

# Randa Mohamed Ahmed Mahmoud



Assistant  
Lecturer

Ph.D  
student

Architect

## Personal Information

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

## Contact

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## Links

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

[https://scholar.google.com/citations?hl=en&user=jSSHLaAAAAJ&view\\_op=list\\_works%3Cfront%3E%3Cnolink%3E%E2%80%8F](https://scholar.google.com/citations?hl=en&user=jSSHLaAAAAJ&view_op=list_works%3Cfront%3E%3Cnolink%3E%E2%80%8F)

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



## Education

### M.SC degree in Architectural Engineering

"Design Framework for Robotic Surgery Ward at Digital Hospitals"  
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 – November 2021  
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



## Looking Forward to

Work in the field of Buildings and Environment integrated with the Architectural technologies for solving the architectural problems and make a balance between the architectural and the environmental needs.



## Academic Publications

### 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>

### 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>

### 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>

### 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/aa.2022.275005>

### 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)

### 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)

### 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)

### 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)

### 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)

### 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)



## Academic project

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

January 2020 – December 2020

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

## Technical Strength

### Simulation software

Advanced Level ●●●



Design builder



Envi-met



EnergyPlus



Openstudio

### Modelling software

Advanced Level ●●●



AutoCad



3D Max



Revit



Rhino



Grasshopper



Sketch up

## Research Interests

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

## Internship

### 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

## Technical Strength

Programming software  
Intermediate Level ●●○



Visualization software

Advanced Level ●●●



Microsoft

## 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