## Khaled Nabil, Ph D

# **Professor of Architecture, Consultant Engineer & Inventor**

#### **Personal Info:**

Full Name Khaled Ibrahim Nabil Ahmed

Nationality Egyptian

Birthday & Place 17 January 1959, Cairo, Egypt Current Position Professor of Architecture & Building

Technology, Architectural Engineering Dep., Faculty of Engineering, Zagazig University,

Egypt.

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#### **Degree Awarded:**

- B.Sc. of Architectural Engineering, Housing Branch, Faculty of Engineering, Alexandria University 1981, Class rank 2/97, Excellent in Graduation project and Architectural Design.
- M. Sc.; "The Construction of Low-income Housing", Faculty of Engineering, Zagazig University 1988.
- Ph.D. of Architectural Engineering, Faculty of Engineering, Cairo University in collaboration with Pennsylvania State University 1995.
   Thesis title: "Appropriate Self Build Technology".
- Associate professor, Supreme Council of Universities, Egypt 2001.
- Professor of Architecture & Building Technology, by Supreme Council of Universities, Egypt December 2005.

### Specialty:

Building Technology and affordable Housing construction; with teaching experience in 10 Universities. Courses:

- Architectural Design (all levels)
- Appropriate Building Technology (Post graduate)
- Building Construction 1, 2, 3
- Housing
- Architectural Skills
- Color & visual formation
- Interior Design
- Architectural Theories 1, 2, 3
- Working Drawings
- Graduation project
- Islamic Architecture
- Intelligent Buildings

#### **Teaching Employment:**

- Instructor, Architectural Dep., Faculty of Engineering, University of Alexandria, 1981-1984.
- Instructor, Dep. of Building Construction, Faculty of Engineering, Zagazig University, 1985-1987.
- Lecturer at the Architectural Dep., Zagazig University 1988-94.
- Associate professor in the Architectural Dep., Zagazig University of 1995-2000.
- Associate professor, the Architectural Dep., Zagazig University, March 2001 - March 2006.
- Visiting professor at the Higher Institute of Al Asher men Ramadan, Dep. of Architectural Eng., Egypt, 2001.
- Visiting professor at Suez Canal University, Dep. of Architectural Engineering 2002-2003, 2005-2007.
- Visiting professor at United Arab Emirates University, Dep. of Architectural Engineering, 2003-2005.
- Professor of building technology at Department of Architectural Eng., Faculty of Engineering, Zagazig University since 2006.
- Visiting Professor of building technology at Department of Architecture, Faculty of Fine Arts, Alexandria University, 2007/08.
- Professor at Islamic Architecture Dep., Faculty of Engineering, Omm Al Qurra University, Makkah, Saudi Arabia. 2009-2014.
- Professor of Architecture, Collage of Architecture & Design, Effat University, Jeddah, SA. 2015-2016
- Professor of Architecture & Building Technology, Architectural Dep., Faculty of Environmental Design, King Abdul Aziz University, Jeddah, SA. 2016-2019.
- Visiting Professor of building technology at Department of Architecture, Faculty of Engineering, British University at Cairo, 2020.

#### **Published Books:**

"Building Technology of Affordable Housing", Edited in both Arabic & English 2018. ISBN 978-977-90-5636-4, at: https://khalednabil.net/

#### **Published Research:**

- "The Impact of Research on the Urban Poor", Proceedings of The 7<sup>th</sup> Inter-School Conference, Loughborou University of Technology, England (1990).
- 2) "Appropriate Building Technology", Seminar of "Towards better building performance, Cairo University (1995).
- 3) "*Charity Housing*", The 24<sup>th</sup> IAHS World Housing Congress, Ankara, Turkey, Vol. 1, PP 360-368, METU, Turkey (May 1996).
- 4) "Pre-cast Stairs for Self Help Housing", The International Journal for

