

Soroush Farzin.Moghadam, Ph.D.

Assistant Teaching Professor
Civil, Environmental & Architectural Engineering
Worcester Polytechnic Institute

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Education

- Ph.D.** **University of Massachusetts Amherst**
Ph.D. in Regional Planning (2016)

Dissertation Title: Urban metabolism and land use modeling for urban designers and planners: a Land Use Module for the Integrated Urban Metabolism Analysis Tool (IUMAT). *Committee:* Elisabeth Hamin, Simi Hoque, Henry Renski
- M.Arch** **University of Massachusetts Amherst**
Master of Architecture (2013)
- M.S.** **Tarbiat Modares University, Tehran, Iran**
Master of Architecture Technology (2009)
- B.A.** **Shahid Beheshti University, Tehran, Iran**
Bachelor of Architecture (2006)

Refereed Journal Articles

- Under Preparation Farzinmoghadam M., Nicole Collucci, Logan Y., Musumeci S., Skavicus C.,
From Net Zero Buildings to a Net Zero Neighborhood; beyond building scale strategies
- Under Preparation Farzinmoghadam M., Dykstra C., Alaoui I., Kasri S.L., Saleem H., Bergendahl J. A., Stoddard E.A., **Net Zero Neighborhood (NZN): A Nexus of Food, Energy, and Water for Smart Cities**, Architectural Engineering Journal
- 2019 Farzinmoghadam, M., Mostafavi, N., Hamin, E., & Hoque, S., **Developing an unsupervised method for the application of LIDAR data in IUMAT Land-use Model: Analysis of land-use changes in Amherst, Massachusetts using Building-form parameterization, GIS, and Artificial Neural Networks**, Journal of Green Building: Winter 2019, Vol. 14, No. 1, pp. 1-30.
- 2017 Mostafavi, N., Farzinmoghadam, M., & Hoque, S. (2017) **Urban Residential Energy Consumption Modeling in the Integrated Urban Metabolism Analysis Tool (IUMAT)**, Building and Environment, , 114, 429-444.
- 2014 Mostafavi, N., Farzinmoghadam, M., & Hoque, S., (2014) **A framework for integrated urban metabolism analysis tool (IUMAT)**, Building and Environment, 82, 702-712.

- 2014 Mostafavi, N., Farzinmoghadam, M., Hoque, S., & Weil, B., (2014) **Integrated urban metabolism analysis tool (IUMAT)**, *Urban Policy and Research*, 32(1), 53-69.
- 2013 Mostafavi, N., Farzinmoghadam, M., & Hoque, S. (2015). **Envelope retrofit analysis using eQUEST, IESVE Revit Plug-in, and Green Building Studio: a university dormitory case study**. *International Journal of Sustainable Energy*, 34(9), 594-613.

Refereed Conferences and Presentations

- 2019 Farzinmoghadam, **Net Zero Neighborhood: A Nexus of Food, Energy, and Water for Smart Cities**, Architectural Engineering Institute conference, Tysons, VA
- 2017 Farzinmoghadam, **Reconsidering the Paradigm: Reimagining the planning and design process for a sustainable future**, Bilkent University, Ankara, Turkey
- 2016 Farzinmoghadam, M., **From Energy Efficient Buildings to Energy Efficient Community**, Worcester Polytechnic Institute, Department of Civil & Environmental Engineering
- Farzinmoghadam, M., Mostafavi, N., Hamin, E., & Hoque, S., **Land Use Modeling in the Integrated Urban Metabolism Analysis Tool (IUMAT)**, Association of Collegiate School of Planning (ACSP) Annual Conference, Portland, Oregon
- 2015 Farzinmoghadam, M., Mostafavi, N., & Hoque, S., **Urban energy modeling in Integrated Urban Metabolism Analysis Tool (IUMAT)**, Association of Collegiate School of Planning (ACSP) Annual Conference, Houston, TX
- Farzinmoghadam, M., Hadilou, A., **Iran Contemporary Architecture; Looking Forward and Backward**, Peace Corps Iran Association (PCA) Conference, University of Texas at Austin, TX
- 2014 Mostafavi, N., Farzinmoghadam, M., & Hoque, S., **Big Data; management and use by Integrated Urban Metabolism Analysis Tool (IUMAT)**, Association of Collegiate School of Planning (ACSP) Annual Conference, Philadelphia, PA
- Farzinmoghadam, M., Mostafavi, N., **Envelope Renovation and Energy Modeling: How Effective and How Reliable?**, GBCI credits, USGBC Massachusetts chapter, Boston, MA
- Farzinmoghadam, M., **Effectiveness of Feature Manipulation Engine (FME) for data transformation and spatial data analysis: Methodology for calculating UMass air travel emissions**, UMass Master Plan Sustainability Subcommittee, Amherst, MA
- Farzinmoghadam, M., Mostafavi, N., **Integrated Urban Metabolism Analysis Tool (IUMAT): a comprehensive approach in dealing with regional problems**, Franklin Regional Council of Governments, Greenfield, MA
- Farzinmoghadam, M., Pavlova-Gillham L., **Implication of Esri online web-service for calculating scope 3 emissions for Academic institution;**

