

Curriculum vitae

Academic Positions

- 2022- now **Assistant Professor in Architecture** and UB Learning Science Initiatives scholar, University at Buffalo, School of Architecture and Planning.
- 2019- 2022 **Assistant Professor in Architecture**, Portland State University, College of the Arts, School of Architecture, carrying out research, advising thesis, and teaching courses on:
- Structures
 - Building Science
 - Building tectonics
 - Design Studio
- 2014-2016 **Graduate Student Instructor (GSI)** in “Structures I” and “Structures II,” University of Michigan, Architecture Department, teaching courses on:
- Structures 1
 - Structures 2
- 2013 - 2014 **Graduate Student Research Assistant (GSRA)**, University of Michigan, Taubman College.
- 2016 **Co-instructor** in teaching structures in Michigan Architecture Preparatory Program, April 2016
- 2011-2013 **Adjunct Lecturer**, Islamic Azad University-West Tehran Branch, teaching courses on:
- Construction Technology I;
 - Construction Technology II;
 - History of Iranian Architecture.

Education

- 2013 - 2019 Ph.D. in Architecture (Building Technology)
Department of Architecture, Taubman College, University of Michigan
Advisor: Professor Peter von Buelow
Dissertation: Programmatic Design Methods in Architecture (GA+TRIZ Solution Search Method)
- 2013 - 2015 M.S. in Architecture (Building Technology)
Department of Architecture, Taubman College, University of Michigan
- 2008 - 2010 M.Arch. (Architectural Technology)
Department of Architecture, Faculty of Fine Arts, University of Tehran
(Thesis: Formex Configuration Processing of Iranian Traditional Domes)
- 2003 - 2008 B.Arch.
Department of Architecture, Faculty of Fine Arts, University of Tehran

Professional Experiences

- Since 2011 **Licensed Architect**, Tehran, Iran, September 2011
- Since 2016 **LEED Green Associate**
- 2011- 2013 **Design and Research Fellow** Physical Development Research Center (Consulting Engineers).
- 2008 - 2011 **Design fellow**, Bam Citadel of Kerman Consulting Engineers, Tehran, Iran.

Professional Affiliations

- 2011 - Now Member of the **International Association for Shell and Spatial Structures (IASS)**.
- 2021 - Now Co-chair of Next Generation Parametric Design at **IASS**
- 2019 - Now Member of **American Association of University Professors (AAUP)**
- 2015 - Now Member of **US Green Building Council (USGBC)**.
- 2011 - Now Member of **Tehran Construction Engineering Organization**.

Scholarly Work

Books

- 2021 **Basic Concepts of Structural Design for Architecture Students**
Khodadadi, Anahita
Portland State University Library, August 2021, DOI: 10.15760/pdxopen-31
- 2019 **Programmatic Design Methods in Architecture (GA+TRIZ Solution Search Method)**
Khodadadi, Anahita
Deep Blue Data, University of Michigan, <http://hdl.handle.net/2027.42/151600>
- 2013 **History of Iranian Architecture through 651-1219 CE** (Authored in the Persian language)
Bozorgmehri, Zohreh; Khodadadi, Anahita.
Soroush-Danesh Publisher, Tehran, Iran, August 2013.
- 2011 **Historical Functional Ornaments (Amood) in Iran** (Authored in the Persian language)
Bozorgmehri, Zohreh; Khodadadi, Anahita.
Soroush-Danesh Publisher, Tehran, Iran, April 2011.

Peer-reviewed Articles

- 2022 **“Design Exploration by Using a Genetic Algorithm and the Theory of Inventive Problem Solving (TRIZ)”**
Khodadadi, Anahita; von Buelow, Peter.
Automation in Construction Journal, 141 (2022).
- 2020 **“Materiality in Historical Functional Ornaments (Amood) in Iran”** (Authored in the Persian language), Encyclopaedia Islamica, Tehran, Iran
- 2017 **"GA-Based Design Exploration of a House: An Interactive Computational Approach"**
Khodadadi, Anahita.
The International Journal of Design Management and Professional Practice, 11 (3): 13-25.
- 2014 **"Performance-Based Exploration of Generative Design Solutions Using Formex Algebra"**
International Journal of Architectural Computing (IJAC), 12 (3).
- 2012 **“Modern Lattice Domes Based on the Traditional Iranian Masonry Domes”**
Khodadadi, Anahita; Nooshin, Hoshyar; Bozorgmehri, Zohreh; Golabchi, Mahmoud.
International Journal of Space Structures (IJSS), 27 (4).