- Housing Science, Vol. 20 No.4, PP 255-262, USA (1996).
- 5) "Environmental and Urban Role of Mohtaseb in the Islamic City", with Bendari, Proceedings of scientific conference of Benha Branch, Zagazig University, (1999). Arabic
- 6) "The Holly Koran and Building Technology", Journal of the Egyptian Society of Engineers, No. 2, VOL. 38, Cairo (1999).
- 7) "Economics and Building Techniques of Minimum Cost Housing", with Bendari, Proceedings of the 6<sup>th</sup> Int. Conference in Building and Construction, INTERBUILD, Cairo. (1999). Arabic
- 8) "Techniques of Finishes for Minimum Cost Housing", Scientific Engineering Journal of Helwan University, Egypt (2000). Arabic
- 9) "Affordable Housing Through Social Marketing", Proceedings of The 28<sup>th</sup> International Housing Congress IAHS, Abu Dhabi, (2000).
- 10) "The Dilemma of Changes in Housing Facades", (with Desouki & Shanawani), Proceedings of the 7<sup>th</sup> International Conference in Building and Construction, INTERBUILD, Cairo, (May2000).
- 11) "Criteria of Coloring Facades", Proceedings of the 8<sup>th</sup> Int. Conference in Building and Construction, INTERBUILD, Cairo, (May 2001). Arabic
- 12) "Improvement of Home Design for Distance Learning & Working" Proceedings of the 8<sup>th</sup> Int. Engineering Conference of Al Azhar University, Cairo, (April 2003). Arabic
- 13) "Overview of the Saudi Housing Construction", Proceedings of Housing Symposium II, The High Commission for the Development of Arriyadh, Saudi Arabia, (March 2004).
- 14) "Appropriating Intelligent Buildings", with Hanafi, Asem, Proceedings of The 32<sup>th</sup> International Housing Congress IAHS, Trento University, Italy (September 2004).
- 15) "Housing Strategy of the Urban Poor", With Shanawani, Journal of Egyptian Society of Engineers, Cairo (2004).
- 16) "Quality and its Impact on Cost in Mass Housing Projects", Journal of Egyptian Society of Engineers, Cairo (2004). Arabic
- 17) "Social Impact of Digital Revolution on Urban Housing", with Nasef, S. Proceedings of the 6<sup>th</sup> Inte. Engineering Conference of Assuit University, Egypt, March, 2005. Arabic
- 18) "Smart Housing: A Critical Historical Review", with Hanafi & Ragab, Proceedings of ArchCairo February 2005.
- 19) "Towards Environment-Friendly Intelligent Buildings ...Cooling Systems in High-rise Buildings in Hot Arid Regions", With Ragab & Hanafi. International Congress on Environmental Planning and Management, Environmental Challenges of Urbanization, 2005 (Brazil ISBN: 85-905036-2-3).
- 20) "Robotics' Potentials for Tall Buildings", with Ragab & Hanafi, The 7th International Conference on Multi-Purpose Towers and Tall Buildings, IFHS 2005, Dubai, UAE, December 10-11-2005.
- 21)"Reuse of Demolished Building's Debris in Post war Construction",

- The 1<sup>st</sup> Euro-Mediterranean Regional Conference, Barcelona, pp 514-518. (July 2007).
- 22) "Low Cost Roofs for self Build" Proceedings of The International Architectural Conference of Assuit University, Egypt, March, 2010. In Arabic.
- 23) "Sustainable Conservation of Heritage Environments; Master Degree program", with M. Abolilah, The 2<sup>nd</sup> Qassim University Architectural Forum, SA, 20 April 2015.
- 24) "Appropriate Building Technology & Sustainability", The Saudi International Conference for Building and Construction Technologies, KACST, Riyadh10-11 May, 2015.
- 25) "Smart to Smarter: Smart Home Systems; Future Challenges, with Sultan, CHI2016 Workshop, Future of Human-Building Interaction, San Jose, USA, May 2016.
- 26) "Adaptive Smart Home Automation using Big Data Analysis for User Behaviors", With M sultan, International Conference. Between Data and Senses, Architecture Neuroscience & Digital World BDS2017 UEL University of East London, March 2017.
- 27) "SLASH: Self-learning and adaptive smart home framework by integrating IoT with big data analytics", With M sultan, Computing Conference, London, UK. 18-20 July 2017. http://ieeexplore.ieee.org/document/8252147/?reload=true
- 28) "Critique for Ismailia Experience in Developing Mohamed Ali's Boulevard, Egypt", International Conference of Architectural & Urban Heritage of Mediterranean, Hamamet, Tunisia, 18-20 November, 2018.In Arabic.
- 29) "Tahrir Square, Cairo during 2011; From vague Space into livable interactive Place", Spaces & Places Conference, Bruges, Belgium, April 2019. <a href="http://www.progressiveconnexions.net">http://www.progressiveconnexions.net</a>

