

## **Prof. Dr. Hanan Mostafa Kamal Sabry**

Emeritus/ Professor of Architecture and Environmental Control

Department of Architecture – Faculty of Engineering

Ain Shams University

Phone: +2-01223979913

E-Mail : hanan\_sabry@eng.asu.edu.eg

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### **Qualifications & Graduation**

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| 1996 | Ph.D. Degree in Architecture – Faculty of Engineering – Ain Shams University<br>Thesis Title: " Natural Lighting as an Important Factor in the Design of Museums in Egypt "   |
| 1990 | M.Sc. Degree in Architecture – Faculty of Engineering – Ain Shams University.<br>Thesis Title: " Natural Lighting in Islamic Architecture – A Comparative Field Study in Some Halls of Mamelouk and Ottoman Houses in Cairo." |
| 1980 | B.Sc. Architecture – Faculty of Engineering – Ain Shams University  |

### **Employment History/ Academic**

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|----------------|---|
| 2018 - 2022    | Architectural Engineering Program Coordinator - – Faculty of Engineering – Ain Shams University |
| 2017 - Present | Emeritus Professor at Architecture and Environmental Control                                    |
| 2008 - 2017    | Professor of Architecture and Environmental Control   |
| 2003 – 2008    | Associate Professor   |
| 1996 – 2003    | Lecturer  |
| 1990 – 1996    | Assistant Lecturer  |
| 1980 – 1990    | Tutor   |

### **Professional Career and Research Experience**

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| 2018 – 2021 | Research Project: Monitoring Object and Visitors Environments (MOVE) This project aims to develop a user-friendly dashboard live sensor management system for the environmental data, that could assist museums curators in monitoring varied changing indoor conditions during various seasons. The project is conducted between two main entities: Faculty of Engineering, Ain Shams University in Egypt and school of the built environment, University of Salford in the UK. Project fund: Science and Technology Development Fund (STDF)-Egypt and Arts and Humanities Research Council (AHRC)-UK |
| 2012 -2013  | Research Project in the area of Sustainable Hospital Architecture: Configuration of the Window Openings of Intensive Care Units for Comfort and Energy Saving: The American University in Cairo (AUC): Member of Architectural Aspects Team work/ Daylighting Studies  |
| 2008 – 2012 | Research Project in the area of Integrated Desert Building Technologies: A Collaboration Between King Abdullah University of Science and Technology (KAUST) and The American University in Cairo (AUC): Member of Architectural Aspects Team work/ Daylighting Studies   |
| 2003 - 2008 | The Grand Egyptian Museum Project: Member of Technical Committee as Daylighting Consultant   |
| 2004        | Three months visiting scholar at The Center for Environmental Design Researches (CEDR) at the University of California in Berkeley, USA  |
| 2002 - 2003 | The project of the New Campus of the American University in Cairo: Participation in Daylighting Studies  |

2000 – 2003 Energy Efficiency Residential Building Code (EERBC): Participation in Daylighting Studies- Member of Lighting Committee

### Membership in Several Committees

2023 - Present Coordinator and member of the Conferences Committee / Faculty of Engineering - ASU  
 2022 - 2023 Member of the organizing committee of the international conference of Smart Cities 2023 – Ain Shams University (ASU)  
 2022 - Present Member of IRB (Institutional Review Board) - Faculty of Engineering - ASU  
 2019 - 2022 Coordinator and member of the committee presenting the program of Architectural Engineering for accreditation from NAQAAE (The National Authority for Quality Assurance and Accreditation of Education.)  
 2021 Coordinator of the organizing committee of MOVE International Conference - Museum Environments: Challenges and Opportunities (MECO) - December, 14-15, 2021  
 2018 - 2022 Member of students and education committee/ / Faculty of Engineering - ASU  
 2014 – 2018 Member of Postgraduate Committee / Faculty of Engineering - ASU  
 2013 Member of Examining Committee of Ph.D Thesis at the University of Aix- Marseille (Ecole d'Architecture de Marseille) in France  
 2009 – 2010 Member of the committee presenting ASU as a partner in The Centre for Natural Resources and Development CNRD Network: Cologne University of Applied Sciences CUAS Institute for Technology and Resources Management in the Tropics and Subtropics  
 2006 - 2008 - 2019 Member of the organizing committee of the first, second and third of the international conference of the department of Architecture and Urban Planning AR\_UP 2006 - 2008 - 2019  
 2004 – 2011 Member of the Environmental Committee/ Faculty of Engineering - ASU  
 2003 – Present Member of the Architectural Department Board  
 2003 – Present Member of The Examining Committee of several Master Degree and Ph.D Thesis  
 2000 - 2003 Member of the Engineering Consultant Unit – faculty of Engineering – Ain Shams University

