Murad Y. Abu-Farsakh, Ph.D., P.E.

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Baton Rouge, LA 70817

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PERSONAL DATA

Married, U.S. citizen.

EDUCATION:

Ph.D. in Civil Engineering:
Louisiana State University, Baton Rouge, Louisiana, USA, 1997
Dissertation: *Coupled Field Equations for Saturated Soils and Its Application to Piezocone Penetration and Shield Tunneling*.
Emphasis: Geotechnical Engineering (GPA: 4.00/4.00)

M.S. in Civil Engineering:
Jordan University of Science and Technology, Irbid, Jordan, 1988
Thesis: Effect of Transverse and Longitudinal Stiffeners in the Behavior of Plate Girders.
Emphasis: Structural Engineering (Ave. 92.4% - Excellent)

B.S. in Civil Engineering:
University of Jordan, Amman, Jordan, 1985
Rank: second among 91 graduates (Ave. 86.4%- Excellent)

PROFESSIONAL REGISTRATION, SOCIETIES, AND COMMITTEES:

Professional Engineering (P.E.), license in State of Louisiana.

Member, American Society of Civil Engineer, ASCE, Member.

Member, Jordan Engineering Association.

Member, US Universities Council on Geotechnical Engineering Research (USUCGER).

Member, Engineering Geology and Site Characterization Committee, Geo-Institute.

Member, Geosynthetics Committee, Geo-Institute.

Member, Deep Foundation Committee, Geo-Institute.

Member, TRB Committee AFS70 - Committee on Geosynthetics.

Member, TRB Committee AFP30 - Committee on Soil and Rock Properties

Member, Deep Foundation Institute, DFI

Former Member, TRB Committee AFP20 - Committee on Exploration and Classification of earth Materials.

Former Member, TRB Committee AFS50 - Committee on Modeling Techniques in Geomechanics.

Former Member, American Society for Testing and Materials, ASTM.

Former Member, ASTM D18, Committee on Soil Tests.

TECHNICAL & PROFESSIONAL TRAINING:

- Pile Driving Contractors Association (PDCA) - 8TH Biennial Professors' Driven Pile Institute (PDPI) Workshop, Utah State University, Logan, Utah, June 21-26, 2015.
- *Instructor Development Training Course*, NHI Course No. 420018, Baton Rouge, LA, May 20-23, 2014.
- *LRFD for Highway Bridge Substructures and Earth Retaining Structures*, NHI training course, Baton Rouge, LA, August 17-20, 2009.
- *Associates of Drilled Shaft Contractors (ADSC) - 2008 Foundation Engineering Faculty Workshop*, Chattanooga, Tennessee, June 8-14, 2008.
- *Introduction to Mechanistic-Empirical Pavement Design Workshop*, National Highway Institute Course No. 131064, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, December 17-20, 2007.
- *Geosynthetic Engineering Workshop*, National Highway Institute Course No. 132013, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, April 10-12, 2007.
- *LRFD for Highway Bridge Substructures and Earth Retaining Structures*, NHI training course, Baton Rouge, LA, February 13-17, 2006.
- *Elmod IV (FWD) Workshop*, Baton Rouge, LA, March 25-27, 2003.
- *Scientific Approaches to Transportation Research*, NHI training course, Baton Rouge, LA, May 20-23, 2002.
- *Geotechnical Instrumentation for Monitoring Performance*, Workshop, FHWA Module 11, U.S. Department of Transportation/ FHWA, Washington, D. C., January 13, 2002.
- *Mechanically Stabilized Earth Walls and Reinforced Soil Slopes*, Design and Construction Workshop, FHWA Demonstration Project 82, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, January 26-28, 1999.
- *Earth Retaining Structures*, National Highway Institute Course No. 13236, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, May 5-7, 1998.
- *Design and Construction of Driven Pile Foundations*, National Highway Institute Course Nos. 13221 and 13222, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, May 18-21, 1998.
- *Ground Improvement Methods*, FHWA Demonstration Project 116, U.S. Department of Transportation/ FHWA, Baton Rouge, LA, November 17-19, 1998.

MANAGEMENT TRAINING COURSES

- Effective Communication Skills, Part 1, October 30–31, 2000.
- Managing Work Time Effectively, November 30, 2000.
- Managing and Improving Work Processes, December 12–13, 2000.

