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Dr. Abdalla Mitwalli Mohamed Harraz
Assistant Professor, Structural Engineering Department,
Mansoura University, Egypt



PERSONAL IDENTIFICATION:

Name: Abdalla Mitwalli Mohamed Harraz

Position: Assistant Professor, Structural Engineering Dept., Mansoura University, Egypt

Address: 76 El-Imam Mohamed Abdo Street, Toreel El-Gideda, Mansoura, Egypt

Date of Birth: 17-12-1971

Marital Status: Married, 2 sons and daughter, (Mahmoud, 25-3-2002, Omar, 22-1-2004, and Nada, 2-3-2006)

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EDUCATION:

- Arizona State University, Ph.D. in Civil and Environmental Engineering, May 2003.
Thesis: "Seismic Analysis of Cantilever Retaining Walls"
- Mansoura University (Egypt), M.S. in Civil Engineering September 1997.
Thesis: "Reliability Analysis of Tunnels".
- Mansoura University (Egypt), B.S. in Civil Engineering, Excellent with honor grade, First on class, June 1994.

EXPERIENCES:

- **Assistant Professor** (11/04-till now)

Structural Engineering Department, Mansoura University, Egypt

- Vice President of Centrifuge Laboratory, Mansoura University, Egypt.
- Teaching Soil Mechanics and Foundation Courses (Undergraduate and Graduate levels)
- Supervise Master and Ph.D. Students in Structural Engineering Department.
- Member in Research Project "Rising of Ground Water Table in Cities and Urban Areas", funded by The Research Academy, Cairo, Egypt.

- Member in Research Project “Use of Centrifuges as educational Tools and Base for virtual Laboratories in Civil Engineering”, funded by Higher Education Development and Improvement (HEEPF).
- Member of Study, Research and Engineering Consulting Center, Faculty of Engineering, Mansoura University
- Member of Soil Mechanics and Foundation Laboratory to prepare Geotechnical Scientific reports for boring logs and recommend suitable foundation for different projects.

Research and Engineering Consulting Center, Faculty of Engineering, Mansoura University (11/04-till now)

Member of the Research and Engineering Consulting Center, Faculty of Engineering, Mansoura University:

- Investigate Cleopatra Hotel and write the technical report on the structural elements of the hotel.
- Periodical Supervision on the repairing process of the Saudi Residential Building (leakage of water in basement), Mansoura, Egypt.
- Periodical supervision on the repairing of the expansion joint between two blocks of the Saudi Residential Building, Mansoura, Egypt.
- Investigate and write the technical report on private multi story building owned by Mr. Khafaga, Talkha, Egypt.
- Monitoring the inclination of two buildings owned by Hamdy El-Maamly and Abdelghafoor Salem, Gamalia, Dakhlia.
- Perform Ultrasonic Test on the Piles for El-Galaa Language school, Tanta, Gharbia.
- Supervising the loading test performed on the pile at El-Galaa Language school, Tanta, Gharbia and writing the technical report.
- Design several multi story buildings owned by Dakhila Governorate (Mubarak Youth Project), i.e,
 - El-Forn Building, Mansoura, Egypt.
 - Sandoob Building, Mansoura, Egypt
 - El-Magzar Building, Mansoura, Egypt
 - El-Salakhana, Sherbben, Egypt
 - El-Makaber Building, Mansoura, Egypt
 - Mahta Elkhalt Building, Mansoura, Egypt
 - New Alexandria Building, Manzala, Dakhlia Governorate
 - Manzala Building, Manzala, Dakhlia Governorate
 - El-Ewaa Building, Mansoura, Egypt

- Soil Mechanics and Foundation Laboratory

Member of the Soil Mechanics and Foundation Laboratory, Faculty of Engineering, Mansoura University. Write Geotechnical report and perform laboratory tests on different soils and recommend the suitable foundation for many projects, for example:

- Faculty of Education , Mansoura University.
- Meet Ghamr building, Dakhlia.
- Shelbaya building.
- Nawasa El-Gheet, Dakhlia.
- Atmeda 1 and Atmeda 2, Meet Ghamr, Dakhlia
- El-Makaber Building, Mansoura, Egypt
- Mahta Elkhalt Building, Mansoura, Egypt
- El-Adeeb site, Meet Salseel Dakhlia
- New Water Inlet for Mansoura.
- Mostafa Abdeltahman building, Meet Ghamr, Dakhlia
- Othman building, Mataria, Dakhlia.
- Sandoob building, Mansoura.
- El-Magzar Building, Mansoura, Egypt
- El-Salakhana, Sherbben, Egypt
- New Alexandria Building, Manzala, Dakhlia Governorate
- Manzala Building, Manzala, Dakhlia Governorate
- Aga Building, Aga, Dakhlia
- West Harbor land, Mataria, Dakhlia
- Student Dorm, Mansoura University, Mansoura.
- Fire Department building, Gamasa
- Self Civil Defense Building, Mansoura
- ElNozel area, Dakhlia
- Tanah Building, Dakhlia
- El-Hazaer Building, Mataria
- Air Force villa, Gamasa
- El-Nile Club hall, Mansoura
- El-Naseemia area, Mansoura
- El-Korama school, dikirnis

- Ras el-bar school, Damitta
- El-Eslah school
- Essam Sakr school, Bilqas, Dakhlia
- El-Darafeel school, Bilqas.

