

CURRICULUM VITAE

CHADI SAID EL MOHTAR, Ph.D.

ASSISTANT PROFESSOR

DEPARTMENT OF CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING

COCKRELL SCHOOL OF ENGINEERING

THE UNIVERSITY OF TEXAS AT AUSTIN

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RESEARCH INTERESTS

As a geotechnical scholar researching pore fluid engineering geotechnics, I have developed a research program focused on auto-adaptive solutions for mitigating geo-challenges to existing and future infrastructures. My research involves engineering pore fluids and soils for resilient response to adverse and unforeseen loading conditions, with minimal compromise to the performance under normal working loads. Particularly, my work has focused on advancing the fundamental understanding of viscous flow within porous media through relating rheological properties of fluids and suspensions to the mechanical and hydraulic characteristics of geomaterials. Over the course of my research career, I have expanded my work on pore fluid-soil micro-mechanics from ground improvement contexts to include mobilization of non-aqueous fluids within porous media in geo-environmental and petroleum engineering applications. As such, my research integrates the areas of rheology, deep-bed filtration, geotechnical, geo-environmental and petroleum engineering to better understand the progressive temporal and space variations during and post flow of complex fluids in porous media.

For additional details and electronic copies of my publications, please refer to my personal webpage at: http://www.caee.utexas.edu/prof/El_Mohtar/

FORMAL EDUCATION

Ph.D.	2008, Purdue University, Civil Engineering
MSCE	2003, Michigan State University, Civil Engineering
BSCE	2001, Beirut Arab University, Civil Engineering

ACADEMIC APPOINTMENTS

2008-Pres.	Assistant Professor, CAEE, The University of Texas at Austin
2008	Post-Doctoral Fellow, Purdue University
2004-2008	Graduate Research Assistant, Purdue University
2004-2007	Teaching Assistant (Civil Eng.), Purdue University
2003-2004	Teaching Assistant (Mathematics), Purdue University
2002-2003	Teaching Assistant, Michigan State University

ACADEMIC HONORS AND AWARDS

2014	Arthur Casagrande Professional Development Award. Awarded by ASCE Geo-Institute.
2014	REES2014 Faculty Grant Award. Awarded by the American Railway Engineering and Maintenance-of-Way Association (AREMA)

- 2013 **Top Student paper.** Awarded at the 7th International Conference on Remediation of Contaminated Sediments in Dallas, TX to my graduate students.
- 2012 **Faculty Early Career Development (CAREER) Award.** Awarded by the National Science Foundation (NSF).
- 2010 **Excellence in Engineering Education (ExCEED) Fellow.** Awarded by ASCE.
- 2009 **Summer Research Assignment Award.** Awarded by The University of Texas at Austin.
- 2003 **Research Enhancement Award.** Awarded by Michigan State University.

PROFESSIONAL REGISTRATION

- 2008-Pres. Engineering in Training (EIT)
- 2001-Pres. Licensed Civil Engineer, Lebanese Order of Engineers and Architects, Lebanon

RESEARCH PUBLICATIONS (Advisees' names are underlined)

Refereed Archival Journal Publications

- J-1. Marika Santagata, Julia P. Clarke, Antonio Bobet, Vince P. Drnevich, **Chadi S. El Mohtar**, Pao-Tsung Huang and Cliff T. Johnston. "Rheology of concentrated bentonite suspensions treated with sodium pyrophosphate for application in mitigating earthquake induced liquefaction" Applied Clays Science, [doi: 10.1016/j.clay.2014.05.017](https://doi.org/10.1016/j.clay.2014.05.017), In Press.
- J-2. Yoon, J. and **El Mohtar, C. S.** "Groutability of Granular Soils using Bentonite Grout based on Filtration Model" Transport in Porous Media. Volume 102, Issue 3, p.p. 365-385, 2014.
- J-3. **El Mohtar, C. S.**, Drnevich, V. P., Santagata, M. C. and Bobet, A. "Pore pressure generation in Sand with Plastic Fines" Geotechnique. Volume 64, No. 2, pp. 108-117, 2014.
- J-4. Yoon, J. and **El Mohtar, C. S.** "Evaluation of time-dependent yield stress using dynamic rheological property of bentonite suspensions" ASTM Geotechnical Testing Journal, Vol. 37, No. 1, p.p. 85-93, 2014.
- J-5. Yoon, J. and **El Mohtar, C. S.** "Dynamic rheological properties of sodium pyrophosphate modified bentonite suspensions for liquefaction mitigation" Clays and Clay Minerals, Volume 61, No. 4, 319-327, 2013.
- J-6. Yoon, J. and **El Mohtar, C. S.** "Groutability of granular soils using sodium pyrophosphate modified bentonite suspensions" Tunneling and Underground Space Technology, Vol. 37 p.p. 135-145, 2013.
- J-7. **El Mohtar, C. S.**, Bobet, A., Santagata, M.C., Drnevich, V.P., Johnston C. "Liquefaction Mitigation using Bentonite Suspensions," Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 139, No. 8, p.p. 1369-1380, 2013.
- J-8. **El Mohtar, C. S.**, Drnevich, V. P., Santagata, M. C. and Bobet, A. "Combined Resonant Column and Cyclic Triaxial Tests for Measuring Undrained Shear Modulus Reduction of Sand with Plastic Fines" ASTM Geotechnical Testing Journal, Vol. 36, No. 4, p.p. 484-492, 2013.
- J-9. Yoon, J. and **El Mohtar, C. S.** "Disturbance effect on yield stress measurement of bentonite suspension," ASTM Geotechnical Testing Journal, Vol. 36, No.1, p.p. 78-87, 2013.
- J-10. Erten, M.B., Reible, D.D., Gilbert, R.B., and **El Mohtar, C.S.** "The Performance of Organophilic Clay on NAPL Contaminated Sediments under Anisotropic Consolidation," Journal of ASTM International STP 1554, Vol. 5, Contaminated Sediments: Restoration of Aquatic Environment, p.p. 32-44, 2012.

