Gamal Abdelaziz, PhD., P.Eng.
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A Geotechnical Engineer with 33 years of experience in Civil Engineering. In 2000 a PhD in Geotechnical Engineering (Pile Foundations) from Concordia University in Montreal (Quebec, Canada) was obtained; and in 1993 a M.Sc. in Structural Engineering from Zagazig University in Zagazig, Egypt was obtained. Between 2000 and 2015, experience was gained by working with 5 different Canadian Engineering companies: DST Dominion Soil Testing as a Senior Geotechnical Engineer, Sarafinchin Associates as a Senior Geotechnical Engineer, Trow Consulting as a Senior Geotechnical Engineer, EBA Engineering as a Senior Geotechnical Engineer and SAGA Engineering as senior (Principal) engineer and director of the company.

Energetic, self-motivated, and hard working Civil Engineer with initiative for independence and team work. Proven abilities to manage and complete projects to the highest standards, support and supervise other staff, and motivate them to achieve deadlines and company objectives. Some other qualities include:

- *Demonstrated ability to build long-term client relationships and determine cost effective solutions to design, process, or regulatory issues*
- *Analytical, detailed, and results focused leadership with a track record in quality management principles to develop standards engineering practices*
- *Proactive agent in enforcing health, safety, and Environment policies compliance*
- *Excellent communicator and innovative problem solver, skilled team leader, and adept at fostering a winning team mentality*

Served as Adjunct/visiting Professor in the Civil Engineering Department of University of Western Ontario, Ontario, Canada and Ryerson University, Toronto, Canada.
Experience working at universities includes teaching and research activities as a part-time professor. Held an active role in applied engineering orientated research finding solutions for industrial problems through the maintenance of close links between industrial requirements and modern research and technology. The author of several technical publications and have presented lectures and seminars at various universities and engineering institutes in Canada and abroad.

Expertise is in the fields of Geotechnical Engineering, Structural Engineering, Ground Improvements, Foundations Engineering, Soil Dynamics, Water Resource Management, and Environmental Engineering. Vast involvement in projects; have been involved with preliminary and feasibility studies, site reconnaissance, exploration, geohazrds analyses and and mapping, design, construction, monitoring, research, consulting, project management, engineering control, and international marketing; this breadth of experience comes with the additional opportunities of establishing offices and company branches managing and participating in operations. Participated in a variety of projects, such as, geotechnical investigations, machine foundation analyses and design, earth-fill, slope stability and analyses, dykes safety evaluation, foundations of major structures and machinery, MSE walls, Segmental retaining walls, Ground anchors, Pavement friction testing, highways, water and waste-water supply and drainage, roads, environmental site assessment, etc. Responsibility for over 110 Civil engineering projects thus far.

Designed and successfully delivered more than 35 civil engineering courses for professional engineers, undergrad and graduate students at different Canadian institutes, etc. Trained more than 2000 professional engineers, technicians, and technologists in several engineering areas such as geotechnical, structural, and water resources engineering.

Multidisciplinary ability, diversified technical and managerial experiences, strong communication, and interpersonal skills along with multicultural exposure, which has served well whilst managing multiple projects and staff and international business development in several countries. Fluent in English and Arabic.

EDUCATION

2000 Ph.D. Geotechnical Engineering, Concordia University, Canada.
1993 M.Sc. Structural Design, Zagazig University, Egypt
1982 B.Sc. Civil Engineering, Alexandria University, Egypt

KEY PROJECTS

Recent work includes a diverse scope of engineering projects such as MSE walls as quality engineer of records for Stony Trail (Ring road), Calgary, AB, geotechnical evaluations of proposed sites for AFFRACs (Alberta First Response Communication , Systems) towers – a project commissioned by the Government of Alberta; HWY 63 expansion analyses and design; Pump station foundation dynamic analyses for Suncor, Environmental site Assessment of a variety of gas stations at different locations, bridged sized culvert replacements in Clearwater County; as well as numerous geotechnical investigations of industrial, commercial, and residential properties.