UMass greenhouse gas emissions of employees and students daily commuting, UMass Master Plan Sustainability Subcommittee, Amherst, MA

Farzinmoghadam, M., Mostafavi, N., **Envelope Retrofit Analysis Using eQUEST, IESVE Revit Plug-in and Green Building Studio**, HSW AIA credit, Western Mass AIA, Amherst, MA

Grants, Awards & Competitions

2020	NSF Grant #2028224 , Measuring the Impact of the COVID-19 Pandemic on STEM Student Engagement and Learning in Online Learning Environments, \$199,999
2020	WPI TRIAD Grant , WPI's Vice Provost for Research, \$60,000
2019	LAGA, Land Art Generator - Abu- Dhabi
2019	WPI Global Lab Fellowship , \$5,000
2019	WPI Green Revolving Fund
2018	Finalist - The SOM Foundation Research Prize (Net Zero Neighborhood (NZN): A Nexus of Food, Energy, and Water for Smart Cities)
2018	Dean of Engineering SEED Grant , Worcester Polytechnic Institute, \$ 5,000
2018	Architecture at Zero Competition sponsored by Pacific Gas & Electric (PG&E)
2014 & 2015	LA&RP Research Travel Grant Program , LARP Department, UMass Amherst
2013	Winning Award , The small lots BIG IDEAS design Competition sponsored by Northampton municipality and WMAIA
2013	Architecture Thesis Scholarship , Department of Architecture, UMass Amherst
2012	Annual steel design student competition sponsored by ACSA
2011	Finalist , Design zero energy building competition sponsored by Dow Company
2010	Honorable Mention , Tabriz carpet international trade center

Teaching Experience

2017 - Current	Assistant Teaching Professor (Worcester Polytechnic Institute)
2016 - 2017	Adjunct Teaching Professor (Worcester Polytechnic Institute)
2015	Studio Assistant (UMASS) ARCH600/LA609: Sustainable Community Studio
	Teaching Assistant (UMASS) BCT 520: Energy and Buildings
2011 - 2013	Teaching Assistant (UMASS) GIS-Media support for Landscape Architecture and Regional Planning Department
2008 - 2010	Teaching Assistant (Shahid Beheshti University) Environment and building energy performance
2007 - 2009	Teaching Assistant (Shahid Beheshti University) Construction cost estimating

Academic Lectures

2015	Design Critic ARCH 600: Graduate Design Studio III
	Design Critic LANDARCH 601: Recreation Planning and Design

	Guest Lecturer CE-ENGIN 597: Transportation Sustainability
	Design Critic LANDARCH 279D: Undergraduate Landscape Design Studio II
2014	Design Critic LANDARCH 379B: Studio III Landscape Design
2013	Guest Lecturer LANDARCH 606: Studio VIII Cultural Landscape
	Guest Lecturer LANDARCH 691S: S-Cultural Landscapes: Documentation, Values and Policy
2012	Guest Lecturer LANDARCH 609: Landscape Planning II
	Guest Lecturer LANDARCH 556: Studio IV Landscape Planning
2011	Guest Lecturer REGIONPL 645: Growth Management

