



## PAUL W. MAYNE, PhD, P.E.

Professor - Geosystems Engineering  
 School of Civil and Environmental Engineering  
 790 Atlantic Drive, Mason Building Room 2245  
 Georgia Institute of Technology, Atlanta 30332-0355  
 Email: [paul.mayne@gatech.edu](mailto:paul.mayne@gatech.edu) Phone: 404-894-6226

Georgia Tech CEE Website: [www.ce.gatech.edu](http://www.ce.gatech.edu)  
 Research: <http://geosystems.ce.gatech.edu/Faculty/Mayne>  
<http://scholar.google.com/citations?hl=en&user=iG8TdV8AAAAJ>

### I. Earned Degrees

• Ph.D. 1991	Geotechnical Engineering	Cornell University
• M. Eng. (Civil) 1977	Geotechnical/Civil/Environmental	Cornell University
• BSCE 1976	Civil & Environmental Engineering	Cornell University

### II. Employment History

• 2016-present	Professor	Georgia Institute of Technology
• 2012-2016	Geosystems Team Leader	Georgia Institute of Technology
• 2008-2012	Professor	Georgia Institute of Technology
• 2000-2008	Geosystems Team Leader	Georgia Institute of Technology
• April 2000	Full Professor	Georgia Institute of Technology
• Sept. 1990	Associate Professor	Georgia Institute of Technology
• Aug. 1987	Research Assistant	Cornell University, Ithaca, NY
• May 1977	Senior Geotechnical Engineer	Law Engineering Associates, McLean, VA
• June 1976	Foundation Engineer	Thomsen Associates/Empire Soils, Groton, NY

### III. Honors and Awards

#### A. International and National Awards

- **26<sup>th</sup> Szechy Lecture, Hungarian Geotechnical Society, Budapest (14 Feb 2020)**
- **21<sup>st</sup> Robert L. Schiffman Lecture, Civil & Environmental Engineering, Cornell University (05 Nov. 2019):**  
<https://www.cee.cornell.edu/events/schiffman-colloquium-seismic-piezocone-testing>
- **Cross-USA Lecture (2018-2019)** awarded by ASCE Geo-Institute (May 2018 to May 2019): total 36 talks:  
<https://www.geoinstitute.org/chapters/cross-usa-lectures/cross-usa-lecture-tour-2018-2019>
- **26<sup>th</sup> Spencer Buchanan Lecture, Texas A&M University, Bryan, TX (30 November 2018):**  
<https://ceprofs.civil.tamu.edu/briaud/buchanan.html>
- **34<sup>th</sup> Manuel Rocha Lecture, Portuguese Geotechnical Society, Lisbon (11 October 2017):**  
<http://www.soilsandrocks.com.br/soils-androcks/SR40-3.pdf>
- **Opening Keynote Lecture:** 3<sup>th</sup> Bolivian International Conference on Deep Foundations, Univ. Santa Cruz (27-29 April 2017). <http://www.cfpbolivia.com>
- **Keynote Lecture on In-Situ Testing:** Chicago ASCE Geo-Institute Section, Univ. Illinois - Chicago (05 May 2017).  
<http://chapters.geoinstitute.org/wp-content/uploads/sites/3/2017/02/2017-CHICAGO-GEOTECHNICAL-LECTURE-SERIES.pdf>
- **14<sup>th</sup> Nonveiller Lecture, Croatian Geotechnical Society, Berislavićeva 6, 10000 Zagreb; held at the University of Zagreb, (5 Oct. 2016).** <http://www.hgd-cgs.hr/>
- **Paul W. Mayne selected as "GeoLegend" - ASCE GeoStrata magazine (May - June 2016; pp 22-28).**
- **Keynote Lecture:** 5<sup>th</sup> International Conference on Site Characterization (ISC-5), Jupiters Resort, Gold Coast, Australia (08 Sept 2016). [www.isc5.com.au](http://www.isc5.com.au)
- **Keynote Lecture:** In-situ geocharacterization of soils in the year 2016 and beyond. XV Pan American Conf. on Soil Mechanics & Geotechnical Engineering, Buenos Aires (Nov. 2015)

