MOHAMED ADIL HAQUE, PH.D., P.E.
29/15 JOSIER STREET
NUNGAMBAKKAM, CHENNAI 600034
TAMIL NADU, INDIA
PHONE: +91 7708601470
MSA_889@YAHOO.COM

CURRICULUM VITAE

Specialties

- Forensic soil-structure interaction,
- Numerical modeling,
- Analysis and design of slope stability and stability improvement using various techniques,
- Analysis and design of shallow and deep foundations and excavation support systems,
- Analysis of dam, mine and underground tunnel stability,
- Seepage and groundwater flow analysis,
- Geophysical investigations using various geophysical techniques;
- Bioreactor landfill technology.

Education

Doctor of Philosophy (Ph.D.) in Civil Engineering — August 2007
The University of Texas at Arlington, Arlington, Texas

Master of Science in Civil Engineering — May 2003
The University of Texas at Arlington, Arlington, Texas

Bachelor of Engineering in Civil Engineering — May 2001
Madras University, Chennai, India

Certification

Registered Professional Engineer (Texas), No. 106035

Registered Professional Engineer (Mississippi), No. 25241

Registered Professional Engineer (Kentucky), No. 30726

Registered Professional Engineer (Louisiana), No. 40292

Work Experience

***Professor/HoD - PG**, Department of Civil Engineering, Mohamed Sathak A.J College of Engineering, Siruseri* (June 2019– Present)

***Director,** Pacific Builders, Chennai, India* (July 2016 –May 2018)

Manage day-to-day operation of the company. Implement innovative construction technologies a Device protocol and check QA/QC.

***Vice President,** Bryant Consultants, Inc., Carrollton, TX.* (Sept. 2011 – July 2016)

Role expanded to include executive management, regional engineering management, sales and marketing, various technical advisory committees, client program management and project management.

***Director of Geotech. Engineering,** Bryant Consultants, Inc., Carrollton, TX.* (Oct. 2010 – Sept. 2011)

Role expanded from Staff Engineer to encompass oversight of company's daily operations including administration and finance. Responsibilities also include that of daily management of staff personnel in the areas of geotechnical engineering, laboratory and drilling services. Continue to manage own geotechnical/geophysical projects.

***Staff Engineer,** Bryant Consultants, Inc., Carrollton, Texas* (May 2010 – Oct. 2010)

Role expanded from Graduate Engineer to encompass additional responsibilities such as:

- Devise protocols for field testing and analysis for various forensics investigations.
- Perform forensic evaluation of pre-existing residential, commercial, and industrial structures and concrete/asphalt pavements.
- Work and consult with leading experts in the field of geotechnical engineering, geophysical exploration science and interconnected fields.

***Graduate Engineer,** Bryant Consultants, Inc., Carrollton, Texas* (May 2007 – May 2010)

Analysis & Design Experience

- Performed forensic geotechnical and geophysical examination for several problematic foundations, pavements, retaining walls and water towers.
- Designed and recommended pier parameters for remedial work.
- Performed slope stability analysis for several medium to large retaining walls using PLAXIS, GSTABL and Slope/W.
- Developed design parameters for construction of retaining wall/slope system.
- Designed support systems such as tie-backs, geo-textiles and piles.

- Assisted field crews in field sample collection, soil classification and boring log preparation.
- Coordinated geotechnical laboratory, geotechnical drilling and geotechnical engineering activities.
- Performed soil-structure interaction analysis using finite element modeling (FEM) programs on approximately 15 to 20 specialty cases. These analyses were for soil-pipe, soil-slab, soil-wall interaction using two-dimensional (2-D) and three-dimensional (3-D) FEM code PLAXIS.
- Performed seepage analysis of an embankment using PLAXIS and Seep/W.
- Performed ground penetrating radar (GPR) surveys for concrete and asphalt evaluation studies.
- Performed two- and three-dimensional electrical resistivity and induced polarization surveys for subsurface stratigraphic and moisture mapping.
- Performed electromagnetic (EM) surveys for subsurface feature identifications such as metallic objects.
- Performed sinkhole and surface subsidence evaluation using geotechnical, geophysical and numerical methods.

Selected Recent Projects

- Designed MSE, Soil Nail, Wire Wall & Drilled Shaft Wall for **North Tarrant Express**, **Dallas, Texas**.
- Analysis of Slope Failure and devised slope stability improvement protocols for **Trinity River Embankment, Dallas, Texas**.
- Forensic Analysis of Surface Subsidence due to **Tabsco Salt Mining, Louisiana**.
- Forensic Analysis of Abnormal Mine Closure at **Lyons Salt Mine, Lyons, Kansas**.
- Analysis of Failure of Vert Wall System at **President George Bush Turnpike, Dallas, Texas**.
- Forensic Analysis of Berth (Dock) Failure, **Berth 7, Freeport, Houston, Texas**.
- Analysis of Dome Collapse, **Nucor Steel, Louisiana.**
- Forensic Analysis of Dam Failure, **Franklin County Dam.**
- Mapping of Buried Pipeline using **Geophysical Methods, Carlsbad Caverns,** New Mexico.
- Forensic Analysis of Big Creek Drop Structure**, Fort Bend County, Texas**.
- Construction **Vibration Analysis**, McAllen, TX.
- Designed Deep Foundation for **Creekside Monument, Fort Worth, Texas**.
- Forensic Analysis of **Gas Pipe Explosion, Kansas & Texas**.
- Evaluation of Structural Damage due to **Hurricane Sandy, New Jersey**.

