

**Assoc. Prof. Shehab Eldin M. MOURAD**

Civil Engineering Department, College of Engineering , King Saud University



## Curriculum Vitae

### Personal Information:

**Name:** Shehab Eldine Mohamed MOURAD

**Place & Date of Birth:** Los Anglos- California- U.S.A, September, 5<sup>th</sup> 1960

**Nationality:** Egyptian & American Citizen

**Languages:** English & Arabic

**Position:** Associate Professor at Faculty of Engineering, Ain Shams University, Cairo – Egypt, currently sabbatical leave at the Civil Engineering Department- College of Engineering, King Saud University, Riyadh – Kingdom of Saudi Arabia

**Mailing Addresses :** King Saud University, P.O Box 800, Riyadh 11421, Kingdom of Saudi Arabia

**Phone numbers :**

**Office :** 00966- 1- 467-7012

**Email :** ceg@link.net

**Mobile :** 00966-551015016

### Educational Background:

**1994: Ph.D. McMaster University, Ontario, Canada;** Faculty of Engineering, Department of Civil Engineering. The Ph.D. program included a research work resulted in a thesis titled by "**Behavior of Blind Bolted Moment Connections for Square HSS Columns**". A newly developed bolted moment connection for hollow section columns was studied experimentally and analytically

**1987: M. Sc. Ain Shams University, Cairo- Egypt;** Faculty of Engineering, Department of Civil Engineering. The M.Sc. thesis "**Analysis of Tall Buildings**" dealt with studying and analyzing tall buildings with different stiffening elements (Cores, shear walls and frames) with uniform and non-uniform properties along the height when subjected to lateral loads.

**1982 : B. Sc. Ain Shams University, Cairo- Egypt;** Structural Engineering. Graduated with Honor Degree, GPA 3.9 out of 4.0.

## **Professional Experience :**

**2000 – 2007**

**Consultant Engineer Certificate No. 3817/1 from the Engineering Syndicate, Cairo -Egypt, in the field of Design of Concrete Projects**

**1997 - 2007,**

**Construction Engineering Group (CEG) , Naser City, Cairo - Egypt  
Title : Manager and Senior Structural Engineer**

Preparing structural design and reviewing several projects such as;

- Community Collages at Hael University and Gizan University at Kingdom of Saudi Arabia.
- El Asher Shopping Center Mall at 10<sup>th</sup> of Ramadan City, Egypt ( 6 storey concrete building with a total area of 16000 m<sup>2</sup>)
- Redcon Mall at Hurghada – Egypt, ( 5 story concrete building with a total area of 8500 m<sup>2</sup>)
- Egyptian British Bank - Hurghada Branch, Egypt, (5 story concrete building with a total area of 4000 m<sup>2</sup>)
- Egyptian British Bank - Burg Alarab Branch, Egypt, ( 4 story concrete building with total area of 6400 m<sup>2</sup>)
- Nat Pack Factory at El Aboure City , Egypt, (3 story administration concrete building with a steel factory 2600 m<sup>2</sup>)
- The Administration Building of Al Shurouk City, Egypt , (3 story concrete building with a total area of 15000 m<sup>2</sup>)
- Amr Ebn El-Aase Mousque, including the social building and medical center at Port Said City
- Several Residential Buildings (10 to 15 stories)
- National Security Building- Ministry of Interior- at 6<sup>th</sup> October City, Cairo

**1997 - 2004,**

**Member of the Engineering Consulting Center, at Faculty of Engineering, Ain Shams University.**

- Design the administration Buildings for the Egyptian Ministry of Interior at 6 October city, the project costs about 80 million Egyptian pounds and consists of a main building, Social building, soldier building and sports building.
- Preparing Structural evaluation reports of different existing structures, such as residential buildings, administration buildings, schools and factories, in order to strengthen and retrofit the structural element to support the expecting excessive loads.
- Reviewing the design and calculation sheets for newly constructed projects in Egypt, as a part of an approval procedure for issuing the insurance certificate.