- **Editor's Choice:** *Canadian Geotechnical Journal* paper by F. Niazi and P.W. Mayne (November 2014): <http://www.nrcresearchpress.com/doi/full/10.1139/cgj-2013-0220#.VI2p-XvG8cY>
- **Hal Hunt Lecture**, 39<sup>th</sup> Deep Foundations Institute Conference, Atlanta Marriott Marquis (Oct 2014): <http://www.dfi.org/awardslectures.asp?hunt>
- **The James Hoover Distinguished Lecture**, 38<sup>th</sup> Geotechnical Conference, Iowa State University, 10 April 2014
- **The 12<sup>th</sup> Jennings Lecture** given in Capetown, Durbin, and Pretoria, South African Institution of Civil Engineers (SAICE), 4-6 February 2014: <http://www.geotechnicaldivision.co.za/awards/je-jennings-award>
- **The 16<sup>th</sup> George F. Sowers Lecture**, ASCE Georgia Geotechnical Section, Atlanta, GA (07 May 2013)
- Keynote Talk: **Shaking the Foundations of GeoEngineering Education**, Univ. Ireland, Galway: 04 July 2012
- Keynote Speaker: **2012 Nordic Geotechnical Meeting**, Copenhagen: 09 May 2012.
- **2012 Ardaman Lecture**: University of Florida, Gainesville, 10 April 2012: "Advanced Geotechnical Site Testing"
- **2012 State-of-the-Art**: "Requirement of multi-channel in-situ tests for routine geotechnical site characterization" ASCE GeoCongress (25-29 March 2012), Oakland, CA: <http://content.geoinstitute.org/GeoCongress2012.html>
- **2010 Opening Keynote - Overview of CPT Regional Reports** - International Symposium on Cone Penetration Testing (CPT'10), Hyatt Resort, Huntington Beach CA (09-13 May 2010): [www.cpt10.com](http://www.cpt10.com)
- **2009 State-of-the-Art (SOA-1) Lecture: Geomaterial Behavior & Testing**, 17<sup>th</sup> International Conference on Soil Mechanics & Geotechnical Engineering (ICSMGE), Alexandria, Egypt - 05 - 10 October 2009: [www.issmge.org](http://www.issmge.org)
- **2009 Michael W. O'Neill Lecture** - University of Houston during the annual CIGMAT Conference (06 March 2009). Center for Innovative Grouting, Materials, and Testing: <http://cigmat.cive.uh.edu>
- **2007 Cross-Canada Lecture** (Fall) - Canadian Geotechnical Society, National Research Council of Canada, Ottawa; (Delivered 14 presentations visiting 12 cities in 2 weeks; December 2007): [www.cgs.ca](http://www.cgs.ca)
- **2006 James K. Mitchell Lecture** delivered during GeoShanghai International Conference (June 2006).
- **Synthesis on Cone Penetration Testing**, Awarded by National Academies, NCHRP Program, Transportation Research Board (Jan.2006).
- **Award of Appreciation for Proceedings Editor** presented by Association of Drilled Shaft Contractors (ADSC) and ASCE Geo-Institute, Jan. 31, 2004.
- Paper by Mayne, P.W. and Kulhawy, F.H., "K<sub>0</sub>-OCR Relationships in Soils" was selected as a **classic reading reference** and chosen for reprint in *A History of Progress*, ASCE Geotechnical Special Pub. No. 118 (2003).
- Award of Appreciation for Editorial Board Service on *ASTM Geotechnical Testing Journal*, Jan. 15, 2002.
- Appreciation Award, USUCGER Board Service, November 2001. [www.usucger.org](http://www.usucger.org)
- Nominee, Wellington Prize, American Society of Civil Engineers for JGGE paper, Oct. 1999.
- Elected President, U.S. Universities Council on Geotechnical Engineering Research (USUCGER), 1999-2000.
- Chair, Host Committee for International Site Characterization (ISSMGE), 1996-1998.
- Exemplary Contributions Award, Transportation Research Board, January 1995.
- National Young Investigator (NYI), Engineering Directorate, National Science Foundation, 1992-1997.