Peer-Reviewed Conference papers

- 2022 **“Open Educational Resources in Structural Engineering Education”**,
Anahita Khodadadi
International Association of Shells and Spatial Structures (IASS) Annual Symposium, Beijing, China, September 2022.
- 2021 **"Computational form exploration of branching columns using concepts of formex algebra and the ParaGen method"**
von Buelow, Peter; Khodadadi, Anahita
International Association of Shells and Spatial Structures (IASS) Annual Symposium, Surrey, UK, August 2021.
- “A Technical Design Challenge: A Medium for Integrating Technical Knowledge and Design Skills”**, ACSA109 Annual Meeting, March 2021
- 2019 **“Tutorials for Tutorials: Guidelines for Creating Video Tutorials on Teaching Structural Morphology to Architecture Students”**
Khodadadi, Anahita; Emami, Niloufar
International Association of Shells and Spatial Structures (IASS) Annual Symposium, Barcelona, Spain USA, October 2019.

- 2019 **“Eco-friendly Mid-rise Apartments Using CLT Panels”**
 Khodadadi, Anahita;
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Barcelona, Spain USA, October 2019.
- 2018 **“Synergy of a Genetic Algorithm and TRIZ in Conceptual Design”**
 Khodadadi, Anahita.
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Boston, USA, July 2018.
- 2015 **“Form Exploration of Timber-based Folded Plate Domes”**
 Falk, Andreas; von Buelow, Peter; Khodadadi, Anahita.
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Amsterdam, Netherlands, August 2015.
- “The Active Learning Approach in Teaching Structural Concepts to Architecture Students”**
 Khodadadi, Anahita.
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Amsterdam, Netherlands, August 2015.
- 2014 **"Design of Shading Screens Inspired by Persian Geometric Patterns: An Integrated Structural and Daylighting Performance Evaluation,"**
 Emami, Niloufar; Khodadadi, Anahita; von Buelow, Peter.
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Brasilia, Brazil, 2014.
- "Form Exploration and GA-Based Optimization of Lattice Towers Comparing with Shukhov Water Tower"**
 Khodadadi, Anahita; von Buelow, Peter.
 International Association of Shells and Spatial Structures (IASS) Annual Symposium, Brasilia, 2014.
- "Dynamic Configuration Processing and Optimization of Forms (Exploring Truss-bridges)"**
 Khodadadi, Anahita; von Buelow, Peter.
 Conference on Engineering and Applied Sciences Optimization (OPT-i), Kos Island, Greece, June 2014.
- 2012 **“The Morphology of Historical Shell Domes in Iran”**
 Khodadadi, Anahita; Bozorgmehri, Zohreh.
 The International Association for Shell and Spatial Structures (IASS) Symposium, Seoul, Korea, June 2012.
- “The Knowledge of Geometry in Architectural Education”**
 Khodadadi, Anahita.
 The 4th National Conference on Architectural Education, Tehran, Iran, January 2012

Invited Talks / Lectures

- 2022 **“GA-based Design Exploration of Light Weight Structures”**
 Universität Innsbruck, Austria, January 2022
- 2021 **“Program Assessment Methodology at the School of Architecture”**
 Office of Academic Innovation, Portland State University, October 2021
- “Iranian Classical Architecture”**
 Point Park University, September 2021
- 2020 **“Typology of Iranian Classical Architecture”**
 Point Park University, October 2020
- “Building Material from Waste”**
 PDX Talks, Portland, November 2020

- 2020 **“Development of Masonry Domes in Mesopotamia and Persia”**
School of Architecture, Portland State University, February 2020
- 2017 **“GA-Based Design Exploration - An Interactive Computational Approach”**
11th International Conference on Design Principles and Practice, Toronto, Canada, March 2017.
- 2016 **“Performance-Based Form Exploration, Decision Making, Parametric Design and Application of Genetic Algorithm”**
Harly Ellis Devereaux (HED) Architecture Firm, Southfield, Michigan, March 2016