TEACHING EXPERIENCE:

I taught the following courses at Louisiana State University:

CE 2450: Statics

CE 2460: Dynamics

CE 3300: Geotechnical Engineering I (Soil Mechanics)

CE 3350: Geotechnical Engineering Lab

CE 3400: Mechanics of Materials

CE 4300: Geotechnical Engineering II (Shallow Foundation)

CE 4310: Geotechnical Engineering III (Deep Foundation)

CE 7300: Advanced Geotechnical Engineering I

CE 7310: Advanced Geotechnical Engineering II

CE 7335: Soil Improvement and Stabilization

CE 7340: Theory and Practice of Geotechnical Laboratory Experiment

CE 7700: Applications and Design with Geosynthetics

CE 7700: Advanced Geotechnical In Situ Testing

CE 7701: Advanced Testing and Analysis of Deep Foundations

GRADUATE STUDENTS ADVICEMENT:

I advised and co-advised the following graduate students:

Ph.D. Students (11)

Hossein Alimohammadi, Ph.D. Candidate, working on *FE Numerical modeling to evaluate/quantify the benefits of geosynthetic reinforced pavements.*

Mohsen Amirmojahedi, Ph.D. Candidate, working on *FE Numerical Analysis and Analytical Methods to Evaluate the Pile Resistance from CPT Test Data.*

Allam Ardah, Ph.D. Candidate, Wworking on *Field Instrumentatio and Monitoring, and Finite Element Analysis of Geosynthetic Reinforced Soil – Integration Bridge System (GRS-IBS).*

Ahmad Souri, Ph.D. graduated Fall 2017, Dissertation: "*Numerical Evaluation of the Lateral Behavior of Vertical and Battered Pile Group Foundations Using 3-D Finite Element Modeling"*.

Shadi Hanandeh, graduated Fall 2016, Dissertation: "*Performance Evaluation of Instrumented Geosynthetics Reinforced Paved Test Sections built over weak subgrade using Accelerated Load Testing"*.

Fairouz Rousti, graduated Spring 2016, Dissertation: *"Numerical Simulation of Pile Installation and Following Setup Considering Soil Consolidation and Thixotropy"*.

Md. Nafiul Haque, graduated Fall 2015, Dissertation: "*Field Instrumentation and Testing to Study Set-Up Phenomenon of Driven Piles and Its Implementation in LRFD Design Methodology"*..

Jie Gu, PhD. graduated Fall 2011, Dissertation: "Computational Modeling of Geogrid Reinforced Soil Foundation and Geogrid Reinforced Base in Flexible Pavements".

Qiming Chen, Ph.D., graduated Summer 2007, Dissertation: "An Experimental Study on Characteristics and Behavior of Reinforced Soil Foundation".

Munir Nazzal, Ph.D. graduated Spring 2007, Dissertation: **"**Laboratory Characterization and Numerical Modeling of Geogrid Reinforced Bases in Flexible Pavements".

Lie Wei, Ph.D. graduated Spring 2004, Dissertation: "Numerical Simulation and Field Verification of Inclined Piezocone Penetration Test in Cohesive Soils".

M.S. Students (18)

Md. Imran Hossain, M.S. student. Working on *using the in-situ CPT data for Subsurface Soil Classification and Evaluation of Different Soil Properties.*

Md. Habibur Rahman, M.S. student. Working on *Generating Synthetic CPT profile and Soil Boring from Surrounding Tests of same site for use on Pile Design.*

Abu Hakim Faisal, M.S. student. Working on *Site Variability and Laboratory/In-situ Testing Variability of Soil Properties in Geotechnical Engineering Design.*

Benjamin Fernandos, M.S. student. Working on *Field Instrumentatio and Monitoring of Geosynthetic Reinforced Soil – Integration Bridge System (GRS-IBS).*

Alicia Fortier, M.S., graduated Summer 2015. Thesis Title: *Calibration of Resistance Factors Needed In the LRFD Design of Drilled Shafts*.

Ayan Mehrouta, M.S., graduated Fall 2014. Thesis Title: *Evaluating the Influence of Moisture Variation on Resilient Modulus for Unsaturated Pavement Subgrades*.

Allam Ardah, M.S., graduated Fall 2014. Non-Thesis Project: "*Performance Evaluation of Cement treated/ stabilize very weak subgrade soils*".

Yida Zhang, M.S., graduated Summer 2012. Thesis Title: *Numerical study of Laterally Loaded Batter Piles with the Application of Anisotropic Modified Cam Clay Model*.

Sanjay Dhakal, M.S., graduated Summer 2012. Thesis Title: *Stabilization of Very Weak Subgrade Soils with Cementitious Stabilizers*.

Imran Akond, M.S., graduated Spring 2012. Thesis Title Title: *Laboratory Evaluation of Geosynthetics to Stabilize the Subgrade/Base in Unpaved Roadways*.

Zhachary Autin, M.S., graduated May 2012. Non-Thesis Project: *Evaluation of Geosynthetic Reinforcement of Two-Layer Base-Subgrade Specimens with Monotonic and Repeated Loading Triaxial Tests*.