## **Supervised Thesis:**

- MSc.by Hussein Essam Abo Elfadl : Dynamic &Transformable Architecture, Zagazig University, Egypt. 2012
- MA, Rakan Bahshawan: Improving Mena Path; Establishing Truth experience, with Rayan Madson, Catalina Strother, Savannah College of Art and Design USA. 2016
- PH D. supervision for Minna Gamal Eldin: Inclusive Interactive Architecture for the Disabled in Egypt, Zagazig University, Egypt. 2020

## **International Training:**

- 1) Master Degree research (1989/1990) of Appropriate Building Technology, The Institute of Advanced Architectural Studies, University of York, UK.
- 2) Applied research (1991/1992) of Self-Build Technology at the Department of Architectural Engineering, Pennsylvania State University, USA.
- 3) Material research (1992/1993) Development of small pre-cast building

- components at the Civil Engineering Department, Ohio State University, USA.
- 4) Participating in the "BASIN-AEA" Awareness Seminar of Appropriate Building Technology at Inshas Science City, 12-24 September 1996. (BASIN; EU Organization).

#### Attended Conferences in the last 10 years:

- 1) The 8<sup>th</sup> International Architectural Conference of Assuit University, Egypt, (March, 2010).
- 1st Forum for upgrading Informal Areas, Prince Khalid Al Faisal -Research Chair for Upgrading Informal Areas in Makkah City, SA, 2013.
- 3) GIS Innovation Forum, Umm Al Qura University, Mekkah, Saudi Arabia, February 6, 2014.
- 4) The 2<sup>nd</sup> Qassim University Architectural Forum, SA, 2015.
- 5) Saudi International Conference for Building and Construction Technologies, KACST, Riyadh, May, 2015.
- 6) Architecture Neuroscience & Digital World BDS2017 UEL, University of East London UK, 23-24 March 2017.
- 7) Computing Conference, London, UK. 18-20 July 2017.
- 8) International Conference of Architectural & Urban Heritage of Mediterranean, Hamamet, Tunisia, 18-20 November, 2018.
- 9) Spaces & Places Conference, Bruges, Belgium, April 2019.

### **Language and Computer:**

High command of Arabic and English; (language certificate from University of York, England). Computer skills of different software related to building construction. Use of online learning; Blackboard, Zoom & Google Classrooms

#### Inventions:

- 1) US patent: Cut stone construction and masonry method, US 20140245679
- 2) US patent: Low cost roofing techniques, US08984841 B1
- 3) WIPO Patent: Transparent OLED architectural partition and method WO 2016016674 A1
- 4) WIPO Patent: **OLED multi-use intelligent curtain & method** WO2016016675
- 5) US Patent: Step-block precast stair, US9347224

All inventions are Assigned by: Umm Al-Qura University, SA. All patents are at: https://patents.justia.com/inventor/khaled-i-nabil-ahmed

# **Rewards & Architectural Competitions:**

- Design of a multi-purpose residential, commercial & Office building, 12 floors, with underground parking at Ismailia, Egypt 1985.
- Police Officers' beach club, Ismailia. 1986.
- El Manar Language School, Ismailia. 1997.
- 2 rewards in the design of the squares and land marks of the Eastern Region of

- Saudi Arabia 2007, (El mesbaha & the waves), with others.
- Winning the planning of lagoon Valley development with Prof. Tarek Abo Zekry, in a limited planning competition. It is a mega project of 880 acres on the northern coast, Egypt. Winning the general layout led to more design work of; 3 hotels, a vernacular village, cabins & yacht marina, the civic center: administration BLD, nursery, mosque, shopping center, country club, small zoo, swimming pool.

## Society membership:

- The Egyptian Engineering Syndicate since 1981.
- Consultant engineer in the design of housing projects since 1997.
- International Association for Housing Science, USA.