Reviewing Scholarly Works

- 2022 **Reviewer**, The Symposium on Simulation for Architecture and Urban Design (SimAUD)
- 2021 **NSF grant reviewer/panelist**
- 2021 **Reviewer**, ACSA 110th Annual Meeting, Association of Collegiate Schools of Architecture
- 2020 **Reviewer**, ACSA 109th Annual Meeting, Association of Collegiate Schools of Architecture
- 2018 **Reviewer**, Landscape Architecture and Built Environment Research, Routledge Taylor and Francis Group, May 2018.
- 2017 **Reviewer**, “Design Principles and Practices Journal Collection,” Common Ground Publisher, University of Illinois Research Park, USA.
- 2016 **Guest Critic**, “Design and Construction,” School of Architecture, McGill University, October 2016.
- 2016 **Reviewer**, Computers and Structures International Journal, June 2016.
- 2015 **Reviewer**, Rule, and Form: Triennial P+ARG Graduate Student Conference, University of Michigan, February 2015

Research Project Advising

- 2022 “Fungivors: Using mycelium to create sustainable bricks” by Sarah Almuhanha and Nancy Barakat Adams
- 2021 “Design for Disassembly: Comparative Life Cycle Assessment of Two Wood-Frame Structural Systems” by Sean Silverstein and Cascadia Local Food Movement
- “Supplemental cementitious material (SCMs) to reduce the carbon footprint of concrete” by Maab Mohammed and SRG Architect
- 2020 “Potted plants and indoor air quality: a field study” by Kevin Clement
- “Avoiding the Landfill: Analyzing Material Waste Streams in Adaptive Reuse Project” by Matt Thomas and BORA Architects
- “Exploring In-situ U-Value Thermal Performance of Glazing with Infrared Thermography for an Urban Multifamily Housing Complex” by Justin Tuttle and Salazar Architects
- “Template – Based Design for Classroom Daylight Studies” by Christopher Cardoza and Bassetti Architects
- “Heliodon as a Design Tool” by Maximilian Hey and Opsis Architects

Design Advising

- 2021-2022 “An Honest Conversation with Nature” by Nancy Barakat
- 2020-2021 “Kinetic Architecture for Pop-Up Culture” by Randi Lacy
- “The Urban Farming School with Nature” by Monse Vazquez-Fonseca

Al-Nouri Rehabilitation and Reconstruction UNESCO Competition

2019-2020 "Transformative Inclusion: Designing Inclusive Experience in Adaptive Reuse" by Bailey Bernheine

Grants and Awards

2022 Finalist of PSU CleanTech Challenge, being awarded for two ongoing CleanTech Projects, PSU Center for Entrepreneurship, January-April 2022

2021 **Excellence in Sustainability Teaching Award**, Portland State University, May 2021

PDX Open Education Resource Grant, PSU Library, Summer 2021

Scholarship of Teaching and Learning, PSU office of Academic Innovation, April-June 2021

Finalist of PSU CleanTech Challenge, being awarded for three ongoing CleanTech Projects, PSU Center for Entrepreneurship, January-April 2021

Open Education Practices AIM, Office of Academic Innovation, January-April 2021

Assessment Planning and Reporting AIM, Office of Academic Innovation, January-April 2021

2020 Finalist of PSU CleanTech Challenge, being awarded for prototyping Eco-Friendly Sharing Screens, PSU Center for Entrepreneurship

2018 Willard A. Oberdick Fellowship, University of Michigan, September 2018

Rackham One-Term Dissertation Fellowship, University of Michigan, Summer 2018

2017 Emmanuel-George Vakaló Endowed Scholarship, University of Michigan, September 2017

2016 Morvarid Guiv Trust Endowed Scholarship for 2016-17, Federation of Zoroastrian Associations of North America (FEZANA), September 2016

2015 Vakhshoori Scholarship, Vakhshoori Foundation, November 2015

2011 "M.Arch. Thesis Award", Center of Excellence of Architectural Technology, May 2011