Binay Pathak, M.S., graduated Spring 2011, Thesis: Analysis of Static Lateral Load Test of Battered Pile Group at I-10 Twin Span Bridge".

Gael Souci, M.S. graduated Fall 2009, Thesis: "Laboratory Characterization of Geogrid-Reinforced Unbound Granular Material for Use in Flexible Pavement Structures".

Rohit Pant, M.S., graduated Summer 2007, Thesis: "Evaluation of Consolidation Parameters of Cohesive Soils Using PCPT Method".

Julian Coronel, M.S., graduated Fall 2005, Thesis: "Frictional Interaction Properties between Geomaterials and Geosynthetics".

Munir Nazzal, M.S., graduated Fall 2003, Thesis: "Field Evaluation of In-situ Testing Technology for Q_C/Q_A Procedures during Construction of Pavement Layers and Embankments".

Ekrem Seyman, M.S., graduated Fall 2003, Thesis: "Laboratory Evaluation of In-Situ Tests as Potential Quality Control/Quality Assurance Tools".

Ather Mohiuddin, M.S., graduated Summer 2003, Thesis: "Analysis of Laboratory and Field Pull-Out Tests of Geosynhthetics in Clayey Soils".

PROFESSIONAL EXPERIENCE:

Professor, Research: Louisiana Transportation Research Center (LTRC), College of Engineering, Louisiana State University, Baton Rouge, Louisiana, (7/1/2013 to present)

Associate Professor, Research: Louisiana Transportation Research Center (LTRC), College of Engineering, Louisiana State University, Baton Rouge, Louisiana, (7/1/2008 to 6/30/2013)

Assistant Professor, Research: Louisiana Transportation Research Center (LTRC), College of Engineering, Louisiana State University, Baton Rouge, Louisiana, (7/1/2002 to 6/30/2008)

Adjunct Assistant, Associate and Professor: Civil and Environmental Engineering, Louisiana State University, Baton Rouge, Louisiana, (10/1/2002 to present)

Research Associate, Louisiana Transportation Research Center (LTRC), Louisiana State University Baton Rouge, Louisiana, (10/1997 to 6/30/2002)

***Graduate Research Assistant**, Department of Civil and Environmental Engineering, Louisiana State University, Baton Rouge, Louisiana (8/1992 to 9/1997).*

***Senior Geotechnical and Material Engineer**: Arab Corporation for Engineering and Geotechnology, Amman, Jordan (5/1989 to 8/1992).*

***Structural Design Engineer**, Subhi Tabal Establishment, Amman, Jordan, (6/1988 to 5/1989).*

***Graduate Research/Teaching Assistant**, Department of Civil Engineering, Jordan University of Science and Technology, Irbid, Jordan, (9/1985 to 5/1988).*

Research Assistant:

Teaching Assistant:

***Training Engineer**, COWI Consulting Firm, Copenhagen, Denmark, summer 1984*. Worked in the design of prestressed concrete bridges.

HONORS:

Dean's List: - University of Jordan - several Times.
Honor List: - University of Jordan - several Times.

COMPUTER SKILLS:

Computer Systems: Main frame, Work stations, and PC computers
Operating Systems: UNIX, VMS, MS-DOS, MS-WINDOWS.
Language: FORTRAN, Visual Basic.
Softwares: ABAQUS, PLAXIS.
Word Processing: Word Perfect, Microsoft Word, Frame Maker, and LaTex
Spread Sheets: Excel, Quattropro
Graphics: Grapher, Surfer, xmgr, Sigmaplot, and Freelance.
Statistics: STATISTICA
Mathematics: MathCad

COURSES:

Advanced Geotechnical Engineering I; Advanced Geotechnical Engineering II; Ground Modification and Soil Stabilization ; Soil Dynamics and Earthquake Engineering; Theory of Plasticity, Viscoelasticity and Viscoplasticity; Solid and Continuum Mechanics; Finite Element Method, I, and II; Advanced Engineering Foundation; Advanced Material of Construction; Applied Mathematics for Engineering; Advanced Pavement Design; Highway Construction Materials; Prestressed Concrete Design; Matrix Analysis of Structures; Structural Stability; Structural Dynamics; Introduction to Structural Reliability; Engineering Analysis and Statistics; Numerical Methods in Geotechnical Engineering (aud); Principles of Soil Behavior (aud); Environmental Geotechnics (aud).

Soil Mechanics; Engineering Foundation; Reinforced Concrete Design I; Reinforced Concrete Design II; Structural Analysis I; Structural Analysis II; Structural Analysis III; Steel Design.

