



## Nermine Abdel Gelil M. Abdel Halim

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### EDUCATION

2003 – 2007 Ph.D. in Architectural Engineering (Tokyo, Japan)  
Graduate School of Engineering, Civil Engineering & Architecture, Hosei University  
1997 – 2003 M.Sc. in Architectural Engineering (Cairo, Egypt)  
Faculty of Engineering, Cairo University  
1992 – 1997 B.Sc. in Architectural Engineering (Cairo, Egypt)  
Faculty of Engineering, Cairo University

### TEACHING EXPERIENCE

Aug. 2024 – Present Associate Professor – Effat University  
College of Architecture and Design, Department of Architecture  
June 2024 – Present Professor – MSA University  
Faculty of Engineering, Department of Architecture  
Apr. 2014 – Jun. 2024 Associate Professor – MSA University  
Faculty of Engineering, Department of Architecture  
2010 – 2014 Assistant Professor – MSA University  
Faculty of Engineering, Department of Architecture  
2007 – 2010 Assistant Professor – Fayoum University  
Faculty of Engineering, Department of Architecture  
2007 – 2009 Part-time Lecturer – MSA University  
Faculty of Engineering, Department of Architecture  
2006 – 2007 Assistant Lecturer – Hosei University  
School of Engineering, Tokyo, Japan



- 2003 – 2007 Assistant Lecturer – Fayoum University  
Faculty of Engineering, Department of Architecture (Doctoral scholarship since Oct. 2003)
- 1997 – 2003 Teaching Assistant – Fayoum University  
Faculty of Engineering, Department of Architecture

## RESEARCH EXPERIENCE

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- 2017 – 2024 Founder and Director of MSA Center of Earth Architecture
- 2017 – 2021 The Ecofriendly House – An Eco-Friendly Affordable Unit Built with Compressed Earth Bricks, Hybrid Roofs, and Palm Midribs. Design, consultancy, documentation, and full site supervision.
- Jan.-Aug. 23 A Green Rural House Prototype in El Kharga Oasis, the New Valley Governorate. Design, consultancy, documentation, and full site supervision.
- Dec. 2022 Protocol of cooperation between MSA University and the New Valley Governorate to implement the “Green Rural House Initiative” in El Kharga Oasis.
- Apr. 2021 Technical study on the evaluation of the thermal performance of a room inside a residential unit built with compressed stabilized earth bricks and its comparison with a conventional bricks' room – MSA University (Report no. 292). Cairo: Building Physics & Environmental Institute, HBRC.
- Apr. 2021 Measuring of sound pressure levels in a housing unit model in MSA University (Report no. BPEL-A-R-10/2021 & BPEL-A-R-11/2021). Cairo: Building Physics & Environmental Institute, HBRC.
- Oct. 2020 Technical report on an experimental building with compressed stabilized sandy soil bricks – MSA University (Report no. 505). Cairo: Building Materials Research & Quality Control Institute, HBRC.

## PUBLICATIONS

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- Abdel Gelil Mohamed, N., A. Moustafa, and E.A. Darwish. (2024). Structural, acoustical, and thermal evaluation of an experimental house built with reinforced/hollow interlocking compressed stabilized earth brick-masonry. *Journal of Building Engineering*, 86, 108790.  
doi:<https://doi.org/10.1016/j.jobe.2024.108790>
- Abdel Gelil Mohamed, N. (2023). Assessment of urban ventilation in typical Egyptian housing layouts from four eras using a multi-directional CFD analysis. *HBRC Journal*, 19(1), 453-481.  
doi:<https://doi.org/10.1080/16874048.2023.2285093>
- Abdel Gelil Mohamed, N., E. Hamid Abd El-Rahman, and M. Sadek. (2023). A smart green

