

MOSTAFA MOHAJERANI

✉ mohajerani@yahoo.com
✉ m.mohajerani@shahroodut.ac.ir
🌐 linkedin.com/in/ mostafa-mohajerani
☎ +098 9153715742
🏠 IRAN, SABZEVAR



SUMMARY

Top M.A. student in Architecture and Energy from Hakim Sabzevari University with the thesis focused on the reconstruction and optimization of the external wall of a school, considering the lifecycle assesment of environmental, energy, and economic (3E) aspects. Leveraging academic background, played a significant role in several energy-related projects. High level expert with a passion for employing energy, climate based and building energy modeling software as well as a successful lecturer with strong academic background who began teaching career in energy courses at the master's level at alma mater after completing studies, possessing several articles published in high impact journals. A passionate specialist in building energy simulation having created several offline educational courses for students based on energy and environment. Active participant in different architecture and energy-oriented workshops and meetings as either the student or the instructor. Committed professional work experience as energy evaluator and Climatic redesign of some office building. Joined Shahrood University of Technology as an instructor in energy courses for postrgraduate students and soon appointed as the head of the university's energy laboratory.

EDUCATION

📅 September 2019– July 2021

Master of Art:

Energy and Architecture

Hakim Sabzevari University, Khorasan Razavi, Sabzevar

(Dep. Avg. = 19.15/20) GPA 4/4

Graduated in the top 2% of the class thesis: implementing a new optimal structure method based on the external wall of the educational building, considering life cycle assessment (LCA) and life cycle energy analysis (LCEA), in a hot and dry climate, case study: Sabzevar

📅 September 2011– June 2016



**Bachelor of Art:
Architecture**



Location: Islamic Azad University of Shahrod, Iran



PUBLICATIONS



 See Google Scholar profile for full publications list.



JOURNAL ARTICLES

-  Dokhanian, F., Mohajerani, M., Estaji, H., & Nikravan, M. (2023). Shading design optimization in a semi-arid region: considering energy consumption, greenhouse gas emissions, and cost. *Journal of Cleaner Production*, 428, 139293.  DOI: <https://doi.org/10.1016/j.jclepro.2023.139293>

-  Karimi, A., Mohajerani, M., Moslehi, H., Mohammadzadeh, N., García Martínez, A., & Moreno-Rangel, D. (2023). An innovative simulation-based methodology for evaluating cooling strategies in climate change-induced overheating. *Journal of Building Engineering*, 80 (108167).  DOI: <https://doi.org/10.1016/j.job.2023.108167>

-  Mohajerani, M., Dokhanian, F., Estaji, H., Boer, D., & Norouzi, M. (2024). Geospatial distribution of qanats in Middle Eastern countries: Potential for sustainable groundwater system. *Journal of Arid Environments*, 222, 105170.  DOI: <https://doi.org/10.1016/j.jaridenv.2024.105170>

-  Karimi, A., Bayat, A., Mohammadzadeh, N., Mohajerani, M., & Yeganeh, M. (2023). Microclimatic analysis of outdoor thermal comfort of high-rise buildings with different configurations in Tehran: Insights from field surveys and thermal comfort indices. *Building and Environment*, 240, 110445  DOI: <https://doi.org/10.1016/j.buildenv.2023.110445>

-  Akhlaghinezhad, F., Mohajerani, M., & Bagheri Sabzevar, H. (2023). Optimizing Courtyard Design for Thermal Performance: A Study on Shadow and Sunlight Dynamics in Traditional Houses. *International Journal of Urban Management and Energy Sustainability*, 5(1), 31-53.  DOI: [10.22034/IJUMES.2024.2019088.1190](https://doi.org/10.22034/IJUMES.2024.2019088.1190)

TEACHING EXPERIENCE

Teaching and Lecturing

Teacher Assistant:

Location: Faculty of Architecture and Urbanism, Hakim Sabzevari University

Duration: Full-time, August 2020 - December 2020

Summary: Teaching building simulation and energy modeling concepts using Energy Plus software to master students in the Architecture and Energy program.

📌 Lecturer:

Location: Faculty of Architectural Engineering and Urbanism, Shahrood University of Technology

Duration: Full-time, August 2023 - Present

Summary: Teaching a variety of courses at both undergraduate and postgraduate levels. Undergraduate courses include electrical installations and mechanical installations. Master's courses include building energy simulation and urban energy design.

EDUCATIONAL COURSES

📌 Introductory and Advanced Courses in JEPlus and JEPlus +EA

Course Duration: 5 hours

Summary: Comprehensive training on using JEPlus software, including coding based on Energy Plus, teaching optimization algorithms, parametric design, and sensitivity analysis.