FUNDED PROJECTS:

- Principal Investigator – "*Verification and Implementation of Set-Up Empirical Models in Pile Design*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 247,771, 08/01/2016-07/31/2018.
- Principal Investigator – "*Incorporating the Site Variability and Laboratory/In-situ Testing Variability of Soil Properties in Geotechnical Engineering Design*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 476,813, 07/01/2016-12/31/2018.
- Principal Investigator – "*Finite Element Analysis of the Lateral Load Test on Battered Pile Group at I-10 Twin Span Bridge*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 260,368, 03/01/2016-05/31/2018.
- Principal Investigator – "*Monitoring of In-Service Geosynthetic Reinforced Soil (GRS) Bridge Abutments in Louisiana*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 302,200, 10/01/2014-12/31/2017.
- Principal Investigator – "*In Situ Evaluation of Design Parameters and Procedures for Cementitiously Treated Weak Subgrades using Cyclic Plate Load Tests*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 294,679, 3/01/2013-09/30/2015. (Co-PI Dr. Qiming Chen).
- Co-Principal Investigator – "Calibration of LRFD Geotechnical Axial (Tension and Compression) Resistance Factor (ϕ) for California." Funded by CALTRANS, $222,606, 01/01/2015 – 06/30/2017. (PI: Dr. Xinbao Yu – University of Texas at Arlington).
- Principal Investigator – "*Accelerated Load Testing of Geosynthetic Stabilized/Rreinforced Subgrade/Base in Unpaved and Pavement Test Sections,"* funded by FHWA and LA DOTD, **$** 258,133, 01/01/2011-12/31/2015. (Co-PI Dr. Xiaochao Tang).
- Principal Investigator – "*Field Instrumentation and Testing to Study Set-up Phenomenon of Piles Driven into Louisiana Clayey Soils*," funded by Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD), $ 489,708, 01/01/2011-12/31/2015. (Co-PI Dr. Qiming Chen).
- Co-Principal Investigator – "*An Integrated Computational and Experimental Study of Driven Pile Set-up in Soft Clays*." Funded by Board of Regents – Industrial Ties Research Subprogram (ITRS) program, $307,781 7/01/2012-6/30/2015. (PI: Dr. Carol Friedland, other Co-PIs: Drs. Gouping Zhang and Emerald Roider).

- Co-Principal Investigator – "*Assessment of Environmental, Seasonal and Regional Variations in Pavement Base and Subgrade Properties,"* funded by FHWA and LA DOTD, $ 262,210, 9/1/2011-8/31/2013. (PI Kevin Gaspard).
- Principal Investigator – "Support Study to *Accelerated Load Testing of Geosynthetic StabilizedRreinforced Subgrade/Base in Unpaved and Pavement Test Sections,*" a project funded by Tensar and TenCate Mirifi, $200,000, 12/01/20010-05/31/2012.
- Principal Investigator – "Calibration of Resistance Factors for Drilled Shafts for the New FHWA Design Method," funded by FHWA and LA DOTD, **$** 97,857, 1/12/2011-07/31/2012.
- NCHRP 10-84: Modulus-Based Construction Specification for Compacted of Earthwork and Unbound Aggregate." Funded by National Cooperative Research Program, Transportation Research Board, National Research Council, **$** 500,000, 10/12/2010-03/31/2013. (PI: Dr. Soheil Nazarian, University of Texas at El Paso)
- Principal Investigator – "*Substructure Health Monitoring of the I-10 Twin Span Bridge*." Funded by Innovative Bridge Research and Deployment (IBRD) program, FHWA, $565,550, 11/01/2007-07/31/2012.
- Principal Investigator – "Support Study to *Substructure Health Monitoring of the I-10 Twin Span Bridge*." Funded by FHWA and LA DOTD, $232,951, 01/01/2008-07/30/2012.
- Principal Investigator – "*Field Demonstration of New Bridge Approach Slab Designs and Performance.*" Funded by FHWA and LA DOTD, $393,176, 08/01/2008-07/31/2011 (Co-PI Dr. Qiming Chen).
- Principal Investigator – "*Calibration of Resistance Factors needed in the LRFD design of Driven Piles.*" Funded by FHWA and LA DOTD, $250,775, 11/1/2006-03/30/2010 (Co-PI Dr. Ching Tsai).
- Principal Investigator – "*Evaluation of the Base/Subgrade Soil under Repeated Loading*." Funded by FHWA and LA DOTD, $433,483, 8/1/2005-06/30/2010.
- Principal Investigator – "Support Study to *Evaluation of the Base/Subgrade Soil under Repeated Loading.*" Funded by Tensar International Corporation, $101,251, 01/01/2008-12/31/2008.
- Co-Principal Investigator – "*Effect of Drainage in Unbound Aggregate Bases on Flexible Pavement Performance.*" Funded by FHWA and LA DOTD, $285,574, 3/1/2006-08/31/2008 (PI. Dr. Tao Mingjiang).
- Principal Investigator – "*Control of Embankment settlement: Field Verification of PCPT Prediction Methods*." Funded by FHWA and LA DOTD, $268,627, 3/1/2005-12/31/2010 (Co-P.I. Gavin Gautreau).
- Principal Investigator – "*Use of Reinforced Soil Foundation (RSF) to Support Shallow Foundation*." Funded by FHWA and LA DOTD, $391,058, 3/1/2004-12/31/2007. (Co-P.I. Dr. Izzaldin Almoh'd).
- Principal Investigator – "*Development of Laboratory Testing Facility for Evaluation of Base-Soil Behavior under Repeated Loading.*" Funded by FHWA and LA DOTD, $62,974, 3/1/2004-10/30/2004. (Co-P.I. Dr. Izzaldin Almoh'd).
- Co-Principal Investigator – "*Alternative Methods to Trench Backfill.*" Funded by FHWA and LA DOTD, $127,480, 10/1/2002-3/31/2004 (P.I. Dr. Zhongjie Zhang).
- Principal Investigator – "*Assessment of In-Situ Test Technology for Construction Control of Base Courses and Embankments.*" Funded by FHWA and LA DOTD, $160,000, 7/1/2001-12/31/2003 (Co-P.I. Dr. Khalid Alshibli).