- mashrabiyya-shutter design for residential applications in Egypt. *HBRC Journal*, 19(1), 229-252. doi:<https://doi.org/10.1080/16874048.2023.2259629>
- Sadek, Mohamed R. and Abdel Gelil Mohamed, N. (2023). Artificial Intelligence as a pedagogical tool for architectural education: What does the empirical evidence tell us? *MSA Engineering Journal*, 2(2), 133-148. doi:<https://doi.org/10.21608/msaeng.2023.291867>
- Abdel Gelil Mohamed, N. and I. Abo Eldardaa Mahmoud. (2023). Cost-effectiveness and affordability evaluation of a residential prototype built with compressed earth bricks, hybrid roofs and palm midribs. *Frontiers in Built Environment*, 9. doi:<https://doi.org/10.3389/fbuil.2023.1058782>
- Abdel Gelil M., N., & A. Abbas, N. (2019). A comparative analysis between the Egyptian code, Auroville code and Brazilian standards for compressed stabilized earth blocks/bricks. *Journal of Environment Protection and Sustainable Development*, 5(2), 48-57. <http://www.aiscience.org/journal/paperInfo/jepsd?paperId=4433>
- Abdel Gelil M., N., M. Soliman, M., & A. Abbas, N. (2019). The experience of two workshops on CSEB attended by MSA University team at Auroville Earth Institute and MSA Center of Earth Architecture. *Journal of Environment Protection and Sustainable Development*, 5(2), 28-43. <http://www.aiscience.org/journal/paperInfo/jepsd?paperId=4418>
- Abdel Gelil M., N., & M. Badawy, N. (2015). Simulated comparative investigation of the daylight and airflow of the conventional Egyptian shutter 'sheesh' and a proposed latticework device 'new mashrabiyya.' *Indoor and Built Environment*, 24(5), 583-596. doi:<https://doi.org/10.1177/1420326X13516656>
- Abdel Gelil M., N. (2014, March). From Japanese to Cairene houses: A contribution to the design of socially responsible housing in Egypt. *International Journal of Islamic Architecture (IJIA)*, 3(1), 147-170. doi:[https://doi.org/10.1386/ijia.3.1.147\\_1](https://doi.org/10.1386/ijia.3.1.147_1)
- Abdel Gelil M., N., & Hussein A., W. (2014). Traditional residential architecture in Cairo from a green architecture perspective. *Arts and Design studies*, 16, 6-26. doi:<http://doi.org/10.7176/ADS/2014-1-1>
- Hussein A., W., & Abdel Gelil M., N. (2013). Green architecture assessment system in Egypt with an application on Zeinab Khatoun house. *Journal of Developing Country Studies*, 3(14), 56-78. <https://www.iiste.org/Journals/index.php/DCS/article/view/9428>
- Abdel Gelil M., N. (2011, July). Less space, more spatiality for low income housing units in Egypt: Ideas from Japan. *International Journal of Architectural Research: ArchNet-IJAR*, 5(2), 24-48. doi:<http://dx.doi.org/10.26687/archnet-ijar.v5i2.196>
- Abdel Gelil M., N. (2006). A new *mashrabiyya* for contemporary Cairo: Integrating traditional latticework from Islamic and Japanese cultures. *Journal of Asian Architecture and Building Engineering (JAABE)*, 5(1), 37-44. doi:<https://doi.org/10.3130/jaabe.5.37>
- Abdel Gelil M., N., & Hussein A., W. (2012). Towards new entrances for low-income housing units in Egypt: Integrating ideas from traditional *magaz* and Japanese *genkan*. In E. Duyan, & C. Ozturkcan, *House & Home from a Theoretical Perspective, ARCHTHEO '12 Conference Proceedings* (pp. 133-46). Istanbul: Dakam Publishing. ISBN: 9786054514045

Hussein A., W., & Abdel Gelil M., N. (2009). Future Cities Between Planning Methodologies and Development Methods: Towards New Architecture Visions. Towards A New Architectural Vision: *New Glasses: Presentation and Representation, Proceeding for the 5th International Conference (ARCHCAIRO 2009)* (pp. 180-188). Cairo: Cairo University.