PROFESSIONAL EXPERIENCE

Senior Consultant
LVM Engineering/CHINOOK Construction - 2014 to Present
Calgary, Alberta

- Acted as an independent project consultant to oversee the overall directing of engineering & contraction management services (project management, safety, QA/QC, design, contract administration, planning & cost control, risk management, etc.) for variety of different engineering & construction contracts
- Quality Engineer of records for MSE retaining walls (PPP project) Stony Trail Ring Road, Calgary, Alberta

Senior Geotechnical Engineer and Managing Director
SAGA Engineering - 2008 to Present
Edmonton, Alberta

- Business development for all civil engineering projects
- Conduct variety of soil investigations for different industrial, commercial, and residential projects

- Design of different foundations for varying types of projects
- Analyses and recommendations for deep and shallow foundations options for different structural types
- Structural design revisions and approval
- Proposal, tendering packages preparations and revisions
- Provide Technical, Marketing, and Operating Consulting Services to the Company
- Direct and insure the quality and performance of the Company Projects

President Dean of Engineering
Global Innovative Campus (GIC Canada) - 2004 to present
Edmonton, Alberta

- Providing leadership and strategic planning
- An integral member of the GIC Leadership Team; this position is a fundamental pillar to the development of key strategies and actions from an operational perspective that enables staff to realize GIC's mission, vision, and strategic vision
- Managing full time staff and more than 200 technical staff
- Advising and supervising operations as follows:
    - Developing and implementing annual business plan to achieve target revenue goals
    - Preparing a budget to support the annual plan
    - Prepare and execute marketing and promotion strategy
    - Control costs and expenditures
    - Implement new initiatives
    - Solicit for, evaluate, and, appoint qualified instructors from industry and academia
    - Supervise classroom instruction and review instructor evaluation
    - Source out and manage external suppliers
    - Negotiate job placement with non-profit organizations
    - Recruit and supervise support staff

Senior Geotechnical Engineer
EBA Engineering - 2006 to 2007
Edmonton, Alberta

- Soil investigation reports
- Slope stability analyses for oil tanks
- Finite element thermal analyses for hazardous northern military sites
- Highway 63 expansion analyses and design

Senior Geotechnical Engineer
Trow Associates Inc. - 2005 to 2006
Hamilton, Ontario

- Slope stability analyses and revisions
- Site investigations

- Foundation design
- Rock bolts design, slope stability analyses, site investigations,
- Site investigations for variety of industrial and commercial sites
- Finite element analyses and revisions

Program Director, Civil Eng.,
Educational Program Innovation Centre (EPIC) - 2001 to 2006
Toronto, Ontario

- Program Director for PEO technical courses; collaborated with participants from government, industry, and universities on program evaluation and policy enhancements
- Oversaw and supervised education programs
- Implemented plans, schedules, and program goals
- Marketing studies and advisory board responsibilities
- Developed technical short courses in: Structural Bridge Foundation Design, Retaining Walls Structural Design, Tunneling Design Geotechnical and Structural, Geosynthetics Engineering, Geotechnical Investigation, Soil and Rock Slope Stability, Structural Foundation Engineering Design, Geotechnical Materials and Analysis, and Elementary Structural Analysis

Senior Geotechnical Engineer
Sarafinchin Associates Ltd. – 2002 to 2004
Toronto, Ontario

- Numerical modeling:
  - Rock slope stability calculations
  - Laboratory testing programs
  - Stress analyses for foundations and slopes
  - Finite element analyses for slopes and foundation
  - Settlement calculations
  - Geotechnical laboratory work and reporting
- Rock slope stability analyses and reporting
- Foundation settlement analyses forensic geotechnical engineering
- Consulting for structural analyses of buildings, loads, and structural elements
- Numerical modeling for rock structural analyses
- Settlement analyses for large residential area
- Soil investigation programs for variety of projects
- Acted as court witness on geotechnical engineering disputes

Geotechnical Engineering Professor
Ryerson University - 2001 to 2006
Toronto, Ontario

- Teaching graduate courses in Geotechnical engineering (Foundation Engineering, Soil Behaviour and Soil Mechanics
- Presentation of geotechnical lectures and seminars at various universities and engineering institutions in Canada and abroad

- Participation in the review of technical papers for the Canadian Geotechnical Journal, and for some international conferences
- Conducted research in geotechnical/environmental engineering.
- Supervision of undergraduate research studies in: Use of shredded tire in landfill design, slope stability analyses, retaining walls deign and analyses

