



# Hany Hossam Eldien

**POSITION:** Associate Professor

## Personal Data

Nationality | Egyptian

Date of Birth | 21 May 1970

Department | Building Engineering

Official UoD Email | [hehassam@iau.edu.sa](mailto:hehassam@iau.edu.sa)

Office Phone No. |

## Language Proficiency

Language	Read	Write	Speak
Arabic	Native	Native	Native
English	Fluent	Fluent	Fluent
French	Fluent	Fluent	Fluent

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
1993	B.Sc. Architecture	University of Alexandria	Egypt
1998	M.Sc. Architecture	University of Alexandria	Egypt
2005	PH.D. Building Acoustics	University of Nantes	France

## PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Forme architecturale : une approche d'auto - protection sonore : "application à la forme du balcon"
Master	A comparative study to assess the environmental performance of the urban fabric of residential communities in the Western Desert of Egypt

## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Teaching Assistant	Alexandria University, Egypt	1993 - 1994
Teaching Assistant	Canal Suez University, Egypt	1996 - 1998
Lecturer	Canal Suez University, Egypt	1998 - 2001



Chercheur (CNR2)	CERMA, Nantes University, France	2001 - 2005
Chercheur (CNR2)	LCPC Lab., Ministère de l'Enseignement Supérieur et de la Recherche, France	2006-2008
Assistant Prof.	Canal Suez University, Egypt	2008-2009
Assistant Prof.	Dammam University, KSA	2009 - 2014
Associate Prof.	Dammam University, KSA	2014 - Till Now

## Scientific Achievements

### Published Refereed Scientific Researches

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1.	H Hossam Eldien, U M Bongwirnsso, S Alzaher	The effects of workstation arrangements on the acoustical performance of the architecture design studios.	INTER-NOISE and NOISE-CON Congress and Conference Proceedings 265 (7), 694-710, 2023
2.	H Hossam Eldien, U M Bongwirnsso, E Hammad	Impact of Mihrab geometry on the acoustics of the mosque	INTER-NOISE and NOISE-CON Congress and Conference Proceedings 265 (7), 379-391, 2023
3.	H Hossam Eldien,	Effect of Dome-Shape on the Reverberation Time of the Mosque-A Case Study	Civil Engineering and Architecture 11 (4), 1749-1775, 2023
4.	H Hossam Eldien, S. M. Alizadeh	Evaluation and prediction of the rock static and dynamic parameters	Journal of Applied Geophysics, 2022
5.	H Hossam Eldien, VV Borisov, B Ranjbar, YS Sallam	Piezoelectric sensors application in causing inductive vibrations by external fluid flow around the porous micro-beam and energy harvesting	Journal of the Brazilian Society of Mechanical Sciences and Engineering 43, 2021
6.	H Hossam Eldien, K Gazzeh, E Hammad	An investigation on urban soundscape essentials in ecological acoustics	Journal of Green Engineering 10 (9), 7290-7311, 2020
7.	H Hossam Eldien, K Gazzeh, E Hammad	Sustainable Supply Chain Management in Smart City Design: A Case Study of Al Khobar City Centre	International Journal of Supply Chain Management 9 (4), 893 – 910, 2020



