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MAIN RESEARCH INTERESTS AND FOCUS AREAS

Energy Geotechnology and Sustainability: Physical and numerical/analytical modeling of ground-coupled thermo-hydro-mechanical processes associated with energy geotechnology. Typical research thrusts include; (1) Ground-coupled heat exchangers and energy geostructures (energy piles, thermal tunnels etc.), (2) Thermal and mechanical energy geostorage (underground thermal energy storage, compressed air energy storage etc.), (3) Temperature and physicochemical effects on soil behavior, (4) Carbon footprint of geotechnical construction, (5) Carbon sequestration and underground storage, (6) Nuclear waste storage, (7) Waste recycling and use of by-products in earth structures. Several of these focus areas have yielded research projects while the others remain as ongoing efforts at various stages of development.

Geotechnical Earthquake Engineering: Dynamic response of soils and earth structures, mitigation of ground damage during earthquakes. Main focus areas are (1) Performance of improved ground during earthquakes, (2) Dynamic soil-foundation-structure interaction, physical and numerical/analytical modeling of earth structures and foundations, (3) Dynamic response of fine grained soils, (4) Dynamic behavior of carbonate sands, (5) Seismic site amplification with specific emphasis on intraplate tectonic and geologic environments, (6) Induced seismicity related to fluid injection for oil and gas recovery. Most of these focus areas have yielded research projects in addition to the others aligned with ongoing research efforts.

Disaster Resilience: Disaster risk management during natural disasters along interdisciplinary interfaces of engineering, economy and public policy to improve the resilience of physical infrastructure systems and communities. Main focus areas are (1) Decision frameworks for infrastructure resilience in response to multi-hazards, (2) Characterization of emerging vulnerabilities as a result of increased urbanization and societal interconnectedness, (3) Quantitative decision making frameworks for multi-dimensional and multi-scale analysis of hazard impacts on physical infrastructure and communities. This is an emerging interdisciplinary research area with growing collaborative opportunities with researchers from geosciences, systems engineering, urban affairs and planning as well as other disciplines of civil engineering.

EDUCATION

Doctor of Philosophy, Civil and Environmental Engineering, January 2004

Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA

Dissertation : Performance of Improved Ground and Reinforced Soil Structures during Earthquakes – Case Studies and Numerical Analyses

Advisor : Dr. James R. Martin

Master of Science, Civil Engineering, July 1995

Bogazici University, Istanbul, Turkey

Thesis : Instrumentation and Monitoring in Geotechnical Engineering

Advisor : Dr. H. Turan Durgunoglu

Bachelor of Science, Civil Engineering, July 1993

Bogazici University, Istanbul, Turkey

APPOINTMENTS

Aug. 2018 – Present	Assistant Professor, Department of Civil and Environmental Engineering, Missouri University of Science and Technology
Jan. 2000 – July 2018	Consultant, Geotechnical Engineering Blacksburg, VA
Aug. 2009 – July 2017	Research Assistant Professor Geotechnical Division, Department of Civil and Environmental Engineering, Virginia Tech
Aug. 2013 – July 2017	Co-Director Interdisciplinary Graduate Education Program on Disaster Resilience, Graduate School, Virginia Tech
Aug. 2005 – Aug. 2009	Research Scientist Geotechnical Division, Department of Civil and Environmental Engineering, Virginia Tech
Jan. 2004 – Aug. 2005	Post-Doctoral Research Associate Geotechnical Division, Department of Civil and Environmental Engineering, Virginia Tech
Aug. 1998 – Jan. 2004	Graduate Research Assistant / Graduate Student Instructor Geotechnical Division, Department of Civil and Environmental Engineering, Virginia Tech
1994 – 1998	Research and Teaching Assistant

1993 – 1998

Civil Engineering Department, Bogazici University, Istanbul, Turkey

Project Engineer

Zetas, Earth Technology Corporation, Istanbul, Turkey

SUMMARY OF HIGHLIGHTS

1.) Research Funding: Total \$8.8 million (Page 5)

- National Science Foundation: Geotechnical Engineering, National Research Traineeship (NRT), Network for Earthquake Engineering Simulation Research (NEESR), Decision Frameworks for Multi-Hazard Resilient and Sustainable Buildings (RSB), Office of International Science and Engineering (OISE)
- U.S. Geological Survey
- U.S. Agency of International Development
- Private companies: Hayward Baker, DGI-Menard, Geopier, GeoInstruments, Layne GeoConstruction, Berkel Foundations, Schnabel Engineering, Mechanical Equipment Sales
- Mid-Atlantic Universities Transportation Center (MAUTC)
- Virginia Tech internal seed funding: Virginia Tech Graduate School, Institute of Critical Technology and Applied Science, Institute for Society, Culture and Environment / Global Issues Initiative, Center for Geotechnical Practice and Research
- State Council of Higher Education for Virginia

2.) Student Supervision (Page 9)

- Ph.D. Student Advising: 6 completed, 3 ongoing
- MS Student Advising: 21 completed, 1 ongoing
- Undergraduate Student Advising: 8 completed including 2 who received NSF Graduate Research Fellowships

3.) Publications (Page 14)

- Journal Papers: 37 accepted/published, 17 in review
- Peer Reviewed Conference Papers: 64

4.) Presentations (Page 30)

- Invited Presentations: 26
- Conference Presentations: 77

5.) Professional and Scholar Service (Page 38)

- Chair and member of several technical committees
- Session Chair/Co-Chair at conferences and meetings
- Guest Co-Editor for Journal Special Issues
- Workshop Organizer
- Proposal Reviewer
- Paper Reviewer

RESEARCH FUNDING (Total: \$8.8M)

- 1. NRT: Disaster Resilience and Risk Management (DRRM) - Creating quantitative decision making frameworks for multi-dimensional and multi-scale analysis of hazard impact**
Sponsor: National Science Foundation **Dates:** 2017-2022
Funding Amount: \$2,999,782
Level of Responsibility: Core Faculty, Co-Leader of Hazards Thrust
- 2. Interdisciplinary Graduate Education Program on Disaster Resilience**
Sponsor: Virginia Tech Graduate School (Internal Funding) **Dates:** 2017-2022
Funding Amount: \$197,000 equivalent (provided as 1 GRA support for 5 years as a supplement to the NRT program)
Level of Responsibility: Co-Principal Investigator
- 3. Seismic Design of Colum-Supported Embankments**
Sponsor: Center for Geotechnical Practice and Research **Dates:** 2016-2017
Funding Amount: \$58,875
Level of Responsibility: Principal Investigator
- 4. RSB: Performance-based Decision Support System for Resilient and Sustainable Multi-Hazard Building Design**
Sponsor: National Science Foundation **Dates:** 2015-2019
Funding Amount: \$1,260,000
Level of Responsibility: Co-Principal Investigator
- 5. Seismic Hazard Mapping of the National Capital Region Using Random-Field Models**
Sponsor: U.S. Geological Survey **Dates:** 2015-2016
Funding Amount: \$87,456
Level of Responsibility: Principal Investigator
- 6. Nanoscale Characterization of Sands**
Sponsor: Virginia Tech Institute for Critical Technology and Applied Science (ICTAS) (Internal seed funding for equipment time) **Dates:** 2015
Funding Amount: \$1,500
Level of Responsibility: Principal Investigator
- 7. Virginia Tech – Universidad Austral, Chile Collaboration on Seismic Research**
Sponsor: Virginia Tech Institute for Critical Technology and Applied Science (ICTAS) (Internal seed funding) **Dates:** 2014-2015
Funding Amount: \$10,000
Level of Responsibility: Co-Principal Investigator
- 8. Temperature Effects on Soil Erodibility around Energy Geostructures**
Sponsor: Virginia Tech Institute for Critical Technology and Applied Science (ICTAS) (Internal seed funding) **Dates:** 2014
Funding Amount: \$10,000
Level of Responsibility: Co-Principal Investigator

9. Building a Common Language around the Dynamic Resilience of Coastal Communities
Sponsor: Virginia Tech Institute for Society, Culture and Environment / **Dates:** 2014-2015
 Global Issues Initiative (GII) (Internal seed funding)
Funding Amount: \$20,000
Level of Responsibility: Co-Principal Investigator
10. Interdisciplinary Graduate Education Program on Disaster Resilience
Sponsor: Virginia Tech Graduate School (Internal Funding) **Dates:** 2013-2019
Funding Amount: \$235,500 equivalent (provided as 1 GRA support for 6 years in 2 consecutive cycles of 3 years)
Level of Responsibility: Co-Principal Investigator
11. Equipment Grant : Unsaturated Soils Testing Suite
Sponsor: State Council of Higher Education for Virginia **Dates:** 2014
Funding Amount: \$42,641
Level of Responsibility: Principal Investigator
12. Effect of Heating/Cooling Cycles on the Thermomechanical Performance of Energy Piles
Sponsor: National Science Foundation **Dates:** 2013-2016
Funding Amount: \$361,454 (Virginia Tech Subcontract \$40,452)
Level of Responsibility: Principal Investigator for the VT Subcontract
13. Load Transfer Mechanisms for Soft Soil Sites Reinforced with Rigid Columns
Sponsor: DGI-Menard Inc. **Dates:** 2013-2015
Funding Amount: \$142,892
Level of Responsibility: Principal Investigator
14. Site Response and Soil Amplification in the National Capital Region During the 2011 Virginia Earthquake-Development of Region-Specific Site Amplification Factors
Sponsor: U.S. Geological Survey **Dates:** 2013-2014
Funding Amount: \$79,932
Level of Responsibility: Co-Principal Investigator
15. A Feasibility Study of Bridge Deck Deicing using Geothermal Energy
Sponsor: Mid-Atlantic Universities Transportation Center (MAUTC) **Dates:** 2013-2015
Funding Amount: \$145,092 (Virginia Tech subcontract \$69,000)
Level of Responsibility: Principal Investigator for the VT Subcontract
16. International Workshop on Thermo-active Geotechnical Systems for Near-Surface Geothermal Energy, Lausanne, Switzerland
Sponsor: National Science Foundation **Dates:** 2012-2013
Funding Amount: \$49,995
Level of Responsibility: Principal Investigator
17. Preliminary Study of the Seismic Performance of Improved Ground Sites during the 2010-11 New Zealand Earthquakes