Perform Ultrasonic and Supervise the loading test on the pile foundation for the following projects:

- West Harbor land, Mataria, Dakhlia
- Self Civil Defense Building, Mansoura
- El-Naseemia area, Mansoura
- Ras el-bar school, Damitta

- Dept. of Civil and Environmental Engineering, Arizona State University, USA (08/99-11/04)

Teaching several courses, for example

- CEE 553, Advanced Soil Mechanics
- CEE 554, Advanced Shear Strength and Slope Stability
- CEE 555, Advanced Foundation
- Inviting guest speakers and staff members for CEE296 (Civil Engineering Systems).

Perform following Consultation and Research

- Evaluate the swelling potential and collapsibility of the San Clement Resort to recommend the soil mitigation required to reduce soil collapse, San Clement, California, USA.
- Running Finite Element program (ABAQUS) for lateral and axial loads on drilled shafts for Arizona Department of Transportation projects (ADOT).
- Contribution in running two complete full size lateral load field tests at Price and Warner, Tempe, Arizona for ADOT project.
- Analyzing Lateral Capacity of Drilled Shaft Foundations for Research Project number SPR483 for ADOT using Finite element code and LPILE GROUP programs.
- Analyzing Axial Capacity of Drilled Shaft Foundations for Research Project number SPR493 for ADOT using Finite element code and APILE.
- Sharing in performing Vane Shear Tests on Lyman Dam site for Arizona Department of Water Resource (ADWR).
- Analyzing the factor of safety against sliding for Lyman Dam, ADWR.

- Serving as PI (Principal Investigator) on a project titled “Large Scale Direct Shear Testing on SGC Soils from the Phoenix Sky Harbor International Airport” between Arizona State University and Gannett Fleming
 - Running Finite Element program (ABAQUS) for lateral and axial loads on drilled shafts for ADOT projects.
 - Working on State-of-art of Unsaturated Triaxial Systems.
 - Share in the design and developing of Double Cell Wall Triaxial System for Unsaturated Soils.
 - Co-PI for the FHWA Research Project (Grain Size Distribution and Capacity of Drilled Shafts)
 - Performing Large Scale Direct Shear Testing on Sand, Gravel and Cobbles (SGC) Soils from six different states in the US, developing the dilation angles and shear strength of these soils.
- **Assistant Lecturer** (08/94-06/99):
 Dept. of Civil Engineering, Mansoura University, Egypt.
- Teaching undergraduates "*Soil Mechanics and Foundations*", "*Structure Courses*" courses and supervising senior projects for *Foundations*

COMPUTER PROFICIENCIES:

- **Engineering Software:** AutoCad.
- **Operating Systems:** Windows, DOS, MS Office.
- **Programming:** Fortran.
- **Structural Software Packages:** ABAQUS, SHAKE, TSLOPE, SAP, SAVE, APILE, LPILE, GROUP, GEOSTUDIO, GEOSLOPE.

COURSE PROJECTS:

- Designed and simulated, *Comparison between Cable Stayed Bridges and Suspension Bridges*, (Senior project, 1994).
- Design and Analysis, *Slope Stability and Earthquake aspects for Lyman Dam Project, AZ, USA*, (Fall 99)
- Seminar, *Presenting a seminar for Arizona Department of Water Resource, ADWR on using Shake and Tslope software*, (Spring 00)
- Coded and Applied, *Software for solving Pile Load Transfer problems*, (Spring 01).

COURSES EXPERIENCE:

- Advanced Geotechnical Testing
- Advanced Soil Mechanics

- Unsaturated Soils
- Shear Strength and Slope Stability
- Earthquake Engineering Aspects
- Dams safety
- Soil dynamics
- Nonlinear Structure Analysis
- Advanced Concrete Structures
- Structural Dynamics
- Advanced Foundations
- Soil Behavior

ACTIVITIES & AFFILIATIONS:

- Registered member in ASCE (American Society of Civil Engineering)
- Registered member in Civil of Engineers, Cairo, Egypt.
- Registered member in Egypt Earthquake Engineering Society, Cairo, Egypt.
- Registered member in Geotechnical Engineering Society, Cairo, Egypt.
- Registered member in the International Society of Geotechnical Engineering.

HONORS:

- Recipient of ASU Graduate Scholarship for the academic years 98/99--99/00--00/01--01/02—02/03.
- First highest score of the B.S. graduating class of Dept. of Civil Engineering, Mansoura University in the academic year 93/94 (120 students).
- Receive honor certificate from Egypt Education Minister (1st of high school -math division-, 1989)

ATTENDED CONFERENCES:

10th Arab Structural Engineering Conference, November 13-15, 2006, Kuwait.

4th International Conference on Unsaturated Soil Mechanics, April 2-6, 2006, Carefree, Arizona, USA.