## **B. Institute or School Awards**

- Advisor to Dr. Z. Ouyang who received the 2019 Sowers Award by ASCE Atlanta Geo-Institute Section and GT Geosystems Engineering Group (07 May 2019 at Academy of Medicine).
- Advisor to Zhongkun "Frankie" Ouyang who received best GTA award in CEE (December 2017)
- **Class of 1940 Teaching Award** - (Course Survey Teaching Effectiveness), Georgia Institute of Technology, Center for the Enhancement of Teaching and Learning (CETL) in February 2016.
- Advisor and coauthor to 2011 DFI\* **Best Student Paper Award** given to PhD candidate: Fawad Niazi (Oct. 2011).
- Advisor to Fawad Niazi - **Top 10 research papers award** - \*\*SAIC Student Paper Contest (November 2011)
- Advisor to 2008 **Best PhD Thesis** (Dr. Alec McGillivray), School of Civil & Environmental Engineering, GT.
- **2006 Outstanding Professional Education Award**, bestowed by President G.W. Clough, Georgia Institute of Technology, GT Awards Ceremony, Student Center Ballroom, April 2006. (Engraved Plaque with \$2000 check).
- **Innovation Award**: Electric AutoSeis Source; awarded by CEE, Georgia Tech, May 2, 2003.
- Certificate of Appreciation for Ten Years of Dedicated Service, April 2000, Georgia Tech.
- CEE Nominee of Best Journal Paper to Sigma Xi Society, March 1999.
- ASCE Certificate of Appreciation, GT Student Chapter, April 1999.
- CEE Nominee to Sigma Xi Best Paper Award, 1996.

- Awarded Tenure, Georgia Institute of Technology, May 1996.
- Especially Effective Teacher, Graduating Seniors, GT Civil & Environmental Engineering, January 1994.
- University Nominee for NSF Presidential Faculty Fellows by Georgia Institute of Technology, November 1991.

Notes: \*DFI = Deep Foundations Institute; \*\*SAIC = Science Applications International Corporation.

### **C. Other Awards**

- Listed in *Marquis Who's Who* ([www.marquiswhoswho.com](http://www.marquiswhoswho.com)): 2011, 2019
- 2006 Award for *Geosystems Team Leader (2000-2006)* given by Geosystems Engrg. Group/CEE (Dec. 2006)
- Certificate of Participation, Cairo University, Egypt, Jan. 27, 2000.
- Advisor, Sigma Xi Undergraduate Research Award to James Schneider, 1997.
- Educational Achievement Award, Univ. of Wisconsin, Madison, 1997.
- Advisor, Barksdale Award to James Schneider, Civil & Env. Engineering, Georgia Tech, May 1997.
- Award of Appreciation, Nanyang Technological University, June 1996.
- Advisor, J-L. Chameau Student Excellence Award to Susan E. Burns, Georgia Inst. of Technology, 1996.
- Educational Achievement Award, Univ. of Wisconsin, Madison, Aug. 1995.
- Advisor, G.F. Sowers Graduate Award to Susan E. Burns, June 1995.
- Advisor, Outstanding Teaching Assistant Award to Susan E. Burns, Civil & Env. Engineering, June 1994.
- Faculty Advisor Award, SAIC\* Best Student Paper, June 1993.
- Elected President, Cornell Geotechnical Society, Sept. 1989.
- Senior Engineer Certificate, Law Engineering, McLean, Virginia, 1983.
- Employee of the Year, Law Engineering, Washington, D.C., 1978.