### Awards

2022 Architectural Engineering Program Accreditation Appreciation Awards from Faculty of Engineering – Ain Shams University  
 2021 International Publication Research Awards from Ain Shams University  
 2020 Ain Shams University Appreciation Awards for Architecture  
 2010 Prize for best paper in Renewable Energy 2010 International Conference and Exhibition - Advanced Technology Paths to Global Sustainability - June 27 – July 2, Yokohama, Japan (**Joint Paper**)

### Book Editing

2020 Member of the editorial board of ARCHITECTURE AND URBANISM: A SMART OUTLOOK PROCEEDINGS OF THE 3RD INTERNATIONAL CONFERENCE ON ARCHITECTURE AND URBAN PLANNING, CAIRO, EGYPT. SPRINGER 2020, ISBN 978-3-030-52583-5 ISBN 978-3-030-52584-2 (EBOOK)

### Reviewing Research Papers

Reviewer in the following Journals:

2019 Solar Energy  
**Impact Factor: 7.188**  
 2020 - 2021 Journal of Engineering and Applied Science - Faculty of Engineering - Cairo University  
**Impact Factor: 0.18**  
 2021 Frontiers in Public Health - Environmental health and Exposome -  
<http://www.frontiersin.org/>

**Impact Factor: 6.461**

2022 Mansoura Engineering Journal - Faculty of Engineering - Mansoura University  
2023 Energy & Buildings

**Impact Factor: 7.201**

2023 Alexandria Engineering Journal  
**Impact Factor: 3.732**

**Publications (Selection)**

**Scopus - h-index = 8**

<https://orcid.org/0000-0003-2597-9553>

- 2023 Elhelaly, N., Abdel Kader, M., **Sabry, H.**, Nessim, A.: EVALUATING DAYLIGHTING PERFORMANCE WITHIN EXISTING SCHOOLS EXPANSION IN EGYPT., Springer Nature's Scopus-indexed book series titled Advances in Science, Technology & Innovation, 2023
- 2022 Fathy, F., Mansour, Y., **Sabry, H.**, Refat, M., Wagdy, A.: VIRTUAL REALITY AND MACHINE LEARNING FOR PREDICTING VISUAL ATTENTION IN A DAYLIT EXHIBITION SPACE: A PROOF OF CONCEPT, Ain Shams Engineering Journal, 30 December 2022, 102098
- 2022 Morsi, N., Kamel, S., **Sabry, H.**, Assem, A.: COMPUTATIONAL DESIGN FOR ARCHITECTURAL SPACE PLANNING OF COMMERCIAL EXHIBITIONS: A FRAMEWORK FOR VISITORS INTERACTION USING PARAMETRIC DESIGN AND AGENT-BASED MODELLING, Hybrid Spaces of the Metaverse – Architecture in The Age of The Metaverse – Opportunities and Potentials, ASCAAD 2022, Beirut Arab University, Lebanon, 12-14 October 2022