## PATENTS

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Patent n. 30046, 2020

Title: A mixture and curing procedures to produce interlocking hollow bricks from stabilized compressed soil using sandy soil in order to increase their compressive strength and moisture resistance.

Inventor: Nermine Abdel Gelil Mohamed Abdel Halim

Granted by: Egyptian Patent Office (EPO) – Academy of Scientific Research and Technology.

Int. Cl.8-C 04 B 28/04; C 04 B 111/00.

## PRESENTATIONS

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- From Japanese to Cairene Houses: Traditional Inspiration for Small-Scale Housing Units in Egypt. The Japan Foundation
- Many Lectures during the hands-on training on CSEB production and construction, hybrid jack arch and funicular shell-roofs, and date palm leaves' midribs shutters, doors and pergolas.

## GRANTS AND FELLOWSHIPS

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- Oct. 23 – Apr. 24 Recipient of “Enhancement of the Entrepreneurship Ecosystem (EEE)” Grant provided by the African Development Bank (AfDB) in collaboration with the General Authority for Investment and Free Zones (GAFI), Egypt.
- Jan.-Aug. 2023 New Valley Governorate Fund – The implementation of the Green Rural House Pilot, El Kharga Oasis.
- 2017 – 2021 MSA University Head of the Board of Trustees Fund – The Ecofordable House project: experimentations and technical tests, training and workshops, CSEB production, funicular-shell and jack arch roofs, date palm leaves' midribs craftsmanship, full construction on-campus, Cairo.
- 2003 – 2007 Japanese Government Scholarship (*Monbukagakusho*) Doctoral Program – Tokyo
- 2005 – 2006 Young Researcher Grant (*Keieisha Kondankai*) – Tokyo



## AWARDS AND HONORS

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- Feb. 2024 4th Place in the “Low-income Green Housing Competition.” Ministry of Housing, Utilities & Urban Communities.
- Oct. 2023 1st place in the National Initiative for Smart Green Projects - small local projects category for the entry “Green Rural houses in New Valley Governorate” Phase 1 (governorates level) and Phase 2 (nationwide). Organized and sponsored by Ministry of Planning and Economic Development and UN-affiliates. Honored by the Prime Minister and the Ministry of Planning and Economic Development.
- Nov. 2023 Shortlisted in THE MENA AWARDS (Times Higher Education - Middle East and North Africa Awards) in the category: “Outstanding Contribution to Environmental Leadership for the project “The Ecofordable House: An Eco-Friendly Affordable Unit Built with Compressed Earth Bricks, Hybrid Roofs, and Palm Midribs.”
- Oct. 2021 Honored by the Engineering Quality Assurance and Accreditation Unit at MSA
- Mar. 2018 A memorial photo with President El-Sisi honoring winners of the Academy of Scientific Research and Technology (ASRT) awards of innovation (4th Cairo Innovates), the National Conference of Scientific Research: Revealing Egyptian Potentials, 25-26 March 2018
- Dec. 2017 Honored by the Minister of Higher Education & Scientific Research, and President of the Academy of Scientific Research and Technology
- Nov. 2017 1st Place – Green Urbanism and Innovative Architecture, 4th Cairo International Exhibition of Innovation (Cairo Innovates), organized by ASRT, 22 - 23 November 2017. The prize was awarded to MSA Center of Earth Architecture team for the submitted proposal. I was the designer and team leader.

## SCIENTIFIC RESEARCH REVIEWS

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- Complex Layout Generation for Large-Scale Public Spaces Via Deep Edge Aware GNNs. Reviewed: Feb 2024 for Journal of Building Engineering.
- Design strategies of passive solar greenhouses: A bibliometric and systematic review. 2 rounds from Nov 2023 to Jan 2024 for Ain Shams Engineering Journal.
- Stress-strain characteristics of autoclaved aerated concrete masonry under varying displacement rates. 2 rounds from Sep 2023 to Nov 2023 for Journal of Building Engineering.
- Effect of a geothermal heat pump system on cooling residential buildings in a hot, dry climate. 2 rounds from Aug 2023 to Sep 2023 for HBRC Journal.

