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PERSONAL INFORMATION

Name: Ashraf M. Hefny
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EDUCATION

Ph.D. (1994), University of Western Ontario, London, Ontario, Canada. Thesis chosen by the Tunneling Association of Canada as the best thesis in tunneling in Canada (1994).

Visiting Scholar (1988-1990), Colorado State University (Aug. 1988-Dec. 1988) and the University of Illinois at Urbana Champaign, U.S.A. (Jan. 1989-May 1990).

M.Sc. (1986), Civil Engineering, Ain Shams University, Cairo, Egypt.

B.Sc. (1981), Civil Engineering, Ain Shams University, Cairo, Egypt.
Distinction with honors degree – First of the Class (structural division).

WORK EXPERIENCE

Assoc. Professor (Feb 2012-pres) United Arab Emirates University, UAE.

Assoc. Professor & Asst. Professor (March 2006-pres) Ain Shams University, Cairo, Egypt.

Director of Soil Mechanics and Foundation Eng Consultancy Unit (Sep 2011 – Feb 2012) Ain Shams University, Cairo, Egypt.

Assoc. Professor (Part Time) (Feb 2007 – May 2010) British University in Egypt (BUE), El Sherouk City, Egypt.

Assoc. Professor (Jan 2003-March 2006) & **Asst. Professor** (Nov. 1998-Dec 2002) School of Civil and Environmental Engineering, **Nanyang Technological University**, Singapore.

Research Associate (Feb. 1995-Nov. 1998) Geotechnical Research Centre, The University of Western Ontario (UWO), London, Ontario, Canada.

Lecturer (Aug. 1994 - Jan. 1995) Ain Shams University, Cairo, Egypt.

Lecturing of soil mechanics, foundation engineering, and numerical techniques in civil engineering courses for undergraduate and graduate students.

Research/Teaching Assistant (1990-1994) The University of Western Ontario, London, Ontario.

Visiting Scholar (1988-1990) Colorado State University (Aug. 1988 - Dec. 1988) and the University of Illinois at Urbana Champaign (Jan. 1989 - May 1990).

Research/Teaching Assistant (1981-1988) Ain Shams University, Cairo, Egypt.

Geotechnical and Structural Engineer (1981-1988) Nile Engineering Consulting Office, Cairo, Egypt (part time).

CONSULTANCY

- **Soil Mechanics & Foundation Eng Consulting Unit, Ain Shams University, Cairo, Egypt (March 2006-Feb 2012)** (Participated in many consultancy projects involving site investigations, feasibility studies for new cities, quality control of engineering fill for roads and for replacement of problematic soils, evaluation of stability of slopes and escarpments, stability measures of rock slopes, construction and permanent dewatering, design of deep excavation support, traditional and specialized lab testing, pressuremeter testing, field monitoring, geophysical studies, foundation design, effect of tunnel induced ground deformations on adjacent surface and underground structures).
- **Jurong Consultants Pte Ltd, Singapore (2002-2006)**
Geotechnical Advisor.
- **Obayashi-MacDowell Joint Venture (2001)**
Specialist consultant (sub-consultancy from URS) for geological assessment for the tendering of the construction of the sub-sea Cable Tunnel (C301) through limestone formation in Singapore.
- **Geotechnical Research Centre, UWO, London, Canada (1995-1998)**
Several geotechnical engineering projects.
- **Nile Engineering Consulting Office, Cairo, Egypt (1981-1988)**
Several geotechnical and structural engineering projects.

AWARDS AND SCHOLARSHIPS

- NTU-NIE Excellence in Teaching Award (Teacher of the year) 2004.
- IES Publication Award, the Institution of Engineers, Singapore, 2002 (my student's thesis).
- Hulme Prize (first prize), offered by Tunnelling and Underground Society of Singapore for best technical article by a young engineer in tunnelling, 2002 (my student's thesis).
- Tunnelling Association of Canada Award for Best Graduate Thesis in Tunnelling, 1994.
- Ontario Graduate Scholarship, Government of Ontario, 1993-94.
- Graduate Research Fellowships, the University of Western Ontario, 1992/93, 1993/94.
- Special University Scholarships, the University of Western Ontario, 1991, 1992.
- Admission Scholarship, the University of Western Ontario, 1990-92.
- Ontario Fee Bursary, Government of Ontario and the University of Western Ontario,

1990-94.

