Dr. Amgad Fahmy

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EDUCATION

2011 PhD from the University of Karlsruhe
Faculty of Architecture, Division of Building Science-
Germany

2006 Master of Science in Architectural Engineering
Department Of Architecture
Faculty Of Engineering, Cairo University

2000 Bachelor of Architectural Engineering
Department Of Architecture
Faculty Of Engineering, Cairo University

TEACHING EXPERIENCE

2026 Professor, Architectural Department, Effat University.

2024 Associate Professor, Architectural Department, Effat University.

2020 Associate Professor, Architectural Department and Environmental Design, AAST, Heliopolis Campus.

2011 Assistant Professor, Architectural Department and Environmental Design, AAST, Heliopolis Campus.

RESEARCH EXPERIENCE

Throughout my research, I studied the boundaries of thermal comfort in hot climates. My studies focused mainly on the adaptive comfort model and acceptable limits in hot climates. Afterward, my research focused on sustainability as a holistic way of living, for it plays a vital role in all aspects of our lives. In architectural terms, sustainable design is a major challenge towards realizing an appropriate contemporary built environment. Energy-saving and passive solutions are principal elements in all environmentally friendly enterprises. They can combine the precedents of vernacular architecture with up-to-date technological advancements to develop new approaches and creative solutions that do not necessarily adhere to particular architectural styles, incorporating biodegradable materials to achieve optimal performance.

PUBLICATIONS

- Fahmy, A. Unveiling barriers and proposing strategies for green building practices adoption in Egypt: perspectives primarily from architects and engineers. *J. Eng. Appl. Sci.* **72**, 204 (2025). https://doi.org/10.1186/s44147-025-00777-8
- Fahmy, A. A Review on Structural Literacy in Architectural Education. *Buildings* **2025**, *15*, 4312. https://doi.org/10.3390/buildings15234312
- Rawan Magdi , Tarek M. Kamel , Amgad Fahmy , "Architectural Façade Retrofitting of an Educational Building to Reduce Traffic-Induced Noise Load," Civil Engineering and Architecture, Vol. 13, No. 4, pp. 3020 - 3035, 2025. DOI: 10.13189/cea.2025.130414
- Mayar Ghoniem , Amgad Fahmy , Tarek M. Kamel (2025). Evaluating Urban Surface Materials: Albedo Optimization and Shading for Pedestrian Thermal Comfort in Hot-Arid Environments. Civil Engineering and Architecture, 13(6), 4331 - 4352. DOI: 10.13189/cea.2025.130616 https://www.hrpub.org/journals/article_info.php?aid=15470
- Fahmy, A.; Thamarat, M. How Community Engagement Approach Enhances Heritage Conservation: Two Case Studies on Sustainable Urban Development in Historic Cairo. Sustainability **2025**, 17, 4565. https://doi.org/10.3390/su17104565 **Q1**
- Moatazbellah El Behery, Ali Assem, Amgad Fahmy; UTILIZING BIM TO VISUALIZE REAL-TIME THERMAL AND VISUAL COMFORT IN OFFICE SPACES. Journal of Green Building 1 January 2025; 20 (1): 183–198. doi: https://doi.org/10.3992/jgb.20.1.183 **Q2**
- Mohamed Mahdy , Amgad Fahmy , Rana El-Dabaa (2025). A Multi-Objective Optimization for Passive Adaptive Envelope Integrating Smart Materials. Civil Engineering and Architecture, 13(2), 794 - 812. DOI: https://doi.org/10.13189/cea.2025.130204 **Q2**
- Gamal Hady, Elfiki Sherif, Fahmy Amgad (2024). Examining the Realization of Residential Satisfaction in the State's New Housing Projects, with Reference to Cairo, Egypt. *IOP Conf. Ser.: Earth Environ. Sci.* 1396 012017. https://doi.org/10.1088/1755-1315/1396/1/012017
- Hussein Serag, Mai Mahmoud, Tarek Kamel, Amgad Fahmy (2024). Comparative Validation of a Building Energy Model Calibration Methodology with a Focus on Residential Buildings. Civil Engineering and Architecture, 12(3), 1447 - 1462. DOI: https://doi.org/10.13189/cea.2024.120314 **Q2**
- Anne A. Soliman, Yasser M. Moustafa, Amgad Aly Fahmy (2024). Design Characteristics of University Campus Outdoor Spaces and Their Stress-Reducing Quality as Perceived by Students: Investigation in the Egyptian Context. Civil Engineering and Architecture, 12(1), 278 - 292. DOI: https://doi.org/10.13189/cea.2024.120122 **Q2**
- Mariam Hani Bishai, Amgad Fahmy, "Analyzing the Impact of Ownership on the Patterns of Use in Residential Rooftops Case Study: New Cairo, Egypt," Civil Engineering and Architecture, Vol. 11, No. 4, pp. 1871 - 1889, 2023. DOI: https://doi.org/10.13189/cea.2023.110416 **Q2**

