Curriculum Vitae

Personal Information
Ming Hu
Assistant Professor, School of Architecture, Planning, Preservation
Affiliate faculty, National Center for Smart Growth
Affiliate faculty, Maryland Transportation Institute
Fellow, Global Classroom Initiative
Fellow, Rockefeller Foundation (2019-2020)
Fellow, Fulbright Finland (2020-2021)
University of Maryland, College Park, MD, 20742
Tel: (301)4054386; E-mail: mhu2008@umd.edu

OVERVIEW OF SIGNIFICANT ACTIVITIES WHILE ON TENURE TRACK (Fall, 2016-Spring 2020)

Research
- **2 book published**
- **1 book chapter published** (peer reviewed).
- **25 peer-reviewed journal paper**
- **1 commissioned journal article**
- **42 peer-reviewed conference paper**
- **6 competitive national grants and 8 university grants,** as a principle investigator (PI), Co-PI or Senior Personnel, with total funding of $ 575,633
- **23 invited talk (off campus, including keynote speech)**.

Teaching
- **10 Courses (including 3 new courses),** including core courses for Bachelor of Science in Architecture and Master of Architecture.
- **Serve on 15 graduate student committees**, include chairing 6 committees
- **1 national teaching award** from AIAS / ACSA
- **Serve as 1 Doctoral candidate advisor**
- **2 teaching-related grants** from University of Maryland, with total fund of $ 11,500
- **1 teaching-related grant** from National Collegiate Inventors and Innovators Alliance, with total fund of $ 10,000
- **Serve as research advisor to 11** graduate/undergraduate students

Service
- **Board members,** Building Technology Educator's Society (BTES).
- **Board members,** Architecture Research Center Consortium (ARCC).
- **Editorial Board Member,** for 3 leading green building and sustainable design journals
- **Topic Editorial,** for 3 environment-health journals
- **School consular,** Association of Collegiate Schools of Architecture (ASCS)
- **Conference Session Chair,** for 2 international conference

ACADEMMIC AND PROFESSINAL POSITIONS

August 2016 -Present	**Assistant Professor**	University of Maryland School of Architecture, Planning, Preservation *Affiliate faculty, National Center for Smart Growth *Affiliate faculty, Maryland Transportation Institute

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
2014-2015	**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 – 2021
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: 9, Citation:165 (since 2016, source: Google Scholar)

A. Books and Book Chapters

A1	2020	Book Author (original)	*Smart Technologies and Design for Healthy Built Environments.* Springer, September 2020. https://www.springer.com/gp/book/9783030512910
A2	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
A3	2019	Book Author (original)	*Net Zero Building: Predicted and Unintended Consequences*. Routledge. April 2019. DOI:10.4324/9781351256520
A4	2011	Book Translator	*The Architecture of Community by* Leon Krier. (English – Chinese) China Architecture and Building Press.

B. Refereed Journal Paper[1]

Journal Articles (***25 papers published*** *and 2 in review*)

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

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

B1 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 3.998*). https://doi.org/10.1038/s41598-021-85210-9

B2 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

B3 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 3.468)* doi.org/10.1080/09613218.2020.1798208

B4 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. doi.org/10.1016/j.dibe.2020.100010

B5 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 2.990)* **doi.org/10.3390/en13081905**

B6 2020 Phelan, P., Wang, N., **Hu, M.,** & Roberts, J. D. "Sustainable, Healthy Buildings & Communities." Building and Environment (2020):174. Elsevier. (*Journal Impact Factor 4.82*). doi.org/10.1016/j.buildenv.2020.106806

B7 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

B8 2019 **Hu, Ming *.** "Life-cycle environmental assessment of energy retrofit on an urban scale". *Building Research and Information* (2019):1-22. Taylor & Francis. ***(****Journal Impact Factor 3.468)* DOI: 10.1080/09613218.2019.1691486

B9 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 5.228)* doi.org/10.1016/j.resconrec.2019.104410

B10 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

B11 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 2.801)* doi.org/10.3390/su11082444

B12 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 2.990)* DOI: 10.3390/en12081539

B13 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 3.160)* https://doi.org/10.1016/j.scs.2018.11.026

B14 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 5.228)* 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)

B15 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 2.33)7* DOI: 10.1007/s10098-018-1636-x

B16 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

B17 2018 **Hu, Ming***. "Optimal Renovation Strategies for Education Buildings—A Novel BIM–BPM–BEM Framework. *Sustainability*. MDPI (2018): 10(9):3287. (*Journal Impact Factor 2.592)* doi.org/10.3390/su10093287

B18 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

B19 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)

B20 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 4.779)* https://doi.org/10.1016/j.enbuild.2017.10.043

B21 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 2.196)* 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.)

