

**Mohamed Osama Ramadan El Hariri,**  
**PhD; MSc; Consultant Eng.**  
**Certified External Reviewer for NAQAAE**

**Professor, Banha University.**  
**Faculty of Engineering (at Shobra)**

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### **Career Objectives**

To continually enhance and develop my professional, academic and research skills for the purposes of making significant contributions to the field of quality control, testing, durability and repair of structures; to continue my successful career as a well respected and exceptional educator, trainer and consultant of concrete design and technology, steel structures design, and geotechnical engineering; keep up to date with the latest teaching and training methods and techniques.

### **Mailing addresses**

84 El Tairan street, Nasr City, Cairo 11371, Egypt.

### **Education**

#### **Ph.D., Civil Engineering, November 1993.**

University of Dundee, Scotland, UK.

Thesis Title: Development of PFA Mortar for Masonry Construction.

#### **M.Sc., Civil Engineering, May 1988.**

Cairo University, Cairo, Egypt.

Thesis Title: Permeability and Consolidation Rate of Normally Consolidated Clay.

#### **B.Sc. In Civil Engineering, May 1981.**

Cairo University, Cairo, Egypt.

### **Membership of Professional Associations**

Member, American Society of Civil Engineers (ASCE) and *former Secretary of the ASCE Egypt Section.*

Consultant Engineer, Concrete design and Geo-technical engineering.

Member, Egyptian Engineers Syndicate.

Member, The Society of Egyptian graduates of British Universities.

### **Consultancy positions**

- *Member of Egyptian code for design and construction of concrete structures, Code number 203-2007, materials committee.*
- *Member of Egyptian code for design and construction of concrete structures, Third appendix, Guide for Laboratory testing of concrete materials, number 203.*
- *Director, Concrete and quality control laboratory, Faculty of Engineering (shobra), banha university, Cairo, Egypt.*

- Member of "Committee of Architectural heritage buildings in Cairo", Cairo governorate, Egypt.
- Member of "Assessment of structurally defective buildings in Cairo" committee, Cairo governorate, Egypt.
- QA consultant, Quality control and testing Laboratory, National Agency for Cooperative Housing, Jan. 2005 to Jan. 2008.
- Cairo Governor technical consultant for road paving, Jan. 2003 to Jan. 2008.
- External reviewer, Supreme Council of Egyptian University, Board of Promoting Faculty Members, 2013.

### **Academic Posts**

#### **Professor, August 2009, to present**

##### ***Banha University (Egypt), Faculty of Engineering (Shobra).***

Teaching duties included the following courses:

- Construction Technology (3<sup>rd</sup> and 4<sup>th</sup> year Civil),
- Advanced C.E. Materials (4<sup>th</sup> year Civil),
- Concrete Technology and Quality Control (2<sup>nd</sup> year Civil),
- Advanced Construction Technology (MSc pre-requisite course),
- Advanced Civil Engineering Materials (MSc pre-requisite course),
- In-situ testing of concrete structures (MSc pre-requisite course),
- Computer applications in Civil Engineering (Diploma course).

#### **Visiting Professor, March 2008 to September 2010**

##### ***King Faisal University, (now Dammam University), (KSA), College of Architecture and Planning.***

Teaching duties included the following courses:

- Concept of Structures I, (Theory of structures),
- Building Structures I, (Concrete technology and design)
- Building Construction II, (Steel structures design),
- Technical Project II, (High Rise Buildings),
- Technical Project III, (Prefabricated Buildings)
- Materials and building technology, (postgraduate level, MSc course).

#### **Associate Professor, October 2001 to August 2009**

##### ***Banha University (Egypt), Faculty of Engineering (Shobra).***

Teaching duties included the following courses:

- Construction Technology (3<sup>rd</sup> and 4<sup>th</sup> year Civil),
- Advanced C.E. Materials (4<sup>th</sup> year Civil),
- Concrete Technology and Quality Control (2<sup>nd</sup> year Civil),
- Advanced Construction Technology (MSc pre-requisite course),
- Advanced Civil Engineering Materials (MSc pre-requisite course),
- In-situ testing of concrete structures (MSc pre-requisite course),
- Computer applications in Civil Engineering (Diploma course).