- Osman, F.O., Moustafa, Y.M. & Fahmy, A.A. Residential satisfaction in gated communities according to stages in the life cycle with reference to Cairo, Egypt. J. Eng. Appl. Sci. 68, 41 (2021). https://doi.org/10.1186/s44147-021-00047-3 **Q2**
- Elskalakany, S. M., Tolba, O., & Fahmy, A. (2022). Application of COVID-19 guidelines in workplace design. In IOP Conference Series. Earth and Environmental Science (pp. 012009-012009).
- Hady, G. M., Elfiki, S., & Fahmy, A. (2022). Towards a model for the assessment of low-income housing: A case study in Egypt. IOP Conference Series. Earth and Environmental Science, 1056(1), 012008. doi: https://doi.org/10.1088/1755-1315/1056/1/012008
- FAHMY AND D. ABDELGHANY, (2020), EFFECT OF GRASS AND TREES ON OUTDOOR THERMAL COMFORT IN OUTDOOR ENTERTAINMENT VENUES IN HOT ARID CLIMATE, Journal of Engineering and Applied Science, 6(67). **Q2**
- S. M. ASEF, O. TOLBA AND A. FAHMY, (2020), THE EFFECT OF LEAF AREA INDEX AND LEAF AREA DENSITY ON URBAN MICROCLIMATE, Journal of Engineering and Applied Science, 2(67). **Q2**
- D. ABDELGHANY, Tolba, O. Fahmy, A. (2019), Simulation Study on the Effect of Different Landscape Treatments on Thermal Comfort in Outdoor Entertainment Venues in a Hot Arid Climate, CPUD'19 IV. INTERNATIONAL CITY PLANNING AND URBAN DESIGN CONFERENCE
- Shaker, R. Tolba, O. Fahmy, A. (2019). Socio-Cultural Divisions and Urban Waterfront Activities: The Case of El Minya City, Egypt, Journal of Engineering and Applied Science, 5(66). **Q2**
- M. YASSER, S. ELFIKI, & A. FAHMY.(2017), INVESTIGATING USERS' PREFERENCES IN EVOLVING AND CREATED SHOPPING ENVIRONMENTS OF CAIRO, Journal of Engineering and Applied Science, 1(64).
- Wanas, A., Shafik, S., Farghal, A., & El-Dabaa, R. (2015). Use of Kinetic Facades to Enhance Daylight Performance in Office Buildings with Emphasis on Egypt Climates. Journal of Engineering and Applied Science, 4(62).
- Farghal, A., Desouki, D. (2014), Comparing Occupants' Satisfaction in LEED Certified Office Buildings and Non-LEED Certified Office Buildings - A Case Study of Office Buildings in Egypt and Turkey, Building, Architecture and Urbanism, Istanbul
- Book: Studying the Adaptive Comfort Model, A Case Study in Arid Climate: Cairo, Egypt, VDM Verlag Dr. Müller e.K. ISBN 978-3-639-35222-1
- Farghal, A., Wagner, A. (2010), Enhancing the Adaptive Comfort Standard, a case study in a hot dry climate, Cairo, Egypt, Windsor conference, U.K.
- Farghal, A., Wagner, A. (2008). Studying the adaptive comfort approach within a hot, dry climate: a case study in educational buildings in the Egyptian climate, Windsor conference, U.K.
- Wagner, A., Moosmann, C., Gropp, T., Gossauer, E, und Farghal, A., (2008) Thermischer Komfort in einem natürlich gelüfteten Gebäude - Ergebnisse einer Felduntersuchung, gesundheitsingenieur Haustechnik - Bauphysik – Umwelttechnik Inhaltsverzeichnis ISSN: 0932-6200
- Amgad, F., Moemen, A., Gated Communities as a Catalyst for Approaching Sustainability, IAPS 19 Conference Proceedings, 2006

PATENTS

PRESENTATIONS

- Programming and Coding Using AI Tools: AI tools, coding for non-coders. Feb 2025. Effat University
- Programming and Coding Using AI Tools: AI tools, coding for non-coders. Feb 2025. Effat University
- Presentation Design: Innovative Presentations' Slides Using AI Tools. Feb 2025. Effat University
- Productivity and Task Organization: Don't Get Overwhelmed, Manage Your To-Do List Using AI. Feb 2025. Effat University
- Innovative Teaching with ChatGPT,2024. Effat University

- Canva for Teachers, 2024. Effat University
- How to create presentations using Canva, 2024. Effat University
- Prompt Engineering for ChatGPT, 2024. Effat University
- Creating a Student Profile in Google Docs. 2024. Effat University
- Fundamentals of Digital Transformation, two modules (Web search – Mobile Applications) 2023, AAST.
- Applications of Artificial Intelligence in Architecture Level 1 AASTMT, September 2023.
- Applications of Artificial Intelligence in Architecture Level 2 AASTMT, September 2023.
- International Publishing AASTMT, August 2023.
- Emotional Intelligence in Education, AASTMT, July 2023.
- PMP preparation course, 45 PDU's (Professional Development units), PMP course ID # PRMG 100, AUC, Engineering and Science Services, January – March 2015
- Organizing scientific conferences, AASTMT, April 2014
- Research Ethics, AASTMT, March 2014
- Competing for research funds, AASTMT, February 2014
- AASTMT – Academic Preparation Workshop, Egypt, 2003
- DAAD – Proposal Writing - 2014

