

Maryam Kouhirostami

Assistant Professor at Construction Management Department, Cal Poly

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EDUCATION

University of Florida, Gainesville, Florida

2019- 2023

Ph.D. in Construction Management

Dissertation topic: Using modular housing to reduce the Carbon footprint of residential construction |

Advisor: Dr. Abdol R. Chini, Robert Ries

Texas Tech University, Department of Architecture, Lubbock, Texas, USA

Master of Science in Architecture

2016-2018

Thesis: Improving natural ventilation through windows in a classroom to reduce energy consumption and increase thermal comfort

Graduate Certificate in Digital Design and Fabrication

2016-2018

University of Science and Technology, Tehran, Iran

2011-2014

Master of Architectural Engineering, Specialization: Educational and Cultural Design

Thesis: Designing a Net-Zero energy elementary school: reducing energy consumption and improving student's thermal comfort by applying sustainable and vernacular design

Art University of Isfahan, Isfahan, Iran

2007-2011

Bachelor of Architectural Engineering

Thesis: Designing a coastal hotel - vernacular and sustainable architecture of northern Iran

RESEARCH EXPERIENCE

Advance Modular Housing Design, University of Florida

2019-2021

Sponsor: Department of Housing and Urban Development, USA

Research aim: This research focused on the use of modular housing to rapidly deliver large quantities of post-disaster housing. The research was conducted in the context of three key challenges facing the U.S. housing industry: Resilience, Sustainability, and Affordability.

- Coordinated several charrettes and design workshops.
- Estimated the cost of the alternative designs.
- Performed Life Cycle Cost analysis of alternative energy efficient measures.
- Interviewed modular housing professionals.
- Wrote several sections of the final report.

Comparison of the Carbon Footprint in Offsite and Onsite Construction: Using Life Cycle Assessment to Measure Carbon Footprint, Dissertation topic, Advisor: Dr. Abdol R. Chini.

2021-Present

- Using openLCA software to calculate LCA in buildings
- Comparing offsite and onsite construction carbon footprint by calculating both embodied material emission, transportation emission, and installation and assembly emission.
- Recommending measures to reduce the carbon footprint in offsite construction.
- Measuring the life cycle cost of the recommended measures.

Educational Continuity and Flooding: Adaptive Response by School Communities in South Asia Countries,

Continuing Research, Advisor: Dr. Jason Von Meding.

2022-Present

- Data cleaning and data organizing to get the accurate result
- Writing evaluation and result and drawing diagrams and tables reviewing the paper

Research Assistant, Port St. Joe, Affordable and Resilient Housing: Policy and Design, University of Florida 2021

Research aim: This study aimed to identify the opportunities for housing sites and locations and policy recommendations. The research explored the design of affordable modular housing and utilized it to enhance the quality of a neighborhood by using a collaborative approach.

- Worked in a three-week workshop developed by a collaborative research team including Powell Center, Urbsys Lab, and FIBER.
- Provided the cost estimation for each customized modular design for the community.
- Identification of Implementation Funding Sources: FEMA BRIC, CDBG MIT, HUD, SHIP

Research Assistant, Sustainable and Vernacular Water Management, India, University of Florida, 2019

Research aim: This research aims to record and categorize water management strategies in the different regions of India to determine the influence of culture, climate, and demographic on forming the method and the impact of that method on shaping culture and enhancing the quality of life.

- Evaluated and analyzed the vernacular water management methods and cases in India.
- Traced and surveyed water management heritages in India.
- Compared the vernacular water management method with current sustainable water management in the contemporary landscape architecture in India.
- Interviewed the most famous landscape architectures around the world.

PUBLICATIONS

BOOK

Collaborating on the 5th Edition of “Sustainable Construction” by Dr. Charles J. Kibert

2020-2021

Edited Chapters: Chapter 4: Green Building Assessment, Chapter 5: The US Green Building Council LEED Building Rating System, Chapter 9: Building Energy Efficiency Strategies, Chapter 12: Built Environment Carbon Footprint, Chapter 16: Resilience in the Context of Sustainable Construction, Chapter 17: The Cutting Edge of Sustainable Construction

- Team coordinator
- Updating the context of the assigned chapters, providing most recent case studies, organizing new chapters, modifying layouts
- Providing permission for pictures and information
- Communicating with industry for gathering the most recent information regarding the contexts of the book
- Preparing documents for Wiley publication

JOURNAL PAPERS

Saddoughi, Arezou; **Kouhirostami, Maryam**; Kouhirostamkolaei, Mahtab; Qi, Bing; Costin, Aron, “A systematic review on Design for Manufacturing and Assemblies (DfMA) toward Automation”, ASCE, Journal of Construction Engineering and Management, 2023. [under review]

Kouhirostami, Maryam; Chini, Abdol; Sam, Mahya, “A Review of Strategies for Reducing the Cost of Financing a Manufactured Home”, ASCE, Journal of Architectural Engineering, 2023.