**1997 - present,**

**Regional Technical Support at Middle East for SAFI Software Inc. (Canada)**

Providing technical support and training engineers on the structural software (SAFI), that is originated from Canada and is specialized in structural analysis, design and evaluation of different structures as concrete, steel structures and bridges, electric towers and substations. In addition, participating in the technical development and enhancing the software based on the customer requests to include the Egyptian design codes in SAFI, as well as conducting continuous training sessions for engineers at different authorities and companies for any upgrades on the software.

**1982 - 1989      The Consultant Structural Design Office, Naser City, Cairo-Egypt.  
Title : Senior Structural Engineer**

Participated in designing several major projects constructed in Egypt and Saudi Arabia, including but not limited to;

- Girl s College at Jeddah, Saudi Arabia. The project included classrooms, lecture halls, auditorium, cafeteria, 2-story library, connecting tunnels between buildings, and miscellaneous details.
- Industrial Steel Structures, involving steel frames, trusses, bracings and connections, constructed in Saudi Arabia Harbors.
- Judo Hall at El-Shams Sporting Club (reinforced concrete frames covered with space steel trusses), constructed in Cairo-Egypt.
- 15-story residential concrete building (with a total area of 1.4 million meter square) constructed on a raft foundation, Cairo-Egypt.
- Different Commercial Malls constructed in Egypt, such as Royal Center and City Center at Elharam Street.

Duties and responsibilities included conducting structural analysis (static and dynamic), designing and evaluating reinforced concrete and steel structures, using both working stress design and limit states design methods using different Codes of practices

- Egyptian Codes
- American Standards ACI, LRFD and ASD,
- Canadian Concrete Standard CAN3-A23.3 and Canadian Steel Standard CAN/CSA-S16.1).

The scope of work also included preparing design drawing, details, field sketches, and reviewing designs for insurance companies as well as evaluating and rehabilitates several existing buildings

**Academic and Research Experience:**

**2004 – 2007 :** Associate Professor, at King Saud University, College of Engineering, Civil Engineering Department

- Participating in teaching several undergraduate courses
- Supervision undergraduate student projects.
- Participating in different college committees
- Conducting research projects with the research center of College of Engineering
  - Project No. 47/426 Performance of Plain Concrete Specimens Externally Confined with Welded Wire Fabric

**2001- 2004:** Associate Professor, at Ain Shams University , Department of Structural Engineering - Ain Shams University, Cairo - Egypt.

- Participating in supervision of thesis for Master and Doctoral Students (4 students out of total 12 students have completed their degree)
- Publishing 2 conference papers, and 4 are to be published soon.
- Active member in the Assistant Committee of the Egyptian Code for calculating loads and forces on buildings

**1996- 2001:** Lecturer at Ain Shams University , Department of Structural Engineering - Ain Shams University, Cairo – Egypt

- Publishing 7 journal and conference papers.

- 1994-1996: Research Associate at University of Houston, Texas, USA:** Cullen College of Engineering, Department of Civil and Environmental Engineering. The research involved working in the following projects;
- Post-earthquake damage assessments for buildings using the system identification method.
  - Live load distribution for integral bridge girders near the abutments.

## **Teaching Experience:**

### **2004 – present**

Teaching the following **undergraduate courses at College of Engineering, King Saud University:**

- Steel Design using LRFD approach.
- Structural analysis I
- Structural analysis II

In addition, supervising students on their graduation structural projects.

### **1997- 2004**

Teaching the following **undergraduate courses at Faculty of Engineering, Ain Shams University:**

- Structural Analysis for 3<sup>rd</sup> year Structural Engineering students
- Dynamics and Stability of Structures for 3<sup>rd</sup> year Structural Engineering students
- Earthquake Engineering for 4<sup>th</sup> year Structural Engineering students
- Stresses Analysis for 1<sup>st</sup> year Mechanical Engineering students
- Advanced Structural Analysis for 4<sup>th</sup> year Structural Engineering students

### **1999- Present**

Teaching the following **undergraduate courses at Faculty of Engineering, 6 October University:**

- Computer Aided Design using SAFI software for 4<sup>th</sup> year Structural Engineering students
- Structural Analysis for 1<sup>st</sup> year Structural Engineering students

### **1997-Present**

Teaching the following **graduate courses at Faculty of Engineering, Ain Shams University:**