Sponsor: National Science Foundation **Dates:** 2012-2013
Funding Amount: \$79,464
Level of Responsibility: Co-Principal Investigator

18. NEESR: Reduction of Seismic Shaking Intensity on Soft Soil Sites Using Stiff Ground Reinforcement

Sponsor: National Science Foundation **Dates:** 2012-2015
Funding Amount: \$925,542
Level of Responsibility: Principal Investigator

19. Geothermal Energy Piles: A New Sustainable Green Energy Solution for Middle East Buildings

Sponsor: National Science Foundation and U.S. Agency of International Development **Dates:** 2011-2014
Funding Amount: \$130,000
Level of Responsibility: Co-Principal Investigator

20. GOALI : Long Term Performance and Group Effect Considerations of Energy Piles

Sponsor: National Science Foundation **Dates:** 2011-2014
Funding Amount: \$603,856^a
Level of Responsibility: Principal Investigator

a) This specific program (GOALI) at NSF required cost-sharing from industrial participant investigators. Approximately \$360,000 of in-kind support has been provided by private firms in addition to the \$603,856 NSF grant. The in-kind support was provided in the form of donated materials, equipment, installation of field test setup and performance of field tests. Estimated contributions are listed as; Berkel and Company: \$150,000, Thatcher Foundations: \$120,000; Rehau; \$40,000; Mechanical Equipment Sales: \$30,000; Geo-Instruments: \$20,000.

21. Investigation of IBC/NEHRP Simplified Seismic Design Procedures For Non-Traditional Site Conditions

Sponsor: U.S. Geological Survey **Dates:** 2010-2011
Funding Amount: \$74,587
Level of Responsibility: Principal Investigator

22. The Use of Energy Piles for Sustainable Energy

Sponsor: National Science Foundation **Dates:** 2009-2012
Funding Amount: \$260,268^b
Level of Responsibility: Principal Investigator

b) This project included approximately \$200,000 of in-kind support provided by private firms in addition to the \$260,268 NSF grant. The in-kind support was provided in the form of donated materials, equipment, installation of field test setup and performance of field tests. Estimated contributions are listed as; Layne GeoConstruction: \$150,000, Rehau; \$10,000; Mechanical Equipment Sales: \$40,000.

23. Near Real-Time Monitoring and Adaptive Risk Assessment of the U.S. National Levee

System Using Satellite-Based Remote Sensing

Sponsor: Virginia Tech Institute for Critical Technology and Applied Science (ICTAS) (Internal Seed Funding) **Dates:** 2009-2011

Funding Amount: \$138,400

Level of Responsibility: Co-Principal Investigator

24. Landslide Pilot Area Studies And Development Of Standardized Monitoring Manuals

Sponsor: Disaster Risk Management Inc. **Dates:** 2008-2010

Funding Amount: \$96,039

Level of Responsibility: Co-Principal Investigator

25. Unexpected Cyclic Deformation of Saturated Fine-Grained Soils and Demonstrated Effectiveness of Soil Improvement

Sponsor: National Science Foundation **Dates:** 2007-2009

Funding Amount: \$181,746

Level of Responsibility: Co-Principal Investigator

26. Detailed Numerical Simulation of the Seismic Behavior of Improved Ground

Sponsor: Hayward Baker, Inc. **Dates:** 2007-2008

Funding Amount: \$14,587

Level of Responsibility: Principal Investigator

27. Liquefaction Susceptibility of Uncemented Calcareous Sediments along the Coastal Plains of Puerto Rico

Sponsor: U.S. Geological Survey **Dates:** 2006-2007

Funding Amount: \$49,794

Level of Responsibility: Principal Investigator

28. Unsolicited Gift

Sponsor: Geopier Foundation Co. **Dates:** 2005

Funding Amount: \$5,000

STUDENT SUPERVISION

Ph.D. (6 completed, 3 ongoing)

- Sherif L. Abdelaziz, “Thermo-mechanical behavior of energy piles”, graduated in Fall 2012, co-advised with Dr. J.R. Martin.
- Tolga Y. Ozudogru, “The use of geothermal heat exchanger piles for sustainable design”, graduated in Fall 2015, co-advised with Dr. A. Senol at Istanbul Technical University. Dr. Ozudogru is the recipient of a **two-year doctoral scholarship from the National Council of Higher Education in Turkey**.
- G. Allen Bowers, “Integrated thermal harvesting and ground storage for civil infrastructure”, graduated in Spring 2016. Dr. Bowers is the recipient of the **NSF Graduate Research Fellowship**. Dr. Bowers also received the **1st Place for the 2015 Torgersen Graduate Research Award in the PhD Category** selected among graduating PhD students at Virginia Tech.
- Melis Sutman, “Experimental and analytical study investigating the thermo-mechanical behavior of energy piles”, graduated in Summer 2016, co-advised with Dr. L. Laloui from EPFL, Switzerland.
- Mohammad Khosravi, “Dynamic centrifuge modeling of soil-mix panel reinforcement for reducing seismic shaking” graduated in Summer 2016, co-advised with Dr. R.W. Boulanger from UC Davis.
- Soheil Kamalzare, “Numerical and analytical modeling of soil-mix panel reinforcement for reducing seismic shaking” graduated in Fall 2016.
- Alfonso Rivera Rojas, “Load transfer mechanisms for soft soil reinforced with rigid columns” ongoing, scheduled to graduate at the end of Spring 2019, co-advising with Dr. T.L. Brandon. Mr. Rivera is a very well-accomplished student. He obtained his MS from Virginia Tech as a Fulbright Scholar. I was impressed with his technical capabilities and worked towards creating funding from an industrial sponsor to partially support Mr. Rivera’s PhD. studies. At the end of his first year, Mr. Rivera received a **two-year scholarship from Organization of American States (OAS)** and an instructor position from Virginia Tech to fund the rest of his PhD studies.
- Morgan Eddy, “Seismic site amplification at Central and Eastern United States” ongoing. Mr. Eddy has been in the doctoral program for about 10 years and he is currently on leave. He had to switch advisors and his topic of doctoral studies. As a result he took a leave from Virginia Tech and he has been working as a vice president of a geotechnical contractor firm. He has been working hard over the last year to complete his PhD. I anticipate that he will likely graduate in Fall 2019.
- Guven Erisgen, “Long-term performance of GSHP systems and energy piles”, ongoing, co-advising with Dr. I. Bozbey at Istanbul University, Turkey.

Masters (only the students with active MS research listed; advising for MS defense not included) (20 completed, 2 ongoing)

- Anthony DiGiantomaso “Seismic Design of Colum-Supported Embankments”, ongoing, expected to graduate in Fall 2017.
- Pedro Bengochea, “Compaction characteristics and unsaturated behavior of kaolin clay”, graduated in Spring 2017. I worked with Mr. Bengochea for his scholarship application to the **National Science Foundation East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI) program**. Mr. Bengochea visited Gangneung-Wonju National University in South Korea to work with Dr. Chan-Young Yune and performed model-scale experiments to investigate thermal consolidation of soft clays.
- Mitchell Youmans, “Pressure piles: The use of tubular steel piles for compressed air energy storage”, graduated in Spring 2016.
- Thomas Barham, “Geologic mapping and seismic hazard mapping of Washington Metropolitan Area”, graduated in Spring 2016.
- Faik Cuceoglu, “SWCC characterization of clayey soils”, graduated in Summer 2016, Mr. Cuceoglu is the recipient of **State Waterworks Fellowship from Turkey** for his MS studies.
- Mertcan Geyin, “Microscale characterization of sand grains using nanoindentation” graduated in Spring 2016.
- Mark Tilashalski, “Seismic site amplification in Washington Metropolitan Area”, graduated in Spring 2015, co-advised with Dr. A. Rodriguez-Marek. Mr. Tilashalski received the **3rd Place for 2015 Torgersen Graduate Research Award in the Master’s Category** selected among graduating MS students at Virginia Tech.
- Gianni Martinez, “Characterization of quartzitic sands using monotonic triaxial testing”, graduated in Fall 2014.
- Elizabeth Godfrey, “Probabilistic analysis of site amplification factors in a unified framework” graduated in Summer 2014, co-advised with Dr. A. Rodriguez-Marek. Ms. Godfrey is the recipient of the **NSF Graduate Research Fellowship**.
- Jacob Buttz, “Development of a case-study based interdisciplinary graduate education program on disaster resilience”, ongoing.
- Xiwen Li, “Monotonic and dynamic characterization of quartzitic and calcareous sands using a minicone integrated triaxial apparatus”, graduated in Fall 2014.
- Juan Parra Acosta, “Comparative characterization of quartzitic and calcareous sands”, graduated in Spring 2014.
- Nicolas Waugh, “Ground-source heating in agricultural applications” graduated in Spring 2014. This study built the foundations for the preparation of three research proposals (internal seed funding, Virginia Innovation Partnership, U.S. Department of Agriculture).
- Willis Thompson, “Numerical analysis of thermal behavior and fluid flow in geothermal energy piles” graduated in Fall 2013. I mentored Mr. Willis, a Mechanical Engineering graduate student during his MS studies on numerical modeling of heat exchangers and served

as a committee member. MS Chair Dr. S. Ekkad from Mechanical Engineering at Virginia Tech.