- 2022 Eladl, M., Fathy, F., Morsi, N., Nessim, A., Refat, M., **Sabry, H.**: MANAGING MICROCLIMATE CHALLENGES FOR MUSEUM BUILDINGS IN EGYPT, Ain Shams Engineering Journal Volume 13, Issue 1, January 2022, 101529
- 2021 Edrees, A., Kamel, S. **Sabry, H.** Nessim, A.: VISUAL COMFORT IN ELDER CARE FACILITIES: PROMOTING ENVIRONMENTAL GERONTOLOGY THEORY, Towards Implementation of Sustainability Concepts in Developing Countries pp 227–241, Part of the Advances in Science, Technology & Innovation book series (ASTI), October 2021.
- 2020 Hamza, H., Ashour, A., **Sabry, H.**, Refat, M.: INTEGRATING PASSIVE DESIGN STRATEGIES AND ENERGY GENERATION SYSTEMS FOR NET PLUS-ENERGY HOUSING IN EGYPT, Architecture and Urbanism: A Smart Outlook - Springer – 2020 - pp.159-172.
- 2020 Hamza, H., Ashour, A., **Sabry, H.**, Refat, M.: IDENTIFYING THE INFLUENCE OF DESIGN VARIATIONS ON THE PERFORMANCE OF PV SYSTEMS FOR NET-PLUS ENERGY RESIDENTIAL BUILDINGS IN EGYPT, International Journal of Engineering Research and Technology (IJERT) ISSN 0974-3154 Vol.13, No.3 - 2020, pp. 528-539.
- 2020 Fathy, F., Mansour, Y., **Sabry, H.**, Refat, M., Wagdy, A.: CONCEPTUAL FRAMEWORK FOR DAYLIGHTING AND FACADE DESIGN IN MUSEUMS AND EXHIBITION SPACES, Solar Energy journal. 2020, 204, pp. 673–682.
- 2017 Fathy, F., **Sabry, H.**, Faggal, A.: EXTERNAL VERSUS INTERNAL SOLAR SCREEN: SIMULATION ANALYSIS FOR OPTIMAL DAYLIGHTING AND ENERGY SAVINGS IN AN OFFICE SPACE, PLEA 2017 Conference, Passive Low Energy Architecture Design to Thrive, Edinburgh, England 3-5 July 2017
- 2017 Wagdy A., Sherif, A., **Sabry, H.**, Arafa R. & Mashaly I.: DAYLIGHTING SIMULATION FOR THE CONFIGURATION OF EXTERNAL SUN-BREAKERS ON SOUTH ORIENTED WINDOWS OF HOSPITAL PATIENT ROOMS UNDER A CLEAR DESERT SKY, Solar Energy journal. SE-D-16-01068R1, 2017
- 2016 Sherif, A., **Sabry, H.**, Wagdy A & Arafa R.: SHAPING THE SLATS OF HOSPITAL PATIENT ROOM WINDOW BLINDS FOR DAYLIGHTING AND EXTERNAL VIEW UNDER DESERT CLEAR SKIES Solar Energy journal. SE-D-15-01290R1, March 2016.