16th International Conference of Geomechanics, 11-15 September, 2005, Osaka, Japan.

5th International Conference of Soil Mechanics, January, 2005, Cairo, Egypt.

Geo-Trans 2004, the Geo-Institute Conference on Geotechnical Engineering for Transportation Projects, July 27-31, 2004, Los Angeles, USA.

82nd Annual Meeting for the Transportation Research Board (TRB), January 12-16, 2003, Washington DC, USA.

PUBLICATIONS:

Harraz, A.M., “Evaluation of Granular Soil-Shaft Interface Parameters Using Large Scale Direct Shear Test”, Proceeding of the 2nd British Geotechnical Association International Conference on Foundations, 24-27 June, 2008, University of Dundee, Scotland, UK.

Harraz, A.M., Houston, W.N., and Padilla, J.M., “Site-Specific Earthquake Response Analysis, Case Study: El Mercado Libertad”, Proceeding of the 4th International Conference on Earthquake Geotechnical Engineering, 25-28 June, 2007, Thessaloniki, Greece.

Harraz A.M., and El-Meligy, M., “System Reliability Assessment of Friction Drilled Shafts in Gravelly Soils”, Proceeding of the 6th European Conference in Numerical Methods in Geotechnical Engineering, 6-8 September, 2006, Graz, Austria.

Harraz A.M., and El-Meligy, M., “Safety of Skin Drilled Shaft Foundations in Gravelly Soils”, Proceeding of the 10th Arab Structural Engineering Conference, 13-15 November, 2006, Kuwait.

Houston, W.N., Dye, H.B., Zapata, C.E., Perera, Y.Y., and Harraz, A., “Determination of SWCC using One Point Suction Measurement and Standard Curves”, Proceeding of the 4th International Conference on Unsaturated Soil Mechanics, April 2-6, 2006, Carefree, Arizona, USA.

Houston, W., Walsh, K., Harraz, A., and Houston, S., “Moment/Rotation Effects on Laterally Loaded Drilled Shaft Group Response”, Proceeding of the International Journal of Geomechanics, December 2005.

Harraz, A., Houston, W., Houston, S., and Walsh, K. “Parameters Controlling the Capacity of Axially Loaded Drilled Shaft Foundations in Sand, Gravel, and Cobbles”, Proceeding of the 16th International Conference of Geomechanics, 11-15 September, 2005, Osaka, Japan.

Lawrence, C.A., Houston, W.N., and Harraz, A.M., “Pressure Pulse Technique for Measuring Diffused Air Volume”, Proceeding of an International Symposium on Advanced Experimental Unsaturated Soil Mechanics, Trento, Italy, 27-29 June 2005.

Harraz, A., Houston, W., Walsh, K., Perry, C., and Houston, S., “Comparison of Measured and Predicted Skin Friction Values for Axially Loaded Drilled Shaft Foundations in Gravelly Soils”, Proceeding of the Geo-Frontier 2005, the Geo-Institute Conference on Geotechnical Engineering Applications, Austin, Texas 24-26, 2005.

Houston, W., Walsh, K., Harraz, A., Perry, C., and Houston, S., “Lateral Load Tests on Drilled shafts in Cemented Soil”, Proceeding of the Geo-Trans 2004, the Geo-Institute Conference on Geotechnical Engineering for Transportation Projects, Los Anglos, July 27-31, 2004.

Harraz, A., Houston, W., Fafitis, A., and Houston, S., “Effect of Soil Properties on the Seismic Response of Cantilever Retaining Walls”, Proceeding of the 1st International Conference on Structural & Geotechnical Engineering and Construction Technology, Mansoura, March 23-25, 2004, pp 935-948.

Houston, W., Walsh, K., Harraz, A., and Houston, S., "Moment/Rotation Effects on Laterally Loaded Drilled Shaft Group Response", Proceeding of the 82nd Annual Meeting for the Transportation Research Board, Washington DC, January 12-16, 2003.

Harraz, A., A. Fafitis, and W. Houston, "Development of Database and Guidelines for the Earthquake Resistant Design of Cantilever Retaining Walls" Proceeding of Structures Under Shock and Impact Conference, Montreal, Canada, 27-29 May, 2002.

Harraz, A. Meligy, M. and Dif, A. "Reliability Analysis of Tunnels", Alexandria Engineering Journal, Faculty of Engineering, Alexandria University, Egypt, Vol. 37, No.6, November, 1998.

Harraz, A. Meligy, M. and Dif, A. "Probabilistic-Based Codified Design of Tunnels", Journal of Engineering and Applied Science, Faculty of Engineering, Cairo University, Egypt, Vol. 46, No.5, October 1999, PP. 853-872.

Houston, W., Houston, S., Harraz, A., Febres, E., and, Chen, C., "Site Variability for Collapsible Soil Deposits", Proceeding of the Geomechanics and Geoenvironmental Journal (processing).

Harraz, A., Houston, W., Fafitis, A., and Houston, S., "Design Methodology for Cantilever Retaining Walls Subjected to Earthquakes Loading", Proceeding of the Geomechanics and Geoenvironmental Journal (processing).