#### **Assistant Professor, December 1993 to October 2001**

##### ***Zagazig University, Banha Branch, Faculty of Engineering (Shobra).***

Teaching duties included the following courses:

- As above.

**Visiting Assistant Professor, October 1997 to June 1998**

***Higher Institute of Engineering (Egypt), 10<sup>th</sup> of Ramadan City.***

Teaching duties included the following courses:

- Civil Engineering (1<sup>st</sup> year Electrical Eng.).
- Civil Engineering (1<sup>st</sup> year Chemical Eng.).

**Tutorial Assistant, October 1992 to June 1993**

***University of Dundee, Scotland, United Kingdom.***

Teaching duties included the following courses:

- Mechanics (1<sup>st</sup> year Civil),
- Fluid Mechanics (1<sup>st</sup> year Civil).

**Assistant Lecturer, May 1988 to December 1993**

***Zagazig University (Egypt), Banha Branch, Faculty of Engineering (Shobra).***

Teaching duties included the following courses:

- Theory of Structures (1<sup>st</sup> and 2<sup>nd</sup> year Civil),
- Design of Concrete Structures (3<sup>rd</sup> year Architecture)
- Soil Mechanics and Foundation Engineering (3<sup>rd</sup> year Civil),
- Foundation Engineering (4<sup>th</sup> year Civil),
- Design of metallic structures (3<sup>rd</sup> year civil).

**Demonstrator, October 1983 to May 1988**

***Zagazig University, Banha Branch, Faculty of Engineering (Shobra).***

Teaching duties included the following courses:

- Theory of Structures (1<sup>st</sup> and 2<sup>nd</sup> year Civil),
- Design of Concrete Structures (3<sup>rd</sup> year Architecture)
- Soil Mechanics and Foundation Engineering (3<sup>rd</sup> year Civil),
- Foundation Engineering (4<sup>th</sup> year Civil).

**Research Interests**

Research interest is focused in the area of quality control and testing of building materials; repair a rehabilitation of structures and ancient buildings; improving concrete quality and durability, recycling of industrial wastes.

**Supervision of PhD and MSC degree Thesis**

Three completed PhD thesis and six MSC theses were supervised in the last ten years. The following is a list of the thesis title, and date granted.

- i- Recycling Construction Demolition Materials in concrete, MSc, ongoing.
- ii- Use of ternary blends to improve concrete durability, MSc, ongoing.
- iii- Repair and strengthening of reinforced and plain masonry structures, PhD, ongoing.
- iv- Evaluation and control of alkali reactivity of concrete aggregate, PhD, 2009.
- v- Strengthening of concrete members, PhD, 2005.
- vi- Improving properties of masonry mortars using local materials, PhD, 2002.
- vii- Measuring performance in construction firms concerning quality management system implementation, MSC, 2009.

- viii- Performance of Egyptian activated slag in severe conditions, MSC, 2009.
- ix- Rheology of fresh cement paste containing chemical admixtures and replacement materials, MSC, 2008.
- x- Producing reactive powder concrete by using local materials, MSC, 2008.
- xi- Brick manufacturing from water treatment plant sludge, MSC, 2008.
- xii- Monitoring concrete cracking under uni-axial loading, MSC, 1998.

### **Training Civil Engineers**

More than 1000 hours were spent in training engineers, from major corporations and governmental organizations located in Egypt, Kingdom of Saudi Arabia, Kuwait, United Arab Emirates, Yemen and Sudan. The trainees experience ranged from 2 years up to 30 years. The main attendee came from design sectors, maintenance departments, governmental laboratories and contracting companies. Regular training courses are presented to the following organizations;

- 1- Kuwait Petroleum Company, (Kuwait).
- 2- Ministry of Public Works, Center of Testing, (Kuwait).
- 3- Ministry of Public Works, Roads department, (Kingdom of Saudi Arabia).
- 4- Eden Refineries, (Republic of Yemen).
- 5- Egyptian private sector companies.
- 6- Ministry of Public Works, (Kuwait).
- 7- Sudan Petroleum Company (Sudan).
- 8- Ministry of Public Works (United Arab Emirates, Abu Dhabi).
- 9- Al Ain rural Authority (United Arab Emirates, Abu Dhabi).
- 10- Presidential Buildings Department (United Arab Emirates, Abu Dhabi).