- Vishal Patel, “Performance of improved ground sites during the 2010-11 New Zealand Earthquakes”, graduated in Spring 2013.
- Allen Bowers, “Ground-source deicing of bridge decks” graduated in Spring 2013.
- Anthony Cennamo, “Design and installation of field test setup for energy piles”, graduated in Fall 2012.
- Melis Sutman, “Thermo-mechanical behavior of soils and development of a thermal triaxial cell apparatus”, graduated in Fall 2012.
- Jeffrey Smith, “Biologically-inspired processes in geotechnical engineering”, graduated in Spring 2012.
- Brian Jasion, “Characterization of thermal properties of soils”, graduated in Fall 2010.
- Todd LaVielle “Monotonic and dynamic behavior of uncemented calcareous sands”, MS Thesis, graduated in Fall 2008.
- Kurt Heckendorf, “Probabilistic seismic hazard analysis for USACE lock and dam structures in Midwestern U.S.”, graduated in Spring 2008.

Undergraduate (8 completed)

- Mitchell Youmans, “Geomechanical considerations for Compressed Air Energy Storage using deep foundations”, graduated in Spring 2016.
- Zachary Ostrum, “Nano and microscale characterization of sand grains using the Nanoindenter and Focused-Ion Beam”, graduated in Spring 2015.
- Mark Tilashalski, “Seismic amplification potential of sites in Central and Eastern United States” graduated in Fall 2013. Mr. Tilashalski received the **2014 Best Paper Award in the undergraduate category from the Earthquake Engineering Research Institute (EERI)**. Mr. Tilashalski was invited to the Tenth National Conference on Earthquake Engineering in Alaska, which was held in July 2014.
- Elizabeth Godfrey, “Seismic amplification factors for Columbia SC” graduated in Spring 2013. Ms. Godfrey’s poster submission about her undergraduate research was selected to represent Virginia at Posters on the Hill event organized by the Council on Undergraduate Research (CUR), April 23-24, 2013, Capitol Hill, Washington, DC. Ms. Godfrey received the **NSF Graduate Research Fellowship** in recognition of this undergraduate research and her proposal for graduate studies.
- Allen Bowers, “Bridge deck deicing using energy foundations” graduated in Spring 2012. Mr. Bowers was selected the **Outstanding Senior** in the department of Civil and Environmental Engineering at Virginia Tech Class of 2012. Mr. Bowers was selected **2nd place at the 2012 ASCE Virginias Conference Hardy Cross Competition**. Mr. Bowers also received the **NSF Graduate Research Fellowship** in recognition of this undergraduate research and his proposal for graduate studies. This highly prestigious award provides funding for three years.

- Erin Murphy, “Energy efficient building systems and smart cities”, graduated in Spring 2012.
- Nicholas Waugh, “Grain-drying using ground-source heating”, graduated in Spring 2012.
- Jeff Smith, “Literature review on energy piles”, graduated in Fall 2010. This study helped in the preparation of the initial research proposal on energy piles submitted to NSF, which was subsequently funded.

TEACHING

Instructor :

Soil and Site Improvement, Department of Civil and Environmental Engineering, Virginia Tech, Spring 2001-2011.

Geotechnical Aspects of Earthquake Engineering, Department of Civil and Environmental Engineering, Fall 2003-2012.

Introduction to Geotechnical Engineering, Department of Civil and Environmental Engineering, Virginia Tech, Fall 2013, Spring 2014, Spring 2015, Spring 2016, Fall 2016.

Course co-developer and co-leader: Developed a team-taught interdisciplinary course on “Disaster Resilience and Risk Management” as part of the Graduate Certificate on Disaster Resilience and Risk Management within the Graduate School at Virginia Tech. The course is designed as a series of case histories from the 2011 Tohoku Earthquake focusing on building and infrastructure performance, lifelines, economic effects, emergency response and public policy, Fall 2014, Fall 2015.

Guest Lecturer :

Natural Hazards, Department of Civil and Environmental Engineering, Virginia Tech, Fall 1999, Spring 2000, Fall 2000.

Temporary Structures, Department of Building Construction, Virginia Tech, Fall 2002, Spring 2004, Fall 2005.

Attendee :

ASCE Mini ExCEED Teaching Workshop, Fall 2010, Virginia Tech, Blacksburg, VA.

Effective College Teaching Workshop, by Dr. Richard Felder and Dr. Rebecca Brent, May 30-31, 2002, held at Virginia Tech, Blacksburg, VA

Cooperative Learning, Effective College Teaching Workshop, by Dr. Karl Smith, September 11, 2000, held at Virginia Tech, Blacksburg, VA.

PUBLICATIONS

Book Chapters (2)

1. **Olgun, C.G.** and Bowers, G.A. (2013) “Chapter 11 Ground-Source Bridge Deck Deicing Systems Using Energy Foundations” Energy Geostrutures: Innovation in Underground Engineering, Eds. L. Laloui and A. DiDonna, Iste-Wiley, pp. 211-225.
2. **Olgun, C.G.**, Martin J.R. (2003). “Chapter 22 – Performance of Arifiye Overpass Reinforced Earth Walls during the 1999 Kocaeli (Turkey) Earthquake.”, in Reinforced Soil Engineering: Advances in Research and Practice, H.I. Ling, D. Leshchinsky and F. Tatsuoka eds, Marcel Dekker Publishing, pp. 443-463.

Journal Publications (12 in review and 43 accepted/published)

Submitted and Under Review

1. Kamalzare, S., and **Olgun, C.G.** (2017). “Comparison of NorSand and Dafalias-Manzari constitutive models in predicting soil behavior” International Journal for Analytical and Numerical Methods in Geomechanics, submitted in October 2017, in review.
2. Rivera, A.J., **Olgun, C.G.**, McCartney, J.S., Brandon T.L. and Masse, F. (2017). “Centrifuge physical modeling of the lateral load behavior of rigid inclusion supported-footing systems” ASCE Journal of Geotechnical and Geoenvironmental Engineering, submitted in October 2017, in review.
3. Bowers, G.A., **Olgun, C.G.**, and Ozudogru, T.Y. (2017) “Optimization of Ground Thermal Storage Alternative Heat Injection and Extraction Scenarios”, Geothermics, submitted in October 2017, in review.
4. **Olgun, C.G.**, Ozudogru, T.Y., Brettmann, T., and Senol, A. (2017). “3D numerical evaluation of in-situ thermal conductivity tests performed on energy piles.” Geothermics, submitted in September 2017, in review.
5. **Olgun, C.G.** and Sutman, M. (2017). “Thermo-hydro-mechanical Soil Behavior in Relation to Energy Geostrutures: Review of Experimental Studies”, Geomechanics for Energy and the Environment, submitted in June 2017, in review.
6. **Olgun, C.G.**, Ewais, A., Geyin, M., and Ozudogru, T.Y. (2017). “Geomechanical Behavior of Pressure Piles Utilized for Compressed Air Energy Storage”, Geotechnique Letters, submitted in August 2017, in second round review.
7. Khosravi, M., Boulanger, R.W., Wilson, D.W., and **Olgun, C.G.**, Tamura, S., Shao, L. (2017). “Stress Transfer from Rocking Shallow Foundations on Soil-Cement Reinforced Clay”, Soils and Foundations, submitted in August 2017, in review.
8. **Olgun, C.G.**, Geyin, M., Ozudogru, T.Y., Barham, T.A., and Tuggle, J. (2017). “Grain-scale Characterization of Quartzitic and Carbonate Sand Grains Using Nanoindentation”, Geotechnique Letters, in review, submitted in August 2017, in second round review
9. Geyin, M., **Olgun, C.G.**, and Ozudogru, T.Y. (2017). “Nanoindentation Testing for the Investigation of Micro-scale Mechanical Properties of Geomaterials”, Geotechnical Testing Journal, ASTM, submitted in July 2017, in second round review

10. **Olgun, C.G.**, Geyin, M., and Ozudogru, T.Y. (2017). "Ground Source Energy Simulations for Different Climatic Locations", Applied Energy, submitted in July 2017, in review.
11. Rivera, A.J., **Olgun, C.G.**, Brandon T.L. and Masse, F. (2017). "A numerical study of the construction-induced stresses and excess pore-water pressures around rigid inclusions", International Journal of Numerical and Analytical Methods in Geomechanics, submitted in June 2017, in review.
12. Yazdani, S., Helwany M., **Olgun, C.G.** (2017). "Investigation of thermal loading effects on the shaft resistance of energy pile using laboratory scale model", Geotechnical Testing Journal, ASTM, submitted in December 2017, in review.

Published or Accepted for Publication

1. Sutman, M. **Olgun, C.G.**, Laloui, L. (2019) "Cyclic Load - Transfer Approach for the Analysis of Energy Piles" ASCE Journal of Geotechnical and Geoenvironmental Engineering, 145(1), January 2019, doi.org/10.1061/(ASCE)GT.1943-5606.0001992.
2. Sutman, M., Brettmann, T, **Olgun, C.G.** (2018) "Full-scale In-situ Tests on Energy Piles: Head and Base-restraining Effects on the Structural Behaviour of three energy piles" Geomechanics for Energy and the Environment, Vol. 18, June 2019, pp. 56-68, doi.org/10.1016/j.gete.2018.08.002.
3. Yazdani, S., Helwany M., **Olgun, C.G.** (2018). "Experimental Evaluation of Shear Strength of Kaolin under Cyclic and Non-Cyclic Temperature Variations", ASTM Geotechnical Testing Journal, <https://doi.org/10.1520/GTJ20180020>. ISSN 0149-6115
4. Yazdani, S., Helwany M., **Olgun, C.G.** (2018). "Influence of Temperature on Soil-Pile Interface Strength in Clay", Geomechanics for Energy and the Environment, <https://doi.org/10.1016/j.gete.2018.08.001>
5. Wang, Y., **Olgun, C.G.**, Wang, L., and Meng, B. (2018) "Risk assessment of water inrush in karst tunnels based on the ideal point method", Polish Journal of Environmental Studies, Vol. 28, No. 2, pp. 901-911, DOI: 10.15244/pjoes/85199.
6. Akinola, A.I., Wynn-Thompson, T., **Olgun, C.G.**, Cuceoglu, F., and Mostaghimi, S. (2018). "Influence of Sample Holding Time on the Fluvial Erosion of Remolded Cohesive Soils", ASCE Journal of Hydraulics, 144(8), DOI: 10.1061/(ASCE)HY.1943-7900.0001504.
7. Tamura, S., Khosravi, M., Wilson, D.W., Rayamajhi, D., Boulanger, R.W., **Olgun, C.G.**, and Wang, Y. (2018). "Simple Method for Detecting Cracks in Soil-Cement Mixture in Centrifuge Modeling." International Journal of Physical Modelling in Geotechnics, 18(6): pp.1-23, DOI: 10.1680/jphmg.17.00036.
8. Arel, E., Onalp, A., and **Olgun, C.G.** (2017). "The effect of clay mineral content on the dynamic properties of reconstituted fine grained soils." Bulletin of Earthquake Engineering, 16(11), DOI: 10.1007/s10518-018-0360-6.
9. Khosravi, M., Boulanger, R.W., Wilson, D. W., **Olgun, C.G.**, Tamura, S., and Wang, Y. (2017). "Dynamic Centrifuge Tests of Structures with Shallow Foundations on Soft Clay Reinforced by Soil-Cement Grids", Soils and Foundations, Volume 57, Issue 4, August 2017, Pages 501-513, DOI: 10.1016/j.sandf.2017.06.002