Roostaei, Samira; **Kouhirostami, Maryam**; Sam, Mahya; Kibert, Charles, “Resilience Coverage of Global Sustainability Assessment Frameworks: A Systematic Review”, Journal of Green Building, 16 (2), 23-53, 2021.

Monadizadeh, Shabnam; Kibert, Charles; Li, Jiaxuan; Woo, Junghoon; Roostaei, Samira; Asutosh, Ashish; **Kouhirostami, Maryam**, "A Review of Protocols and Guidelines Addressing the Exposure of Occupants to Electromagnetic Field Radiation (EMFR) in Buildings", Journal of Green Building, 16 (2), 55-81, 2021.

Asutosh, Ashish; Woo, Junghoon; **Kouhirostami, Maryam**; Sam, Mahya; Khantawang Arnon; Cuales, Christine; Ryor, Wolfgang; Kibert, Charles, "Renewable Energy Industry Trends and Its Contributions to the Development of Energy Resilience in an Era of Accelerating Climate Change", International Journal of Energy and Power Engineering, 2020.

Sam, Mahya; **Kouhirostami, Maryam**, "A Critical Review on the Impact of Combining Outdoor Spaces and Nature with Learning Spaces on Students' Learning Ability", GRID - Architecture Planning and Design Journal, 3 (2), 272-290, 2020.

Fenner, Andriel; Kibert, Charles; Razkenari, Mohammad; Hakim, Hamed; Lu, X.; **Kouhirostami, Maryam**; Sam, Mahya, "Embodied, operation, and commuting emissions: A case study comparing the carbon hotspots of an educational building", Journal of Cleaner Production, 2020.

PROCEEDINGS

Kouhirostami, Maryam; Chini, Abdol; Ries, Robert, "Evaluating the Environmental Performance of Manufactured Housing Through a Comprehensive Life Cycle Assessment", ASCE INSPIRE Conference, Arlington, Virginia, November 2023.

Kouhirostami, Maryam; Kouhirostami, Mahtab; Arezou, Sadoughi, "Investigation of the Resiliency in Modular Construction", ASCE INSPIRE Conference, Arlington, Virginia, November 2023.

Kouhirostamkolaei, Mahtab; **Kouhirostami, Maryam**, "Calculating Carbon Footprint in Concrete Buildings Over the Construction and Utilization Phase", ASCE INSPIRE Conference, Arlington, Virginia, November 2023

Kouhirostami, Maryam; Kouhirostami, Mahtab; Arezou, Sadoughi, "Value Added to Small Residential Homes Due to Energy Efficiency Measures", The 59th Annual Associated Schools of Construction International Conference, Liverpool, England, April 2023.

Kouhirostami, Maryam; Chini, Abdol, "Comparison of Carbon Emissions of Modular and Site-built Residential Construction", Modular and Offsite Construction Summit, Edmonton, Alberta, Canada, July 2022.

Kouhirostamkolaei, Mahtab; **Kouhirostami, Maryam**; Sam, Mahya; Kibert, Charles, "Analyzing the Effect of Materials' Selection on Energy Saving and Carbon Footprint: A Case Study Simulating Concrete Structure Building", International Conference on High-Performance Green Building and Energy Design, London, 2020.

Kouhirostami, Maryam; Kouhirostamkolaei, Mahtab; Sam, Mahya; Asutosh, Ashish; Kibert, Charles; Ryor, Wolfgang, "Impact of Louvers Geometry of Window on Cross-Ventilation in a Generic Isolated building in Rigid Climate, Case Study: Lubbock, TX", ACSA 108 Annual Meeting, San Diego, CA, June 2020.

ACADEMIA LETTERS

Kouhirostami, Maryam; Abukhalaf, Amer Hamed; Kouhirostamkolaei, Mahtab, "Eliminating Air Pollution in Cities Through Sustainable Urban Planning", Academia Letters, 2022.

Abukhalaf, Amer Hamed; **Kouhirostami, Maryam**, "Toward Greener Concrete for Better Sustainable Environment", Academia Letters, 2, 2021.

Kouhirostami, Maryam; Abukhalaf, Amer Hamed, "Reducing Urban Thermal Discomfort by Integrating Sustainability in Urban City Planning", Academia Letters, 2, 2021.