#### **Practical Experience:**

I have established my private design office, Dar El Fan Elmimary at Isamilia, Egypt at 1985. As a consultant engineer in the design of housing projects since 1997, granted by The Egyptian Engineering Syndicate, I have designed and supervised almost 285 projects of most functions; residential, offices, educational, recreational, hotels, hospitals and multiuse. This has led The UN to assign me as their consultant to the International Population Conference, held in Cairo at 1994. Such wide and large scale practical experience, in addition to attending building conferences and fairs of building materials in Egypt, England, France, Germany, Italy, USA an UAE has developed my practical experience in Architecture & building technology. In 2012, I was chosen to be the technical manager of the housing project of Omm Al Qura University, Makkah, SA. In 2015, I have participated in the architectural competition of design of the new Collage of architectural & Design "COAD" of Effat University, Jeddah, SA. The building built area is 14000 square meter. It was designed in just 3 weeks with the help of 2 students. The following is the Consultancy Certificate and a short list of some projects I have designed myself:



Project	Owner	Year
1- Multi-purpose residential, commercial	Sheikh Taher	1982
& Office building, 14 floors. Jedda,	Elmasry	
Saudi Arabia.		
2- Block apartment BLD, Ismailia, Egypt.	Mr. Farook Saleh	1984
3- Apartment & Office building, Ismailia,	Eng. Ahmed Rizk	1985
Egypt.		
4- Police Officers' beach club, Ismailia.	Security Direcrorate	1986
5- Amal City planning, 17 acres, Block	Abdonco Company	1987
apartments & land plots. Ismailia.	For Construction	
6- Nesma Beach villas & cabins, Bitter	Abdonco Company	1988
Lake, Suez.	For Construction	
7- Land escape of Hotel Etap (Mercure)	Hotel Etap	1989
cabins. Ismailia.	(Mercure) Ismailia	
8- Ameen Oasis, residential compound	Mr. Ameen Awad	1991
of 26 different Islamic style villas, Cairo-		
Alexandira desert road.		
9- Masjed & Islamic academy of	Islamic Society of	1991
Colombus, Ohio, USA.	Central Ohio	
10- Interior design of Cairo Stadium	Population Council,	1993
indoor halls, for the International	United Nations	
Population Conference, Cairo 1994.		
11- Residential Mansion, swimming	Dr. Hassan Yousif	1994
pool, tennis court & garages, King		
Mariout, Alexandria. 2500m <sup>2</sup>		
12- Karimo Motel, Upper Cliff, Sharm El	Karimo for Real	1995
Sheikh.	Estate Investment	
13- Villa & apartment BLD in The 6 <sup>th</sup> of	Eng. Fakhr Eldeen	1996
October city (near Cairo).	Hawas	400=
14- El Manar Language High School :	El Manar Language	-1997
36 classes, 5 labs, 4 activity rooms,	School	1998
cafeteria, mosque, services & multi-		
purpose hall.	A	4000
15- Al Ayoun Resort : 3 types of villas,	Ayoun Company	-1999
cabins, 12 swimming pools, shops, play		2000
courts, mosque, administration and		
services. 4 star hotel of 210 rooms with		
full services. 300000 m², Saini, Red sea		

16- Office Building of Green Valley Company.	Green Valley Company	2001
17- Planning Studies & proposal layouts of 2 villages in Diarb Negm, Al Sharkia	Urban Planning Authority, Housing	-2002 2003
Governorate, Egypt.	Ministry	
18- Canal Higher Institute for	Canal Society for	-2005
Engineering & Canal Higher Institute for Business Administration and	Human Resources Development	2006
Technology. Both institutes have full	Development	
educational services, 15000 m <sup>2</sup> .		
19- International University at Mersa	International	2007
Matrouh, Egypt: Administration & main	University at Mersa	
auditorium BLD, Faculties of Medicine,	Matrouh, Owned by	
Pharmacy, Dentistry, Environmental	Amlak for Real	
Technology, Engineering, law, Media,	Estate	
Business and Educational hospital and	Development,	
Nursing school. In addition to hospital	Alexandria, Egypt.	
facilities, student center with food court,		
Mosque, student and staff housing, indoor sports" hall and swimming pools.		
The university lies in 160 acres.		
20- Lagoon Valley; planning and design	Lagoon Valley,	2008
of 880 acres on the northern coast, near	Owned by Amlak for	
Mersa Matrouh, Egypt. Layout includes	Real Estate	
2000 villas. 10 hotels; 3 to 5* a mini-golf	Development	
course, a vernacular bedwin hotel, day	Alexandria, Egypt.	
use cabins and yacht marina. A civic		
center containing administration,		
nursery, mosque, shopping center,		
country club, small zoo, and swimming		
pool. A cable car root connects the		
beach, villas, aqua park and the main gate, where a mall/hotel can receive		
guests on the international coastal road.		
21- New Collage of architectural &	Effat university,	2015
Design "COAD" of Effat university,	Jeddah.	
Jeddah. The building is 5 floors, with a		
total built area is 14000 sqm.		