- Wind and Earthquake Engineering for Master and Doctoral Structural Engineering Students
- Dynamics of Structures for Diploma Structural Students

### **1990 -1994:**

**Teaching Assistant at McMaster University, Ontario, Canada;** Faculty of Engineering, Department of Civil Engineering. Duties included, preparing notes, leading tutorials, preparing and marking exams for the following undergraduate courses;

- Structural Mechanics (static and dynamic)
- Structural Analysis
- Steel design (according to Limit states design)
- Computer applications for Civil Engineering

### **1983- 1989:**

**Assistant Lecturer at Ain Shams University, Cairo-Egypt;** Faculty of Engineering, Department of Civil Engineering.

### **Research Interests:**

- ☞ Dynamic behavior of structures under dynamic loads and earthquake loads
- ☞ Pounding of structures due to earthquake loads
- ☞ Analysis of bridges under different load conditions
- ☞ Evaluation and monitoring of bridges and buildings
- ☞ Damage detection in structures using dynamic measurements
- ☞ Behavior of confined concrete with ferrocement laminates

### **Faculty Committees:**

- ☞ Member in ABET Committee for Civil Engineering Department
- ☞ Member in the Annual Report Committee of the Civil Engineering Department

### **Scholarship Awarded:**

- Dally Scholarship from McMaster University for 3 years (1991-1993, value \$7,000/ year).
- Chairman Scholarship from the Department of Civil Engineering, McMaster University, for one year (1990, value \$7,000/ year).
- Distinction Scholarship from Ain Shams University for 4 years (1979-1982).

### **Computer Knowledge:**

**Structural Software:** SAFI , ALGOR, COSMOS, ANSYS, SAP2000, STAAD, DRAIN2DX, PFRAME and SFRAME.

**Other Software:** AutoCAD, Quatro, Excel, Word, SigmaPlot and WordPerfect.

In addition, developing special structural software for analysis and design on FORTRAN and Excel

### **Conferences Participation**

Several international Conferences have been participated by either publishing or presenting papers since 1993, as follows

- Fifth International Symposium of Tubular Structures, 1993, Nottingham- United Kingdom.
- Annual Conference of the Canadian Society of Civil Engineering, 1993, Fredrektion , New Brunswick- Canada.
- 32<sup>nd</sup> Annual Meeting of the Society of Engineering Science, New Orleans, October 1995.
- The International Conference on Rehabilitation and Development of Civil Engineering Infrastructure Systems, American University of Beirut, 1997.
- Seventh International Colloquium on Structural and Geotechnical Engineering, Ain Shams University, Cairo, 1996.

- Eight International Colloquium on Structural and Geotechnical Engineering, Ain Shams University, Cairo, 1998.
- Ninth International Colloquium on Structural and Geotechnical Engineering, Ain Shams University, Cairo, 2000.
- Tenth International Colloquium on Structural and Geotechnical Engineering, Ain Shams University, Cairo, 2003.
- Eleventh International Colloquium on Structural and Geotechnical Engineering, Ain Shams University, Cairo, 2005.

### **Some Recent Published Papers:**

- ***"Proposed Technique for Identifying Damage Location Using Change in Mode Shape Parameters"***, **Shehab M. Mourad**, Scientific Bulletin of Faculty of Engineering ,Ain Shams University, September 2007.
- ***"Dynamic Response of Bridges with unconnected Spans Using an Interactive Bridge-Vehicile Dynamic Analysis Approach"***, **Shehab Mourad**, Hisham Al-Arabaty, Ahmed Korashy, and Mohamed Abdel-Fattah, Civil Engineering Research Magazine, Faculty of Engineering, Al-Azhar University, Vol. 29 , No, 2, April 2007.
- ***"Damage Detection of Cable-Stayed Bridges Using Curvature Changes in Mode Shapes"***,. Abozeid,H., Fayed M., **Mourad, S.**, and Khalil, A., International Conference on Bridge Mangement Systems-Monitoring Assessment and Rehabilitation, 21-23 March, 2006, Cairo-Egypt.
- ***"Cable-Stayed Bridge Model Update Using Dynamic Measurements"***, Abozeid,H., Fayed M., **Mourad, S.**, and Khalil, A., International Conference on Bridge Mangement Systems-Monitoring Assessment and Rehabilitation, 21-23 March, 2006, Cairo-Egypt.
- ***"Dynamic Response Of Fixed Offshore Structures Under Environmental Loads"***, **Shehab Mourad**, Mohamed Fayed, Mostafa Zidan, & Mohamed Harb, Proceedings Of The Eleventh International Colloquium On Structural And Geotechnical Engineering, April, 2005, Cairo- Egypt
- ***"Development Of New Launching Technique For Offshore Jackets Installation "***, A. Salem, **S. Mourad, M.** and A. Kamal, Scientific Bulletin, Faculty of Engineering, Ain Shams University, September. 2005.
- ***"Mitigation Of Pounding Between Adjacent Buildings Under Earthquakes Loads"***, **Shehab M. Mourad**, Mohamed N. Fayed, Ayman A. Embabay & Osama Ahmed., Scientific Bulletin of Faculty of Engineering , Ain Shams University, September 2004