Teaching Experience

Adjunct Faculty, *the University of Texas at Arlington, Arlington, Texas* (January 2013 – May 2013)

Offered CE 5369 (Computational Geotechnics) at UTA. The main objective of this course was to provide the student with a fundamental understanding of computational geotechnics, and to improve problem-solving skills by using computer programs in geotechnical, geoenvironmental, and geostructural systems.

Research Experience

Research Assistant, *the University of Texas at Arlington, Arlington, TX* (August 2004 to May 2007)

Dynamic Characteristic and Stability Analysis of Municipal Solid Waste in Bioreactor Landfill

- Setup and ran various bench-scale reactors in the laboratory to simulate Bioreactor Landfill at its different phases of decomposition.
- Measured and defined time dependent waste stability as a function of volatile solids, pH and gas production rate.
- Performed Static Triaxial and Resonant Column test to evaluate the static and dynamic strength of MSW in Bioreactor Landfill.
- Investigated the changes in waste strength as the MSW decomposes in Bioreactor Landfills.
- Performed numerical model to assess the static and seismic stability of MSW in Bioreactor landfills with decomposition.
- Based on the results from this extensive study, proved that the stability of bioreactor landfills should be evaluated using the strength characteristics determined as a function of time and decomposition.

Research Assistant, *the University of Texas at Arlington, Arlington, TX* (Feb. 2002 to May 2003)

Effect of Nitrification on Chlorine Demand for Disinfection of Municipal Wastewater Effluent

- Provided solutions to the **Village Creek Wastewater Treatment Plant, Fort Worth, Texas** to reduce their chlorine demand in winter.
- Developed three computer simulated models using JAVA program to reduce the running cost and increase the ease of operation.

Publications

Journal Papers

- Hossain, M.S. and **Haque, M.A**. (2011). "The Effects of Intermixed Soils and Decomposition on Hydraulic Conductivity of Municipal Solid Waste in Bioreactor Landfills," ***Journal of Materials in Civil Engineering***, accepted for publication***.***
- **Haque, M.A.** and Bryant, J.T., (2010). "Failure of VERT Wall System: Forensic Evaluation and Lessons Learned", ***Electronic Journal of Geotechnical Engineering*****.** Vol. 15E.
- Hossain, M.S., **Haque, M.A.**, and Hoyos, L. (2010). "Dynamic Properties of Municipal Solid Waste in Bioreactor Landfills with Degradation ", ***Journal of Geotechnical and Geological Engineering***, Vol. 28 (4).

- Hossain, M.S., **Haque, M.A.,** and Hoyos, L. (2010). "Shear Strength Parameters of Municipal Solid Waste with Degradation in Bioreactor Landfills", ***Canadian Geotechnical Journal,*** under review.
- Hossain, M.S. and **Haque, M.A**. (2009). "Stability Analyses of Municipal Solid Waste Landfills with Decomposition", ***Journal of Geotechnical and Geological Engineering***, Vol. 27(6).
- Hossain, M.S., and **Haque, M.A.** (2009). "The Effects of Daily Cover Soils on Shear Strength of Municipal Solid Waste in Bioreactor Landfills," ***Waste Management Journal*****,** Vol. 29(5).
- Hossain, M.S., Omelchenko, V., **Haque, M.A.** and Hossain, J. (2009), "Capacity of Drilled Shafts in Mid-Atlantic Region", ***Electronic Journal of Geotechnical Engineering.*** Vol. 13.
- **Haque, M. A**., Zabolio, J., and Qasim, S. R. (2004). "Effect of Ammonia and Nitrite Nitrogen on Chlorine Demand for Disinfection of Secondary Effluent," ***Journal Water Environment Association of Texas***. Vol. 21(4).

Peer Reviewed Geotechnical Special Publication

- Bryant, J.T., **Haque, M.A.** and Rosenberk, R. S. (2010) "Performance and Design of Slab-on-grade and Pier Foundation Systems: Theoretical Considerations and Practical Applications" Geotechnical Special Publication (GSP) titled: The Art of Foundation Engineering Practice - honoring Clyde Baker.
- Hossain, M.S., Gabr, M.A. and **Haque, M.A.** (2008), "Deformation and Stability of MSW Bio reactor Landfills: Properties and Analysis Approach**"** Geotechnical Special Conference, **GeoC ongress 2008**, March 9 – 12, 2008, New Orleans, Louisiana.
- Hossain, M.S., Omelchenko, V., and **Haque, M.A.** (2007), "Capacity of Drilled Shafts Socketed into Wissahickon Schist in Washington DC", Geo-Denver 2007, February 18-21, 2007, Denver, CO.
- Hossain, M.S., Rao, K.N., and **Haque, M.A.** (2006), "Embankment over Soft Soil Improved with Chemico Pile – A Numerical Study" Geo Shanghai, Shanghai, China, June 2-4, 2006.