B22 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 4.779)* doi.org/10.1016/j.enbuild.2017.01.076

B23 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

B24 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 4.82)*
https://doi.org/10.1016/j.buildenv.2017.10.010

C. Peer-reviewed Refereed Journal Paper Under Review

C1 2020 **Hu, Ming,** Madlen Simon, Anthony A Vivino, Spencer Fix, Edward Bernat**,**. "Exploring sustainable building's impact on occupant mental health and cognitive function in virtual environment." *Buildings and Environment* (under first round review)

C2 2020 **Hu, Ming.** "Housing deep façade retrofit options: a holistic life cycle assessment." *Buildings and Environment* (under first round review)

C3 2020 **Hu, Ming.** "2019 energy benchmarking data for LEED-certified buildings in Washington, D.C: Simulation and Reality." *Journal of Building Engineering* (under first round review)

C4 2020 **Hu, Ming**, Miroslaw Skibniewski. "Green building construction cost surcharge: An overview." *Journal of Building Engineering* (under first round review)

C5 2020 **Hu, Ming**, Gesine Pryor. "Experimental architecture for mobile testing facility inspired by origami science." *Journal of Architecture Education* (under first round review)

D. Peer-reviewed Refereed Journal Paper Under Preparation or in Process

D1 2021 **Hu, Ming**. "Using Sense of Place to Connect the Built Environment to Psychological Health Impacts: A data-driven approach." (manuscript in progress for journal of urban science)

E. Perspectives, Opinions, and Letters

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

F. Peer-reviewed Conference Proceedings *(42 published papers)*

F1 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 (Virtual), March 24-26, 2021. Acceptance rate 31%

F2 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 (Virtual), March 24-26, 2021. Acceptance rate 31%

F3 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 (Virtual), April 7-10, 2021. Acceptance rate 45%

F4 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 (Virtual), April 7-10, 2021. Acceptance rate 45%

F5 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 (Virtual), April 7-10, 2021. Acceptance rate 45%

F6 2021 **Hu, Ming.** *"2019 Energy bencharmakring 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%

F7 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%

F8 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%

F9 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%

F10 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%

F11 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%

F12 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%

F13 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%

F14 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

F15 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

F16 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

F17 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%

F18 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.

F19 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.

F20 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.

F21 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.

F22 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%

F23 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%

F24 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%

F25 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%

F26 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%

F27 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%

F28 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%

F29 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.

F30 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%

F31 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%

F32 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.

F33 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.

F34 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%

F35 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.

F36 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.

F37 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.

F38 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

F39 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.

F40 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.

F41 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.

F42 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

G. Peer-reviewed Conference Presentations *(31 presentations)*

G1 2021 **Hu, Ming**. "Origami inspired, self-assembling clinic for combating coronavirus." 2021 RAIC CCUSA 2021 Academic Summit on Architecture, 2021, Organized by Royal Architectural Institute of Canada (RAIC) and the Canadian Council of University Schools of Architecture (CCUSA). June 17, 2021, Online.

G2 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,

G3 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.

G4 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%

G5 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%

G6 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%.

G7 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%

G8 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%

G9 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.

G10 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.

G11 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.

G12 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.

G13 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.

G14 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.

G15 2017 **Hu, Ming.** "New Sustainable Frontier- Ecological Economics." 2017 World Transportation Convention. Beijing, China, June 06-07, 2017.

G16 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.

G17 2017 **Hu, Ming** and Anica Landrenea *"Is Existing Building the Greenest Building."* 2017 AIA Convention, Orlando, Florida, April 14-16, 2017.

G18 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.

G19 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.

G20 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.

G21 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.

G22 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.

G23 2016 **Hu, Ming.** *"Quantify Biophilic Design Elements: Research on LEED Certified Academic Buildings."* AIA Convention 2016. Philadelphia, PA. May 19-21, 2016.

G24 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.

G25 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.

G26 2015 **Hu, Ming.** *"The Application of Nanotechnology." 2015 SBSE Retreat REGIONS and LOCALITIES,* Portland, OR. June 16-19, 2015.

G27 2015 **Hu, Ming.** *"The Pioneer of Architecture Education and Research in China." 18th UIFA Congress,* Washington DC, July 29, 2015

G28 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.

G29 2014 **Hu, Ming.** *"Design Sustainable Community."* The Inaugural Asian Conference on the Arts, Humanities and Sustainability. December 5th, 2014. PRESDA Foundation, Hiroshima, Japan.

G30 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).

G31 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.