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- J-11. **El Mohtar, C.S.** and Rugg, D. "New Three-Way Split Mold Design and Experimental Procedure for Testing Soft, Grouted Soils," ASTM Geotechnical Testing Journal, Vol. 34 Issue 6, pp. 365-371, 2011.
- J-12. Erten, M., Gilbert, B., **El Mohtar, C.S.**, and Reible, D. "Development of a laboratory procedure to evaluate the consolidation potential of soft contaminated sediments," ASTM Geotechnical Testing Journal: Innovations in Characterizing the Mechanical and Hydrological Properties of Unsaturated Soils, Vol. 34, Issue 5, p.p. 467-475, 2011.
- J-13. **El Mohtar, C.S.** and Khire, M.V. "Lab-Scale Vertical Pullout Test for Measurement of Soil-Geomembrane Interface Friction Parameters between Geomembranes and Cohesionless Soils," Geotechnical Testing Journal ASTM, Vol. 32 Issue 4, p.p. 365-371, 2009.
- J-14. Chatti, Karim and **El Mohtar, C.S.** "The Effect of Different Axle Configurations on the Fatigue Life of an Asphalt Concrete Mixture," Journal of the Transportation Research Record, No.1891, pp. 121-130, 2004.

Refereed Archival Journal Publications-under review

- J-15. **El Mohtar, C. S.**, Yoon, J. and ElKhattab, M. "Penetration depth of bentonite grouts through granular soils" Tunneling and Underground Space Technology.
- J-16. Yoon, J. and **El Mohtar, C.S.** "Rheological properties of sodium pyrophosphate modified bentonite suspensions for seepage control" Engineering Geology.

Refereed Conference Proceedings

- C-1. Kwan, W.S., Sideras, S., **El Mohtar, C.S.**, and Kramer, S. "Pore Pressure Generation under Different Transient Loading Histories", Proceedings of the 10th U.S. National Conference on Earthquake Engineering, Frontiers of Earthquake Engineering, Anchorage, Alaska, July 21-25, 2014.
- C-2. Kwan, W.S. and **El Mohtar, C.S.** "Comparison between Shear Strength of dry Sand Measured in CSS device using Wire-reinforced membranes and Stacked Rings," ASCE Geotechnical Special Publications GSP-234, GeoCongress 2014: Geo-Characterization and Modeling for Sustainability, Atlanta, GA, Feb. 23-26, 2014.
- C-3. Erten, M.B., **El Mohtar, C.S.**, Reible, D.D. and Gilbert. R.B. "Consolidation Properties of NAPL Contaminated Sediments," ASCE Geotechnical Special Publications GSP-225, GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Oakland, CA, March 25-29, 2012.
- C-4. Yoon, J.S. and **El Mohtar, C.S.** "Time dependent rheological behavior of modified bentonite suspensions," ASCE Geotechnical Special Publications GSP-225, GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Oakland, CA, March 25-29, 2012.
- C-5. Rugg, D.A., Yoon, J.S., Hwang, H. and **El Mohtar, C. S.** "Undrained Shearing Properties of Sand Permeated with a Bentonite Suspension for Static Liquefaction Mitigation," ASCE Geotechnical Special Publications GSP-211, Geofrontiers: Advances in Geotechnical Engineering, Dallas, TX, March 13-16, 2011.
- C-6. Hwang, H., Yoon, J., Rugg, D. and **El Mohtar, C.S.** "Hydraulic Conductivity of Bentonite Grouted Sand," ASCE Geotechnical Special Publications GSP-211, Geofrontiers: Advances in Geotechnical Engineering, Dallas, TX, March 13-16, 2011.
- C-7. Brown, A.C., Ellis, T., Dellinger, G., **El Mohtar, C.S.**, Zornberg, J., and Gilbert, R.B. "Long-Term Monitoring of a Drilled Shaft Retaining Wall in Expansive Clay: Behavior Before and