POSTERS

Kouhirostami, Maryam; Sadoughi, Arezou; Kouhirostamkolaei, Mahtab; Ries, Robert, *"Resilience Modular Construction"*, 6th Residential Building Design & Construction Conference, May 2022.

Sadoughi, Arezou; Flood, Ian; **Kouhirostami, Maryam**, *"Incorporating Industrialized Design and Construction in Construction Management Curriculum (undergraduate level)"*, 58th Annual Associated Schools of Construction International Conference, Georgia Tech University, Atlanta, GA, April 2022.

Kouhirostami, Maryam; Chini, Abdol; Ries, Robert, *"Comparison of Carbon Emissions of Modular and Site Built Homes"*, 58th Annual Associated Schools of Construction International Conference, Georgia Tech University, Atlanta, GA, April 2022.

Kouhirostami, Maryam; Chini, Abdol, *"Comparing Greenhouse Gas Emission in Modular and Site-Built Construction: A Review of Academic Publications"*, DCP Research Symposium, University of Florida, 2021.

Kouhirostami, Maryam; Kibert, Charles, *"Advance Modular Housing Design: High-Efficiency, Affordable, and Resilience Post-Disaster Housing"*, DCP Research Symposium, University of Florida, 2020.

Kouhirostami, Maryam; Ross, Michael, *"The Effect of Road Intersection Angle on Ventilation: Urban Wind Corridor Simulation with Computational Fluid Dynamic Software"*, ACSP conference, 2019.

Kouhirostami, Maryam; Sam, Mahya, *"Vernacular Architecture - Tourism Infrastructure, Case study: Asiab Sar Village, Behshahr, Mazandaran, Iran"*, 3rd Annual Diversity Graduate Research Symposium, 2019.

PRESENTATIONS

Kouhirostami, Maryam; Saddoughi, Arezou; Kouhirostamkolaei, Mahtab, *"Resilience Modular Construction"*, 6th Residential Building Design & Construction Conference, Pennsylvania Housing Research, Penn State College of Engineering, PA, 2022.

Kouhirostami, Maryam; Kibert, Charles; Sam, Mahya, *"Advance Manufacturing Housing Design"*, The Construction Environment Conference, University of Calgary, Calgary, CA, 2021.

Kouhirostami, Maryam; Kouhirostamkolaei, Mahtab; Sam, Mahya, *"Understanding the Importance of Window Design and Natural Ventilation in a Classroom-Based on Human Preference"*, International Conference on High-Performance Green Building and Energy Design, London, 2020.

TEACHING EXPERIENCE

Instructor of the Record, "BCN 1582 - International Sustainable Development", Rinker School of Construction

Management, Asynchronous Online and In-person Sections, University of Florida

Summer 2022-Present

- Developed the CANVAS shell for the course.
- Developed a detailed syllabus with each session's activities and deliverables for an asynchronous online and in-person class.
- Updated the course materials and lectures.
- Designed assignments and exams for an asynchronous online and in-person class.
- Evaluated the work of students within the classroom activities, assignments, quizzes, and exams.
- Taught synchronous online and in-person.

Teaching Assistant, "BCN 6585 - Sustainable Construction", University of Florida

2021- 2022

Professor: Dr. Jason Von Meding

- Monitored student participation in the discussion and group projects.
- Evaluated the work of students within the classroom activities, assignments, and quizzes.

Teaching Assistant, “BCN 5618 - Comprehensive Estimating”, University of Florida 2021-2022

Professor: Dr. Abdol R. Chini

- Evaluated the work of students within the classroom activities, assignments, and quizzes.
- Counseled students to resolve their doubts on projects and assignments.

Teaching Assistant, “BCN 1520 - Construction Materials”, University of Florida 2021

Professor: Dr. Charles J. Kibert

- Was responsible for developing course assignments, and the Canvas platform.
- Developed a series of unique projects that succeeded in getting students excited about construction.
- Assisted in developing much of the reference materials that were used for each class.
- Evaluated the work of students within the classroom activities, assignments, and quizzes.

Teaching Assistant, “Building, Information and Technology”, Texas Tech University 2017-2019

Professor: Darrick Wade

Objectives: Drawing plan, section, and elevation, architectural plan reading, developing drawing set, wood framing construction details, and using Revit software for rendering, drafting, and modeling.

Teaching Assistant, “Digital Media 2”, Texas Tech University 2016

Professor: David J. Isern

Objectives: Architectural graphic design with Photoshop, Illustrator, and SketchUp.

Instructor, “Technical Drawing and Drafting”, Science and Technology University, Azad University of Behshahr, Mazandaran, Iran 2015-2016

Objectives: Drawing plan, section, and elevation, architectural plan reading, concrete construction drawing details and regulations, using AutoCAD software for drafting and modeling.