Professional Experience

2006 - Present	Independent Design and Consultant Work <i>Breathing with Ocean, Architecture at Zero Competition, San Francisco, CA</i> <i>The small lots BIG IDEAS design Competition, Northampton, MA</i> <i>Azadegan commercial complex, Tehran, Iran</i> <i>Mega mall shopping center, Tehran, Iran</i> <i>Yaas commercial complex, Tehran, Iran</i> <i>Conceptual design for IRIB mixed-used tower landscape, Tehran, Iran</i> <i>Velenjak dental center, Tehran, Iran</i> <i>Historic rural landscape Conservation, Oromanat, Iran</i>
2013 - 2016	Graduate Green Building Researcher Campus Planning, University of Massachusetts, Amherst, MA
2009 - 2010	Associate Architect Parsomash Consulting Engineers, Tehran, Iran <i>Landscape design of Brame lake and sports complex, Abadan, Iran</i> <i>Mehr residential complex, Isfahan, Iran</i> <i>Ravansar residential complex, Kermanshah, Iran</i>
2008 - 2009	Assistant Architect Space Strategy Designers Studio, Tehran, Iran <i>Conceptual design of mixed-use complex, Minsk, Belarus</i> <i>Master plan proposal for Imam-Ali highway, Tehran-Iran</i>
2007 - 2009	Designer Abnieh Tarahan Alborz Consulting Engineers, Tehran, Iran <i>Airport terminal-3 (Pilgrimage) Imam-Khomeini airport, Tehran, Iran</i>

Exhibitions

Upcoming (2020)	Immersive Space , Worcester Polytechnic Institute
2019	Epistemic Wall (Solo), Worcester Polytechnic Institute
2019	Solar Decathlon Africa 2019 , Worcester Polytechnic Institute, Morocco
2014	UMass September 11 Intervention (Solo), University of Massachusetts Amherst

Research Reports

2015	UMass Amherst Campus Master Plan Sustainability Chapter , UMass Campus Planning, http://scholarworks.umass.edu/cp_masterplans/5/
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UMass Amherst Building Measurement, Verification, Coordination and Template Plan, UMass Campus Planning & Design and Construction, http://scholarworks.umass.edu/cp_reportsplans/2/

UMass Amherst Energy Modeling Guidelines, UMass Campus Planning & Design and Construction, http://scholarworks.umass.edu/cp_reportsplans/1/

2013 **UMass Amherst Green Building Guidelines 2013**, UMass Campus Planning & Design and Construction, http://scholarworks.umass.edu/cp_reportsplans/3/

2006 **Ecological design strategies in Isfahan traditional architecture**, Shahid Beheshti University, Tehran, Iran

2004 **Intelligent architecture, integration of digital technology in improving energy performance of high-rise buildings**, Shahid Beheshti University, Tehran, Iran

Service

2019 **Judge**, WPI Graduate Research Innovation Exchange

2017 - Present **Coordinator**, Architectural Engineering Lecture Series, CEE Department, WPI

2018 - 2019 **Member**, WPI Global Lab Steering Committee

2018 - Present **Member**, CEE Department Awards Committee, WPI

2018 **Judge**, WPI Graduate Research Innovation Exchange, WPI Sustainability Project Competition

2013 - 2016 **Program Director**, USGBC West-Branch, Amherst, MA

2013 - 2015 **Volunteer**, Girls, Inc. + UMass - CNS - project Eureka!
<http://bct.eco.umass.edu/news/eureka-girls-build-and-test-bridges-with-bct-phd-students/>

Professional Training

2019 **Faculty Institute for Online Learning**, Worcester Polytechnic Institute

2018 **KEEN Innovating Curriculum with Entrepreneurial Mindset (ICE) Workshop**
Kern Family Foundation, Denver, Colorado

2018 **Teaching in Active Learning Classrooms**, Worcester Polytechnic Institute

2018 **Great Project Seminars Summer Institute**, Worcester Polytechnic Institute

2015 **Isenberg business certificate for scientists and engineers**
University of Massachusetts, Isenberg School of Management

2015 **Teaching in teaching-intensive Institutions**
University of Massachusetts, Graduate School

2013 **Retro-commissioning workshop**
The Massachusetts Energy Efficiency Partnership (MAEEP), UMass Amherst

Professional Affiliations

Association of Collegiate Schools of Architecture (ACSA)

Association of Collegiate Schools of Planning (ACSP)

Language

English: Fluent. Written and Spoken
Persian: Native