8.	H Hossam Eldien, K Gazzeh, E Hammad	Urban Characterization by the Green Supply Chain Management Concept: A Review	International Journal of Supply Chain Management 9 (4), 962 – 971, 2020
9.	A Qasem, YS Sallam, H Hossam Eldien, BH Ahangarn`	Bond-slip behavior between ultra-high-performance concrete and carbon fiber reinforced polymer bars using a pull-out test and numerical modelling	Construction and Building Materials , 2020
10.	H. Hossam Eldien Alaa Algargoosh	Improving the indoor sound quality by using cymatic shapes	Proceedings of Meetings on Acoustics (POMA), 2013.
11.	H. Hossam Eldien,	Impact of Inner Courtyard Form on Human Sensational Perception.	Port Said Engineering Research Journal, Port Said University, Issue 16, vol. 2, Sept. 2012
12.	H. Hossam Eldien,	The Influence Of Inclined Line Traffic Sources Close to Building Facades With Balconies.	Noise Control Engineering Journal (NCEJ) Issue, July-Aug , 2012.
13.	H. Hossam Eldien,	Noise Mapping In Urban Environments: Application at Suez City Center.	Journal of Computers & Industrial Engineering, Issue, 6-9 July 2009 Page(s):1722 - 1727
14.	H. Hossam Eldien, J. Picaut, C. Sémidor, P. Woloszyn, & al	Effets de la réflexion diffuse des façades sur la propagation acoustique et sur la représentation de l'environnement sonore en milieu urbain	Journal d'Acoustique Techniques, 2008; pp. 17-26
15.	H. Hossam Eldien, P. Woloszyn,	New Roadway noise modeling to predict noise propagation in front of urban façade.	The Journal of the Acoustical Society of America, vol. 123, issue 5, 2008
16.	H. Hossam Eldien, P. Woloszyn,	The acoustical influence of balcony depth and parapet form: experiments and simulations	Science Direct - Journal of Applied Acoustics 2005; 66: 533-551.
17.	H. Hossam Eldien, P. Woloszyn,	Prediction of the sound field into high-rise	Science Direct - Journal of Applied Acoustics 2004; 65/4: 431-440.



		building facades due to its balcony ceiling form	
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#### Patents:

#	Name of Patent	Publisher and date of Publication
1	Sound diffuser inspired by cymatics phenomenon. (US9058799 B2)	USPTO, June16, 2015
2	Systems and methods for sound waves fire extinguishers (US9907987 B2)	USPTO, March 6, 2018
3	Airborne noise reduction system and method (US 10,139,126 B2)	USPTO, Nov. 27, 2018

#### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	H Hossam Eldien, et al	Impact of Mihrab Geometry on The Acoustics of Mosque	InterNoise 2022, August 2022.
2	H Hossam Eldien, et al	The effects of workstation arrangements on the acoustical performance of the architecture design studios.	InterNoise 2022, August 2022.
3	H Hossam Eldien, U Bongwirnsu	IMPACT OF PARTITION TYPES ON ARCHITECTURE DESIGN STUDIOS ACOUSTICAL ENVIRONMENT	InterNoise 2021, August 2021.
4	H. Hossam Eldien & A. Alshawan	Effect of Mihrab Geometry on the Acoustic Performance of Mosque	The First International Conference on Mosques Architecture , Dammam, KSA, 2016
5	H. Hossam Eldien & Y. Farghaly	The Impact of Dome Shape on Speech Transmission Index	The First International Conference on Mosques Architecture , Dammam, KSA, 2016
6	H. Hossam Eldien	Soundscape approach as a tool to evaluate the acoustic comfort in urban open spaces.	The First International Conference of the CIB Middle East & North Africa Research Network CIB-MENA 2014