Peer Reviewed Conference Publication

- **Haque, M.A.** and Bryant, J.T., (2012). "Forensic Evaluation on the Bearing Capacity of Partially Saturated Soils – A Heuristic Approach", ***ASCE Forensic Enginering 2012***, San Francisco, CA.
- Bryant, J.T. and **Haque, M.A.**, (2012). "Time-Dependent Geothermal Analysis – A Forensic Evaluation", ***ASCE Forensic Enginering 2012***, San Francisco, CA.
- **Haque, M.A.** and Bryant, J.T., (2011). "Failure of VERT Wall System: Forensic Evaluation and Lessons Learned", ***Geo-Frontiers 2011***, Dallas, TX.
- Bryant, J.T. and **Haque, M.A.**, (2011). "Soil-Pipe Interaction Analysis: A Forensic Evaluation", ***Geo-Frontiers 2011***, Dallas, TX.
- Bryant, J.T. and **Haque, M.A.**, (2010). "Performance and Design of Foundations on Unsaturated Expansive Soil", Proceedings of UNSAT 2010 Conference, Barcelona, Spain, September 6 - 8, abstract accepted and paper under review.

- Morris, D.V., and **Haque, M.A.** (2009). "An Example of Slope Instability Due To Hydrogeologic Inhomogeneities in Soft Soils," 9th International Symposium on Environmental Geotechnology and Global Sustainable Development, June 1 – 4, 2008, Hong Kong.
- **Haque, M.A.** and Bryant, J.T., (2008). "Generalized Relationships to Estimate Soil Properties from Electrical Resistivity", Proceedings of Texas Section ASCE, Fall 2008, Dallas, TX.
- Hossain, M.S., **Haque, M.A**., Qasim, S. R., and Hoyos, L. (2007). "Dynamic Characteristic of Municipal Solid Waste with Degradation in Bioreactor Landfills," 4th International Conference on Earthquake Geotechnical Engineering, June 25 - 28, 2007, Thessaloniki, Greece.
- Hossain, M.S., **Haque, M.A**., Qasim, S. R., and Hoyos, L. (2007). "Seismic Stability of Bioreactor Landfill with Decomposition – A Numerical Modeling", 4th International Conference on Earthquake Geotechnical Engineering, June 25 - 28, 2007, Thessaloniki, Greece.
- **Haque, M.A.,** and Hossain, M.S. (2006). "Stability of Bioreactor Landfill with Decomposition – A Numerical Modeling", 21st International Conference on Solid Waste Technology and Management, January 18-20, 2006, Philadelphia, PA.
- Hossain, M.S., Khouri, B., and **Haque M. A.** (2006), "Comparative Study of Different In-Situ Tests for Site Investigation" Second International Conference on the Flat Dilatometer, Washington DC, April 2-5, 2006.
- Hossain, M.S., Mydlinski, J., Rao, K.N., and **Haque, M.A.** (2006), "Temporary Support System – A Case Study in Virginia" Geo Congress 2006, mid-Atlantic, February 26 -March 1 , 2006.
- **Haque, M. A.**, Qasim, S. R., and Zabolio, J. (2004). "Effect of Nitrification on Chlorine Demand for Disinfection of Municipal Wastewater Effluent," Proceedings of the Texas Water 2004, Joint meeting of WEAT and Texas Section AWWA, April 5-8, 2004, Arlington, Texas.

Computer Skills

Geotechnical Software	PLAXIS2D, PLAXIS3D, PLAXIS3D Tunnel, PLAXIS3D Foundation, GSTABL7, gINT, SEEP, EPA LandGEM, LPILE, TZPILE, SLOPE/W, Radan 6.5, GPR Slice, Volflo 1.5, SV Flux and SV Solid Unsaturated Soils Software.
Platforms	MS-DOS, Windows XP, MS-Office

Awards & Achievements

- Awarded the University Scholar (2007) award for academic excellence at UTA.
- Awarded the Outstanding Civil Engineering Student (2007) award at UTA.
- Awarded 4-year prestigious 'Hermann's Fellowship' at UTA.
- Awarded 1- year 'Construction Research Scholarship' at UTA.
- Graduated Bachelors with distinction and ranked 13th in Madras University out of 500 students.

Membership

- Member American Society of Civil Engineers (ASCE)
- Member Indian Geotechnical Society (IGS)

References

- MD. Sahadat Hossain, Ph.D., P.E., Professor, The University of Texas at Arlington, hossain@uta.edu.
- Derek V. Morris, Ph.D., P.E., Principal, SW Geotechnology, derekvmorris@yahoo.com.
- Brent L. Douglas, P.E., Vice President, Bryant Consultants, bdouglas@geoneering.com.