- Co-Principal Investigator – "*Support Study for the Assessment of In-situ Test Technology for Construction Control of Base Courses and Embankments*." Funded by FHWA and LA DOTD, $83,200, 7/1/2001-12/31/2003 (P.I. Dr. Khalid Alshibli).
- Co-Principal Investigator – "*Development of Models to Estimate the Subgrade and subbase Layers Resilient Modulus from In-Situ Devices Test Results for Construction Control*." Funded by FHWA and LA DOTD, $100,630, 1/1/2003 – 6/31/2004 (P.I. Louay Mohammad).
- Co-Principal Investigator – "*Inclined Piezocone Penetration Aspects – Theoretical Formulation and Experimental Verification.*" Funded by National Science Foundation (NSF), CSM-9907951, $162,312, 10/1/1999-9/30/2003 (P.I. Dr. Mehmet Tumay).
- Principal Investigator – "*LTRC Support for Geosynthetic Research at the Geosynthetic Engineering Laboratory*." Funded by FHWA and LA DOTD, $177,000, 7/1/2001-6/30/2002.
- Principal Investigator – "*Evaluation of Consolidation Characteristics of Cohesive Soils from Piezocone Penetration Tests (PCPT).*" Funded by FHWA and LA DOTD, $125,580, 11/1/1999-12/31/2003.
- Co-Principal Investigator – "*Evaluation of Bearing Capacity of Piles from Cone Penetration Tests*." Funded by FHWA and LA DOTD, $124,109, 5/15/1998-12/31/2001 (P.I. Dr. Hani Titi).

REFEREED JOURNAL PUBLICATIONS:

1. Haque, Md. N., Abu-Farsakh, M., and Zhang, Z., "Evaluation of Pile Capacity from CPT and Pile Setup Phenomenon," accepted for publication in the *International Journal of Geotechnical Engineering*.
2. Chen Q., **Abu-Farsakh, M.**, Hanandeh S., and Mohammad L., 2018 "Performance Evaluation of Geosynthetic Reinforced Flexible Pavement using Full-Scale Accelerated Loading Test," accepted for publication in *Geosynthetic International Journal*.
3. M., Haque, Md. N., **Abu-Farsakh, M.**, Tsai. C., and Zhang, Z., 2018 "A Load Testing Program on Large Diameter Open Ended Instrumented Test Piles to Evaluate the Design Parameters and Pile Setup," accepted for publication in the Journal of the Transportation Research Record, and for presentation in the 97th TRB annual meeting, January 2018.
4. Mehrotra A., **Abu-Farsakh M.,** and Gaspard G., 2018 "Development of Subgrade M_r Constitutive Models Based on Physical Soil Properties," *Journal of Road Materials and Pavement Design*, Vol. 19, No. 1, pp. 56–70,
5. **Abu-Farsakh, M.,** Souri, A., Voyiadjis, G., and Rosti, F., 2017 "Comparison of Static Lateral Behavior of Three Pile Group Configurations Using Three-Dimensional Finite Element Modeling," Canadian Geotechnical Journal.
6. Ardah A., **Abu-Farsakh, M.**, and Voyiadjis G., 2017 "Numerical evaluation of the performance of a Geosynthetic Reinforced Soil-Integrated Bridge System (GRS-IBS) under different loading conditions," *Geotextiles and Geomembranes*. Volume 45, Issue 6, pp. 558-569.
7. Ardah A., **Abu-Farsakh, M.**, and Chen Q., 2017 "Evaluating the performance of very weak subgrade soils treated/stabilized with cementitious materials for sustainable pavements," *Transportation Geotechnics*, Volume 11, pp. 107–119.
8. **Abu-Farsakh, M.,** Haque, Md. N., and Chen, Q., 2017 "Experimental Study to Evaluate the Effect of Consolidation Behavior on Pile Setup," ASTM International, Vol. 143, Issue 4.
9. Saghebfar M., **Abu-Farsakh, M.**, Ardah A., Chen Q., and Fernandez B. 2017 "Full-Scale Testing of Geosynthetic Reinforced Soil Integrated Bridge System," *Journal of the Transportation Research Record*, Issue 2656, pp. 40-52.