Geotechnical Engineering Professor
University of Western Ontario - 2002 to 2003
London, Ontario

- Teaching undergraduate geotechnical courses
- Supported Graduate students finite element analyses for piled foundations and screw piles
- Participation in the review of technical papers for the Canadian Geotechnical Journal

Senior Geotechnical Engineer
Dominion Soil Testing DST - 2000 to 2001
Toronto, Ontario

- Site investigations
- Tunnel design and analyses
- Developed soil testing programs
- Nuclear testing for compaction control around natural gas pipeline under high pressure, extension of Hwy 410 in Brampton
- Stability analyses for slopes and earth structures
- Preconstruction surveying for Maple Collection Sewer Tunnel quality control and construction monitoring of 9th Line Sewer Tunnel project in Markham (6 km length and 50 m depth);
- Supervised the decommissioning of White Oaks Wells to prevent environmental contamination of the groundwater aquifer in London.

Research Associate
Concordia University
Department of Building, Civil, and Environmental Engineering - 1993 to 1995
Montreal, Quebec

- Instructed graduate courses in foundation engineering design
- Instructed a wide variety of undergraduate courses, such as, soil mechanics, foundation design, laboratory testing, engineering, mathematics, surveying including theodolite, level and total station, construction surveying, traverse, loop leveling computations, and drafting

PhD. Student and Research Associate

Concordia University
Department of Building, Civil, and Environmental Engineering - 1995 to 2000
Montreal, Canada

- Developed a theoretical model for single pile foundation (soil structure interaction) using finite element method and limit equilibrium technique
- Conducted a wide theoretical parametric study for pile load tests
- Trained graduate students on using finite element Package CRISP 94
- Designed basic programs to extract data for plotting finite element output
- Guided undergraduate students' research and technical presentations on slope stability

Faculty Demonstrator and Lecturer
Zagazig University – 1983 to 1993
Zagazig, Egypt

- Conducted finite element research on structural design (stress analysis in tunnels)
- Developed course curriculum for engineering department in soil mechanics, foundation Engineering, engineering drawings, and reinforced concrete design
- Instructed courses, conducted laboratories in civil engineering, computer applications in structural design, design of reinforced concrete structures
- Instructions and teaching assistance in laboratory and classroom for: mechanics, theory of structure, steel design, surveying, soil mechanics, foundations, engineering graphics, descriptive geometry, strength of materials.
- Selection, purchase and installation of equipment for strength of materials and soil mechanics laboratory
- Obtained MSc., through research in Tunneling structural analyses

Civil engineer
Various Construction companies – 1982 to 1993

Structural Engineer, Private Engineering Consultant, Egypt

- Designed reinforced concrete skeleton for multi-storey residential buildings
- Provided construction supervision, scheduling, and drafting for more than 60 residential buildings in Egypt
- Conducted geotechnical investigation, reported recommendations for foundation design
- Provided design consultation and construction supervision for residential buildings
- Designed sewer systems for new residential areas
- Designed and supervised interior finishing, plastering, painting, flooring, plumbing systems
- Conducted feasibility studies for engineering projects and tenders
- Provided design and drawing checking for residential building foundation
- Performed laboratory tests on soils.

Highway Project Engineer, Private Highway Construction Company, Egypt

- Supervised the construction of road works, water supply and drainage systems

- Inspected sites and supervised the construction of highway works and retaining structures
- Estimated quantities and supervised quality control of highway works
- Managed and supervised construction of highway pavement layers
- Prepared and provided cost estimation of earth works
- Removing and filling