Notes: \*SAIC = Science Applications International Corporation

## **IV. Research, Scholarship, and Creative Activities**

### **A. Published Books, Book Chapters, and Edited Volumes**

#### **A1. Books**

1. Rix, G.J., Mayne, P.W., Bachus, R.C., et al. (2019), *NCHRP Manual on Subsurface Investigation*, Web Document 258, National Cooperative Highway Research Board, Transportation Research Board, Washington, DC: 373 pages. [www.trb.org](http://www.trb.org)
2. Tuttle, M., Wolf, L., Mayne, P.W., Dyer-Williams, K., and Lafferty, R. (2018). **Guidance Document: Conducting Paleoliquefaction Studies for Earthquake Source Characterization**, Report NUREG/CR-7238, Division of Engineering, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission Washington, DC 20555: 191 pages. Download: <https://www.nrc.gov/docs/ML1801/ML18012A048.pdf>
3. Saftner, D., Mayne, P.W., and Daggar, R. (2018). **Cone Penetration Test Design Guide for State Geotechnical Engineers**, Report No. 2018-32, Minnesota Dept. of Transportation, St. Paul, MN: 225 pages. <http://www.dot.state.mn.us/research/reports/2018/201832.pdf>
4. Mayne, P.W. (2009). *Geoengineering Design Using the Cone Penetration Test*. 155 p. Published by ConeTec Inc., 12140 Vulcan Way, Richmond, BC, V6V 1J8: Website: [www.conetec.com](http://www.conetec.com)
5. Mayne, P.W. (2007), **Synthesis 368 on Cone Penetration Testing: State-of-Practice**, NCHRP Project 20-05; Task 37-14, Transportation Research Board, National Academies Press, Washington, D.C., 118 p. <http://www.trb.org>
6. Mayne, P.W., Christopher, B.R., Berg, R.R., and DeJong, J. (2002). **Subsurface Investigations - Geotechnical Site Characterization**. Publication No. FHWA NHI-01-031, National Highway Institute, Federal Highway Administration, Washington, D.C., 301 p. <http://geosystems.ce.gatech.edu/Faculty/Mayne/papers/index.html>

7. Sabatini, P.J., Bachus, R.C., Mayne, P.W., Schneider, J.A. and Zettler, T.E. (2002). **Manual on Evaluating Soil & Rock Properties**, *Geotechnical Engineering Circular No. 5*, Report No. FHWA-IF-02-034, Federal Highway Administration, Washington, D.C., 385 pages.
8. Kulhawy, F.H. and Mayne, P.W. (1990). **Manual on Estimating Soil Properties for Foundation Design**, Report No. EL-6800, Electric Power Research Institute, Palo Alto, CA: 306 p. Available from: [www.epri.com](http://www.epri.com)

## A2. Refereed Book Chapters

1. Uzielli, M., Mayne, P.W. and Cassidy, M.J. (2013). Probabilistic assessment of design strengths for sands from in-situ testing data. *Modern Geotechnical Design Codes of Practice, Advances in Soil Mechanics & Geotechnical Engineering*, Vol. 1, IOS-Millpress, Amsterdam: 214-227.
2. Mayne, P.W., Christopher, B.S., and DeJong, J. (2008). Chapter 9: "Interpretation of Rock Properties" in *A Short Course in Geology for Civil Engineers*, by Matthews, M., Simons, N. and Menzies, B., Thomas Telford, London: 222-251.
3. Mayne, P.W. (1993). "In-Situ Determination of Clay Stress History by Piezocone Tests," *Predictive Soil Mechanics*, Wroth Memorial Volume, Thomas Telford, London, pp. 361-373.
4. Mayne, P.W. (1988). "Ground Improvement by Dynamic Compaction," *Civil Engineering Practice: Geotechnical and Ocean Engineering*, Chapter 32, Technomic Publishing, N.J.