10. **Abu-Farsakh, M.,** Haque, Md. N., Tavera, E., and Zhang, Z., 2017 "Evaluation of Pile Setup from Osterberg Cell Load Tests and its Cost Benefit Analysis," *Journal of the Transportation Research Record*, Issue 2656, pp. 61-70.
11. Saghebfar M., **Abu-Farsakh, M.**, Ardah A., Chen Q., and Fernandez B., 2017 "Performance Monitoring of Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS)," *Geotextiles and Geomembranes Journal*., Vol. 45, pp. 34-47.
12. **Abu-Farsakh, M.**, Haque Md. N., and Tsai C., 2017 "A Full-Scale Field Study for Performance Evaluation of Axially Loaded Large-Diameter Cylinder Piles with Pipe Piles and PSC Piles," *Acta Geotechnica*, Volume 12, Issue 4, pp 753–772.
13. Haque, Md. N., **Abu-Farsakh, M.,** Tsai, C., and Zhang, Z., 2016 "Load Testing Program to Evaluate Pile Setup Behavior for Individual Soil Layers and Correlation of Setup with Soil Properties," *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 143, Issue 4.
14. Rosti, F.., **Abu-Farsakh, M.,** and Jung J., 2016 "Development of Analytical Models to Estimate Pile Setup in Cohesive Soils Based on FE Numerical Analyses," *Geotechnical and Geological Engineering*, Vol. 34, Issue 4, pp. 1119 – 1134.
15. **Abu-Farsakh, M.**, Hanandeh S., Mohammad L., and Chen Q., 2016 "Performance of Geosynthetic Reinforced/Stabilized Paved Roads Built over Soft Soil under Cyclic Plate Loads," *Geotextiles and Geomembranes Journal*, Vol. 44, Issue 6, pp. 845-853.
16. Haque Md. N., **Abu-Farsakh, M.**, and Tsai C., 2016 "Field Investigation to Evaluate the Effects of Pile Installation Sequence on Set-up Behavior for Instrumented Test Piles," *Geotechnical Testing Journal*, Vol. 35, Issue 5, pp. 769 – 785.
17. **Abu-Farsakh, M**., Pant, R., Haque, Md. N., 2016 "Correlation of consolidation parameters (M and OCR) of cohesive soils with PCPT data," *Journal of the Transportation Research Record,* Vol. 2578, Geological, Geoenvironmental, and Geotechnical Engineering, pp. 81 –92.
18. Haque, Md. N., **Abu-Farsakh, M**., Chen, Q., and Okeil, A., 2016 "Developing a Model to Estimate Pile Setup for Individual Soil Layers on the Basis of Piezocone Penetration Test Data," *Journal of the Transportation Research Record,* Vol. 2579, Geological, Geoenvironmental, and Geotechnical Engineering, pp. 17 –31.
19. Souri A., **Abu-Farsakh, M.**, and Voyiadjis G., 2016 "Study of Static Lateral Behavior of Battered Pile Group Foundation at I-10 Twin Span Bridge Using 3D Finite Element Modeling," *Canadian Geotechnical Journal*, Vol. 53, No. 6, pp. 962-973.
20. Chen Q., and **Abu-Farsakh M.**, 2016 "Mitigating the Bridge End Bump Problem: A Case Study of a New Approach Slab System with Geosynthetic Reinforced Soil Foundation," *Geotextiles and Geomembranes journal,* Vol. 44, Issue 1, pp. 39-50.
21. **Abu-Farsakh M.,** Rosti F. and Souri A., 2015 "Evaluating Pile Installation and the following Thixotropic and Consolidation Setup by Numerical Simulation for Full Scale Pile Load Tests" *Canadian Geotechnical Journal*, Vol. 52, No. 11, pp. 1734-1746.
22. **Abu-Farsakh M.**, Ankond I. and Chen Q., 2015 "Evaluating the Performance of Geosynthetic-Reinforced Unpaved Roads using Plate Load Tests," *International Journal of Pavement Engineering*, Vol. 7, Issue 10, pp. 901-912.
23. **Abu-Farsakh M.**, Mehrotra A., Mohammad L., and Gaspard K., 2015 "Incorporating the Effect of Moisture Variation on Resilient Modulus for Unsaturated Fine-Grained Subgrade Soils," *Journal of the Transportation Research Recor*d, Vol. 2510, Geology and Properties of Earth materials, pp. 44-53.