10. Pratt, T., Horton, J.W., Munoz, J., Hough, S.E., Chapman, M.C., **Olgun, C.G.** (2017). “Amplification of Earthquake Ground Motions in Washington, D.C. and Implications for Hazard Assessments in Central and Eastern North America” *Geophysical Research Letters*, Vol. 44, doi.org/10.1002/2017GL075517.
11. Firoozi, A.A., **Olgun, C.G.**, Mojtaba, A.A., and Baghini, M.S. (2017) "Fundamentals of soil stabilization" *International Journal of Geo-Engineering*, 8:26 DOI.org/10.1186/s40703-017-0064-9
12. **Olgun, C.G.** and Bowers, G.A. (2016) “Experimental Investigation of Energy Pile Response under Heating and Cooling Loads for Bridge Deck Deicing Applications”, *DFI Journal*, Volume 10, Issue 1, pp. 41-51, DOI: 10.1080/19375247.2016.1166314, **2nd Place in DFI Young Professor Competition.**
13. Khosravi, M., Boulanger, R. W., Wilson, D. W., Tamura, S., **Olgun, C.G.**, and Wang, Y. (2016). “Dynamic Centrifuge Tests of Soft Clay Reinforced by Soil-Cement Grids.” *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Volume 142, Issue 7, 10.1061/(ASCE)GT.1943-5606.0001487.
14. Wang, Y., Wilson, D. W., Khosravi, M, Yuan X., and **Olgun, C.G.** (2016) “Evaluation of cyclic shear stress-strain using inverse analysis techniques in dynamic centrifuge tests.” *Chinese Journal of Geotechnical Engineering*, 2016, 38(2), pp. 271-277 DOI: 10.11779/CJGE201602010.
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58. Green R.A., **Olgun C.G.**, Ebeling, R.M., Cameron W.I. (2003) “Seismically Induced Lateral Earth Pressures on a Cantilever Retaining Wall”, Advancing Mitigation Technologies and Disaster Response for Lifeline Systems, Proceedings of the 6th U.S. Conference and Workshop on Lifeline Earthquake Engineering, J.E. Beavers ed., August 10-13, 2003, Long Beach, CA, ASCE Technical Council on Lifeline Earthquake Engineering Monograph No. 25, pp. 946-955.
59. **Olgun, C.G.**, Martin, J.R., Mitchell, J.K., Durgunoglu, H.T. (2001). “Improved Ground Performance during the 1999 Turkey Earthquakes.”, 15th International Conference on Soil Mechanics and Geotechnical Engineering, August 27-31, 2001, Istanbul, Turkey, Vol. 1, pp. 769-772.
60. Martin, J.R., Mitchell, J.K., **Olgun, C.G.**, Durgunoglu, H.T., Emrem, C. (2001). “Performance of Improved Ground during the 1999 Turkey Earthquakes”, Foundations and Ground Improvement, ASCE Geotechnical Special Publication No. 113, June 9-13, 2001, Blacksburg, VA, T.L. Brandon ed., pp. 565-579.
61. Durgunoglu, H.T., **Olgun, C.G.**, Kulac, H.F., Ikiz, S. (1998). “An Integrated CPT Approach for a Major Housing Development.” ISC ‘98, First International Conference on Site Characterization, April 19-22, 1998, Atlanta, GA, P.K. Robertson and P.W. Mayne eds., vol. 2, pp. 1015-1020.
62. Durgunoglu, H.T., Kulac, H.F., Ikiz, S., **Olgun, C.G.**, Oge, C., Kocak, D., Tezel, G., Ozkul, Z. H. (1997). “Remediation of an Existing Solid Waste Disposal Site”, GREEN 2, 2nd International Green Symposium on Geotechnics and the Environment, September 8-11, 1997, Krakow, Poland, pp. 142-149.
63. Durgunoglu, H.T., Nur, O., Akbal, O., Kulac, H.F., Ikiz, S., **Olgun, C.G.** (1995). “A Case Study on Determination of Soil Improvement Realization Using CPT.” CPT’95 International Symposium on Cone Penetration Testing, October 1995, Linkoping, Sweden, Vol. 2, pp. 441-446.
64. Durgunoglu, H.T., Kulac, H.F., Karadayilar, T., Ikiz, S., Oge, C. E., **Olgun, C.G.** (1995). “A Case Study on Determination of Pile Capacity Using CPT.” CPT’95 International Symposium on Cone Penetration Testing, October 1995, Linkoping, Sweden, Vol. 2, pp. 435-440.

Other Publications (Published Abstracts or Non Peer-Reviewed Papers) (51)

1. Akinola, A., **Olgun, C.G.**, Cuceoglu, F., Wynn-Thompson, T. (2106) “Soil and water temperature effects on the fluvial erosion of cohesive sediments.” AGU Fall Meeting, American Geophysical Union, December 12-16, 2016, San Francisco, CA.
2. Pratt, T., Horton, J.W., Hough, S., Munoz, J., Chapman, M.C., **Olgun, C.G.**, and Beale, J.N. (2016). “Amplification of ground motions in Washington, DC, by shallow deposits.” Eastern Section SSA 2016 Annual Meeting, From the Mantle to the Surface: Joint Meeting of the Eastern Section of SSA and NGA-East, 23–26 October 2016, Reston, Virginia.
3. Chugh, A.K., Labuz, J.F., and **Olgun, C.G.** (2016). “Soil-Structure Interactions of Retaining Walls.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
4. Upadhyaya, S., Tiwari, B., and **Olgun, C.G.** (2016). “Static and Dynamic Properties of Compacted Soil-Cement Mixtures.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
5. Rivera, A.J., **Olgun, C.G.**, McCartney, J.S., Masse, F., and Brandon T.L. (2016). “Centrifuge Tests on Laterally Loaded Footings Supported by Rigid Inclusion-Reinforced Clay.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
6. Barham, T.A, Ostrum, Z., **Olgun, C.G.**, Parra, J., Tuggle, J.R. (2016). “Multi-scale Characterization of Quartzitic and Calcareous Sands.” Abstract, Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
7. Eddy, M.A., **Olgun, C.G.**, Rodriguez-Marek, A., and Chapman, M.C. (2016). “Site Response Effects of Reference Rock and Weathered Zone in the National Capital Region.” Abstract, Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
8. Abdelaziz, S.L. and **Olgun, C.G.** (2016). “Counterbalancing Ambient Interference on Thermal Conductivity Tests for Energy Piles.” Abstract, Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
9. Bowers, G.A. and **Olgun, C.G.** (2016). “Experimental and Numerical Investigation of Ground-Source Bridge Deck Deicing.” Abstract, Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
10. Eddy, M.A., Tilashalski, M., **Olgun, C.G.**, Shamsalsadati, S., Godfrey, E., Chapman, M.C., and Martin, J.R. (2014) “Site Amplification in the Washington D.C. Area during the Mineral, Virginia Earthquake” Abstract, Geological Society of America, Southeastern Section, 63rd Annual Meeting, April 10-11, 2014, Blacksburg, VA.
11. Martin, J.R., Eddy, M.A., **Olgun, C.G.**, Chapman, M.C., Godfrey, E., Pakzad, S.N., Ricles, J.M., Shahidi, G., and Chu, X. (2014) “Correlation of Shaking Intensity and Damage Patterns with Site Conditions in the Washington D.C. Region during the 2011 Mineral, Virginia

Earthquake” Abstract, Geological Society of America, Southeastern Section, 63rd Annual Meeting, April 10-11, 2014, Blacksburg, VA.