## A3. Edited Volumes

1. Coutinho, R.Q. and Mayne, P.W., editors (2012). *Geotechnical and Geophysical Site Characterization 4* (Proc. ISC-4, Pernambuco, Brazil), Volumes 1 and 2, CRC Press-Taylor & Francis Group, London: 1912 p.
2. Robertson, P.K. and Mayne, P.W., editors (2010). *Cone Penetration Testing 2010: Proceedings*, 2<sup>nd</sup> Intl. Symposium on Cone Penetration Testing (CPT'10, Huntington Beach, California), Volumes 1, 2, and 3. Omnipress, Madison, WI: 1371 pages: [www.usucger.org](http://www.usucger.org)
3. Burns, S.E., Mayne, P.W., and Santamarina, J.C., editors (2008). *Deformational Characteristics of Geomaterials*, Vols. 1 and 2, (Proc. 4th IS-Atlanta), IOS-Millpress, Amsterdam: 953 p.
4. Huang, A-B. and Mayne, P.W., editors (2008). *Geotechnical & Geophysical Site Characterization 2008*, Vols. 1 and 2 (CD), (Proc. ISC-3, Taipei), Taylor & Francis Group, London, 1555 p.
5. Viana da Fonseca, A. and Mayne, P.W., editors (2004). *Geotechnical & Geophysical Site Characterization*, Volumes 1 and 2, (Proceedings ISC-2, Porto), Millpress, Rotterdam, 1910 pages (hard copy and CD versions).
6. Turner, J. and Mayne, P.W., editors (2004). *GeoSupport 2004: Deep Foundations, Soil Mixing, Ground Improvement* (Geotechnical Special Publication No. 124), ASCE, Reston, VA, 1045 pages (both paper & CD).
7. Mayne, P.W. and Hryciw, R.D., editors (2000). *Innovations and Applications in Geotechnical Site Characterization* (GSP 97), ASCE, Reston, Virginia (Proc., GeoDenver Conference), 248 pages
8. Robertson, P.K. and Mayne, P.W., editors (1998), *Geotechnical Site Characterization*, 2-volumes, (Proc. First International Conference Site Characterization, ISC-1 Atlanta), Balkema Publishers, Rotterdam, 1555 p. [www.usucger.org](http://www.usucger.org)

## A4. Other Parts of Books

1. Tuttle, M.P., Wolf, L.W., Dyer-Williams, K., Mayne, P.W. (2019 draft). *Paleoliquefaction studies in moderate seismicity regions with a history of large events*. NUREG, Office of Nuclear Regulatory Research, Washington DC: 445 pages.

2. Burns, S.E. and Mayne, P.W. (1998). **Penetrometers for Soil Permeability and Chemical Detection**, *Report No. GIT-CEE/GEO-91-1*, submitted to National Science Foundation and U.S. Army Research Office, 144 p. Download from: <http://geosystems.ce.gatech.edu/Faculty/Mayne/papers/>
3. Schneider, J.A. and Mayne, P.W. (1999). Soil Liquefaction Response in Mid-America Evaluated by Seismic Piezocone Tests. MAE Report GT-3A, Georgia Tech Report to Mid-America Earthquake Center, 273 pages.
4. Chen, B.S.-Y. and Mayne, P.W. (1994). **Profiling the Overconsolidation Ratio of Clays by Piezocone Tests**, *Report No. GIT-CEE/GEO-94-1* submitted to National Science Foundation by Georgia Tech, Atlanta, August 1994, 280 p.
5. Mayne, P.W. and Harris, D.E. (1993). **Axial Load-Displacement Response of Drilled Shaft Foundations in Piedmont Residuum**. FHWA Ref. No. 41-30-2175, Georgia Tech Research Corporation Report to Federal Highway Administration, Washington, D.C. 162 p. <http://geosystems.ce.gatech.edu/Faculty/Mayne/papers/>
6. Mayne, P.W., Kulhawy, F.H., and Trautmann, C.H. (1992). **The Behavior of Drilled Shaft Foundations in Clay Under Static and Cyclic Lateral Loading**, *Report No. TR-100221*, Electric Power Research Institute, Palo Alto: 390 p. Available from: [www.epri.com](http://www.epri.com)