GRANTS AND FELLOWSHIPS

AWARDS AND HONORS

- Distinguished efforts towards **RIBA** unconditional validation for the Architecture Department, AAST, Cairo, Heliopolis Campus

THESIS SUPERVISIONS

- 2024 - 2025: Exploring Factors Influencing Residential Price Fluctuations in Saudi Arabia, by Bashair Dannah, a thesis submitted to the College of Architecture and Design, Effat University.
- 2022 - 2024: Utilizing BIM to Visualize Real-Time Indoor Environmental Quality in Office Spaces, by Hussein Serag, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with an Assistant. Prof. Ali Assem.
- 2022 - 2024: The Egyptian Energy Code's Role and Implementation in the Development and Enhancement of Energy Consumption for Middle-Class Housing. An Environmental Approach, by Hussein Serag, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, under the co-supervision of an Assistant. Prof. Tarek Kamel.
- 2022 - 2024: A COMPARATIVE ANALYSIS OF THERMAL PERFORMANCE & LIFE CYCLE COSTS OF RESIDENTIAL BUILDING FACADES COMPOSED OF DIFFERENT TYPES OF BRICKS IN HOT ARID CLIMATE - An Environmental – Economical Approach, by May Mahmoud, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with an Assistant. Prof. Tarek Kamel.
- 2021 - 2023: Design Characteristics of University Campus Outdoor Spaces and their Stress-Reducing Quality as Perceived by Students: Investigation in the Egyptian Context. by Anne Soliman, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Assc. Prof. Yasser Mostafa.

- 2021 - 2023: Analyzing the Impact of Ownership on the Patterns of Use in Residential Rooftops Case Study: New Cairo, Egypt, by Mariam Matta, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Assc. Prof. Yasser Mostafa.
- 2018 - 2022: Residential satisfaction in gated communities according to stages in the life cycle with reference to Cairo, Egypt, by Fatma Osman, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Assc. Prof. Yasser Mostafa.
- 2020 - 2022: Application of COVID-19 guidelines in workplace design. By Salma Elskalakany, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervised with Prof. Osama Tolba.
- 2020 - 2023: Towards a model for the assessment of low-income housing: A case study in Egypt, by Hady Gamal, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Sherif ElFiki.
- 2016 - 2020: The Effect of Leaf Area Index and Leaf Area Density on Urban Microclimate, by Sherif Assef, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Osama Tolba.
- 2016 - 2019: The Effect of Natural Landscape Elements on Outdoor Thermal Comfort in A Hot Arid Climate, by Dalia Ayman, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Osama Tolba.
- 2015 - 2019: Socio-Cultural Divisions and Urban Waterfront Activities: The Case of El Minya City, Egypt, by Rose Shaker, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Osama Tolba.
- 2016 - 2018: INVESTIGATING USERS' PREFERENCES IN EVOLVING AND CREATED SHOPPING ENVIRONMENTS OF CAIRO, by May Yasser, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Sherif ElFiki.
- 2014 - 2016: The use of Kinetic Facades in Enhancing Daylight Performance for office Buildings, by Rana Ahmed Bahaa, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Assc. Prof. Ayman Wanas and Assc. Prof. Sherine Shafeik
- 2012 – 2016: The impact of window glazing spectral selectivity on energy use for cooling in administrative buildings, (Applied Study: Building (B-19), Smart Village, 6th October – Giza), by Eslam Mohamed Naguib, a thesis submitted to Cairo University, Department of Architecture, co-supervision with Prof. Dr. Ahmed Fikry.
- 2012 – 2014: Towards improving office buildings in the pursuit of green architecture, A case study between Egypt Non-LEED Office building and LEED Certified Office Buildings in Turkey, by Dina Ibrahim El Desouki, a thesis submitted to AASTMT, Department of Architectural Engineering and Environmental Design, co-supervision with Prof. Dr. Ahmed Fikry.

PROFESSIONAL MEMBERSHIPS

- Project Management Institute (PMI) – certified PMP
- Saudi Planners Association.
- Saudi Council of Engineers, Architectural consultant 2025.
- NCEUB Network for Comfort and Energy Use in Buildings.
- The International Building Performance Simulation Association (IBPSA)
- Member of the Egyptian Syndicate of Engineers since 2000, Architectural consultant 2017.
- The Asian Council of Science Editors (ACSE)

RELEVANT SKILLS

- Project Management Institute (PMI) – certified PMP
- AutoCAD
- Revit
- Navisworks
- Sketch up,
- Ecotect,
- Design Builder,
- Envi-met
- SPSS
- Microsoft Office

REFERENCES

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