7	H. Hossam Eldien	Impact of mosque geometry on its acoustical performance.	The First International Conference of the CIB Middle East & North Africa Research Network CIB-MENA 2014
8	H. Hossam Eldien H. Al Qahtani	The Acoustical Performance of Mosques' Main Prayer	Acoustics 2012 conference Nantes, France. April 2012.
9	H. Hossam Eldien	The influence of inclined roads on the acoustical performance of building facades with balconies,	InterNoise 2011, Osaka, September 2011.
10	H. Hossam Eldien	Conception Architecturale : Une approche environnementale d'auto – protection,	ASCAAD 2010, Fas, Maroc, October 2010
11	H. Hossam Eldien, J. Picaut	An experimental study of the use of acoustic diffusers to reduce noise in urban areas	39th Congress INTER-NOISE, Lisbon, Portugal, 2010
12	H. Hossam Eldien	New simulation tool to predict the acoustical protection obtained by Balcony architectural elements,	Third International Conference of The Arab Society for Computer Aided Architectural Design, Alexandria, 2007.
13	H. Hossam Eldien	Sound Field Behaviour of Urban Street Canyons,	XXXVth IAHS World Congress on Housing Science, Melbourne , Australia, 2007.
14	H. Hossam Eldien	Noise mapping as a noise management tool to maintain low noise exposures in large urban areas, application at Suez city centre,	Conference of ARCHICAIRO 2007, Cairo, Egypt, 2007.
15	H. Hossam Eldien	Listen to Urban Form; Acoustical Application to Urban Frontages ,	Conference of Sources of Architectural Form, Kuwait, 2007.
16	H. Hossam Eldien	New numerical formula to predict the acoustical protection obtained by Balcony depth for high-rise building	Conference of ARCHICAIRO 2006, Cairo, Egypt, 2006.
17	H. Hossam Eldien	Courtyards forms, an approach to improve the illumination and acoustical environments	Conference of IAPS 19, Alexandria, Egypt, 2006.
18	H. Hossam Eldien, P. Woloszyn	Perceptive Evaluation Procedures for Diffuse Reflexion Listening	Conference of IAPS 19, Alexandria, Egypt, 2006.



19	H. Hossam Eldien, P. Woloszyn,	Acoustical effect evaluation of balconies' ceiling form in protecting building facades against traffic noise.	CIB-2004 World Building Congress, Toronto, Canada, 2004.
20	H. Hossam Eldien,	Forme architecturale; une approche de protection sonore (Application à la forme du balcon).	2ème Journées GDR, Marseille, France, 2004.
21	H. Hossam Eldien, P. Woloszyn,	Balcony form; an approach to reduce sound pressure level into the building façade.	Third International Conference on Modelling and Experimental Measurements in Acoustics, Acoustics, Cadiz, Spain, 2003
22	H. Hossam Eldien,	Acoustic performance of high-rise building facades due to its balconies form	Fifth European Conference on Noise Control; Euronoise, Naples, Italy, 2003.

### Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	H. Hossam Eldien et al.	Soundscape as an urban design approach: A case study of Al Khobar city center	Dammam University, 2018
2	H. Hossam Eldien A. Al Sudairi	Evaluation of the Acoustical Performance of Educational Spaces. Application at Dammam University	Dammam University, 2014
3	H. Hossam Eldien H. Al Qahtani	The Effect of Domes Shape on the Acoustics of Mosques.	Dammam University, 2013
4	H. Hossam Eldien H. Al Qahtani	Evaluation of Acoustical Characteristics of Mosques' Prayer Halls, A Study Case on Mosques in Dammam City	Dammam University, 2012
5	H. Hossam Eldien J. Picaut	Développement d'un dispositif de reduction des nuisances sonores en milieu urbain.	Laboratoire Central des ponts et Chaussées (LCPC), 2006 - 2008.
6	H. Hossam Eldien J. Picaut	Développement d'un dispositif de reduction des nuisances sonores en milieu urbain.	Laboratoire Central des ponts et



			Chaussées (LCPC), 2008.
7	H. Hossam Eldien J. Picaut	Sources sonores pour maquettes acoustiques urbaines.	Laboratoire Central des ponts et Chaussées (LCPC), 2007.
8	H. Hossam Eldien P. Woloszyn, & al	Effets de la réflexion diffuse des façades sur la propagation acoustique et sur la représentation de l'environnement sonore en milieu urbain	Centre National Français de la Recherche Scientifique (CNRS), 2005.