## B. Refereed Publications and Submitted Articles

### B1. Published and Accepted Journal Articles

1. Mayne, P.W. (1980). "Cam-Clay Predictions of Undrained Shear Strength", *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 106 (GT11): 1219-1242.
2. Mayne, P.W. and Kulhawy, F.H. (1982). " $K_o$ -OCR Relationships in Soil", *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 108, GT6: 851-872.
3. Mayne, P.W. and Jones J.S. (1983). "Impact Stresses During Dynamic Compaction", *Journal of Geotechnical Engineering*, ASCE, Vol. 109, No. 10: 1342-1346.
4. Mayne, P.W., Jones, J.S., and Dumas, J., (1984). "Ground Response to Dynamic Compaction", *Journal of Geotechnical Engineering*, ASCE, Vol. 110, No. 6: 757-774.
5. Mayne, P.W. (1984). " $K_o$ - $s_u$  Relationships for Overconsolidated Clays", *Journal of Geotechnical Engineering*, ASCE, Vol. 110, No. 10: 1511-1516.
6. Mayne, P.W. (1985). "Stress Anisotropy Effects on Clay Strength", *Journal of Geotechnical Engineering*, ASCE, Vol. 111, No. 3: 356-366.
7. Mayne, P.W. (1985). "A Review of Undrained Strength in Direct Simple Shear", *Soils and Foundations*, Japanese Geotechnical Society, Vol. 25, No. 3, 64-72.
8. Olsen, H.W., Rice, T.L., Mayne, P.W., and Singh, R.D. (1986). "Piston Core Properties and Disturbance Effects", *Journal of Geotechnical Engineering*, ASCE, Vol. 112, No. 6, 608-625.
9. Mayne, P.W. (1987). "Determining Preconsolidation Stress and Penetration Pore Pressures from DMT Contact Pressures", *Geotechnical Testing Journal*, ASTM, Vol. 10, No. 3, 146-150.
10. Mayne, P.W. and Frost, D.D. (1988). "Dilatometer Experience in Washington, DC and Vicinity", *Transportation Research Record 1169*, National Academy Press, Washington, DC, 16-23.
11. Mayne, P.W., (1988). "Determining OCR in Clays from Laboratory Strength", *Journal of Geotechnical Engineering*, ASCE, Vol. 114, No. 1, 76-92.
12. Mayne, P.W. and Mitchell, J.K. (1988). "Profiling OCR in Clays by Field Vane", *Canadian Geotechnical Journal*, Vol. 25, No. 1, 150-157.
13. Mayne, P.W. and Kemper, J.B., Jr. (1988). "Profiling OCR in Stiff Clays by CPT and SPT", *Geotechnical Testing Journal*, ASTM, Vol. 11, No. 2, 139-147.
14. Mayne, P.W. and Holtz, R.D. (1988). "Profiling Stress History from Piezocone Soundings", *Soils and Foundations*, Vol. 28, No. 1, 16-28.
15. Yokel, F.Y. and Mayne, P.W. (1988). "Helical Probe Tests: Initial Calibration", *Geotechnical Testing Journal*, ASTM, Vol. 11, No. 3, 179-186.
16. Mayne, P.W. and Stewart, H.E. (1988). "Pore Pressure Response of  $K_o$ -Consolidated Clays", *Journal of Geotechnical Engineering*, Vol. 114 (11), 1340-1346.
17. Kay, J.N. and Mayne, P.W. (1990). "Some Aspects of Interpretation of the Cone Penetration Test", *Australian Civil Engineering Transactions*, Vol. CE 32, No. 1, The Institution of Engineers, Australia, 22-28.