Instructor, “Architectural Geometry”, Azad University of Behshahr, Mazandaran, Iran 2014-2016

Objectives: Drawing architectural shapes, forms, patterns, and perspectives, principles of drawing shadows in perspective, drawing plan, section, and elevation, architectural plan reading

Lecturer, Engineering and Building Council of Behshahr, Mazandaran, Iran 2013-2016

Objectives: Architectural and Engineering Software’s Training from Beginner to Advanced | Revit, AutoCAD

Instructor, “Architectural and Urban Design” and “History of Architecture”, Tamishan University of Behshahr, Mazandaran, Iran 2013-2016

Instructor, “Introduction of Architecture and Urban Design Studio 2” and “Rural Area and Vernacular Design 2”, Azad University of Behshahr, Iran 2013- 2016

PROFESSIONAL EXPERIENCE

Perkins&Will, Dallas, USA | Third-ranked healthcare design in USA 2019

Summer Internship, Designer

Supervisor: Kelly Whitney, Jacob Richie

- Collaborated with a team of 5 members for planning, design, modeling, and construction development of the renovation of HCA Houston Healthcare Medical Center
- Designed a patient care unit for HCA Houston Healthcare Medical Center
- Performed rendering, drafting, and hand drawing assignments under the direct supervision of Jacob Richie
- Used software such as Revit, Bluebeam, Photoshop, Newforma, etc.

HDR Inc., Dallas, USA | First ranked healthcare design in USA

2018

Summer Internship, Designer

Supervisor: Shelly Locke, Lance Winn, Phillip Steffy

- Collaborated with a team of 9 members for schematic design, design, planning, and drawing development of the Cornel-Tahoe Hospital, Shanghai
- Prepared a presentation for board members of Texas Southwest Hospital for the renovation design project
- Performed rendering, drafting, and hand drawing assignments
- Performed architectural software such as SketchUp, Revit, Bluebeam, Rhino, etc. to deliver a design concept

Raf Construction Co. Behshahr, Mazandaran, Iran

2007-2016

Design Principal, Project Coordinator, Architectural Superintendent

COMPETITION

Associated Schools of Construction, Region 2 student competition, risk and finance management, Atlanta, GA – sponsored by Brasfield & Gorrie, LCC

2021

First Place Award

REVIEWER OF SCHOLARLY PUBLICATIONS

JOURNAL

ASCE, Journal of Construction Engineering and Management, ISSN (print): 0733-9364 · ISSN (online): 1943-7862
Building and Environment, ISSN: 0360-1323

Case Studies in Construction Materials Journal, ISSN: 2214-5095

Journal of Civil, Construction and Environmental Engineering, ISSN Print: 2637-3882, ISSN Online: 2637-3890

University of Florida Journal of Undergraduate Research, ISSN 2638-0668

Common Ground Research Network, The International Journal of The Constructed Environment, ISSN (Print): 2154-8587, ISSN (Online): 2154-8595

PROCEEDINGS

2021 ACSA/EAAE Teachers Conference Curriculum for Climate Agency: Design (in)Action, Abstract Review, 5

2020 AIA/ACSA Intersections Research Conference: CARBON, Abstract Review, 6

ACSA108 Virtual Conference, Abstract Review, 6

JUDGE

18th Annual Graduate Student Research Poster Competition, 2019, Texas Tech University, Lubbock

WORKSHOPS

Preparing Future Faculty, Office of Graduate Professional Development, *University of Florida*

2022

- This workshop series is designed to help you create a great learning experience for future faculties students and save them time and frustration. While there is no single "best way" to teach, in this series of workshops they experience and discuss a variety of techniques. We invite them to adapt and use the strategies that seem right for them.
- Develop a toolbox of evidence-based teaching/learning practices and strategies
- Expand candidates' mentoring team and learn best practices for mentees and mentors
- Describe the important aspects of being a successful faculty member, and prepare accordingly during their training at UF
- Identify key elements of being a faculty member at different types of institutions