- During Excavation,” ASCE Geotechnical Special Publications GSP-211, Geofrontiers: Advances in Geotechnical Engineering, Dallas, TX, March 13-16, 2011.
- C-8. **El Mohtar, C.S.** “Evaluation of the 5% Double Amplitude Strain Criterion,” International Conference on Soil Mechanics and Foundation Engineering, ISSMGE, Alexandria, Egypt October 5-9, 2009.
- C-9. **El Mohtar, C.S.**, Santagata, M., Bobet, A., Drnevich, V., and Johnston, C. "Effect of Plastic Fines on the Small Strain Stiffness of Sand," IS-Atlanta: Fourth International Symposium, Deformation Characteristics of Geomaterials, Vol. 1, pp. 245-251, September 22-24, 2008.
- C-10. Abou Najm, M. **El Mohtar, C.S.**, Mohtar, R. and Drnevich, V.P. “Improving TDR Measurements through Accounting for Soil Structural Properties,” ASABE Annual International Meeting, Rhode Island, June 29-July2, 2008.
- C-11. **El Mohtar, C.S.**, Clarke, C., Bobet, A., Santagata, M., Drnevich, V., and Johnston, C. "Cyclic Response of Sand with Thixotropic Pore Fluid," ASCE Geotechnical Special Publication GSP-181: Geotechnical Earthquake Engineering and Soil Dynamics Conference IV, GEESD IV, May 18-22, 2008.
- C-12. Chatti, K., **El Mohtar, C.S.** and Lee, H. S. “Fatigue Life Predictions for Asphalt Concrete Subjected to Multiple Axle Loadings”, 8th International Symposium on Heavy Vehicle Weights and Dimensions, Gauteng Province, South Africa, March 14-18, 2004.
- C-13. Chatti, K., **El Mohtar, C. S.** and Salama, H. “Effect of Heavy Trucks with Large Axle Groups on Asphalt Pavement Damage”, 8th International Symposium on Heavy Vehicle Weights and Dimensions, Gauteng Province, South Africa, March 14-18, 2004.

Refereed Conference Proceedings-Under Review

- C-14. **El Mohtar, C.S.**, ElKhatab, M. and Sangroya, R. “Post-Grouting Stability of Bentonite Suspensions within Sand Pores”, International Foundations Congress and Equipment Expositions (IFCEE2015), San Antonio, Texas, March 17-21, 2015.
- C-15. Brown, A., Dellinger, G., Helwa, A., **El Mohtar, C.S.**, Zornberg, J. Gilbert, R., “Monitoring a Drilled Shaft Retaining Wall in Expansive Clays: Long-Term Performance in Response to Moisture Fluctuations”, International Foundations Congress and Equipment Expositions (IFCEE2015), San Antonio, Texas, March 17-21, 2015.

Non-Refereed Conference Proceedings

- N-1. Spears, A., Yoon, J., Hwang, H. and **El Mohtar, C.S.** “Effects of Bentonite Hydration and Uniformity on Hydraulic Conductivity of Sand-Bentonite Mixtures”, National Society of Black Engineers (NSBE) 40th Annual Conventions, Nashville, TN, March 26-30, 2014.
- N-2. Betak, J. F., Bhasin, A. and **El Mohtar, C.S.** “The railroad Engineering Sustainability Lifecycle,” 100th ASLRRA Annual Meeting, Atlanta, Georgia, April 28-30, 2013.
- N-3. ElKhatab, M., Yoon, J.S. and **El Mohtar, C.S.** “Prediction of Penetration Length of Bentonite Slurry in Soil-Bentonite Slurry walls” 7th International Conference on Remediation of Contaminated Sediments held in Dallas, February 4-7, 2013.
- N-4. Erten, M.B. Reible, D.D. **El Mohtar, C.S.** and Gilbert, R.B. “The Behavior Organophilic Clay as an In Situ Cap on Nonaqueous Phase Liquid Contaminated Sediments” 7th International Conference on Remediation of Contaminated Sediments held in Dallas, February 4-7, 2013.
- N-5. **El Mohtar, C.S.**, Drnevich, V.P., Santagata, M., and Bobet. A. “Combined Resonant Column and Cyclic Triaxial Tests for Measuring Shear Modulus of Sand with Plastic Fines,” ASTM

Symposium on Dynamic Testing of Soil and Rock: Field and Laboratory, San Diego, CA, June 28-29, 2012.

- N-6. Erten, M.B., Goff, M., Reible, D.D., Gilbert, R.B. and **El-Mohtar, C.S.** "Development of a laboratory test to evaluate NAPL mobility in sediments," Sixth International Conference on Remediation of Contaminated Sediments, New Orleans, February 7-10, 2011.
- N-7. Clarke, J.P., Bobet, A., Drnevich, V.P., **El Mohtar, C.S.**, Johnston, C.T., Santagata, M. "Sodium Pyrophosphate-Bentonite Suspensions for Use in Liquefaction Mitigation," International clay conference, Castellaneta Marina (TA) – Italy, June 14-20, 2009.