📌 Ladybug Tools Training Course (Dragonfly)

Course Duration: 9.5 hours

Summary: Introduction to urban energy design concepts, city morphology, external thermal comfort indicators, urban heat islands, and urban modeling using the DRAGONFLY tool. Additionally, training on URBANopt, OpenDSS, UWG, and REopt tools.

📌 Introductory Training Course on LCA Concepts with OPENLCA, Simapro, and One-click LCA Software

Course Duration: 11.5 hours

Summary: Introduction to the concepts of Life Cycle Assessment (LCA), covering various stages of LCA, learning relevant standards and ISOs, understanding environmental impacts, familiarizing with different calculation methods, and learning LCC concepts and their applications. The course also includes training on LCA calculation tools like OpenLCA, Simapro, and One-click LCA.

WORKSHOPS

📌 Holding an educational workshop (Energy simulation using Ladybug Tools)

Location: Architecture and Urbanism Faculty of Hakim Sabzevari University

Workshop Duration: 9 hours (November 2020)

Summary: In this course, an attempt was made to teach working with the Honeybee tool to simulate the energy of a real model at the beginner level

workshop of High-Performance Design for designing integrated daylighting systems to reach high comfort and low carbon through Parametric thinking

Location: Faculty of Fine Arts at the University of Tehran

Workshop Duration: 40 hours (April 2024)

Summary: I played a role as a mentor in this workshop and was able to help students in terms of idea generation, work process, solving design challenges, energy and lighting modeling, etc.

CERTIFICATES

July 10th & 11th 2021

Introduction of Life Cycle Assessment (LCA) and openLCA Held by AUT Office of Sustainability at Amirkabir University of Technology (Tehran Polytechnic)

July 25 to July 3, 2022

Digital FUTURES workshop, REGENERATIVE ARCHITECTURE (online course)

SOFTWARES

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
AutoCAD	◆	◆	◆	◆	◆	◆	◆	◆	◇	◇
Sketchup	◆	◆	◆	◆	◆	◆	◆	◆	◆	◇
Rhino	◆	◆	◆	◆	◆	◆	◇	◇	◇	◇
Grasshopper	◆	◆	◆	◆	◆	◆	◆	◇	◇	◇
Energyplus	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Ladybug tools	◆	◆	◆	◆	◆	◆	◆	◆	◇	◇
OpenStudio	◆	◆	◆	◆	◆	◆	◇	◇	◇	◇
SimaPro	◆	◆	◆	◆	◆	◆	◆	◆	◇	◇
JEPlus	◆	◆	◆	◆	◆	◆	◆	◆	◇	◇
OpenLCA	◆	◆	◆	◆	◆	◆	◆	◇	◇	◇
DesignBuilder	◆	◆	◆	◆	◆	◆	◆	◆	◆	◇
Lumion	◆	◆	◆	◆	◇	◇	◇	◇	◇	◇
Adobe InDesign	◆	◆	◆	◇	◇	◇	◇	◇	◇	◇
Adobe Illustrator	◆	◆	◆	◆	◇	◇	◇	◇	◇	◇
Adobe Photoshop	◆	◆	◆	◆	◆	◇	◇	◇	◇	◇
Origin	◆	◆	◆	◆	◆	◆	◇	◇	◇	◇

PROFESSIONAL WORK EXPERIENCES

■ Building energy auditing of the Gas Office Headquarters

Location: Mashhad, Khorasan, Iran, UPGREENGRADE-CO

Duration: September 2020 - December 2020

Summary: evaluating the energy performance of the gas department building and its devices, as well as operating energy simulation, and auditing of the gas company building. Consequently, I provided them with solutions to reduce energy consumption. (area 8000 m²)

■ Climatic redesign of the shell of the "Culture House" office building

Location: Hakim Sabzevari University

Duration: January 2021 - May 2021

Summary: Using parametric design and multi-objective optimization, we identified the best shade for the outer shell of the building, and this optimization was dependent on the type of wall material. This project is currently running.

REFEREES

■ **Assistant Professor Morteza Hosseini**, Department of Architecture, Design & Media Technology, Aalborg University Copenhagen, A.C. Meyers Vænge 15, DK-2450 Copenhagen SV, Copenhagen| Denmark | Email: smho@create.aau.dk & morteza.hosseini1366@gmail.com | Tel: +45 9940 2082 |

■ **Assistant Professor Kavan Javanroodi**, Department of Building and Environmental Technology, Faculty of Engineering, LTH, Lund University| Sweden | Email: kavan.javanroodi@byggtek.lth.se & kavani.javani@gmail.com | Tel: +46 46 222 91 05|

■ **Assistant Professor Hassan Estaji**, Faculty member at Hakim Sabzevari University and Arch. Dr. Tech. the University of Applied Arts Vienna, Institute of Architecture, Building Technology Department. | Email: estaji@yahoo.com |