

Randa Mohamed Ahmed Mahmoud



Assistant
Lecturer

Ph.D
student

Architect

Personal Information

Date of birth: 17 March 1991
Nationality : Egyptian
Languages : Arabic- English

Contact



+0201011126052



randa.m.a.mahmoud17@gmail.com
randa.m@aun.edu.eg



<https://orcid.org/0000-0001-7846-8875>



8A - 50 St. First district - El-Sheikh Zayed city - Giza

Links



<https://life.aun.edu.eg/engineering/randa-mohamed-ahmed-mahmoud>



https://scholar.google.com/citations?hl=en&user=jSSHLa0AAAAJ&view_op=list_works%3Cfront%3E%3Cnolink%3E%2%80%8F



Randa MOHAMED | Teacher Assistant |
MSc Architectural Engineering, TA
Architectural Engineering Dep | Assiut
University, Asyut | Department of
Architectural Engineering
(researchgate.net)



Education

M.SC degree in Architectural Engineering

- October 2019 - present
- Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt
- Preparation courses' degree: 86.8%

Bachelor of Architectural Engineering:

- September 2008 – July 2013
- Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt
- Grade: Excellent with honor's degree (87.6%)



Work Experience

Assistant Lecturer (Full time)

- October 2019 - present
- Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt
- Academic member at Assiut university for teaching undergraduate classes

Demonstrator (Full time)

- November 2014 – September 2019
- Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt

Demonstrator (Part time)

- November 2015 – September 2018
- Interior design Dep , Faculty of Engineering, Assiut Un, Assiut, Egypt

Architect (Part time)

- November 2015 – June 2024
- Smart Consultant Innovations, Dr. Amr Sayed Hassan, Assiut, Egypt
- November 2013 – July 2015
- Idea Engineering Consultant, Dr. Mahmoud Morad, Assiut, Egypt



Teaching Experience

- Design Principles
- Visual drawing
- Architectural design 1,2,3,4
- Shadow and perspective
- AutoCad, Revit & 3D Max Modelling
- Working drawing 1,2,3.
- Environmental design & climate
- Building laws and regulations
- Quantities and specification
- Graduation Project

Future

Looking Forward to

Work in the field of environment and sustainable urban design and sustainable building design to solve the architectural problems and make a balance between architectural and environmental needs.



Academic Publications

- 1 **A Multi-Objective Optimization Method for Enhancing Outdoor Environmental Quality in University Courtyards in Hot Arid Climates**
Abdallah, A.S.H., Mahmoud, R.M.A., Ragab, A., Gomaa, M.M. (2025). *Buildings* 2025, 15, 3140. DOI: <https://doi.org/10.3390/buildings15173140> . IF = 3.1, Q2.
- 2 **Optimizing Urban Spaces: A Parametric Approach to Enhancing Outdoor Recreation Between Residential Areas in Riyadh, Saudi Arabia**
Abdallah, A.S.H., Mahmoud, R.M.A., Alosan, M.A. (2025). *Buildings* 2025, 15, 1527. DOI: <https://doi.org/10.3390/buildings15091527> . IF = 3.1, Q2.
- 3 **Sustainable Mitigation Strategies for Enhancing Student Thermal Comfort in the Educational Buildings of Sohag University**
Abdallah, A.S.H., Mahmoud, R.M.A., Alosan, M.A. (2025). *Buildings* 2025, 15(2), 2048. DOI: <https://doi.org/10.3390/buildings15122048>. IF = 3.1, Q2.
- 4 **Improvement of Vernacular Building Spaces for Human Thermal Comfort in Hot Arid Climate of Egypt**
Abdallah, A.S.H.; Alamri, U.A.; Mahmoud, R.M.A.; Abdelhafez, M.H.H. (2025). *Buildings* 2025, 15, 4450. DOI: <https://doi.org/10.3390/buildings15244450> . IF = 3.1, Q2.
- 5 **Assessing Mosque Energy Efficiency Using Smart Occupancy Sensors to Mitigate Climate Change in Hot Regions**
Abdallah, A.S.H., Mahmoud, R.M.A., Abdelhafez, M.H.H., Alosan, M.A. (2025). *Buildings* 2025, 15, 935. DOI: <https://doi.org/10.3390/buildings15060935> . IF = 3.1, Q2.
- 6 **Multi-objective Approach for Optimizing Buildings' Forms and Kinetic Façades Systems in Office Buildings**
Mahmoud, R.M.A., Abdallah, A.S.H. (2024). *MEJ Mansoura Engineering Journal*, 49, 1-22. DOI: <https://doi.org/10.58491/2735-4202.3134>
- 7 **Assessment of outdoor shading strategies to improve outdoor thermal comfort in school courtyards in hot and arid climates**
Mahmoud, R.M.A., Abdallah, A.S.H. (2022). *Sustainable Cities and Society* 86, 104147. DOI: [10.1016/j.scs.2022.104147](https://doi.org/10.1016/j.scs.2022.104147) . IF = 10.5, Q1.
- 8 **Urban morphology as an adaptation strategy to improve outdoor thermal comfort in urban residential community of New Assiut city, Egypt**
Abdallah, A.S.H, Mahmoud, R.M.A. (2022). *Sustainable Cities and Society* 78, 103648. DOI: [10.1016/j.scs.2021.103648](https://doi.org/10.1016/j.scs.2021.103648) .IF = 10.5, Q1.
- 9 **A New Planning Proposal for Achieving Residents' Thermal Comfort in Hot arid Climate- based on simulation model**
Eid M.A. , Mahmoud, R.M.A., Abdallah, A.S.H. (2023). *MEJ Mansoura Engineering Journal*, 48, 1-16. DOI: <https://doi.org/10.58491/2735-4202.3075>
- 10 **Investigation of Greening Façade and Retrofitting strategies on Outdoor Thermal Comfort and Indoor Energy Consumption in New Assiut City, Egypt**
Abdallah, A.S.H, Mahmoud, R.M.A. (2023). *MEJ Mansoura Engineering Journal*, 48, 1-15. DOI: <https://doi.org/10.58491/2735-4202.3082>
- 11 **A Computational Framework for Supporting Architectural Education of Spaces' furnishing Design.**
Mahmoud, R.M.A. Youssef, A.M.A. (2022). *International Journal of Architectural Computing*, 1-32. DOI: [10.1177/14780771221097683](https://doi.org/10.1177/14780771221097683) .IF = 1.6, Q1.
- 12 **Design framework for robotic surgery wards at hospitals: Computational implementation.**
Mahmoud, R.M.A. Youssef, A.M.A. (2020). *Frontiers of Architectural Research* (2020) 9, 514-540. DOI: [10.1016/j.foar.2020.05.002](https://doi.org/10.1016/j.foar.2020.05.002) .IF = 3.1, Q1.