18. Mayne, P.W., Kulhawy, F.H., and Kay, J.N. (1990). "Observations on the development of porewater stresses during piezocone penetration in clays", *Canadian Geotechnical Journal*, Vol. 27 (4), 418-428.
19. Mayne, P.W. and Kulhawy, F.H. (1990). "Direct and Indirect Measurements of In-Situ  $K_o$  in Clays", *Transportation Research Record 1278*, Washington, D.C., 141-149.
20. Mayne, P.W. (1991). "Determination of OCR in Clays by Piezocone Tests Using Cavity Expansion and Critical State Concepts", *Soils and Foundations*, Vol. 31 (4), 65-76.
21. Mayne, P.W. and Rix, G.J. (1993). " $G_{max}$  -  $q_c$  Relationships for Clays", *ASTM Geotechnical Testing Journal*, Vol. 16 (1), American Society for Testing & Materials: 54-60.
22. Mayne, P.W., Hover, K.C., and Kulhawy, F.H. (1994). "Microconcrete for Construction of Model Drilled Shaft Foundations", *Construction and Building Materials*, Vol. 8, No. 2, Butterworth-Heinemann, Oxford, 127-135.
23. Mayne, P.W. (1995). "Undrained Plastic Modulus from Original Cam-Clay", *ASCE Journal of Geotechnical Engineering* 121 (5), 448-451.
24. Mayne, P.W. and Rix, G.J. (1995). "Correlations Between Shear Wave Velocity and Cone Tip Resistance in Clays", *Soils and Foundations* 35 (2), 107-110.
25. Mayne, P.W., (1995). "Profiling Yield Stress in Clays by In-Situ Tests", *Transportation Research Record 1479*, National Academy Press, Washington, D.C., 43-50.
26. Mayne, P.W., Holtz, R.D., and Tumay, M.T. (1995). "State-of-Practice in Sampling and Testing of Overconsolidated Clays", *Transportation Research Record 1479*, Natl. Academy Press, Wash. D.C., 1-6.
27. Mayne, P.W., Kulhawy, F.H., and Trautmann, C.H. (1995). "Model Testing of Laterally-Loaded Deep Foundations", *ASCE Journal of Geotechnical Engineering* 121 (12), 827-835.
28. Chen, B.S.Y. and Mayne, P.W. (1996). "Statistical Relationships Between Piezocone Measurements and Stress History of Clays", *Canadian Geotechnical Journal* 33 (3), 488-498.
29. Burns, S.E. and Mayne, P.W. (1996). "Small- and High-Strain Measurements of In-Situ Soil Properties Using the Seismic Cone Penetrometer", *Transportation Research Record* No. 1548, National Academy Press, Washington, D.C., 81-88.
30. Martin, G.K. and Mayne, P.W. (1997). "Seismic Flat Dilatometer Tests in Connecticut Valley Varved Clay", *ASTM Geotechnical Testing Journal* 20 (3), 357-361.
31. Mayne, P.W. and Dumas, C. (1997), "Enhanced In-Situ Geotechnical Testing for Bridge Foundations", *Transportation Research Record* 1569, National Academy Press, Washington, D.C., 26-34.
32. Mayne, P.W. and Martin, G.K. (1998). "Commentary on Marchetti Flat Dilatometer Correlations in Soils", *ASTM Geotechnical Testing Journal*, Vol. 21., No. 3, 222-239.
33. Burns, S.E. and Mayne, P.W. (1998). "Monotonic and Dilatory Porewater Pressures During Piezocone Dissipation Tests in Clay", *Canadian Geotechnical Journal*, Vol. 35 (6), 1063-1073.
34. Mayne, P.W. and Poulos, H.G. (1999). "Approximate Displacement Influence Factors for Elastic Shallow Foundation Systems", *ASCE Journal of Geotechnical & Geoenvironmental Engineering*, Vol. 125 (6), 453-460.
35. Burns, S.E. and Mayne, P.W. (1999). "Pore Pressure Dissipation Behavior Surrounding Driven Piles and Cone Penetrometers," *Transportation Research Record*, No. 1675, National Academy Press, Wash, DC., 17-23.
36. Mayne, P.W., Burns, S.E., and Circeo, L.J. (2000). "High Temperature Magmavication of Geomaterials by Non-Transferred Plasma Arc", *ASCE Journal of Geotechnical & Geoenvironmental Engineering*, 126 (5).
37. Celes, J. & Mayne, P.W. 2000. "Remediation and Transformation of Kaolin by Plasma Magmavication". *Transportation Research Record*, No. 1714, National Academy Press, 65-74.
38. Finke, K., Mayne, P.W., and Klopp, R. (2001). "Piezocone Penetration in Atlantic Piedmont Residuum", *ASCE Journal of Geotechnical & Geoenvironmental Engineering* 127 (1), 48-54.
39. Schneider, J.A., Mayne, P.W., and Rix, G.J. (2001). "Geotechnical Site Characterization in the Greater Memphis Area Using Cone Penetration Tests", *Engineering Geology*, Vol. 62 (Nos. 1-3), 169-184.
40. Burns, S.E. and Mayne, P.W. (2002). "Analytical Cavity Expansion-Critical State Model for Piezocone Dissipation in Fine-Grained Soils". *Soils & Foundations*, Vol. 42 (2), 131-137.
41. Burns, S.E. and Mayne, P.W. (2002). "Interpretation of Seismic Piezocone Results for the Evaluation of Hydraulic Conductivity in Clays", *ASTM Geotechnical Testing Journal*, Vol. 25 (3), 333-340.
42. Liao, T., Mayne, P.W., Tuttle, M.P., Schweig, E.S. and Van Arsdale, R.B. (2002). "CPT site characterization for seismic hazards in the New Madrid seismic zone". *Soil Dynamics and Earthquake Engineering* 22, 943-950.
43. Hegazy, Y.A. and Mayne, P.W. (2002). "Objective Site Characterization Using Clustering of Piezocone Data". *ASCE Journal of Geotechnical & Geoenvironmental Engineering* 128 (12), 986-996.
44. Casey, T.J. and Mayne, P.W. (2002). "Development of an electrically-driven automatic downhole seismic source". *Soil Dynamics and Earthquake Engineering* 22, 951-957.