The courses consist of lectures about the most up-to-date issues of the corresponding subjects. The title of the taught courses are;

1. Structural design of buildings, (40 hours).
2. Use of computer in structural design, (80 hours).
3. Causes of failure and repair of structures, (20 hours).
4. Modern building technology, material technology and their applications, (40 hours).
5. Engineering Contracts, specifications and non destructive testing on structures, (40 hours).
6. Design and quality control of structures, (40 hours).
7. Mix design and quality control of concrete, (40 hours).
8. Construction materials and modern building technology, (60 hours).
9. Maintenance and repair of structures, (40 hours).

The courses were held in Cairo, Kuwait and United Arab Emirates.

### **Educational and Institution Accreditation Courses attended**

Several important courses in the field of accreditation of educational institutes and teaching strategies were attended. The courses were organized by National Authority for Quality Assurance and Accreditation of Education (NAQAA), and the Supreme Council of Egyptian Universities. The list is indicated below:

- 1- Learning outcome and Curriculum maps of higher education institutes.
- 2- Institutional self-evaluation for higher education.
- 3- External-evaluation of higher education institutions.

- 4- Strategic planning of higher education institutions.
- 5- Intensive course for external reviewer - higher education institutions.
- 6- The use of technology in education.
- 7- Improving presentation and communication skills.
- 8- Ethics in education.
- 9- Application to international funds and projects.

### **Contributions in the Field of Civil Engineering**

Several contributions were made to the field of civil engineering such as;

- Honor prize, in participation with colleagues from King Faisal University, in the architectural contest for improving mobility and increasing "Tawaf" capacity in the Holy Mosque, Mecca, Kingdom of Saudi Arabia, 2009.
- Honor prize, in participation with colleagues from King Faisal University, in the architectural contest for design of disabled pilgrims "Tawaf" route in the Holy Mosque, Mecca, Kingdom of Saudi Arabia, 2009.
- Fourth position (in collaboration with colleagues from King Faisal University), in the architectural contest to design the "Wakf" of King Abdullah Bin Abdelaziz, for his parents, in the Holy city of Madinah, Manakha area, Kingdom of Saudi Arabia, 2008.
- Organizing Committee, IV Middle East Regional Civil Engineering Conference and IV international Symposium on Environmental Hydrology, ASCE-Egypt section, Cairo, June 7 – 9, 2005.
- Reviewing papers for the “IV Middle East Regional Civil Engineering conference and IV international Symposium on Environmental Hydrology”, ASCE-Egypt section, 2005.
- Organizing Committee, III Middle East Regional Civil Engineering Conference and III international Symposium on Environmental Hydrology, ASCE-Egypt section, Cairo, April 8-10, 2002.
- Reviewing papers for the “III Middle East Regional Civil Engineering conference and III international Symposium on Environmental Hydrology”, ASCE-Egypt section, 2002.
- Evaluation of Laboratory facilities in Egyptian Universities, Ministry of Higher Education (MOHE), Projects Implementation Unit (PIU), the advancement of Engineering and Technical Education Project funded by the National Bank, July, 1994 till July 1996.
- Supervising research plans, research work, and thesis revision of several PhD and MSc students.
- Sharing in the organization of the International Conference held in the University of Dundee on 7-9 September 1993, “Concrete 2000, Economic and durable construction through excellence”.

- Assisting the organization of the International Conference held in the University of Dundee on 11-13 September 1990, "Protection of Concrete".