Other Major Reports and Publications

- M-1. **El Mohtar, C. S.** "The Geoengineering of Contaminated Sediments", invited article to ASCE GeoStrata, Nov-Dec Issue, 2013.
- M-2. Brown, A., Dellinger, G., **El-Mohtar, C.S.**, Zornberg, J., and Gilbert, R.B. "The Long-Term Performance of a Drilled Shaft Retaining Wall in an Expansive Clay", Center of Transportation Research, Technical Report 0-6603-2, submitted to TxDOT, October 2013.
- M-3. Chatti, K., Manik, A., Salama, H., **El Mohtar, C.S.**, and Suk Lee, H. "Effect of Michigan Multi-Axle Trucks on Pavement Distress Volume III – Rigid Pavements", submitted to Michigan Department of Transportation as part of Project RC-1504, February 2009.
- M-4. Chatti, K., Manik, A., Salama, H., **El Mohtar, C.S.**, and Suk Lee, H. "Effect of Michigan Multi-Axle Trucks on Pavement Distress Volume II – Flexible Pavements", submitted to Michigan Department of Transportation as part of Project RC-1504, February 2009.
- M-5. Chatti, K., Manik, A., Salama, H., Haider, S.W., Brake, N., and **El Mohtar, C.S.** "Effect of Michigan Multi-Axle Trucks on Pavement Distress Volume I – Literature Review and Analysis of In-Service Pavement Performance Data", submitted to Michigan Department of Transportation as part of Project RC-1504, February 2009.
- M-6. **El Mohtar, C.S.** "Pore Fluid Engineering: An Autoadaptive design for Liquefaction Mitigation". Ph.D. dissertation submitted to the Faculty of Purdue University, West Lafayette, IN 47907, May 2008.
- M-7. **El Mohtar, C.S.** "The Effect of Different Axle Configurations on the Fatigue Life of an Asphalt Concrete Mixture", MS Thesis presented to the Dept. of Civil & Environmental Engineering, Michigan State University, East Lansing MI 48824, August 2003.

INVITED/CONFERENCE TALKS

- T-1. **El Mohtar, C.S.** "Engineering our Grouts", Invited talk at University of Washington, Seattle, WA, May 22, 2014.
- T-2. Spears, A., Yoon, J., Hwang, H. and **El Mohtar, C.S.** "Effects of Bentonite Hydration and Uniformity on Hydraulic Conductivity of Sand-Bentonite Mixtures", National Society of Black Engineers' 40th Annual Conventions, Nashville, TN, March 26-30, 2014.
- T-3. **El Mohtar, C.S.**, "Putting some engineering into our grouting practice", Invited talk at University of Texas, San Antonio, March 21, 2014.
- T-4. Kwan, W.S., and **El Mohtar, C.S.** "Comparison between Shear Strength of dry Sand Measured in CSS device using Wire-reinforced membranes and Stacked Rings," GeoCongress 2014: Geo-Characterization and Modeling for Sustainability, Atlanta, GA, Feb. 23-26, 2014.