12. Sutman, M., Brettmann, T. and **Olgun, C.G.** (2014) “Energy Pile Research Heating Up in Texas : Part 2.” Deep Foundations, January-February 2014, pp. 77-79.
13. **Olgun, C.G.**, and Bowers, G.A. (2013). “Ground-Source Deicing of Bridge Decks” Extended Abstract, International Workshop on Geomechanics and Energy – The Ground as Energy Source and Storage, Lausanne, Switzerland, November 26-28, 2013.
14. Brettmann, T. and **Olgun, C.G.** (2013) “Energy Pile Research Heating Up in Texas.” Deep Foundations, July-August 2013, pp. 69-70.
15. **Olgun, C.G.** (2013) “Bridge Deck Deicing Using Energy Piles.” Deep Foundations, July-August 2013, pp. 75-76.
16. Godfrey, E., **Olgun, C.G.**, Martin, J.R. and Amine, M.S. (2012) “Site Amplification in Washington Metropolitan Area During the 2011 Virginia Earthquake” Abstract, 84th Annual Meeting of the Eastern Section of the Seismological Society of America, October 28-30, 2012, Blacksburg, VA.
17. Amine, M.S., Godfrey, E., **Olgun, C.G.**, Martin, J.R. and Chapman, M.C. (2012) “Region Specific Site Amplification Factors for Central and Eastern United States” Abstract, 84th Annual Meeting of the Eastern Section of the Seismological Society of America, October 28-30, 2012, Blacksburg, VA.
18. Martin, J.R., Eddy, M.A., **Olgun, C.G.**, Lazarte, C., and Green, R.A. (2012) “Correlation of Intensity and Damage Patterns with Site Conditions in the Washington Metropolitan Region During the M5.8 Mineral, VA Earthquake.” Abstract, 84th Annual Meeting of the Eastern Section of the Seismological Society of America, October 28-30, 2012, Blacksburg, VA.
19. Eddy, M.A., Martin, J.R. and **Olgun, C.G.** (2012) “Site Response Studies of Washington, DC Sites Following the August 23, 2011 Earthquake” Abstract, 84th Annual Meeting of the Eastern Section of the Seismological Society of America, October 28-30, 2012, Blacksburg, VA.
20. **Olgun, C.G.**, Martin, J.R., and Bowers, G.A. (2012) “Energy Piles: Using Building Foundations as Heat Exchangers”, Geo-Strata, Professional Magazine of the Geo-Institute, American Society of Civil Engineers, Special Issue on Energy Geotechnology, March/April 2012.
21. **Olgun, C.G.**, Martin, J.R. (2012) “Energy Pile Research at Virginia Tech : DFI Supports U.S. Energy Pile Research Efforts”. Deep Foundations, Jan/Feb 2012, pp. 78-79.
22. **Olgun, C.G.**, Martin J.R., Eddy, M. (2012). “Investigation of NEHRP/IBC Simplified Seismic Design Procedures for Non-Traditional Site Conditions.” Final Report submitted to United States Geological Survey for award number G10AP00035.
23. **Olgun, C.G.**, Martin II, J.R. and Abdelaziz, S.L. (2011) “Design Considerations of Energy Piles” SuperPile 2011, Deep Foundations Institute, May 12-13, 2011, Charleston SC.
24. **Olgun, C.G.**, Martin, J.R., Abdelaziz, S.L., Jimenez, M. (2011). “The Use of Energy Piles for Sustainable Energy” National Science Foundation CMMI Research and Innovation Conference, January 4-7, 2011, Atlanta, GA

25. **Olgun, C.G.** (2010). "Seismic Response of Columnar Reinforced Ground." 5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, Special Lecture SPL14, May 24-29, 2010, San Diego CA.
26. **Olgun, C.G.**, Martin, J.R., Sezen, A. (2010). "Field Evidence and Laboratory Testing of the Cyclic Vulnerability of Fine-Grained Soils during the 1999 Kocaeli Earthquake." 5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, Paper No. 4.41a, May 24-29, 2010, San Diego CA.
27. **Olgun, C.G.** and Martin, J.R. (2010). "Seismic Performance of Soil-Mix Panel Reinforced Ground." 5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, Paper No. 5.47a, May 24-29, 2010, San Diego CA.
28. **Olgun, C.G.**, Martin J.R., LaVielle, T.H. (2009). "Liquefaction Susceptibility of Calcareous Sediments along the Coastal Plains of Puerto Rico." Final Report submitted to United States Geological Survey for award number 07HQGR0043.
29. **Olgun, C.G.**, Sezen, A., Kayali, S., Martin, J.R., Polito, C.P., Yildirim, H. (2008) "Dynamic Behavior of Fine Grained Soils – 1999 Kocaeli Earthquake Case History", 14th World Conference on Earthquake Engineering, October 12-17, 2008, Beijing, China.
30. **Olgun, C.G.**, Martin, J.R. (2008) "Numerical Modeling of Columnar Reinforced Ground – 1999 Kocaeli Earthquake Case History.", 6th International Conference on Case Histories in Geotechnical Engineering, Paper No. 3.15, August 11-16, 2008, Arlington, Virginia.
31. Durgunoglu, H.T., Karadayilar, T., and **Olgun, C.G.** (2008) "A Case Study on Slope Failure in a Sanitary Landfill." 1st Middle European Conference on Landfill Technology, February 6-8, 2008, Budapest, Hungary.
32. Chapman, M.C., Martin, J.R., **Olgun, C.G.**, and Regmi, B. (2004). Site Response Mapping in Charleston, South Carolina, Seismological Research Letters, 75. no. 3, Abstract, pp. 441.
33. Chapman, M.C., Martin, J.R., **Olgun, C.G.**, and Regmi, B. (2004). Site Response in Charleston, South Carolina and Vicinity, Seismological Research Letters, 75, no. 2, Abstract, pp. 287.
34. **Olgun, C.G.** (2003). "Performance of Improved Ground and Reinforced Soil Structures during Earthquakes – Case Studies and Numerical Analyses." PhD. Dissertation, Virginia Tech, Department of Civil and Environmental Engineering.
35. Chapman M.C., Martin J.R., **Olgun, C.G.**, Regmi B. (2003). "Prediction and Geographical Information System (GIS) Mapping of Ground Motions and Site Response in Charleston, SC and Two Neighboring Counties: First Phase Development of a GIS for Seismic Hazard Evaluation." Final Report submitted to United States Geological Survey for award number 00HQGR0036.
36. Martin, J.R., **Olgun, C.G.**, Mitchell, J.K., Durgunoglu, H.T., Emrem, C. (2002). "Preliminary Findings from an Investigation of Improved Ground Performance during the 1999 Turkey Earthquakes.", *NSF-TUBITAK Workshop on 1999 Turkey and Taiwan Earthquakes*, March 24-26, 2002, Antalya Turkey, Workshop Proceedings available at http://enr.oregonstate.edu/~vinsont/NSF_Tubitak_Wrk_Proc

37. Martin, J.R., Pando, M.A., **Olgun, C.G.** (2001). "Evaluation of Liquefaction Potential of Railway Embankments." *10th International Conference on Soil Dynamics and Earthquake Engineering*, October 7-10, 2001, Philadelphia, PA., Extended Abstract No. 143, pp. 121.
38. **Olgun, C.G.**, Green R.A., Martin, J.R., Gutierrez, M.S. (2001). "Influence of Damping on Dynamic Site Response Analysis." *10th International Conference on Soil Dynamics and Earthquake Engineering*, October 7-10, 2001, Philadelphia, PA, Extended Abstract No. 109, pp. 151.
39. Durgunoglu, H.T., Emrem, C., Karadayilar, T., Mitchell, J.K., Martin, J.R., **Olgun, C.G.**, (2001). "Case History for Ground Improvement against Liquefaction – Carrefoursa Shopping Center, Izmit Turkey.", Lessons Learned From Recent Strong Earthquakes, *15th International Conference on Soil Mechanics and Geotechnical Engineering, Earthquake Geotechnical Engineering Satellite Conference*, August 24-25, 2001, Istanbul Technical University, Istanbul, Turkey, Atilla Ansal ed., pp. 299-304.
40. Pando, M.A., **Olgun, C.G.**, Martin, J.R. (2001). "Liquefaction Potential of Railway Embankments." *4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, March 26-31, 2001, San Diego CA, Paper No. 2.29.
41. Durgunoglu, H.T., Karadayilar, T., **Olgun, C.G.** (1997). "Foundation Problems of Konya Alaeddin Mosque and Implication of Remedial Measures." *International Conference on Studies in Ancient Structures*, July 14-18, 1997, Istanbul, Turkey, pp. 447-455.
42. Durgunoglu, H.T., Oruc, K., Karadayilar, T., **Olgun, C.G.** (1997). "Geological Investigations for the Remediation of an Old Coal Mining Site for Housing Development Purposes", *GEOENV '97*, International Symposium on Geology and Environment, September 1997, Istanbul, Turkey, J.K. Beddow ed., Abstracts Volume, pp. 96.
43. Durgunoglu, H.T., Kulac, H.F., **Olgun, C.G.** (1997). "Flexible Earth Retaining Structures - Soil Nailing." *Engineering and Education*, Symposium Honoring Vedat A.Yerlici, May 22, 1997, Istanbul, Turkey, pp. 287-296.
44. Durgunoglu, H.T., Oge, C., **Olgun, C.G.**, Tezel, G. (1996). "Utilization of CPT in Foundation Engineering Design." (in Turkish), *Mediterranean Soil Mechanics '96*, Soil Mechanics and Foundation Engineering Seminars, September 28-30, 1996, Antalya, Turkey, pp. 51-65.
45. **Olgun, C.G.**, Durgunoglu, H.T. (1996) "Soil Nailing Practice in Istanbul." *10th European Young Geotechnical Engineers' Conference*, October 21-23, 1996, Izmir, Turkey, pp. 274-283.
46. Durgunoglu, H.T., Kulac, H.F., Ikiz, S., **Olgun, C.G.**, Oge, C., Kocak, D., Tezel, G., (1996) "Remediation of Izmir-Cigli Solid Waste Disposal Site." (in Turkish), *6th Turkish National Conference on Soil Mechanics and Foundation Engineering*, October 24-25, 1996, Izmir, Turkey, Volume 2, pp. 476-486.
47. Durgunoglu, H.T., Kulac, H.F., Durgunoglu, A.T., Eksioğlu, I., Kasimogullari, O., **Olgun, C.G.** (1996). "A Case Study on the Remedial Design of a Retaining Structure Failure." (in Turkish), *6th Turkish National Conference on Soil Mechanics and Foundation Engineering*, October 24-25, 1996, Izmir, Turkey, Volume 2, pp. 325-334.