### **Consultancy Work**

Several major engineering projects in Egypt and Kingdom of Saudi Arabia, in the fields of quality control, design of concrete and steel structures, and geo-technical engineering were completed. The accomplished projects include, consultation works in the "Holly Mosque" in Mecca, consultation works in Al Madinah Al Monawarah "king Abdulaziz Wakf", Cairo underground stations, mosques, shopping centers, cement factories and shopping malls. Details can be supplied upon request.

### **Public Lectures**

**Characterization and Assessment of Block-work Properties In Ancient Monuments In Cairo**, First International symposium in Building materials of Egyptian monuments, Goethe Institute in Cairo, 1-3 December, 2003, Cairo, Egypt.

**Characterization and assessment of block-work properties in ancient monuments in Cairo**, First National Heritage Forum, Jeddah, Kingdom of Saudi Arabia, November, 2011.

### **Publications**

- 1- **Egyptian Code Committee**, "Egyptian Code for design and construction of concrete structures", Code No. 203-2007, Ministry of Housing, Utilities and Urban Development, Egypt, 2007.
- 2- **Egyptian Code Committee**, "Egyptian Code for design and construction of concrete structures, Third Appendix, Guide for laboratory testing of concrete materials", Code No. 203, Ministry of Housing, Utilities and Urban Development, Egypt, 2003.

### **Conferences and Periodicals**

- 3- **Osama A. Kamal, Osama. R. Al Hariri, Gehan A. Hamdy, Tarik S. El-Salakawy**, " Strengthening of Unreinforced Masonry Vaults and Wallets Using FRP Composites", Civil Engineering Research Magazine (CERM), Al-Azhar University, 2014.
- 4- **Osama A. Kamal, Osama. R. Al Hariri, Gehan A. Hamdy, Tarik S. El-Salakawy**, " Strengthening of Unreinforced Masonry Vaults Using FRP Composites", International workshop on Advanced composites for engineering applications, German University in Cairo, 2014.

- 5- **M. O. Ramadan El Hariri**, "Characterization and assessment of block-work properties in ancient monuments in Cairo", First National Heritage Forum, Jeddah, Kingdom of Saudi Arabia, November, 2011.

٦- **عبد العزيز محمود الحمد ، محمد اسامة رمضان الحريري ، محمد سعد رحال ،** "دراسة انهيار نظام بلاطات مسبقة الشد في مبنى خرساني متعدد الأدوار في المنطقة الشرقية بالمملكة العربية السعودية" ، المؤتمر العربي الحادي عشر للهندسة الإنشائية ، جامعة الملك فهد للبترول والمعادن ، المملكة العربية السعودية ، أكتوبر ، ٢٠٠٩.

**Abdelaziz M. Alhamad, Mohamed Osama R. El Hariri, Mohamed S. Rahal**, "Study of the Failure of Post-Tension slab system in a Multi-story building in the Easter province of the Kingdom of Saudi Arabia", 11<sup>th</sup> conference of Structural Engineering, King Fahd University of Petroleum and Minerals, Kingdom of Saudi Arabia, October, 2009.

- 7- **Ramy Z. Radwan, Medhat H. Shehata, Gamal E. Abdelaziz, M. Osama R. El Hariri, Assem M.K. Abdelalim**, "The Impact of Expansion due to Alkali-Carbonate Reaction on Engineering Properties of Concrete", 1<sup>st</sup> International/ 1<sup>st</sup> Engineering Mechanics and Materials Specialty Conference, Canadian Society of Civil Engineers, Canada, May, 2009.
- 8- **A.M.K. Abdelalim, G.E. Abdelaziz, M.O. Ramadan El Hariri, and H.I. Ahmed**, "Some durability aspects of mortar incorporating local activated Water-Cooled Slag", Ain Shams University, Faculty of Engineering Scientific Bulletin, Vol. 34, No. 1, March, 2009.
- 9- **Assem Abdelalim, Mohamed Ramadan, Tarek Bahaa, Wael Halawa** "Performance or reactive powder concrete using local materials", Housing and Building National Research Center, HRBC journal Vol. 4, No. 3, December, 2008.
- 10- **A.M.K. Abdelalim, G.E. Abdelaziz, M.O. Ramadan El Hariri, and H.I. Ahmed**, "A study of the mechanical activation of Egyptian slag", Journal of Engineering and Applied Science, Cairo University, Vol. 3, No. 5, June, 2008.
- 11- **M. O. Ramadan**, "Permeability of silica fume and polypropylene fibers reinforced concretes", Ain Shams University, Faculty of Engineering Scientific Bulletin, Vol. 32, No. 3, December ,2007.
- 12- **Mohamed O. Ramadan, Hanan A. Fouad and Ahmed M. Hassanain**, "Reuse of water treatment plant sludge in brick manufacturing", Engineering Research Journal, Shoubra Faculty of Engineering, Vol. 8, June, 2007.