- 2015 Fathy, F., Mansour, Y., **Sabry, H.**, Abdelmohsen, S., Wagdy, A.: CELLULAR AUTOMATA FOR EFFICIENT DAYLIGHTING PERFORMANCE: OPTIMIZED FAÇADE TREATMENT, 14th International Conference of the International Building Performance Simulation Association, IBPSA Building Simulation Conference, Hyderabad, December 7-9, 2015
- 2015 Sherif, A., **Sabry, H.**, Wagdy A & Arafa R.: DAYLIGHTING IN HOSPITAL PATIENT ROOMS: PARAMETRIC WORKFLOW AND GENETIC ALGORITHMS FOR AN OPTIMUM FAÇADE DESIGN, 14th International Conference of the International Building Performance Simulation Association, IBPSA Building Simulation Conference, Hyderabad, December 7-9, 2015
- 2015 Sherif, A., **Sabry, H.**, Arafa R. & Wagdy A.: THE IMPACT OF ALTERNATIVE WINDOW GLAZING TYPES AND A SHADING SYSTEM ON THE DAYLIGHTING OF HOSPITAL PATIENT ROOMS: SIMULATION ANALYSIS UNDER A DESERT CLEAR SKY, 6th International Building Physics Conference, IBPC Building Physics for a sustainable Built Environment, 14-17 June, Torino, Italy, 2015
- 2015 Sherif, A., **Sabry, H.**, Elzafarany, A., Gadelhak, M., Arafa, R. & Aly, M.: THE IMPACT OF HOSPITAL INTENSIVE CARE UNIT WINDOW DESIGN ON DAYLIGHTING AND ENERGY PERFORMANCE IN DESERT CLIMATE, Proceedings of the XII International conference on Energy, Environment and Sustainable Development, ICEESD 2015, January 23-24, 2015 Paris, France/ World Academy of Science, Engineering and Technology International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering Vol:9, No:7, 2015
- 2014 Sherif, A., **Sabry, H.**, Arafa R. & Wagdy A.: ENERGY EFFICIENT HOSPITAL PATIENT ROOM DESIGN: EFFECT OF ROOM SHAPE ON WINDOW-TO-WALL RATIO IN A DESERT CLIMATE, PLEA 2014 - 30th Conference, Sustainable Habitat for Developing Societies, Ahmedabad, India 15-18 December 2014
- 2014 Sherif, A., **Sabry H.**, Arafa,R. & Wagdy, A.: ENHANCEMENT OF DAYLIGHTING AND EXTERNAL VIEW AS MEANS FOR ACHIEVING A SALUTOGENIC HOSPITAL, World Health Design, Architecture, Culture, Technology, Design and Health, International Academy for Design and Health, July 2014
- 2014 **Sabry, H.**, Sherif, A., Gadelhak, M. & Aly M.: BALANCING THE DAYLIGHTING AND ENERGY PERFORMANCE OF SOLAR SCREENS IN RESIDENTIAL DESERT BUILDINGS: EXAMINATION OF SCREEN AXIAL ROTATION AND OPENING ASPECT RATIO. Solar Energy journal. SE3821 Volume 103, May 2014, Pages 364-377
- 2014 Bahaa El Din H., **Sabry H.**, Faggal A., El Daly H.: EVALUATING THERMAL PERFORMANCE IN OFFICE BUILDINGS: EXAMINATION OF CONVENTIONAL WALL MATERIALS IN THE REGIONAL CLIMATES OF EGYPT. Engineering Research Journal, Faculty of Engineering, El Matareya Helwan University Volum 143 September 2014
- 2013 Sherif A., **Sabry H.**, and Gadelhak M.: DAYLIGHTING SIMULATION AS MEANS FOR CONFIGURING HOSPITAL INTENSIVE CARE UNIT WINDOWS UNDER THE DESERT CLEAR SKIES. 13th International Conference of the International Building Performance Simulation Association. Building Simulation Conference - Chambéry, 25-28 August 2013, France.
- 2013 Gad el Hak, M., Aly, M. & **Sabry, H.**: HIGH PERFORMANCE FACADES: THE EFFECT OF SUN BREAKERS ON DAYLIGHTING PERFORMANCE AND ENERGY CONSUMPTION IN SOUTH ORIENTED OFFICE SPACES. Architectural Engineering Institute(AEI) Conference - April 3-5, 2013 in State College, Pennsylvania, USA.
- 2012 **Sabry, H.**, Sherif, A., & Gadelhak, M.: UTILIZATION OF COMBINED DAYLIGHTING TECHNIQUES FOR ENHANCEMENT OF NATURAL LIGHTING DISTRIBUTION IN CLEAR-SKY RESIDENTIAL DESERT BUILDINGS. PLEA 2012 - 28th Conference, Opportunities, Limits & Needs Towards an environmentally responsible architecture Lima, Perú 7-9 November 2012