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- T-5. **El Mohtar, C.S.** “Grouting in Tunneling”, Invited talk to CE 387S: Underground Construction, Austin, Texas, Dec. 4, 2013.
- T-6. Kwan, W.S., Kramer, S., Sideras, S., Rathje, E. and **El Mohtar, C.S.** “Pore Pressure Generation under Different Loading Histories”, 2013 ASCE Texas Section Fall Conference and Centennial Celebration, Dallas, Texas, Sept. 11-14, 2013
- T-7. Sangroya, R., **El Mohtar, C.S.**, Yoon, J. and ElKhatab, M. “Applying Rheology to Enhance Grouting Prediction in Geotechnical Applications”, 2013 ASCE Texas Section Fall Conference and Centennial Celebration, Dallas, Texas, Sept. 11-14, 2013
- T-8. Betak, J. F., Bhasin, A. and **El Mohtar, C.S.** “The railroad Engineering Sustainability Lifecycle” 100th ASLRRA Annual Meeting, Atlanta, Georgia, April 28-30, 2013.
- T-9. **El Mohtar, C.S.** “Overview of Prof. El Mohtar research at UT”, Talk to Student Engineering Council as part of Research Symposium week April 17th, 2013.
- T-10. **El Mohtar, C.S.** “Overview of Prof. El Mohtar research at UT”, Talk to Student Engineering Council as part of Research Symposium week April 17th, 2013.
- T-11. **El Mohtar, C.S.** “Geotechnical Research at the University of Texas”, CAEE Undergraduate Advisory Board’s 2nd research Forum, March 26, 2013.
- T-12. ElKhatab, M., Yoon, J.S. and **El Mohtar, C.S.** “Prediction of Penetration Length of Bentonite Slurry in Soil-Bentonite Slurry walls” 7th International Conference on Remediation of Contaminated Sediments held in Dallas, February 4-7, 2013 (Poster Presentation)
- T-13. Erten, M.B., Reible, D.D., **El Mohtar, C.S.**, and Gilbert, R.B. “The Behavior Organophilic Clay as an In Situ Cap on Nonaqueous Phase Liquid Contaminated Sediments” 7th International Conference on Remediation of Contaminated Sediments held in Dallas, February 4-7, 2013.
- T-14. **El Mohtar, C.S.** “Career in Academia: First-hand experience” Talk to the Geolnstitute Graduate student chapter at Purdue University. Web-talk, October 24th, 2012.
- T-15. **El Mohtar, C.S.**, Vincent P. Drnevich, Marika Santagata and Antonio Bobet. “Combined Resonant Column and Cyclic Triaxial Tests for Measuring Shear Modulus of Sand with Plastic Fines,” ASTM Symposium on Dynamic Testing of Soil and Rock: Field and Laboratory, San Diego, CA, June 28-29, 2012.
- T-16. **El Mohtar, C.S.** “Geotechnical Research at the University of Texas”, CAEE Undergraduate Advisory Board’s 1st research Forum, April 12, 2012.
- T-17. Erten, M.B., **El Mohtar, C.S.**, Reible, D.D., Gilbert, R.B. “Consolidation Properties of NAPL Contaminated Sediments,” GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Oakland, CA, March 25-29, 2012.
- T-18. Yoon, J.S. and **El Mohtar, C.S.** “Time dependent rheological behavior of modified bentonite suspensions,” GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Oakland, CA, March 25-29, 2012.
- T-19. Rugg, D.A., Yoon, J.S. Hwang, H., and **El Mohtar, C.S.** “Undrained Shearing Properties of Sand Permeated with a Bentonite Suspension for Static Liquefaction Mitigation,” Geofrontiers March 2011, Dallas, TX.
- T-20. Hwang, H., Yoon, J.S., Rugg, D. and **El Mohtar, C.S.** “Hydraulic Conductivity of Bentonite Grouted Sand,” Geofrontiers March 2011, Dallas, TX.
- T-21. Brown, A.C., Ellis, T., Dellinger, G., **El Mohtar, C.S.**, Zornberg, J., and Gilbert, R.B. “Long-Term Monitoring of a Drilled Shaft Retaining Wall in Expansive Clay: Behavior Before and During Excavation,” Geofrontiers March 2011, Dallas, TX.

- T-22. **El Mohtar, C.S.** "Top 10 Things a New Faculty Should Know" New Faculty Orientation, Cockrell School of Engineering, Austin, TX, August 2010.
- T-23. **El Mohtar, C.S.** "Top 10 Things a New Faculty Should Know" New Faculty Orientation, Cockrell School of Engineering, Austin, TX, August 2009.
- T-24. Santagata, M., Clarke, J., Bobet, A., Drnevich, V.P., **El Mohtar, C.S.**, Johnston, C.T. "Sodium pyrophosphate – bentonite suspensions for use in liquefaction mitigation," 14th International Clay Conference, Castellaneta Marina, Italy, June 18, 2009.
- T-25. Santagata, M., Clarke, J., Bobet, A., Drnevich, V.P., **El Mohtar, C.S.**, Johnston, C.T. "Sodium pyrophosphate – bentonite suspensions for use in liquefaction mitigation," 46th Annual Meeting of the Clay Minerals Society, Billings, Montana, June 5-11, 2009.
- T-26. **El Mohtar, C.S.**, Santagata, M., Bobet, A., Drnevich, V., and Johnston, C. "Effect of Plastic Fines on the Small Strain Stiffness of Sand" IS-Atlanta: Fourth International Symposium, Deformation Characteristics of Geomaterials, Atlanta, GA, September 2008.
- T-27. Abou Najm, M., **El Mohtar, C.S.**, Mohtar, R. and Drnevich, V.P. "Improving TDR Measurements through Accounting for Soil Structural Properties" ASABE Annual International Meeting, Rhode Island, June 2008.
- T-28. **El Mohtar, C.S.**, Bobet, A., Santagata, M., Drnevich, V., and Johnston, C. "Cyclic Response of Sand with Thixotropic Pore Fluid" ASCE Geotechnical Earthquake Engineering and Soil Dynamics Conference, Sacramento, CA, May 2008.
- T-29. **El Mohtar, C.S.** "Pore Fluid Engineering: An AutoAdaptive Design for Liquefaction Mitigation" invited Speaker, University of Texas at Austin, March 2008.
- T-30. **El Mohtar, C.S.** "Pore Fluid Engineering: An AutoAdaptive Design for Liquefaction Prevention" invited Speaker, American University of Beirut, March 2007.
- T-31. Chatti, K., **El Mohtar, C.S.**, and Lee, H. S. "Fatigue Life Predictions for Asphalt Concrete Subjected to Multiple Axle Loadings", 8th International Symposium on Heavy Vehicle Weights and Dimensions, 14-18 March 2004, Gauteng Province, South Africa.
- T-32. Chatti, K., **El Mohtar, C.S.** and Salama, H. "Effect of Heavy Trucks with Large Axle Groups on Asphalt Pavement Damage", 8th International Symposium on Heavy Vehicle Weights and Dimensions, 14-18 March 2004, Gauteng Province, South Africa.
- T-33. Chatti, K. and **El Mohtar, C.S.** "The Effect of Different Axle Configurations on the Fatigue Life of an Asphalt Concrete Mixture," The Transportation Research Board 83rd Annual Meeting, Washington, D.C. January 2004.