48. Durgunoglu, H.T., Kulac, H.F., Ikiz, S., Oge, C., **Olgun, C.G.** (1995). “Two Case Studies on the Determination of Hydrocompression Settlement in Russia.” *11th African Regional Conference on Soil Mechanics and Foundation Engineering*, December 11, 1995, Cairo, Egypt, vol. 3, pp. 535-543.
49. Durgunoglu, H.T., Kulac, H.F., Karadayilar, T., Ikiz, S., Oge, C.E., **Olgun, C.G.** (1995). “An Application of Instrumentation in Landslide Remediation.” (in Turkish), *2nd National Landslide Conference*, October 1995, Adapazari, Turkey, pp. 215-224.
50. Durgunoglu, H.T., **Olgun, C.G.**, Kulac, H.F., Karadayilar, T., Ikiz, S., Oge, C. (1995). “Instrumentation and Monitoring in Foundation Engineering.” (in Turkish), *Improvements in Civil Engineering, 2nd Technical Conference*, September 18-20, 1995, Istanbul, Turkey, pp. 109-118.
51. **Olgun, C.G.** (1995). “Instrumentation and Monitoring in Geotechnical Engineering”, MSc. Thesis, Bogazici University, Istanbul, Turkey.

PRESENTATIONS

Invited Presentations (26)

1. Invited Presentation, “Geothermal Foundations” Lehigh University, February 10, 2018.
2. Invited Keynote Presentation “Task Force 3 Position Paper : Energy Geo-Structures and Storage of Thermal Energy in the Ground” International Symposium on Energy Geotechnics, June 2-4, 2015, Barcelona, Spain (Olgun, C.G. and Loveridge, F.A.).
3. Invited Presentation “Soil Improvement and Mitigation of Seismic Site-Effects” Seismic Hazard and Microzonation Studies in Urban Areas, Universidad Austral de Chile, June 11-12, 2015, Austral, Chile.
4. Invited Panelist “Interesting Site Conditions” Earthquake Engineering Research Institute, 67th Annual Meeting, March 31-April 3, 2015, Boston MA.
5. Invited Presentation “Shear Wave Velocity Profiling and Seismic Site Amplification in the Mid-Atlantic States” Froehling and Robertson 38th Annual Professional Meeting, January 15, 2015, Glenn Allen, Virginia.
6. Invited Presentation “Temperature Effects on Soil Behavior In Transportation Infrastructure” 94th Annual Meeting of the Transportation Research Board, January 11-15, 2015, Washington, DC.
7. Invited Presentation “Performance of Energy Foundations for Heating and Cooling of Structures : Geotechnical Challenges and Design Considerations” Charlotte Geotechnical Group, University of North Carolina Charlotte, April 22, 2014, Charlotte, NC.
8. Invited Presentation “Ground improvement design under seismic loading: Partial depth treatment and box-type treatment using soil mixing” Liquefaction and Environment, 2014 Geopac Technical Seminar, March 31-April 1, 2014, Vancouver, BC, Canada.
9. Invited Lecture “Site class reduction using soil mixing” Liquefaction and Environment, 2014 Geopac Technical Seminar, March 31-April 1, 2014, Vancouver, BC, Canada.
10. Invited Lecture “Overview of geothermal engineering” Liquefaction and Environment, 2014 Geopac Technical Seminar, March 31-April 1, 2014, Vancouver, BC, Canada.
11. Invited Lecture “Near-Surface Geothermal Energy : Application to energy piles/walls” Liquefaction and Environment, 2014 Geopac Technical Seminar, March 31-April 1, 2014, Vancouver, BC, Canada.
12. Invited Presentation “Energy Piles : Recent Developments and Geotechnical Design Issues” Froehling and Robertson 37th Annual Professional Meeting, January 16, 2014, Glenn Allen, Virginia.
13. Invited Presentation for "Near Surface Storage of Thermal Energy" Geological Society of America Annual meeting, Technical Session on Ground-Source Geothermal Energy Systems: A Significant Emerging Resource, October 27-30, 2013, Denver, Colorado (Olgun, C.G., Ozudogru, T.Y., Senol, A.)
14. Invited Presentation “Seismic Soil Reinforcement,” University of Colorado Boulder, October 31, 2013, Boulder, Colorado.

15. Invited Presentation, “Near Surface Storage of Thermal Energy “ International Workshop on Geoengineering and Energy Geo-Storage, July 3-5, 2013, Weimar, Germany.
16. Invited Keynote Speaker for State of the Art Lecture “Energy Piles : Background and Geotechnical Engineering Concepts” 16th Annual George F. Sowers Symposium, Organized by the Georgia Section of American Society of Civil Engineers, May 7, 2013, Atlanta, GA.
17. Invited Lecture “Ground-Source Bridge Deck Deicing Using Integrated Energy Foundations”, Georgia Tech, May 9, 2013, Atlanta, GA.
18. Invited Luncheon Lecture “Geothermal Energy Piles: Operational Principles” Association of Drilled Shaft Contractors (ADSC) Mid-Atlantic Chapter Meeting, Baltimore, MD, December 5, 2012.
19. Invited Lecture “Green Energy Applications Using Thermo-Active Deep Foundations: Design Challenges and Considerations” 44th Kansas Geotechnical Conference, Lawrence, KS, November 8, 2012.
20. Invited Keynote Lecture “Design considerations of energy piles and bridge deck deicing” International Bridge Conference, Technical Seminar Session on Geothermal Energy Pile Systems, June 8, 2011, Pittsburgh, PA.
21. Invited Presentation “Seismic Response of Columnar and Panel Reinforced Ground – Implications for Design” Rizzo Associates, June 7, 2011, Pittsburgh, PA.
22. Invited Presentation “Geothermal Energy Foundation Systems - An Innovative Renewable Energy Approach” featured 2-hour talk for the Virginia Engineers Conference, Williamsburg, VA, September 8, 2010.
23. Invited Keynote Lecture “Renewable Energy Applications Using Thermo-active Deep Foundations,” International Scientific Conference CIBv 2010, organized by Transilvania University of Brăso, November 12-13, 2010, (Martin, J.R., Abdelaziz, S.L., and Olgun, C.G.)
24. Invited Keynote Lecture “Renewable Energy Applications in Geotechnical Engineering.” ZM13, 13th Turkish National Conference on Soil Mechanics and Geotechnical Engineering, September 30-October 1 2010, Istanbul Turkey (In Turkish). (Olgun, C.G., Sezen A., Martin, J.R., Abdelaziz, S.L.)
25. Invited Special Lecture “Seismic Response of Columnar Reinforced Ground.” 5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, SPL14, May 24-29, 2010, San Diego CA.
26. Invited Presentation, “Dynamic behavior of fine grained soils during earthquakes” Istanbul Kultur University, Istanbul, Turkey, October 27, 2009.

Conference Presentations (77)

1. **Olgun, C.G.**, Geyin, M., and Ozudogru, T.Y. (2017). “Long-Term Performance of Heat Exchanger Boreholes at Different Climatic Conditions,” Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.

2. Kamalzare, S. and **Olgun, C.G.** (2017). "Utilization of Dissipated Energy to Characterize Soil Behavior during Uniform Cyclic Loading and Earthquake Excitation" Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
3. Kamalzare, S. and **Olgun, C.G.** (2017). "Numerical Modeling of Columnar-Reinforced Ground Behavior during Dynamic Centrifuge Testing" Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
4. Eddy, M.A., **Olgun, C.G.**, Rodriguez-Marek, A., and Chapman, M.C. (2017). "Site Response Effects of Reference Rock and Weathered Zone in the National Capital Region." Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
5. Sutman, M., **Olgun, C.G.**, Laloui, L., and Brettmann, T. (2017). "Effect of End-Restraint Conditions on Energy Pile Behavior" Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
6. Rivera, A.J., **Olgun, C.G.**, Brandon T.L. and Masse, F. (2017). "Numerical Analysis of Stiff Column Behavior under Lateral Loads." Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
7. Flint, M., Dhulipala, L., Shahtaheri, Y., Tahir, H., Ladipo, T., Eatherton, M. R., Irish, J. L., **Olgun, C. G.**, Reichard, G., Rodriguez-Marek, A., Zobel, C., Leon, R. T., and de la Garza, J. M. (2016). "Developing a Decision Framework for Multi-Hazard Design of Resilient, Sustainable Buildings." 1st International Conference on Natural Hazards and Infrastructure (ICONHIC), June 28-30, 2016 Chania, Greece, 10 p.
8. Akinola, A., **Olgun, C.G.**, Cuceoglu, F., Wynn-Thompson, T., (2016). "Temperature effects on cohesive riverbank erosion", World Environmental and Water Resources Congress, ASCE EWRI, May 22-26, 2016, West Palm Beach, FL.
9. **Olgun, C.G.**, Eddy, M.A., (2016). "Seismic Hazard Mapping in the Washington, D.C. Metropolitan Area." Environmental and Engineering Geology Spring Symposium, Association of Environmental and Engineering Geologists, April 9, 2016, Radford, VA.
10. Eddy, M.A., **Olgun, C.G.**, Rodriguez-Marek, A., and Chapman, M.C. (2016). "Site Response Effects of Reference Rock and Weathered Zone in the National Capital Region." Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
11. Barham, T.A, Ostrum, Z., **Olgun, C.G.**, Parra, J., Tuggle, J.R. (2016). "Multi-scale Characterization of Quartzitic and Calcareous Sands." Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
12. Abdelaziz, S.L. and **Olgun, C.G.** (2016). "Counterbalancing Ambient Interference on Thermal Conductivity Tests for Energy Piles." Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
13. Bowers, G.A. and **Olgun, C.G.** (2016). "Experimental and Numerical Investigation of Ground-Source Bridge Deck Deicing." Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.