- 2012 Sherif, A., **Sabry, H.**, & Gadelhak, M.: THE IMPACT OF CHANGING SOLAR SCREEN ROTATION ANGLE AND ITS OPENING ASPECT RATIOS ON DAYLIGHT AVAILABILITY IN RESIDENTIAL DESERT BUILDINGS. Solar Energy journal. SE3230
- 2012 Sherif, A., **Sabry, H.**, & Gadelhak, M.: EXTERNAL PERFORATED SOLAR SCREEN PARAMETERS AND CONFIGURATIONS: DAYLIGHTING PERFORMANCE OF SCREEN AXIAL ROTATION AND OPENING PROPORTION IN RESIDENTIAL DESERT BUILDINGS. The International Conference on Computing in Civil and Building Engineering - icccbe2012 June 22- 27 2012, Moscow State University of Civil Engineering (National Research University) , Moscow
- 2012 Sherif, A., **Sabry, H.**, & Rakha, T.: EXTERNAL PERFORATED SOLAR SCREENS FOR DAYLIGHTING IN RESIDENTIAL DESERT BUILDINGS: IDENTIFICATION OF MINIMUM PERFORATION PERCENTAGES. Solar Energy journal. SE3059
- 2011 **Sabry, H.**, Sherif, A., & Rakha, T.: DAYLIGHTING EFFICIENCY OF EXTERNAL PERFORATED SOLAR SCREENS: EFFECT OF SCREEN AXIAL ROTATION UNDER CLEAR SKIES. the International Conference on Sustainable Design and Construction Proceedings. Kansas City, USA.
- 2011 Sherif, A., **Sabry, H.**, El-Zafarany, A., Arafa, R., Rakha, T., & Anees, M.: BALANCING THE ENERGY SAVINGS AND DAYLIGHTING PERFORMANCE OF EXTERNAL PERFORATED SOLAR SCREENS. Plea 2011 - 27th Conference: Architecture & Sustainable Development, (pp. 807-812). Louvain-la-Neuve, Belgium.
- 2011 Mansy, K., **Sabry, H.**, El-Deeb, K. and Fekri, N.: SERVICE LIGHT-WELLS, A REALITY OR A MYTH? EVALUATION OF ENVIRONMENTAL PERFORMANCE AS PRESCRIBED BY THE EGYPTIAN BUILDING CODE: 4th Urbenviron International Congress on Environmental Planning and Management, Green Cities: a Path to Sustainability, Cairo 2011
- 2010 **Sabry, H.**, Sherif, A., Shawky, S. and Rakha, T.: ASSESSING THE EFFECT OF EXTERNAL OBSTRUCTION PARAMETERS ON INDOOR DAYLIGHTING PERFORMANCE IN DESERT CLEAR SKY CONDITIONS: International Sustainable Development Research Conference , 30 May – 1 June 2010, Hong Kong
- 2010 **Sabry, H.**, Sherif, A., Fikry, A. and Rakha, T.: INTEGRATION OF DAYLIGHTING SIMULATION SOFTWARE IN ARCHITECTURAL EDUCATION: The International Conference on Computing in Civil and Building Engineering - icccbe2010 June 30- July 2, 2010, University of Nottingham, UK
- 2010 Sherif, A., **Sabry, H.** and Rakha, T.: DAYLIGHTING FOR PRIVACY: EVALUATING EXTERNAL PERFORATED SOLAR SCREENS IN DESERT CLEAR SKY CONDITIONS: Renewable Energy 2010 International Conference and Exhibition - Advanced Technology Paths to Global Sustainability , June 27 – July 2, Yokohama, Japan
- 2008 **Sabry, H.**: INTEGRATING DAYLIGHTING STRATEGIES INTO THE DESIGN PHASES OF BUILDINGS: ARUP 2008 Conference ( 2nd International Conference of Architecture and Urban Planning Departments – Faculty of Engineering – Ain Shams University)
- 2006 **Sabry, H.**: THE IMPACT OF DAYLIGHTING- GUIDING SYSTEMS ON INDOOR NATURAL LIGHT PENETRATION: SIMULATION ANALYSIS FOR LIGHT-SHELVES: 23rd PLEA Conference ( Passive Low Energy Architecture ) "Design Clever and Affordable Comfort", Geneva, Switzerland
- 2005 **Sabry, H.** And Faggal, A.: INTEGRATION OF ELECTRIC LIGHTING SYSTEM IN A DAYLIT BUILDING: 22nd PLEA Conference ( Passive Low Energy Architecture ) " Environmental Sustainability The Challenge of Awareness in Developing Societies" ,Beirut, Lebanon

### Teaching Experience

INSTITUTION: Department of Architecture – Faculty of Engineering – Ain Shams University (1980 – Present)

INSTITUTIONS: (AUC) The American University in Cairo,(2009)  
(MIU) Misr International University (2007)&  
(MSA) October University for Modern Sciences & Art ( 2002 – 2003)  
COURSES: Under Graduate Students: - Acoustics & Lighting

### **Architectural Practice**

Participation in the design and working details of the following projects:

2003	Design of Auditoria Complex Building at Elbanat Faculty
2002	The New Offices and Laboratories Building of Energy Planning Organization
1982 - 1985	Residential Buildings in Saudi Arabia
1980 - 1982	Office Buildings, Mosques and Residential Buildings in Egypt and Saudi Arabia as a part of the design team at The Center of Planning & Arch. Studies (CPAS), Dr.Abedelbaky Ibrahim

### **Membership of Professional Organizations and Societies**

**Member of Syndicate of Engineers and Syndicate- Licensed Consultant**

*Prof. Dr. Hanan Mostafa Kamal Sabry - 2023*