PUBLICATIONS AND PRESENTATIONS

Warith, M., and Abdelaziz, G., "Feasibility of Using Shredded Tires as Landfill Leachate Collection System", The Journal of Solid Waste Technology and Management (Submitted)
Warith, M., and Abdelaziz, G., "Characteristics of Shredded Tires as Landfill Media" Second International Conference on Geotechnical and GeoEnvironmental Engineering in Arid Land, Geo 2002, Saudi Arabia. (Published)
Abdelaziz G. (2000) "A Theoretical Model for a Single Pile in Sand", Ph.D. Thesis, Concordia University, Montreal, Canada.
Sabry, M. A., Shalaby, S.I., and Abdelaziz, G. (1992). "Behaviour of Strip Footing on Weak Clay Layer Stabilized with Sand Trench". (Published)
Haggag, A., Abdelsalam, S., and Abdelaziz, G., 1991. "Behaviour of Two Adjacent D-Shaped Tunnels." Published and presented in: Conference of Tunneling in Congested Cities, Cairo, Egypt, January 1991.
Abdelaziz, G. (1991), "Stress Analysis in Tunnels" M.Sc. Thesis, Zagazig University, Egypt.

Publications in Preparation

Abdelaziz, G. "Numerical Modeling for Twin Horseshoe Shaped Shallow Tunnels", (ready for publication)
Abdelaziz, G. and Hanna, A.M. "Interdependence of Shaft and Tip Resistances of a Single Pile Driven in Sand".
Abdelaziz, G., and Warith, M., "Granular Materials Stabilization Using Portland Cement".
Abdelaziz, G., and Warith, M., "Sand Stabilization using Bituminous Materials".
Abdelaziz, G. Hanna, A.M., "Unified Model for a Single Pile Driven in Sand, Part I: Numerical Model", in preparation for submission to Canadian Geotechnical Journal.
Abdelaziz, G. Hanna, A.M., "Unified Model for a Single Pile Driven in Sand, Part II: Theoretical Model", in preparation for submission to Canadian Geotechnical Journal .
Abdelaziz, G. and Warith, M., "Characteristics of Gasification and Incineration of Solid Waste", in preparation for possible conference publication.
Abdelaziz, G., Warith, M., and Easa, S., "Implementation of Hollow Sections in Rigid Pavement".
Abdelaziz, G., Easa, S. and Warith, M., "Implementation of Hollow Sections in Flexible Pavement".

Example List of Personally Developed Seminars/Short Courses

Machine Foundation design; Retaining Walls Design; Construction and Rehabilitation Foundation Engineering Design; Workshop Soil Mechanics Fundamentals and Applications; Geotechnical Engineering for Non-Geotechnical Engineers; Structural Design of Earth Works Using Geosynthetics Design and Construction of Earth Works; Deep Foundation Design and

Construction; Introduction to Tunnels Design and Construction; Dam Engineering Design, Practical Rock Engineering, and Applications; Geotechnical Aspects of Pavements; Design and Strengthening of Shallow Foundations; Soil and Rock Slope Stability Design and Rehabilitation Slope Stabilization and Erosion Control; Finite Element Method in Geotechnical Engineering Applications; Structural and Geotechnical Design of Bridge Foundations; Structural and Geotechnical Design of Industrial Buildings Foundations; Horizontal Directional Drilling; Flexible and Rigid Retaining Walls Design and Construction; Elementary Structural Analysis; Geotechnical Design; Geotechnical Materials and Analysis; Mechanics of Materials; Municipal Engineering Systems Design Workshop; Water Supply Systems Design Workshop; Sanitary and Storm Water Systems Design Workshop; Highway Drainage Networks Design; Workshop Pumping Station design Workshop

PROFESSIONAL AFFILIATIONS

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGA)
Association of Professional Engineers, Geologists, and Geophysicists of Saskatchewan (APEGS)
Former Association of Professional Engineers of Ontario (PEO)
Former Tunneling Association of Canada (TAC)
Canadian Geotechnical Society (CGS)
Former Project Management Institute (PMI)
Former Canadian Dam Association (CDA)
Former American Back Flow Prevention Association (ABPA)

AWARDS AND SCHOLARSHIPS

Graduate studies awards (variety), Concordia University 1993-2000
Graduate student award CGS competition, Ryerson University 2002

PROFESSIONAL DEVELOPMENT

2000 Short Course in Finite Element Methods in Geotechnical Engineering, U of A.

COMPUTER APPLICATIONS

MS Office and variety of finite element application programs in earth and rock fill dams and underground excavation, stability analysis and rock mechanic programs. Dynamic analyses of machine foundations

LANGUAGES

English (Excellent), Arabic (Excellent)