- USA-Egypt Peace Fellowship for Scholastic work at Colorado State University and the University of Illinois at Urbana-Champaign, U.S.A., 1988-90.
- Honor degree for the B.Sc. (First of the Class), Ain Shams University, Cairo, Egypt, 1981.
- Egyptian Ministry of Education Scholarship for outstanding students, 1976-81.

PROFESSIONAL MEMBERSHIP (current and/or previous)

- International Association of Engineering Geology and Environment, Chair of Singapore National Group (Dec 2000-Dec 2002).
- Tunnelling and Underground Construction Society (Singapore), Honorary Treasurer and Committee member (March 2000-Feb 2002).
- Association of Professional Engineers of Ontario, member.
- Tunnelling Association of Canada, member.
- The Canadian Geotechnical Society, member.
- International Society of rock mechanics, member.
- Canadian Society for Civil Engineering, member.
- Egyptian Engineering Syndicate, member.
- Research Grants Council (Hong Kong), referee.
- Journal of Tunnelling and Underground Space Technology, reviewer.
- International Journal of Rock Mechanics and Mining, reviewer.
- Canadian Geotechnical Journal, reviewer.
- Journal of Applied Mechanics, ASME, reviewer.
- International Journal of Ain Shams University, reviewer.

PhD THESIS EXTERNAL EXAMINER

- The University of Adelaide, Australia (PhD Thesis)
- Indian Institute of Technology Bombay (PhD Thesis)

SHORT COURSES CONDUCTED

- Rock mechanics and underground excavations. Offered to engineers of the Defense Science & Technology Agency, Singapore, March 2001.
- A Training Course in Military Soil Engineering. Conducted four times in 2002 and 2003.

MASTER AND DOCTORAL STUDENT SUPERVISION

PhD: (6)

- Response of large diameter bored piles in clayey soils under axial compression loads (ASU)
- Modeling soil profile and geotechnical properties using Geo-statistical algorithms (ASU – Started 2010)
- 3D Analysis and behavior of surface structures due to tunneling effects (ASU - Started 2010)
- Stability of rock slopes (ASU - Completed 2012)
- Performance of footings on treated soft clay using lime columns (ASU - Started 2009)
- Numerical studies on 2-D compressional wave propagation in jointed rock masses due to impact load in tunnels and boreholes (NTU -

- Completed 2005 - Ext examiners: K.Y. Lo, Canada & Ujing Jian, Japan)
- MSc: (12)
- Prediction of Field Response of Soil–Support Systems in Deep Excavations (ASU – Completed 2011)
 - Numerical Analysis of a Subway Station in Greater Cairo (ASU – Completed 2014)
 - Performance of a Geogrid-Reinforced and Pile Supported Highway Embankment over Soft Clay (ASU – Started 2010)
 - Behaviour of deep excavations in soft clay (ASU - Completed 2013)
 - Numerical Analysis of Negative skin friction on piles in soft clay (ASU - Completed 2012)
 - Behaviour of Large Diameter Bored Piles Supporting Raft Foundation in Softy Clay Soil (ASU - Completed 2012)
 - Analysis of Pile Groups of Offshore Fixed-Jacket Structures (ASU – Completed 2011)
 - Fracturing characteristics of brittle rocks (NTU - Completed - Ext examiner: Dick Stacy, South Africa)
 - Numerical Analysis for Shallow Tunnels in Weak Rocks Supported by the Umbrella Arch Method (NTU - Completed - Ext examiner: Ian Moore, Canada)
 - Estimation of ground settlement due to tunnelling using Artificial Neural Networking (NTU – Completed - Ext Examiner: Andria Assiss, Brazil)
 - Behaviour of rocks of Singapore under uniaxial and triaxial loading (NTU – Completed - Ext examiner: Dick Stacy, South Africa)
- MEng: (6)
- Estimation of soil properties for Kallang Formation cohesive soils from soil investigation works in Singapore (NTU - Completed 2002)
 - Ground behaviour due to tunnelling at MRT NEL C-705 Project (NTU - Completed 2004)
 - Effect of soil models on the prediction of ground settlement due to tunnelling (NTU - Completed 2004)
 - Ground settlement of NATM tunnels at Contract T06 of Singapore DTSS project (NTU - Completed 2004)
 - Field Performance of TBM tunnelling at Kranji Tunnels in DTSS Project, Singapore (NTU - completed 2006)
 - Study of the ground conditions in DTSS ANG MO KIO NATM Tunnel Project (NTU - completed 2006)

PUBLICATIONS

- Publication of tens of international journal and conference papers in the area of geotechnical engineering.
- Publication of a book and two book chapters in area of rock engineering.