- Selecting Adequate Electronic Tools to Increase the Efficiency of Distance Learning in Architectural Education. Reviewed: Aug 2023 for Ain Shams Engineering Journal.
- Models of Health Care Integrated Horizontally and Vertically with Architecture. Reviewed: Jun 2023 for Journal of Building Engineering.
- An Embedded Model for Assessing Urban Environmental Quality in African Context: a Case Study of Tangier City, Morocco. Reviewed: May 2023 for Urban Climate.
- Building Person-centred Homes. 2 rounds from Feb 2022 to Feb 2023 for Journal of Housing and the Built Environment.
- Building person-centred homes: a case study of a cluster-designed home for adults with intellectual disability in Australia. Reviewed: Feb 2023 for Journal of Housing and the Built Environment.
- Outdoor ventilation evaluation and optimization based on spatial morphology analysis in Macau. 5 rounds from Mar 2022 to Oct 2022 for Urban Climate.
- Investigating the Effect of Noise and Noise Pollution on the Identity of Urban Neighborhoods Case Study (Agajani Beig and Golapa Neighborhoods of Hamadan. Reviewed: Aug 2020 for Journal of Housing and the Built Environment.
- Demographic Structure and House Prices in the United States: A Reconciliation Using Metropolitan Area Data. Reviewed: Jul 2020 for Journal of Housing and the Built Environment.
- Thermal Insulation Efficiency of Unventilated Air-Gapped Facades in Hot Climate. 2 rounds from Aug 2016 to Sep 2016 for Arabian Journal for Science and Engineering.
- Thermal Insulation Efficiency of Unventilated Air Gapped-Facades in Hot Climate. Reviewed: May 2016 for Arabian Journal for Science and Engineering.
- Accumulation of Lead-210 and Polonium-210 in the Groundwater of Wadi Nu'man, Mecca Province. 2 rounds from Feb 2016 to Mar 2016 for Arabian Journal for Science and Engineering.
- The Passivhaus concept for the Arabian Peninsula – An energetic-economical evaluation considering the thermal comfort. Reviewed: Jan 2016 for Research Square.

## PROFESSIONAL MEMBERSHIPS

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Egyptian Engineers Syndicate: Cairo, Egypt, EG

## RELEVANT SKILLS

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- One Click LCA application: Life Cycle Assessment (LCA) of buildings
- EDGE application: EDGE green building certification (Excellence in Design for Greater Efficiencies) - developed by the IFC (International Finance Corporation)
- Grasshopper/Eddy3d: Outdoor CFD Analysis (Computational Fluid Dynamics)
- Simscale: Outdoor and indoor CFD Analysis



## REFERENCES

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1. Professor Noel-Ann Bradshaw  
Deputy Dean - Faculty of Engineering & Science  
University of Greenwich, Medway Campus,  
England, United Kingdom  
Email: [N.Bradshaw@greenwich.ac.uk](mailto:N.Bradshaw@greenwich.ac.uk)
2. Prof. Dr. Hidenobu Jinnai  
Jinnai Laboratory PhD Supervisor  
Hosei University  
Tokyo, Japan  
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3. Assoc. Prof. Dr. Shady Shawky  
Head of the Department of Architecture  
MSA University, Cairo, Egypt  
[ssaifelnasr@msa.edu.eg](mailto:ssaifelnasr@msa.edu.eg)
4. Prof. Dr. Hisham Aref  
Former Vice-Dean of the Faculty of Engineering, and former Head of the Department of  
Architecture  
MSA University, Cairo, Egypt  
Former Head of the Department of Architecture  
Fayoum University, Fayoum, Egypt  
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