could – and did- receive a $20M award
- Website

MARYLAND TODAY
- Interviewed me and my collaborators for the research project and published paper (November 2022) — Oct 2022
- Article title: Study finds neighborhood features impact mental and physical health for better or worse
- Website

MARYLAND TODAY
- Interviewed me and my collaborators for the research project and publication paper — Dec 2021
- Article title: UMD Study: Cutting the environmental cost of construction
- Website

MAPP website
- Introduce my collaborated funded research project — Sept 2020
- Article title: Green Team: New Interdisciplinary Curriculum Will Connect Students to the Science Behind Sustainable Design"
- Website

MARYLAND RESEARCH ROUNDUP
- Introduce my research project and published paper — August 2020
- Article title: The Right "Fit": New research shows certain factors can influence the successes of an energy retrofit"
- Website

El PALS
- Interviewed me for the future of building technology (June 2019) — June 2020
- Article title: On the front page" We are moving towards a conception of buildings as sensitive systems"
- Website

MARYLAND TODAY
- Included my funded project (April 2020) — Apr 2020
- Article title: Seed Grants to Grow 9 UMD Research Projects on COVID-19
- Website

MARYLAND TODAY
- Interviewed me, my collaborators and my student for the funded Net Zero Retrofit project (Dec 2019) — Feb 2020
- Article title: Building Toward Zero: project to develop ways to make older campus structures models of efficiency
- Website:

SWE Magazine (Society of Women Engineers)
- Interviewed me and my collaborators, Professor Madlen Simon and Professor Edward Bernat for the our research on how and what kind impact sustainable building has on human using neuroscience approach. — Jan 2020
- Article title: This is Your Brain on Green Buildings
- Website

MARYLAND TODAY
- Interviewed me and my students for the spaghetti bridge project in ARCH 464 Structure I class (Nov 2019) — Nov 2019
- Article title: Using Their Noodles: excitement boils over at architecture's pasta bridge competition
- Website

THE DIAMONDBACK

- Interviewed me for the overheating condition in students' dorm without A.C. (October 2019) — October 2019
- Article title: We placed heat sensors in every UMD dorm without A.C. Here's what we found
- Website

UMD News
- Interviewed me for impact of open access publication (October 2019) — October 2019
- Article title: OA Fund Success Stories
- Website

UMD News Release (Campus Life)
- Interviewed me and my student at UMD (March 2018) — March 2018
- Introduce my energy efficient and health building research, study motivation and potential research impact.
- Article title: Healthy Saving
- Website

MAAP website
- Introduce my Graduate student special topic seminar course — July 2017
- Article title: Urban Upcycle: Understanding the science of retrofitting prepares students for sustainable practice".
- Website

Metropolis Magazine
- Interviewed me and my team member for our first-place competition submission (March 2011) — March 2011
- Discussed our design approach to achieve net zero energy goal
- Winning submission title: Process Zero
- Website