PROFESSIONAL AND UNIVERSITY SERVICES

Professional Development

- 2014 AREMA REES2014 workshop, Overland Park, KS
- 2011 NSF Day workshop, Texas State University, San Marcus, Texas
- 2010 ASCE EXCEED workshop
- 2010 NSF/AAAS workshop on communicating research to public and broader impact of research, Austin, TX.
- 2009 Rheology workshop for Research and Industry by Thomas Mezger, Chicago, IL.
- 2008 Getting started as a successful grant writer and academician workshop by David C. Morrison, PhD, Austin, TX.
- 2008 CBI Symposium: Characterization and Behavior of Interfaces, Atlanta, GA.

Proposal Reviews

- 2012 National Science Foundation, CMMI-GEOMM Ad-Hoc Review
 2011 National Science Foundation, CMMI-GEOMM Panel Review

University, College and Department

- 2012-Pres. Geotechnical Engineering Graduation Admission Coordinator
 2012 Member: Geotech faculty search committee
 2011-Pres. Organizer: Explore UT Geotechnical Engineering Activities
 2010-Pres. Member: Graduate Curricula & Policies Committee
 2009-Pres. Member: Distinguished Lecture Series
 2009 Member: ABET Review Committee (Program Outcome-5 Subcommittee)
 2009 Member: Geotechnical Laboratory Manager Hiring Committee
 2009-2010 Member: Curriculum Committee
 2008 Geotechnical Engineering Liaison for the CAEE External Advisory Committee
 2008-Pres. Organizer: Lymon C. Reese Memorial Golf Tournament (in association with the Reese Lecture)
 2008-Pres. Advisor for Geo-Institute Graduate Student chapter

Professional Societies and Major Governmental Committees

- 2014 Co-Chair GeoCongress 2014 session: Hydrocarbon Bearing Geomaterials for Sustainable Energy Production
 2013 Session Organizer, 2013 ASCE Texas Section Fall Conference and Centennial Celebration: Geotechnical Research at the University of Texas at Austin
 2012-Pres. Task Group Chairman: ASTM WK38054, Cyclic Simple Shear Test with load Control and with Displacement Control
 2012-Pres. Secretary, ASTM D18.09: Cyclic and Dynamic Properties of Soil
 2012-Pres. Member, ASCE Soil Properties and Modeling committee
 2011-Pres. Member, ASCE Grouting Committee (Geo-Institute)
 2010-Pres. Member, ASTM D 18: Soil and Rock Committee

Conference and Journal Reviews

- 2012-Pres. Soils and Foundations Journal
 2012-Pres. ASCE Journal of Materials in Civil Engineering
 2012-Pres. ASTM Geotechnical Testing Journal
 2011 Geofrontiers: Advances in Geotechnical Engineering, Dallas, TX
 2010 GeoShanghai- International conference on Soil Mechanics, Shanghai, China
 2009-Pres. ASTM Journal of Testing Evaluation
 2009 17th International Conference on Soil Mechanics and Foundations Engineering
 2009 International Foundation Congress and Equipment Exposition
 2007-Pres. ASCE Journal of Geotechnical and Geoenvironmental Engineering

Memberships in Professional and Honorary Societies

- 2009-Pres. Member, American Society for Testing and Materials (ASTM)
 2009-Pres. Member, American Society of Civil Engineers (ASCE)
 2009-Pres. Member, GeoInstitute, the Geotechnical Engineering branch of ASCE

- 2009-Pres. Member, International Society of Soil Mechanics and Geotechnical Engineering
 2008-Pres. Member, Purdue Geotechnical Society (PGS)
 2006-Pres. Member, Tau Beta Pi, The Engineering Honor Society
 2002-Pres. Member, Chi Epsilon, The National Civil Engineering Honor Society
 2001-Pres. Member, Syndicate of Engineers and Architects, Beirut, Lebanon

GRANTS AND CONTRACTS (*Service contracts)