24. Tang X., **Abu-Farsakh, M**., Hanandeh S., and Chen Q., 2015 "Performance of Reinforced/Stabilized Unpaved Test Sections Built over Native Soft Soil under Full-Scale Moving Wheel Loads," *Journal of the Transportation Research Record,* Vol. 2511, Soil Mechanics, pp. 81-89.

25. Abu-Hijleh N., **Abu-Farsakh, M**., Suleiman M. and Tsai C., 2015 "Development and Use of High-Quality Databases of Deep Foundation Load Tests," *Journal of the Transportation Research Record,* No. 2511, Soil Mechanics, pp. 27-36.

26. **Abu-Farsakh M.,** Dhakal S., and Chen Q., 2015 "Laboratory Characterization of Cementitiously Treated/Stabilized Very Weak Subgrade Soil under Cyclic Loading," Soils and Foundations Journal, Volume 55, Issue 3, pp. 504-516.

27. Chen Q. and **Abu-Farsakh M**, 2015, "Ultimate Bearing Capacity Analysis of Strip Footings on Reinforced Soil Foundation," *Soils and Foundations Journal,* Volume 55, Issue 1, pp. 74-85.

28. Haque M. N., **Abu-Farsakh, M**., and Chen Q., 2014, "Case Study on Characterization of Pile Setup of Individual Layer in Cohesive Soils," *Journal of the Transportation Research Record,* No. 2462, Soil Mechanics, pp. 37-47.

29. **Abu-Farsakh M**., Gu J., Voyiadjis G., and Chen Q. 2014, "Mechanical-Empirical Analysis of the Results of Finite Element Analysis on Flexible Pavement with Geogrid Base Reinforcement," *International Journal of Pavement Engineering.* Vol. 15, No. 9, pp 786-798.

30. Chen Q., Haque M., **Abu-Farsakh, M**., and Fernandez B., 2014, "Field Investigation of Pile Setup in Mixed Soil," *ASTM Geotechnical Testing Journal*. Vol. 37, No. 2, pp

31. Chen Q., **Abu-Farsakh M.,** Voyiadjis G., and Souci G., 2013, "Shakedown Analysis of Geogrid-Reinforced Granular Base Material," *ASCE Journal of Material in Civil Engineering,* Vol. 25, No. 3, pp. 337 – 346.

32. **Abu-Farsakh M.,** Chen Q., and Sharma R., 2013, "An Experimental Evaluation of the Behavior of Footings on Geosynthetic-Reinforced Sand," *Soils and Foundations Journal*, Vol. 53, Issue 2, pp. 335–348.

33. **Abu-Farsakh M.,** Yu X., and Zhang Z., 2012 "Calibration of Side, Tip, and Total Resistance Factors for LRFD of Drilled Shafts," *Journal of the Transportation Research Board*, No. 2310, Soil Mechanics, pp. 38-48.

34. Yu X., **Abu-Farsakh M.,** Yoon S., Tsai C., and Zhang Z., 2012, "Implementation of LRFD Design of Drilled Shafts in Louisiana," ASCE *Journal of Infrastructure Systems*. Vol. 18, number 2, pp. 103-112.

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UNDER REVIEW PAPERS

1. Haque, Md. N., and **Abu-Farsakh, M.**, "Development of Analytical Models to Estimate the Increase in Pile Capacity with Time (Pile Set-up) from Soil Properties," Submitted for possible publication in the *ACTA Geotechnica Journal*.
2. Rousti F. and **Abu-Farsakh M.**, "Development of a Constitutive Model for Clays Based on Disturbed State Concept and its Application to Simulate Pile Installation and Setup," Submitted for possible publication in *Soils and Foundations Journal*.
3. Ardah, A., **Abu-Farsakh, M.**, and Voyiadjis, G., "Numerical Investigation of the Performance of Geosynthetic Reinforced Soil–Integrated Bridge System (GRS-IBS) Subjected to Differential Settlement," Submitted for possible publication in the *Geosynthetics International Journal*.
4. **Abu-Farsakh, M.**, and Haque, Md. N., "Estimation of Pile Setup and Incorporation of Resistance Factor in LRFD Framework," Submitted for possible publication in the *ASCE Journal of Geotechnical and Geoenvironmental Engineering*.
5. **Abu-Farsakh, M.**, Ardah, A., and Voyiadjis, G., "Numerical Parametric Study to Evaluate the Performance of Geosynthetic Reinforced Soil–Integrated Bridge System (GRS-IBS) under Service Loading," Submitted for possible publication in the *Geotextiles and Geomebranes Journal*.