The Construction Faculty Teaching Excellence Program, Mississippi State University	2022
<ul style="list-style-type: none"> Provides insight and guidance for effective teaching in the main construction subjects, including project management/heavy equipment, cost management, and VDC. Discussion on the ACCE-SLO documentation and effective class management. 	
Be the Change Summit: Leading Sustainable Impact, UF's Brown Center for Leadership and Service and P4H Global, University of Florida	2022
First Year Florida, Intro to Diversity, Inclusion and Multicultural Engagement, University of Florida	2022
Python in Construction Management, Powell Center, Presenters: Dr. Robert Ries	2022
Life Cycle Assessment in Construction, Powell Center, Presenters: Dr. Robert Ries	2021
Using ClimateStudio for Daylight and Energy Analysis, SimAUD 2021 Workshop	2021
Engaged Scholarship and Higher Education TLPDC, Teaching Skills, Led by Teaching, Learning, and Professional Development Center, Texas Tech University	2018
Groundwork Program, TLPDC, Teaching Skills, Led by Teaching, Learning, and Professional Development Center, Texas Tech University	2018
International Teaching Assistantship, Led by Foreign Language Department, Texas Tech University	2017
How Learning Works: 7 Research-Based Principles for Smart Teaching, Led by Teaching, Learning and Professional Development Center, Texas Tech University	2016
Teaching Assistantship, Led by Graduate Center, Texas Tech University	2016
Energy Modeling and Its Application in Architectural Design Process, Led by DesignBuilder Co., Tehran, Iran	2014

CERTIFICATIONS

Florida Department of Transportation Plan Reading	2021
Certified Publons Academy Peer Reviewer, Publons	2021
OSHA 30 Hours Occupational Safety and Health Training,	2020
Digital Design and Fabrication, College of Architecture, Texas Tech University	2018
International Teaching Assistantship, Department of Classical & Modern Languages & Literatures, Texas Tech University	2017

SERVICES & ROLES

Treasurer of the Ph.D. Forum, Rinker School of Construction Management Doctoral Student Association, Under Supervision of Dr. Ravi Srinivasan.	2021-2022
Coordinator of the Powell Center Lab Members	2020-2022
President of the Ph.D. Forum, Rinker School of Construction Management Doctoral Student Association	2020-2021
Member of Sigma Lambda Chi International Construction Honor Society	2020-Present
Active Member of Habitat for Humanity, Women in Engineering, University of Florida	2020- Present
Active Member of University of Florida USGBC Community	2019-2022
Lubbock Volunteer Group, Lubbock Community, Lubbock, Texas	2017-2019
Director of Events, Iran University of Science and Technology, Tehran, Iran	2011-2014
Education Advisor, Alghadir Hight School Organization, Behshahr, Iran	2007-2014

HONORS AND AWARDS

- **Graduate School, Office of Research**, University of Florida, Travel Funding, 2022. (\$800)
- **Graduate Student Council**, University of Florida, Travel Funding, 2022. (\$350)
- **International Student Certificate of Outstanding Achievement**, University of Florida International Center, 2021
- **Fluor NAWIC Scholarship**, M.E. Rinker, Sr. School for Construction Management, 2021. (\$500)
- **Dr. Abdol R. Chini Scholarship**, M.E. Rinker, Sr. School for Construction Management, 2021. (\$1,000)
- **Emerging Scholar Award for the Eleventh International Conference on The Constructed Environment**, University of Calgary, Calgary, Canada
- **Best Presentation Award, World Academy of Science, Engineering, and Technology**, International Conference on High-Performance Green Building and Energy Design, 2020.
- **Ingle Family**, M.E. Rinker, Sr. School for Construction Management, 2020. (\$2,000)
- **William C. Early Scholarship**, TTU College of Architecture, 2017. (\$1,300)
- **J.T. & Margaret Talkington Graduate Fellowship**, Texas Tech University, 2016-2019. (\$4,000 per year)
- **Department of Architecture Ph.D. Student's Scholarship**, TTU College of Architecture, Texas Tech University, 2016-2019. (\$6,000 per year)
- **Third Student Title**, Admissions Office of Iran University Science and Technology, M.A. Program.
- **Ranked 76th** in the Nationwide University Entrance Exam for the M.A. Program with Nearly 2,500 Participants.

MEMBERSHIPS

American Society of Civil Engineer

Associated School of Construction

Association of Collegiate School of Architecture

SKILLS

- **Project Management Software:** Microsoft Project Management, Primavera, Microsoft Office Suite, Bluebeam, On-Screen Takeoff
- **Life Cycle Assessment Software:** OpenLCA, SimaPro
- **Energy Modeling Software:** EnergyPlus, eQuest, DesignBuilder, AutoDesk CFD, Weather tool
- **Architectural Software:** Revit, AutoCAD, GIS, Adobe Photoshop, Google SketchUp
- **Architectural Skills:** Architectural Sketching, Model Making, Architectural Collage
- **Art:** Jewelry Making - Metal (Copper, Brass, Silver), Painting (Oil, Pencil, Charcoal, Color Pencil, Pastel, Chiaroscuro), Architectural Photography - Digital (DSLR)