- 2014-2016 Investigating the Drilling Fluids and Well Formation Interaction from a combined Rheological and Physical Properties Context (Co-PI: K. Gray), Wider Windows Joint Industry Project.
- 2014 REU Supplement: CAREER: Balancing Rheology and Filtration: An Experimental and Probabilistic Approach for Suspension Flow and Sustainability in Heterogeneous Granular Media, National Science Foundation.
- 2013* Measuring Shear Strength of Soft Austin Limestone using the Direct Shear Test, Freese and Nichols Inc., Austin, Texas.
- 2012-2017 CAREER: Balancing Rheology and Filtration: An Experimental and Probabilistic Approach for Suspension Flow and Sustainability in Heterogeneous Granular Media, National Science Foundation.
- 2012-2013 Continuation: Long-Term Performance of Drilled Shaft Retaining Walls (PI: R. Gilbert, Co-PI: J. Zornberg), Texas Department of Transportation.
- 2012* Geotechnical Investigation of Gowanus Canal Sediments: NAPL Expression (with D. Reible), GEI Consultants, Woburn, MA.
- 2010* Measuring the Resilient Modulus for Compacted Fill for the Port of Corpus Christi, HVJ Associates, Austin, TX.
- 2010* Measuring the Undrained Shear Strength of Compacted Silty Clays, GeoPentech, Santa Anna, CA.
- 2009-2013 NEESR-CR: Evolutionary Intensity Measures for More Accurate and Informative Liquefaction Hazard Evaluation (PI: S. Kramer, Co-PIs: E. Rathje, M. Khun), National Science Foundation.
- 2009-2012 Long-Term Performance of Drilled Shaft Retaining Walls (PI: R. Gilbert, Co-PI: J. Zornberg), Texas Department of Transportation.
- 2009-2010 Effective Containment of NAPL in Sediments-II (PI: D. Reible, Co-PI: R. Gilbert), Texas Hazardous Waste Research Center.

TEACHING AND ADVISING

Classes Taught

- 2008-Pres. CE 357: Geotechnical Engineering (Undergraduate Junior level)
 2009-Pres. CE 375: Earth Slopes and Retaining Structures (undergraduate Senior level)
 2009-Pres. CE 387L.1: Consolidation and Shearing Properties of Soils (Graduate level)

Pedagogy Training

- 2011 Training by Center of Teaching and Learning at the University of Texas at Austin
 2010 ASCE EXCEED workshop
 2003 Teaching Assistants and Assisting Instructors Teaching Workshop, Department of Mathematics at Purdue University

Ph.D. Advisees (* expected graduation date)

- 2016* Ritika Sangroya (*admitted to Candidacy*)
Dissertation: Balancing Rheology and Filtration: An Experimental Approach for Suspension Flow and Sustainability in Heterogeneous Granular Media.
- 2015* Wing-Shun Kwan (*admitted to Candidacy*)
Dissertation: Laboratory Investigation into Evaluating Sand Liquefaction under Transient Loading.
- 2012 Erten, Mustafa (*Co-advised with R. Gilbert*)
Dissertation: Geotechnical Containment of Sediments Contaminated with Non-Aqueous Phase Liquid.
- 2011 Yoon, Jisuk
Dissertation: Application of Pore Fluid Engineering for Improving the Hydraulic Performance of Granular Soils.

M.S. Advisees (* expected graduation date)

- 2015* Alex Brewster
Thesis: Effectiveness of Peizometers in High-Plasticity Clays.
- 2014 Spears, Amber
Thesis: Effects of Bentonite Swelling on Hydraulic Conductivity of Sand-Bentonite Mixtures (SBMs).
- 2013 El Khattab, Mai
Thesis: Post-permeation Stability of Modified Bentonite Suspensions under Increasing Hydraulic Gradients.
- 2012 Stromberg, Michael
Thesis: Commissioning of the Multi-Use Static/Dynamic Large-Scale Soil Testing Table
- 2011 Goff, Mary (*Co-advised with R. Gilbert*)
Thesis: Geotechnical Properties of Kaolinite Contaminated with a Non-Aqueous Phase Liquid.
- 2011 Ellis, Trenton
Thesis: A Subsurface Investigation in Taylor Clay.
- 2010 Rugg, Dennis
Thesis: Undrained, monotonic shear strength of loose, saturated sand treated with a thixotropic bentonite suspension for soil improvement.
- 2010 Hwang, Hansic
Thesis: Effects of prehydration on hydraulic conductivity of SBMs.