SPECIAL PUBLICATIONS:

1. **Abu-Farsakh M.**, Saghebfar M, Ardah A., and Chen Q. 2017 "A Case Study on Evaluating the Performance of Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS)" accepted for publication and presentation at Geo-Frontiers 2017, Orlando, FL.
2. **Abu-Farsakh M.**, and Haque M. N. 2017 "Development of Empirical Models to Estimate the Increase in Pile Resistance (Set-Up) with Time" accepted for publication and presentation at Geo-Frontiers 2017, Orlando, FL.
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CONFERENCE PROCEEDINGS

1. Haque Md. N., **Abu-Farsakh M.**, and Nickel C., 2017, "A Field Study to Analyze Pile Setup Behavior and Comparison of Pile Capacity Methods from CPT," Proceedings of the 42nd DFI Annual Conference, New Orleanse, Oct 24-27, 11 p.
2. Ahmad Souri A., and **Abu-Farsakh M.**, 2017 "Comparison of Static Lateral Behavior of Vertical nnd Battered Pile Groups of The I-10 Twin Span Bridge using Finite Element Simulation," Proceedings of the 42nd DFI Annual Conference, New Orleanse, Oct 24-27, 10 p.
3. **Abu-Farsakh M.**, Saghebfar M, Ardah A., and Chen Q. 2017 "Instrumenting and Monitoring the Performance of Geosynthetic Reinforced Soil Integrated Bridge System" accepted for publication and presentation at the CESARE'17 (Coordinating Engineering for Sustainability and Resilience) conference, Dead Sea, Jordan.
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PRESENTATIONS

1. Haque Md. N., **Abu-Farsakh M.**, and Nickel C., 2017, "A Field Study to Analyze Pile Setup Behavior and Comparison of Pile Capacity Methods from CPT," Presented at the 42nd DFI Annual Conference, New Orleanse, Oct 24-27.
2. **Abu-Farsakh M.**, Saghebfar M, Ardah A., and Chen Q. 2017 "Instrumenting and Monitoring the Performance of Geosynthetic Reinforced Soil Integrated Bridge System" presented at the CESARE'17 (Coordinating Engineering for Sustainability and Resilience) conference, Dead Sea, Jordan.
3. **Abu-Farsakh M.**, Saghebfar M, Ardah A., and Chen Q. 2017 "Estimating the Increase in Pile Resistance with Time (or Setup) Based on Soil Properties" presented at the CESARE'17 (Coordinating Engineering for Sustainability and Resilience) conference, Dead Sea, Jordan.
4. **Abu-Farsakh M.**, Saghebfar M, and Ardah A., 2017 "Monitoring the Performance of Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS) at Maree Michel Bridge Site" presented at Geo3T2 conference, April 11-12, Raleigh – Durham, NC.
5. **Abu-Farsakh M.**, Saghebfar M, Ardah A., and Chen Q. 2017 "A Case Study on Evaluating the Performance of Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS)" presented at Geo-Frontiers 2017, Orlando, FL.
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53. Chen, Qiming, and **Abu-Farsakh, M**., 2012 “Structural Contribution of Geogrid Reinforcement in Pavement,” presented at the GeoCongress 2012 conference, Oakland, CA.
54. Yu, Xinbao, and **Abu-Farsakh, M**., 2012 “Separated Resistance Factors of Drilled Shafts Based on O-cell Tests,” presented at the GeoCongress 2012 conference, Oakland, CA.
55. **Abu-Farsakh, M**., 2012, Dubai “Instrumentation and Full-Scale Lateral Load Testing of a Batter Pile Group Foundation at I-10 Twin Span Bridge,” presented at the Deep Foundations Institute Middle East Conference (DFIMEC), Dubai, UAE.
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Developed Softwares

Responsible for the development of several visual basic computer softwares aimed at implementing the Cone Penetration Test (CPT) technology in many geotechnical engineering applications. These softwares are:

1. Classification by Cone Penetration Test (LSC-CPT): Five CPT soil classification systems were implemented in this software, the probabilistic region estimation method, the fuzzy classification method, the Schmertmann, the Douglas and Olsen, and the Robertson et al. methods.
2. Louisiana Pile Design by CPT (LPD-CPT): three CPT pile design methods were implemented in this software, De Ruiter and Beringen method, LCPC method, and Schmertmann method.
3. Estimation of Embankment Settlement from CPT: this software will first estimate the soil's consolidation parameters from the piezocone penetration and dissipation tests, which are then used to calculate the embankment settlement.

The first two softwares can be downloaded for free from the LTRC website at (www.ltrc.lsu.edu/downloads.html).