### Membership of Scientific and Professional Societies and Organizations

- French Society of Acoustics – SFA, **Member**
- French group for traffic noise and Urban noise research - GDR 2493, **Member**
- Egyptian society of Architecture, **Member**
- Arab Society for Computer Aided Architectural Design, **Member**
- The Institute of Noise Control Engineering of the USA, **Member**
- UK Acoustics Network Plus (UKAN+), **Member**
- American Society of Acoustics – ASA, **Member**
- International Institute of Acoustics and Vibration (IIAV), **Member**

### Teaching Activities

#### Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Design Studio 5 Tech	BSTC 301	Teaching
2	Design Studio 6 Tech	BSTC 302	Teaching
3	Environmental Engineering “Building Acoustics”	BSTC 521	Teaching
4	Acoustical Modeling	BSTC 582	Teaching
5	Noise & Vibration Control	BSTC 586	Teaching
6	Construction System I	BSTC- 311	Teaching
7	Construction System I	BSTC- 312	Teaching
8	Building Systems-II (Lighting and Acoustic)	INAR 322	Teaching



9	Environmental Control Systems II.	ARCH-322	Teaching
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**Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)**

1	Principles of Architectural Drawing
2	Principles of Building Services design
3	Principles of Building Acoustics
4	Building Acoustics simulation
5	Noise and Vibration treatments in buildings
6	Building construction systems
7	Building construction special systems
8	Lighting and Acoustics design in closed spaces
9	Lighting, plumbing and Acoustics systems in buildings

**Postgraduate**

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Fundamentals of Acoustics	MAE 650	Teaching
2	Architectural and Building Acoustics	MAE 651	Teaching
3	Room Acoustics	MAE 652	Teaching
4	Auditorium Acoustical Design	MAE 653	Teaching
5	Noise Control Engineering	MAE 654	Teaching
6	Environmental Noise Management	MAE 655	Teaching
7	Computer Simulation for Acoustics	MAE 656	Teaching
8	Sound system Design (Transducer Design)	MAE 657	Teaching
9	Building Acoustics Measurement, Analysis and Assessment	MAE 658	Teaching

**Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)**

1	Fundamentals of sounds, sound intensity, energy density, sound level and loudness.
2	Basic concepts and principles of Architectural acoustics





3	Fundamental physical principles underlying the generation and propagation of sound waves in indoor spaces
4	Auditorium Acoustical Design and treatments
5	Sound propagation outdoors and indoors, and the principles of passive noise control
6	Stages in Noise Management and Recommended Noise Management Measures
7	Building construction special systems
8	Basic experience in using computer-aided acoustic modeling tools.
9	Basic of Acoustical and electro acoustical measurements, assessed through laboratory or field work, and the major aspects of sound system design

### Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
	Undergraduate	5	2021	Now

### Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1	Ph D	The effect of natural ventilation on the architectural formation with a special study of the vocabulary of the facades	Cairo University	2009
2	Master	The acoustic environment as an introduction to urban design	Alexandria University	2011
3	Master	The mechanism of modern processors in the design of multi-purpose halls (acoustic processors)	Alexandria University	2012
4	Master	Factors affecting sensory perception Components of space	Port Said University	2012
5	Master	Improving Indoor Sound Quality by Using Cymatic Shapes	Dammam University	2013
6	Master	Effect of Mihrab Geometry on the Acoustic	Imam Abdulrahman Bin Faisal University	2017



		Performance of Masjid		
7	Master	Evaluate the Acoustic parameters performance in Classrooms in Saudi Arabia	Imam Abdulrahman Bin Faisal University	2018
8	Master	Sound quality of internal light partitions; Applied study on the Saudi market	Imam Abdulrahman Bin Faisal University	2019

### Committee Membership

#	From	To	Position	Organization
1	2016	Now	KPI Data Collection Committee/Head	Department of Building Engineering
2	2016	Now	Laboratories Committee/Head	Department of Building Engineering
3	2016	Now	Curriculum Area Committees /Member	Department of Building Engineering
4	2016	Now	Research Committee/ Member	Department of Building Engineering

### Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	ODEON, CATT ACOUSTIC
2	DIRAC Room Acoustics,
3	Predictor-LimA,
4	B&K PULSE, 01dB Building Acoustics
5	Microsoft Office "suite office "
6	AutoCad
7	Photoshop
8	Photography



Last Update

28/08/2023