- **"Simplified Model for Evaluating the Transversal Stiffness of Skew Bridges"**, S. Mourad, A. Khalil, M. Fayed and G. Bassyouni, Scientific Bulletin, Faculty of Engineering, Ain Shams University, Vol. 39, No.4, 2004.
- **"Live Load Distribution Factors in Skew Steel Plate Girder Bridges"**, Khalil A., Mourad S., Fayed N., & Bassyouni G., Proceedings of the Tenth International Colloquium on Structural and Geotechnical Engineering, April, 2003, Cairo- Egypt
- **"Diaphragm Effect on Live Load Distribution Factors in Skew Steel Plate Girder Bridges"**, Fayed, M. N., Mourad, S., Khalil, A. H., and G. Bassyouni, ", in the Proceedings of Regional Conference on Civil Engineering, ASCE-Egyptian Section, Cairo, Egypt, (2002).
- **" Response of Offshore Structures to Seismic Forces"**, Shehab Mourad, Civil Engineering Research Magazine, Faculty of Engineering, Al-Azhar University, Vol. 22 , No, 4, October 2000.
- **"Effect of Infill Walls on Strengthening and Lateral Behavior of Buildings"**, Shehab Mourad, Civil Engineering Research Magazine, Faculty of Engineering, Al-Azhar University, Vol. 22 , No, 4, October 2000.
- **"Effect of Dampers on Pounding Response of Adjacent Buildings"**, Ayman Embaby and Shehab Mourad, Civil Engineering Research Magazine, Faculty of Engineering, Al-Azhar University, Vol. 22 , No, 4, October 2000.
- **"Deck slab stresses in Integral Abutment Bridges"**, Shehab Mourad & Sami.W. Tabsh, Journal of bridge Engineering, ASCE, Vol. 4. No. 2 , May 1999 .
- **"Pile Forces in Integral Abutment Bridges Subjected to Truck Loads"**, Shehab Mourad & Sami.W. Tabsh, Transportation Research Record No. 1633, National Research Council, 1998 .
- **"Live Load Distribution in Integral Composite Steel Bridges"**, Sami W. Tabsh and Shehab Mourad, Engineering Journal, American Institute of Steel Construction, First Quarter 1988 , Volumn 35, No. 1, pp 12- 18, (1998).
- **"Reliability of High Strength Blind Bolts in Tension"**, S.Tabsh and S. Mourad (1995)., Proceedings of the 32nd annual meeting of the Society of Engineering Science, edited by David Hui, New Orleans, October 1995, pp. 603-604.
- **"Newly developed Blind Bolted Moment Connection for HSS Columns"**, Mourad, S., Korol, R.M. and Ghobarah, A.. Proceedings of the Canadian Society of Civil Engineers, Fredrecton, New Brunswick, Canada, (1993).
- **"Blind Bolting W-shape Beams to HSS Columns "**, Korol, R.M., Ghobarah, A., and Mourad, S., Journal of the Structural Division, ASCE, Vol, 119, No12, (1993).
- **"Behavior of Blind Bolted Moment Connection for HSS Columns"**, Ghobarah, A., Mourad, S., and Korol, R.M..Proceedings of the Fifth Symposium of Tubular Structures, Nottingham, England, (1993).