Scopus h-index
= 4
(Until January 2026)

Technical Strength

Simulation software

Advanced Level ●●●



Design builder



Envi-met



EnergyPlus



Openstudio



Rhino



Grasshopper

Modelling software

Advanced Level ●●●



AutoCad



3D Max



Revit



Rhino



Grasshopper



Sketch up

Technical Strength

Programming software Intermediate Level ●●○



MATLAB



Python

Visualization software Advanced Level ●●●



Lumion



Premiere



After Effect



Photoshop



Microsoft



Academic Publications

13 Sustainable Solutions for the Open Spaces of the New desert Egyptian Cities with Considering the Climate Change

Abdallah, A.S.H, Mahmoud, R.M.A. (2022). Arts and Architecture Journal, 3 (2), 159-173. DOI: <https://doi.org/10.21608/aaaj.2022.275005>

14 Architectural Comparative Analyses between Robotic Surgery Wards in Digital Hospitals and Traditional Surgery Wards in Conventional Hospitals.

Mahmoud, R.M.A., Youssef, A.M.A, Abdel Karim, N.M. (2020). Journal of Engineering Sciences 48(2):248-264. DOI: [10.21608/jesaun.2020.135249](https://doi.org/10.21608/jesaun.2020.135249) . IF = 0.7.

15 Comparative Analyses of Computational Implementations for Healthcare Building Design.

Mahmoud, R.M.A., Abdel Karim, N.M, Youssef, A.M.A. (2019). Journal of Engineering Sciences 47(No.5):627-643. DOI: [10.21608/jesaun.2019.115729](https://doi.org/10.21608/jesaun.2019.115729) . IF = 0.7.



Academic project

Smart Urban Governance Center (SUGC) for sustainable, resilience, and livable city

📅 January 2021 – December 2023

📍 Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt

- Collecting and analyzing Database
- Research project funded by Science and Technology Development Fund (STDF) in Egypt-Project No. 45850

Integration of inclined solar chimney with passive cooling technique to achieve low energy building- Phase 1 and Phase 2 (Using PCM material for night cooling).

📅 Phase 1: January 2015 – December 2016

Phase 2: January 2019 – December 2021

📍 Architectural Dep, Faculty of Engineering, Assiut Un, Assiut, Egypt

- Modelling and simulation the base case by DesignBuilder and visualizing and analysis the results
- Research project funded by Science and Technology Development Fund (STDF) in Egypt-Project No. 30067

DAAD project “ High Education Dialogue with Muslim Countries”, Culture change program

📅 August 2017

📍 Freie University in Berlin and TU of Berlin



Scientific Conference program

The Green Sustainable Future in The Kingdom of Saudi Arabia (GiKS). King Fahd University of Petroleum & Minerals

📅 29th – 30th January 2025

📍 Dhahran, Saudi Arabia

9th International Conference on Climatic Changes, Challenges of Sustainable Development, Current and Advanced Research on Architecture, Art and Heritage(CCRAAH)

📅 6th – 10th October 2022

📍 Marsa Alm, Egypt



Internship program

Workshop of “Urban heat Island” cooperated with Freie University of Berlin

📅 September 2017 – October 2017

📍 TU Berlin El- Gouna, Egypt

LEED GA V.4 training with Dr. Shady Atia

📅 January 2016

📍 Cairo, Egypt

Architectural professional internship

📅 Nov 2015 : Nov 2016

📍 Smart Consultant Innovations, Dr. Amr Sayed, Assiut



Research Interests

- Developing urban design methodologies and frameworks.
- Urbanism
- Parametric urban design
- Urban climate and Morphology
- Building & urban simulation
- Computational design
- Energy Efficiency in Building
- Parametric Modelling
- Optimization of building forms
- Architectural Urban conditions

References:

Amr S.H Abdallah

Associate Professor Department of Architectural Engineering, Faculty of Engineering, Assiut Un

E-mail: Dr.amrsayed@aun.edu.eg

Amr M.A Youssef

Lecturer, Department of Architectural Engineering, Faculty of Engineering, Assiut Un

E-mail: amr.ma.youssef@aun.edu.eg