14. Rivera, A.J., **Olgun, C.G.**, McCartney, J.S., Masse, F., and Brandon T.L. (2016). “Centrifuge Tests on Laterally Loaded Footings Supported by Rigid Inclusion-Reinforced Clay.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
15. Upadhyaya, S., Tiwari, B., and **Olgun, C.G.** (2016). “Static and Dynamic Properties of Compacted Soil-Cement Mixtures.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
16. Chugh, A.K., Labuz, J.F., and **Olgun, C.G.** (2016). “Soil-Structure Interactions of Retaining Walls.” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
17. Pratt, T., Horton, J.W., Hough, S., Munoz, J., Chapman, M.C., **Olgun, C.G.**, and Beale, J.N. (2015). “DC Shake : Measuring Variations in Earthquake Ground Motions in Washington, DC.” AGU Fall Meeting, American Geophysical Union, December 14-18, 2015, San Francisco, CA.
18. Barham, T.A, **Olgun, C.G.**, Eddy, M.A., Tilashalski, M., Chapman, M.C., and Rodriguez-Marek, A. (2015). “Seismic Hazard Mapping of the National Capital Region Using Random Field Models.” 2015 GSA Annual Meeting, Geological Society of America, November 1-4, 2015, Baltimore, MD.
19. Pratt, T., Horton, J.W., Hough, S., Munoz, J., Chapman, M.C., **Olgun, C.G.**, and Beale, J.N. (2015). “DC Shake : Local Site Effects and Variations in Earthquake Ground Motions in Washington DC.” 2015 GSA Annual Meeting, Geological Society of America, November 1-4, 2015, Baltimore, MD.
20. Tamura, S., Khosravi, M., Boulanger, R.W., Wilson, D. W., **Olgun, C.G.**, Rayamajhi, D., Wang, Y. (2015). “Seismic response of Soft Clay Reinforced by Soil-Cement Grid Based on Dynamic Centrifuge Tests”, 6th International Conference on Earthquake Geotechnical Engineering, November 1-4, 2015, Christchurch, New Zealand.
21. Debats, J-M., Pardessus, N., Racinais, J., and **Olgun, C.G.** (2015). “In-situ determination of the shell correction factor in carbonate sands”, 6th International Conference on Earthquake Geotechnical Engineering, November 1-4, 2015, Christchurch, New Zealand.
22. Loveridge, F.A., **Olgun, C.G.**, Brettmann, T., and Powrie, W. (2015). “Group thermal response testing for energy piles” 16th European Conference on Soil Mechanics and Geotechnical Engineering, September 13-17, 2015, Edinburgh, U.K.
23. Akinola, A., Wynn-Thompson, T., **Olgun, C.G.** (2015). “Temperature effects on cohesive riverbank erosion”, Watershed Management Symposium, ASCE EWRI, August 5-7, 2015, Reston, VA.
24. Khosravi, M., Boulanger, R.W., Wilson, D.W., Tamura, S., **Olgun, C.G.**, and Wang, Y., (2015). “Seismic Performance of Soil-Cement Grid Supporting a Structure over Soft Clay.” The Deep Mixing 2015 Conference, June 2-5. 2015, San Francisco, CA, pp. 631-640.
25. Rayamajhi, D., Tamura, S., Khosravi, M., Boulanger, R.W., Wilson, D.W., Ashford, S.A., and **Olgun, C.G.** (2015). “Investigating Reinforcing Effects of Soil-Cement Columns in

Liquefiable Sand Using Dynamic Centrifuge Tests”, The Deep Mixing 2015 Conference, June 2-5, 2015, San Francisco, CA, pp. 375-384.

26. Bowers, G.A. and **Olgun, C.G.** (2015). “Experimental and Numerical Investigation of Bridge Deck Deicing Using Energy Piles” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
27. Godfrey, E.A., Rodriguez-Marek, A. and **Olgun, C.G.** (2015). “Probabilistic Methodology for Developing Regional and Site-Class Dependent Seismic Site Amplification Factors” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
28. Kamalzare, S. and **Olgun, C.G.** (2015). “Comparative Soil Response during Earthquake Excitation and Uniform Cyclic Loading” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
29. Sutman, M., **Olgun, C.G.** and Brettmann, T. (2015). “Full-Scale Field Testing on Energy Piles” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
30. Rivera, A.J., **Olgun, C.G.**, Brandon T.L. and Masse, F. (2015). “A numerical study of the installation-induced stresses and excess pore-water pressures around rigid inclusions using a linear elastic perfectly plastic soil model.” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
31. Khosravi, M., Tamura, S., Boulanger, R.W., Wilson, D.W., **Olgun, C.G.**, Rayamajhi, D., Wang, Y. (2015). “Dynamic Centrifuge Tests on Soft Clay Reinforced by Soil-Cement Grids” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
32. Tilashalski, M., **Olgun, C.G.**, Rodriguez-Marek, A., Godfrey, E.A., Chapman, M.C., Shamsalsadati, S., and Eddy, M.A. (2015). “Regional Geology and Seismic Site Amplification in the Washington, D.C. Metropolitan Area” IFCEE 2015, International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, Texas.
33. Sutman, M., Brettmann, T. and **Olgun, C.G.** (2014). “Thermo-Mechanical Behavior of Energy Piles: Full-Scale Field Test Verification.” 39th Annual Conference, Deep Foundations Institute, October 22-24, 2014, Atlanta, GA.
34. Bowers, G.A., Ozudogru, T.Y., and **Olgun, C.G.** (2014). “The Role of Groundwater Flow in Bridge Deck Deicing” 2014 GSA Annual Meeting, October 19-22, 2014, Vancouver, British Columbia, Canada.
35. Ozudogru, T.Y., **Olgun, C.G.**, and Senol, A. (2014). “Thermal Resistance Evaluation and Performance Assessment of Heat Exchanger Piles” 2014 GSA Annual Meeting, October 19-22, 2014, Vancouver, British Columbia, Canada.
36. Zobel, C.W., **Olgun, C.G.**, Zhang, Y., Weiss, R., Cowell, M., and Ghafory-Ashtiany, M. “Building a Common Language around Disaster Resilience,” 5th International Disaster and Risk Conference, IDRC Davos 2014, August 24-28, 2014, Davos, Switzerland.
37. Upadhyaya, S., Tiwari, B., San Pablo, A., Melgar, K., Pandey, P., and **Olgun, C.G.** (2014). “Reduction in Seismic Shaking Intensity of Soft Soil Sites Using Soil-Cement Panels as Stiff

- Ground Reinforcement”, 12th International Symposium on Geo-disaster Reduction, September 5-6, 2014, Fullerton, CA, USA (**awarded: 2nd Best Student Presentation**).
38. Zhou, J., Moen, C.D., Bowers, G.A. and **Olgun, C.G.** (2014) “Thermal-Structural Modeling of Energy Harvesting and Geothermal Storage Systems” EMI 2014, Engineering Mechanics Institute Conference, August 5-8, 2014, Hamilton, Ontario, Canada.
 39. Loveridge, F., Brettmann, T., **Olgun, C.G.**, and Powrie, W. “Thermal behaviour of three different auger pressure grouted piles used as heat exchangers” DFI-EFFC International Conference on Piling and Deep Foundations, May 21-23, 2014, Stockholm, Sweden.
 40. “Performance and Design Considerations for Thermo-active Geostructures” Purdue Geotechnical Society Workshop, Energy Geotechnics, West Lafayette, Indiana, April 26, 2014.
 41. **Olgun, C.G.**, Eddy, M.A, Godfrey, E.A., Chapman, M., Tilashalski, M., Martin, J.R. and Camp, W. “Investigation of Seismic Site Amplification for Non-NEHRP Site Conditions: Site Response Study of Columbia, SC.” GeoCongress 2014, American Society of Civil Engineers, Geotechnical Special Publication.
 42. Kamalzare, S., and **Olgun, C.G.** (2014). “Simulation of Monotonic and Cyclic Soil Behavior Using a Kinematic Hardening Plasticity Model” GeoCongress 2014, American Society of Civil Engineers, Geotechnical Special Publication.
 43. Tiwari, B., Fanaiyan, S., Hastings, R. and **Olgun, C.G.** (2014). “Reduction in Seismic Ground Shaking with the Use of Soil-Cement Panels,” GeoCongress 2014, American Society of Civil Engineers, Geotechnical Special Publication.
 44. Bowers, G.A. and **Olgun, C.G.** (2014). “Ground-Source Bridge Deck Deicing Systems Using Energy Foundations” GeoCongress 2014, American Society of Civil Engineers, Geotechnical Special Publication.
 45. **Olgun, C.G.** and Bowers, G.A. (2013). “Ground-Source Deicing of Bridge Decks” International Workshop on Geomechanics and Energy – The Ground as Energy Source and Storage Lausanne, Switzerland, November 26-28, 2013.
 46. “Bridge Deck Deicing with Ground-Source Heating” Geological Society of America Annual meeting, Technical Session on Ground-Source Geothermal Energy Systems: A Significant Emerging Resource, October 27-30, 2013, Denver, Colorado (Olgun, C.G. and Bowers, G.A)
 47. “Long term performance of heat exchanger piles.” Proceedings of CPEG 2013, Coupled Phenomena in Environmental Geotechnics, July 1-3, 2013, Torino, Italy.
 48. “Ground Motions and Site Response at Washington Monument and Museum Support Center” Workshop on Collaborative Study of Soil-Structure Interaction Effects on Behavior and Damage to Structures in Washington D.C. during the August 23, 2011 Earthquake, March 8, 2013, Smithsonian Institute, Washington DC. (Godfrey, E. and Olgun, C.G)
 49. “Seismic Site Amplification at the Washington Monument during the 2011 Central Virginia Earthquake” Posters on the Hill, Council on Undergraduate Research (CUR), April 23-24, 2013, Capitol Hill, Washington, DC. (Godfrey, E.A. and Olgun, C.G)

