

NARIMAN RAFATI

Birth : 21/04/1995

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Phone : +98 935 114 5761

Location : TEHRAN , IRAN

Education

Master's Degree

2018 - 2021

University: Iran university of Science and Technology

Major: Architecture - Sustainability

Overall Average : 18.58 (out of 20)

Thesis : Design of School for Daylight and Energy Optimization Based on Louver Function
This research not only proposes a workflow for optimizing building louvers by considering the most influential factors but also suggests design alternatives for understudied climate zones in three different cities in Iran. These alternatives will be developed by categorizing the results from a Pareto Front chart, identifying specific louver features that are compatible with each specific climate. These design alternatives will be assessed based on their energy performance and visual comfort in those climates.

Bachelor's Degree

2013 - 2017

University: Shahid Chamran University of Ahvaz

Major: Architecture Engineering

Overall Average : 16.27(out of 20)

Thesis : Design of Cultural Space and Art Musuem for Parviz Tanavoli
This thesis focuses on designing a museum that includes an educational component dedicated to teaching sculpting using the renowned Iranian sculptor's method, Parviz Tanavoli.

Work Experience

Research Assistant at Shahid Beheshti University

2023 (Feb) - 2024 (Sep)

At Shahid Beheshti University, I conducted a study to investigate the impact of furniture layout, design, and material on user visual comfort and productivity in shared workspaces. Utilizing virtual reality technology, I created five distinct scenarios with varying layouts and design elements. Participants experienced these simulated spaces, completing questionnaires on task performance, spatial perception, and immersion. My research findings revealed that furniture layout, design, and material significantly influence user focus, while higher light intensity can decrease it. These results underscore the importance of interior design in creating visually comfortable and productive shared workspaces.

DigitalFUTURES Farsi

2021 (Nov) - 2023 (Jan)

I serve as a committee member at DigitalFUTURES Farsi, a key part of the global DigitalFUTURES network. In this role, I participate in monthly meetings focused on exploring the latest advancements in architecture, fostering an environment for knowledge sharing and learning among experts and enthusiasts.

Kouman Studio

2020 (June) - **2021** (Feb)

At Kouman Studio, I handled design modeling and simulations, focusing on integrating passive solutions for heating and cooling using Ladybug Tools software. By automating assessments for Daylighting, Building Energy, and Thermal Comfort, I informed design decisions and contributed to environmental analysis, including solar radiation assessments and material examinations. My role also involved optimizing initial architectural geometric ratios for enhanced indoor daylighting, glare control, and energy efficiency.

BeraNia office

2018 (Aug) - **2020** (March)

During my time at BeraNia Office, I engaged in a diverse array of projects spanning interior design and urban planning across industrial, commercial, and residential buildings. Emphasizing sustainable strategies and computational design, I focused on improving facades, buildings, and urban spaces. This involved conducting crucial environmental data analyses, including climate data assessment, daylight calculations, energy consumption evaluation, and thermal comfort analysis. Our overarching objective was to propose sustainable designs at various scales, incorporating Transit Oriented Development (TOD) and renewable energy-powered urban furniture for larger projects, while optimizing window sizes and louvers for smaller-scale designs to maximize daylighting and energy efficiency.

Teaching Experience

Building energy simulation Course at Pars University of Architecture and Art **2024** (Winter semester)

- Teacher Assistant

Regenerative Architecture workshop held by DigitalFUTURES

2022 (June)

- Tutor

Climate Compatible Architecture Seminar at Shahid Chamran University

2022 (April)

- Lecturer

Energy Efficient Course Held by Arj School

2019 (Feb)

- Lecturer

Certificates & Achievements

Zero Energy Building Design held by Delft University

2020

- Certificate

This workshop focused on minimizing primary energy consumption in buildings through a three-step approach: reducing, reusing, and producing energy using renewable sources.

Austria Square held by Tehran City Hall District 22

2020

- Second Place

The aim of the competition was to design the square and its plaza. Our team approached it by emphasizing pedestrian and bicycle pathways while also enhancing the use of renewable energies.

Hustle Hub - UNI.XYZ

2019

- Short Listed

The "Hustle Hub," redefines sustainability by providing Moscow's young generation with a dynamic, multifunctional space. This eco-friendly hub offers short-term stays, fostering communication and nurturing personal growth. It serves as a launchpad for their promising careers, embodying a vision where sustainability meets youthful ambition and innovation.

Publications

- Optimizing architectural multi-dimensional forms; a hybrid approach integrating approximate evolutionary search, clustering and local optimization** 2024
Morteza Hazbei, Nariman Rafati, Nawwaf Kharma, Ursula Eicker
Energy and Buildings, Volume 318, 1 September 2021, 114460
<https://doi.org/10.1016/j.enbuild.2024.114460>
- Louver configuration comparison in three Canadian cities utilizing NSGA-II** 2023
Nariman Rafati, Morteza Hazbei, Ursula Eicker
Building and Environment, Volume 229, 1 February 2023, 109939
<https://doi.org/10.1016/j.buildenv.2022.109939>
- Comparison of different louver configurations for daylight and energy optimization in Bandar Abbas and Tabriz** 2022
Nariman Rafati , Haniyeh Sanaieian, Mohsen Faizi
Journal of Honar-Ha-Ye-Ziba: Memary Va ShahrSazi, Volume 26, Issue 3
<https://doi.org/10.22059/jfaup.2022.333965.672718>
- Optimizing building density in TOD zones in Tehran with the approach of reducing cooling and heating energy consumption; Case study Sohrevardi metro station zone** 2022
Nariman Rafati, Ehsan Khezerloo-Ye Aghdam.
The 9th National Conferance on Modern Studies and Research in Architecture
<https://civilica.com/doc/1510408>
- Investigation of visual privacy and daylight with the use of venetian blinds in Tehran** 2022
Nariman Rafati, Ehsan Khezerloo-Ye Aghdam.
The 9th National Conferance on Modern Studies and Research in Architecture
<https://civilica.com/doc/1510407>
- Investigating the effect of placement and dimensions of the south fenestration on the amount of natural light and cooling and heating load in Arak City** 2022
Nariman Rafati, Ehsan Khezerloo-Ye Aghdam.
The 9th National Conferance on Modern Studies and Research in Architecture
<https://civilica.com/doc/1510406>