Current and Past Undergraduate Research Assistants (* expected graduation date)

- 2015* Masaaki Ward
- 2015* Abigail Kugel
- 2015* Brian Landry
- 2015* Patricia Bennet
- 2014* Dany Hatoum (*visiting undergraduate summer intern*)
- 2014 Osama ElQuqa
- 2014 Hamza Jaffal (*visiting undergraduate summer intern*)
- 2014 Ali Srour (*visiting undergraduate summer intern*)

- 2013 Christian Hogan
 2013 Abdallah Najdi (*visiting undergraduate summer intern*)
 2013 Mohamad Melhem (*visiting undergraduate summer intern*)
 2012 Jesse Kempf
 2012 Robert Green
 2012 Andrew Higgins
 2012 Edward Jaimes

Ph.D. Dissertation Committee Member (* indicates expected graduation date)

- 2015* Gore, Matthew
 Dissertation: Geotechnical Characterization of Bauxite Residue for Reuse in Levees.
- 2015* Mirabolghasemi, Maryam (*Department of Petroleum and GeoSystems Engineering*)
 Dissertation: Coupled Fluid and Particulate Flow Study for Improved Formation Damage Modeling.
- 2015* Azevedo, Marcelo
 Dissertation: Unsaturated hydraulic properties of geosynthetics.
- 2015* Azhar, Wardah
 Dissertation: Equilibrium Isotherms and Expected Cap and In-Situ Treatment Modeling.
- 2015* Chang, Min Jung (*Department of Petroleum and GeoSystems Engineering*)
 Dissertation: Interaction of Organic Rich Shales with Water-Based Fluids.
- 2014* Lee, Bohyoung
 Dissertation: Dynamic Properties of Granular Soils with Non-plastic Fines.
- 2014* Suncar, Oscar
 Dissertation: Monitoring Time-Dependent Landslide Deformations from Satellite Remote Sensing.
- 2013 Brown, Andrew
 Dissertation: The Behavior of Drilled Shaft Retaining Walls in Expansive Clay Soils.
- 2013 LeBlanc, Matthew
 Dissertation: Field Measurement of the Linear and Nonlinear constrained moduli of granular soil.
- 2013 Nair, Sriramya
 Dissertation: Adaptive Performance of Cement-based Materials Using a Magneto-rheological Approach.
- 2013 Moghadam, Mahdi Heidari.
 Dissertation: Time Dependent analysis of Jet-Grouted tunnels in difficult ground conditions.
- 2013 Chen, Ching-Hsiang
 Dissertation: Performance of Suction Can Foundation with Small L/D ratio.
- 2012 Navidi, Sara
 Dissertation: Development of Site Amplification Model for Use in Ground Motion Prediction Equations.
- 2010 Kim, Seung Han
 Dissertation: Large Tunnels for Transportation Purpose and Face Stability of Mechanically Driven Tunnels in Soft Ground.

-
- 2010 Cheon, Jeong Yeon
Dissertation: Analysis of Spatial Variability in Geotechnical Data for Offshore Foundations.
- 2008 Saygili, Gokhan
Dissertation: A Probabilistic Approach for Evaluating Earthquake-Induced Landslides.

M.S. Thesis Committee Member (* indicates expected graduation date)

- 2014* Das, Jasadwee
Thesis: Centrifuge Characterization of Expansive Clays.
- 2012 Tsiapas, Ioannis (May 2012)
Thesis: Pore Pressure Response of Liquefiable Soil Treated With Prefabricated Vertical Drains: Experimental Observations with Numerical Predictions.
- 2011 Yates, Trevor
Thesis: Hydraulic Performance and Stability of Geosynthetic Cover Systems with Constrained Drainage at the Outlet.
- 2010 Wang, Yubing
Thesis: Influence of Ground Motion Scaling Methods on the Computed Seismically-Induced Sliding Displacements of Slopes.
- 2010 Muhlenkort, Craig
Thesis: Monitoring of Time-Dependent Deformations in a Geotextile-Reinforced Soil Slope.
- 2010 Eun, Jongwan
Thesis: Effect of Geogrid Characteristics on Confined Stiffness.
- 2009 Na, Suk Joon
Thesis: Evaluation of Synergism between Creep and Defects in a Low Linear Density Polyethylene (LLDPE) Geomembranes.
- 2009 Tang, Yucao
Thesis: Calibration of Water Content Reflectometer in Rocky Mountain Arsenal Soil.
- 2009 Lynk, John Michael
Thesis: Performance of Drag Embedment Anchors Dragged Through Remolded Clay and Loaded at Various Horizontal Orientations.
- 2009 Miller, Jaime
Thesis: Model Torpedo Pile Tests in Reconstituted Kaolinite Test Beds.
- 2009 Materek, Britain
Thesis: An Investigation into Analytical Modeling Methods Used to Determine Capacities of Offshore Jacket Type Foundations.
- 2009 Macrowski, Stephen
Thesis: Predicting Settlement of a 27-In. Diameter Footing on Unsaturated Cohesive Soil Using Field and Laboratory Stiffness Measurements.
- 2009 Carpenter, Justin
Thesis: Effect of Well Conductors on the Lateral Capacity of Fixed Offshore Platforms.
- 2009 Kroncke, Mark
Thesis: Experimental Modeling for In-Plane Loading of Scaled Model Drag Embedment Anchors.