



Aya Elkhaili

Research & Teaching Assistant | Architect

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BIOGRAPHY

Aya Elkhaili is an architect and a Research and Teaching Assistant in the School of Built Environment at Al Hussein Technical University (HTU), Amman, Jordan. She holds a Bachelor of Architecture from Yarmouk University and is currently completing a Master of Sustainable Buildings at the German Jordanian University. Her work bridges architectural design, building performance, and sustainability, with a research focus on energy-efficient design, simulation-based building optimization, and multi-criteria decision-making for material selection. At HTU, she mentors students in design and technical courses and leads sustainability initiatives, including procurement evaluations and the alignment of campus practice with EDGE Advanced and international green building standards. Her research applies building-performance simulation to optimize energy use in existing and heritage buildings, extending to multi-criteria evaluation of low-energy facade and material strategies. She has held teaching and research posts at the University of Petra and has gained international experience through an Erasmus+ traineeship and a DAAD informal-settlements workshop.

EDUCATION

M.Sc. Sustainable Buildings, German Jordanian University

B.Sc. Architecture, Yarmouk University

SELECTED CREDENTIALS

- Invited by the Ambassador of Ireland and the Chairman of Jordan Young Scientists (JoYS) to a 2025 recognition reception for her role as a judge of student projects.
- Publication: El-Khalili, A. (2025), "Simulation-Based Optimization of Energy Performance in Heritage Cultural Centers: Case of Al-Nabulsi Home in Irbid," *Journal of Buildings and Architecture (JBA)*.

ICRERA 2026 — Paper Details

Paper ID: 225

Title: A Multi-Criteria AHP Framework for Energy-Efficient Residential Facade Envelope Selection in a Hot-Dry Climate