- 13- **R. M. Abd El-Naby, M. O. Ramadan, A. A. Aleem**, “The behavior of concrete exposed to fire: Analytical and experimental investigation”, Al-Azhar Engineering Ninth International Conference, April, 2007.
- 14- **M. O. Ramadan**, “Microstructure study of deteriorated Islamic monuments in Cairo”, Ain Shams University, Faculty of Engineering Scientific Bulletin, Vol. 41, No. 2, June, 2006.
- 15- **Kareem M. El-Dash and Mohamed O. Ramadan**, “Effect of Aggregate on the Performance of Confined Concrete”, Cement and Concrete Research, Vol. 36, Issue 3, 2006, United Kingdom.
- 16- **K. Mahmoud, E. Fouad, M.O. Ramadan And A. Abd-El Alim**, “Modeling of axially loaded square and rectangular R.C. columns confined with different wrapping configurations”, International Conference : Future Vision and Challenges for Urban Development, Housing and Building Research Center, Cairo, Egypt, December 2004.
- 17- **K. Mahmoud, E. Fouad, M.O. Ramadan And A. Abd-El Alim**, “Behavior of axially loaded square RC columns confined with sandwich FRP wraps”, International Conference : Future Vision and Challenges for Urban Development, Housing and Building Research Center, Cairo, Egypt, December 2004.
- 18- **G. E. Abdelaziz, M. A. K. El Mohr and M. O. Ramadan**, “Reliability and significance of Schmidt Hammer readings in assessing the strength and variability of concrete”, Engineering Research Journal, Helwan University, Vol. 85, February 2003.
- 19- **K. M. El-Dash, and M. O. Ramadan**, “Contribution of aggregate type to the behavior of confined concrete columns”, Ain Shams University, Faculty of Engineering Scientific Bulletin, September, 2002.
- 20- **M. O. Ramadan, A. M. Abdel Aleem and A. A. Fouda**, “Moisture movements from mortar to brick”, Journal of Engineering Research, Helwan University, Vol. 75, June 2001.
- 21- **M. O. Ramadan, A. M. Abdel Aleem and A. A. Fouda**, “Improving mortar-brick bond strength”, Civil Engineering Research Magazine, Al-Azhar University, Vol. 22 No. 4, October 2000.
- 22- **A. M. Abdel Aleem, M. O. Ramadan and A. A. Fouda**, “Behaviour of brick masonry in compression using Egyptian



local materials”, Ain Shams University, Faculty of Engineering Scientific Bulletin, Vol. 34 No. 4, December 1999.

- 23- **A. M. Abdel Aleem, H. H. Ahmed, M. O. Ramadan and Y. A. Fawzy**, “Monitoring of concrete cracking under uni-axial loading”, 1st International Conference on Civil Engineering, Helwan University, 24-26 March 1998.
- 24- **A. M. Abdel Aleem and M. O. Ramadan**, “Assessment of Blockwork strength in ancient Islamic mosques in Cairo”, Civil Engineering Research Magazine, Al-Azhar University, December 1996.
- 25- **M. O. Ramadan**, “Micro-cover-meter, abilities and limitations”, Journal of Engineering Research, Helwan University, Vol. 46, December 1994.

### **References**

Details can be furnished upon request.