

## **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**

Submitted

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

Accepted

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**, Green Building Journal

2017

Mostafavi, N., Farzinmoghadam, M., & Hoque, S. (2017) **Urban Residential Energy Consumption Modeling in the Integrated Urban Metabolism Analysis Tool (IUMAT)**, Building and Environment.

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

- 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

### Teaching Experience

- 2017 - Current **Assistant Teaching Professor (WPI)**
- 2016 - 2017 **Adjunct Teaching Professor (WPI)**
- 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**  
*Breathing with Ocean, Architecture at Zero Competition, San Francisco, CA*  
*The small lots | BIG IDEAS design Competition, Northampton, MA*  
*Azadegan commercial complex, Tehran, Iran*  
*Mega mall shopping center, Tehran, Iran*  
*Yaas commercial complex, Tehran, Iran*  
*Conceptual design for IRIB mixed-used tower landscape, Tehran, Iran*  
*Velenjak dental center, Tehran, Iran*  
*Historic rural landscape Conservation, Oromanat, Iran*

- 2013 - 2016      **Graduate Green Building Researcher** Campus Planning, University of Massachusetts, Amherst, MA
- 2009 - 2010      **Associate Architect** Parsomash Consulting Engineers, Tehran, Iran  
*Landscape design of Brame lake and sports complex, Abadan, Iran*  
*Mehr residential complex, Isfahan, Iran*  
*Ravansar residential complex, Kermanshah, Iran*
- 2008 - 2009      **Assistant Architect** Space Strategy Designers Studio, Tehran, Iran  
*Conceptual design of mixed-use complex, Minsk, Belarus*  
*Master plan proposal for Imam-Ali highway, Tehran-Iran*
- 2007 - 2009      **Designer** Abnieh Tarahan Alborz Consulting Engineers, Tehran, Iran  
*Airport terminal-3 (Pilgrimage) Imam-Khomeini airport, Tehran, Iran*

### Exhibitions

- Upcoming (2019)      **Reflection**  
 Worcester Polytechnic Institute
- Upcoming (2019)      **Solar Decathlon Africa 2019**, Worcester Polytechnic Institute  
 Morocco
- 2014      **UMass September 11 Intervention (Solo)**  
 University of Massachusetts, Amherst, MA

### Grants, Awards & Competitions

- Submitted      The Graham Foundation Individual Grant (Reflection)
- Submitted      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  
 (Net Zero Neighborhood: A Nexus of Food, Energy, and Water for Smart Cities)
- 2017      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

## Research Reports (Co-authored)

- 2015                    **UMass Amherst Campus Master Plan Sustainability Chapter**, UMass Campus Planning, [http://scholarworks.umass.edu/cp\\_masterplans/5/](http://scholarworks.umass.edu/cp_masterplans/5/)
- UMass Amherst Building Measurement, Verification, Coordination and Template Plan**, UMass Campus Planning & Design and Construction, [http://scholarworks.umass.edu/cp\\_reportsplans/2/](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/](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/](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

- 2017 - Present            **Coordinator**, Architectural Engineering Lecture Series, CEE Department, WPI
- 2018 - Present            **Member**, WPI Global Lab Steering Committee
- 2018                        **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

- 2018                        **KEEN Innovating Curriculum with Entrepreneurial Mindset (ICE) Workshop**  
Kern Family Foundation, Denver, Colorado
- 2018                        **Teaching in Active Learning Classrooms**  
**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