50. "Temperature Effects on Soil Behavior In Relation to Ground-Sourced Bridge Deck Deicing Systems" 92nd Annual Meeting of the Transportation Research Board, January 13-17, 2013, Washington, DC.
51. "Long-Term Performance and Sustainable Operation of Energy Piles." 2nd International Conference on Sustainable Design, Engineering and Construction, November 7–9, 2012, Fort Worth, TX.
52. "Field Testing of Energy Piles at Virginia Tech" 37th Annual Conference on Deep Foundations, October 17-19, 2012, Houston, TX.
53. "Performance of Energy Foundations for Heating and Cooling of Structures" Purdue Geotechnical Society Workshop, Geotechnical Engineering: Crossing Boundaries, April 13, 2012, West Lafayette, IN.
54. "Thermal Conductivity Testing of Energy Piles : Field Testing and Numerical Modeling" GeoCongress 2012 - ASCE Geo-Institute Conference, March 25-29, 2012, Oakland CA.
55. "Design Considerations of Energy Piles" SuperPile 2011, Deep Foundations Institute, May 12-13, 2011, Charleston SC.
56. "Seismic Performance of Soil-Mix Panel Reinforced Ground." 5th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, May 24-29, 2010, San Diego CA.
57. "Economic Benefits of Ground Improvement – Ford-Otosan Plant Case History." Earthquake and Tsunami, WCCE-ECCE-TCCE Joint Conference, June 22-24, 2009, Istanbul, Turkey.
58. "The Effect of Soil-Mix Panels on Ground Motions – A Performance Based Approach." IS-Tokyo 2009, International Conference on Performance-Based Design in Earthquake Geotechnical Engineering : From Case History to Practice, June 15-18, 2009, Tokyo, Japan.
59. "Long Term Economic Benefits of Ground Improvement – Ford-Otosan Plant Case History." IS-Tokyo 2009, International Conference on Performance-Based Design in Earthquake Geotechnical Engineering : From Case History to Practice, June 15-18, 2009, Tokyo, Japan.
60. "Soil Improvement for Damage Mitigation along Izmit Bay during the 1999 Kocaeli Earthquake." 2nd International Conference on Geotechnical Engineering for Disaster Mitigation & Rehabilitation (GEDMAR08), May 30-31, 2008, Nanjing, China.
61. "Effectiveness of Jet-Grout Columns for Mitigation of Liquefaction during Earthquakes." 2nd International Conference on Geotechnical Engineering for Disaster Mitigation & Rehabilitation (GEDMAR08), Liu, Deng & Chu eds., May 30-31, 2008, Nanjing, China, pp. 768-773.
62. "Numerical Modeling of the Seismic Response of Columnar Reinforced Ground.", GEESD IV, 4th Decennial Geotechnical Earthquake Engineering and Soil Dynamics Conference, May 18-22, 2008, Sacramento, California.
63. "Earthquake Performance of Reinforced-Earth Embankment Subjected to Strong Shaking and Ground Deformations." IS Kyushu 2007, 5th International Symposium on Earth Reinforcement, November 14-16, 2007, Fukuoka, Japan.

64. "Soil Improvement for Mitigation of Damages During the 1999 Kocaeli Earthquake (Turkey)", HAZTURK 2007, - International Symposium on Earthquake Loss Estimation for Turkey, September 23-25, 2007, Istanbul, Turkey.
65. "Economic Benefits of Ground Improvement to Mitigate Earthquake Damages – Ford Plant Case History", HAZTURK 2007, - International Symposium on Earthquake Loss Estimation for Turkey, September 23-25, 2007, Istanbul, Turkey.
66. "Site-Specific Geotechnical Earthquake Engineering Issues in the Central and Eastern U.S." Presentation given at the Annual Transportation Research Board (TRB) meeting, Geoseismic Concerns Subcommittee of the TRB Committee on Seismic Design of Bridges, January 23, 2007, Washington DC.
67. "Issues related to numerical analysis" Lecture given at the Seismic Design Training Workshop for Federal Energy Regulatory Commission (FERC) held at Virginia Tech on 8-12 August 2005.
68. "Historical seismicity of the Southeastern United States and the Richmond, VA Earthquake of December 9, 2003", seminar presented to D.C. Department of Transportation (DDOT) on 22 March 2004 "Recent Advances in Earthquake Engineering in the Eastern US and Implications for DDOT Facilities".
69. "Performance of improved ground and reinforced soil structures", NSF-Tubitak Turkey/Taiwan Grantee Workshop, March 26, 2002, Antalya, Turkey.
70. "Case study of a mechanically stabilized earth wall performance during the 1999 Kocaeli Earthquake" Center for Geotechnical Practice and Research, Research Presentation at the Annual Members Meeting, February 28, 2002, Blacksburg VA.
71. "Geotechnical aspects of the 1999 Turkey Earthquake", Virginia Tech Geotechnical Society Student Presentation, November 13, 2001, Blacksburg VA (given to the graduate students at Virginia Tech Geotechnical Group).
72. "Performance of improved ground and reinforced soil systems during earthquakes – Case studies and numerical analyses" Center for Geotechnical Practice and Research, Research Presentation at the Annual Members Meeting, November 13, 2000, Blacksburg VA.
73. "Performance of improved ground during earthquakes" Center for Geotechnical Practice and Research, Research Presentation at the Annual Members Meeting, February 29, 2000, Blacksburg VA.
74. "A case study on the remedial design of a retaining structure failure" 6th Turkish National Conference on Soil Mechanics and Foundation Engineering, Deep Excavations and Tunneling Session, October 25, 1996, Izmir, Turkey.
75. "Soil nailing practice in Istanbul" 10th European Young Geotechnical Engineers' Conference, October 23, 1996, Izmir, Turkey.
76. "An application of instrumentation in landslide remediation" 2nd National Landslide Conference, Session on Case Studies, October 1995, Adapazari, Turkey.
77. "Instrumentation and monitoring in foundation engineering" Improvements in Civil Engineering, 2nd Technical Conference, Geotechnical Applications Session, September 20, 1995, Bogazici University, Istanbul, Turkey.

PROFESSIONAL AND SCHOLAR SERVICE

1. Co-director of Interdisciplinary Graduate Education Program (IGEP) on Disaster Resilience at Virginia Tech
2. Founding member of Technical Committee on Energy Geotechnics within International Society of Soil Mechanics and Geotechnical Engineering, and leader of Task Force III on “Energy GeoStructures and Storage of Thermal Energy in the Ground”. This milestone development to establish a professional organization on energy geotechnology originated from the discussions at the International Workshop on Thermo-active Geotechnical Systems that I had organized in March 2013.
3. Committee member: AFP40 Technical Committee on Physicochemical and Biological Processes in Soils, Transportation Research Board.
4. Committee member: Sustainability Committee of the Deep Foundations Institute.
5. Committee member: Sustainability Committee, Geo-Institute, ASCE.
6. Founding Co-chair: Energy Pile Working Group within the Sustainability Committee of the Deep Foundations Institute.
7. Founding Committee member: Energy Pile Sub-committee of the Technical Committee on Deep Foundations within ASCE Geo-Institute.
8. Session co-chair: “Energy Geostructures and Thermo-active Geotechnical Systems” Geotechnical Frontiers 2017, March 12-15, 2017, Orlando, Florida.
9. Session co-chair: “Soil-Structure Interaction for Energy Geo-Structures” Geotechnical and Structural Engineering Congress, ASCE Geo-Institute and Structural Engineering Institute Conference, February 14-17, 2016, Phoenix, AR.
10. Session co-chair: “Thermally-Active Foundation Systems”. IFCEE International Foundations Congress and Equipment Expo, March 17-21, 2015, San Antonio, TX.
11. Session chair and moderator: “Energy Foundations : Wind, Transmission and Geothermal” 39th Annual Conference, Deep Foundations Institute, October 22-24, 2014, Atlanta, GA.
12. Session co-chair: “Thermally Active Geotechnical Engineering Systems,” GeoCongress 2012 - ASCE Geo-Institute Conference, March 25-29, 2012, Oakland CA.
13. Guest co-editor (along with Lyessse Laloui, Kenichi Soga and John McCartney) for Acta Geotechnica, Special Issue on Thermally Active Geotechnical Systems for Near Surface Geothermal Energy
14. Guest co-editor (along with John McCartney) for Journal of Geotechnical and Geological Engineering, Thermo-hydro-mechanical Behavior of Soils and Energy Geostructures.
15. Guest co-editor (along with John McCartney) for DFI Journal Special Issue on Energy Foundations
16. Developed a Webinar on “Energy Piles: Background and Geotechnical Engineering Concepts” for the American Society of Civil Engineers. Presented five well-attended webinars (25+ attendees) and additional webinars are scheduled.

17. Lead organizer: “International Workshop on Thermo-active Geotechnical Structures”, NSF supported workshop at Ecole Polytechnique Federale de Lausanne (EPFL) in Switzerland during March 25-27, 2013. The workshop brought together leaders such as Dr. Lyesse Laloui at, Dr. Kenichi Soga at Cambridge University UK, Dr. Rolf Katzenbach at the Technical University of Darmstadt in Germany. More than 70 researchers from around the world attended this workshop. Pressing issues on thermo-active geotechnical structures were discussed. The discussions from this workshop will be published in two special issues of Acta Geotechnica and Deep Foundation Institute Journal.
18. Lead organizer: “Energy Pile International Research Workshop”, joint international workshop between Virginia Tech and the Deep Foundations Institute, Arlington, VA, June 29, 2010; this workshop featured key researchers, foundation engineers and contractors from the US and abroad along with representatives from agencies such as the FHWA, U.S. Green Building Council and NSF. This workshop laid the foundations for the \$600,000 NSF GOALI grant listed above.
19. Reviewer for several conferences, ASCE GeoCongress, ASCE GeoRisk, DFI Annual Conference, IFCEE, DFI-EFFC Conference, Physical Modelling in Geotechnics and others.
20. Proposal review and panel member, NSF CMMI Geotechnical Engineering Program, NSF CMMI Geomechanics and Geomaterials Program, NSF CAREER Program, National Science Foundation Research Traineeship (NRT) Program, NSF OISE USAID Program, NSF OISE International Research Experiences for Students (IRES) Program, NSF IIP SBIR Program, NSF IIP STTR Program.
21. Reviewer for several journals, ASCE Journal of Geotechnical and Geoenvironmental Engineering, Applied Thermal Engineering, ASTM Journal of Testing and Evaluation, ASTM Geotechnical Testing Journal, Acta Geotechnica, Journal of Geotechnical and Geological Engineering, Soil Dynamics and Earthquake Engineering, Environmental Geotechnics, DFI Journal.