G32 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

H. 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.

I. 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

J. Non-Peer-reviewed Technical Report

J1 2020 **Hu, Ming**. *"Net Zero Energy Retrofit Initiative."* Annual project report to the Office of Sustainability, University of Maryland

J2 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

J3 2018 **Hu, Ming** and Jennifer Roberts. *"Healthy Building for Today and Tomorrow"*. Annual project report to the U.S. National Science Foundation.

J4 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)

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

2020. 09.26 *"Net Zero Energy Building: predicted and unintended consequences."*
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

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

2020.11.03 *"Net Zero Energy Building."*
Measuring Sustainability in Architecture Class (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)

SPONSORED RESEARCH AND PROGRAMS

-Grants & Contracts Received (Total funds received: $575,633)

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 – 6 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

-Grants Proposal to be submitted

To be submitted
Role: Principal Investigator **(PI)**
NSF-Environmental Sustainability Program: ($300,000 – 3 years)
A Novel Integrated Framework for Sustainable Building Renovation."
Expected full proposal submission: June 2020

To be submitted
Role: Principal Investigator **(PI)**
NSF-Leading Engineering for America's Prosperity, Health, and Infrastructure (LEAP HI) ($1,000,000 – 4 years)
Division of Civil, Mechanical and Manufacturing Innovation
"Virtual Auditing of Built Environment Health Impact on Elderly Population."
Expected full proposal submission: July / September 2020

-Grants Proposals Highly Rated but Not Funded (Selective)

2019
Role: Principal Investigator **(PI)**
National Science Foundation ($400,000 – 3 years)
"Collaborative Research: Value by Design: A Systematic Decision-making Framework for Architectural and Engineering Design under Uncertainty."
Proposal Submission: February 2019
Review outcomes: Score (Excellent; Good; Good; and Fair)

2019
Role: Co-Principal Investigator **(Co-PI)**
National Endowment for Humanities' Digital Humanities Advancement Grant ($50,000 – 1year).
"Building Information Modeling Platform for the Mount of Olives Funerary Monuments Project." Proposal Submission: January 2019
Review outcomes: Score (Very Good; Some Merit; Good; Very Good)

2018 Role: Principal Investigator **(PI)**
Johnson & Johnson Women in STEM^{2}D Scholars Programs: ($149,964 – 3years).
"Nexus between Sustainable Buildings and Human Health".
Proposal Submission: September 2018
Review outcomes: Shortlisted for the final round review)

FELLOWSHIPS, PRIZE AND AWARDS

-Fellowships

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
Assistant Professor

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 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 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 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.

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

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

Lecture

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-Present
(I have been advising Aysin as a PhD research committee member)

- **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

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

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)

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***

2020-	Editor	Green Building and Construction Economics. Impact factor 1.5. http://ojs.wiserpub.com/index.php/GBCE/about/editorialTeam
2018-2020	Editor	Journal Clean Technologies and Environmental Policy (CTEP). 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. "Future of Built Environment Seen from the Lens of Sustainability Science". Impact factor 2.576
2018-2020	Topic Editor (Special Issue)	Journal of Buildings and Environment. "Sustainable, Healthy Buildings & Communities". Impact factor 5.379.
2018-2019	Topic Editor(Special Issue)	Frontier in Built Environment. "Urban Environment and Health". Impact factor 6.4.

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

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***

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 Maryland

2020-2022	Research Council

- ***Campus Service – Department***

University of Maryland, School of Architecture, Planning and Preservation

2020-present	Program Curriculum Committee Member
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 - present	Graduate Admission Committee Member
2017- present	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	2019-2020
Board Member Building Technology Educator's Society	2019-2021
Faculty Consular Association of Collegiate Schools of Architecture Steel Competition	2019-2020
Juror Association of Collegiate Schools of Architecture Steel Competition	2018
School Representative Architectural Research Centers Consortium	2017-present
School Counselor Association of Collegiate Schools of Architecture	2017 -present
Blue Ribbon Committee Member University of Notre Dame, School of Architecture Blue Ribbon Committee on Diversity	2016 -2018
Organizer AIA/ACSA Intersections Symposium, May 13, 2015, Atlanta, GA. "Applied Research in Architecture Education that Advances Practice"	2015
Organizer AIA/ACSA Intersections Symposium, May 18, 2016, Philadelphia, PA. " Innovative Technologies in Design and Delivery"	2016
Sustainability Committee member City of Rockville, Maryland	2012-2016

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 - Present

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	World Transportation Convention (Construction and Project Management Section)	2017-2019

OUTREACH ACTIVITIES

Media Citation

MARYLAND TODAY

- Interviewed me and my collaborators for the research project and published paper (November 2020) — Nov 2020
- Article title: UMD Study: Housing, Demographics Play Outsize Role in D.C.'s COVID Death Disparity
- 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