45. Gomberg, J., Waldron, B., Schweig, E., Hwang, H., Webbers, A., VanArsdale, R., Tucker, K., Williams, R., Street, R., Mayne, P.W., Stephenson, W., Odum, J., Cramer, C., Updike, R., Hutson, S. and Bradley, M. (2003). "Lithology and shear-wave velocity in Memphis, Tennessee". *Bulletin of the Seismological Society of America*, Vol. 93 (3), 986-997.
46. Mayne, P.W. (2005). "Unforeseen large settlements of mat foundation on Piedmont residuum", *International Journal of Geoengineering Case Histories: Vol. 1 (1): 5-17*: <http://casehistories.geoengineer.org/contents.html>
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### B3. Other Refereed Material

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#### B.4. Submitted Journal Articles

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#### C. Other Publications and Creative Products

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14. Schneider, J.A., \*Mayne, P.W., Hendren, T.L., and Wise, C.M., (1998). "Initial Development of an Impulse Piezovibrocone for Liquefaction Evaluation", *Physics & Mechanics of Liquefaction*, (Proc. NSF Workshop, Johns Hopkins), A.A. Balkema Rotterdam, 341-354.
15. \*Ortigao, J.A. and Mayne, P.W. (1999). "General Report on Ground Property Characterization," *Pan Am Conference on Soil Mechanics and Geotechnical Engineering*, Vol. 4, Iguassu, Brazil.
16. \*Schneider, J.A., Peuchen, J., Mayne, P.W. and McGillivray, A.V. (2001). Piezocone profiling of residual soils. *Proceedings, Intl. Conf. on In-Situ Measurement of Soil Properties and Case Histories*, Bali, Indonesia, 593-598.
17. Mayne, P.W., Fahey, M., Massarsch, R., Huang, A-B, Ervin, M., and Tohumcu, P. (2002). "General Report on Ground Property Characterization by In-Situ Tests", Session 1.2, *Proceedings*, 15th International Conference on Soil Mechanics and Geotechnical Engineering, Istanbul, Vol. 4, 2703-2704.
18. Liao, T. and \*Mayne, P.W. (2002). "Evaluation of Soil Liquefaction Potential and Dynamic Soil Properties by Seismic Piezocone", *Proceedings*, International Conference on Advances & New Challenges in Earthquake Engineering Research (ANCER 2002), Polytechnic University, Hong Kong, 115-122.
19. Elhakim, A.F. and \*Mayne, P.W. (2003). "Derived stress-strain-strength of clays from seismic cone tests". *Deformation Characteristics of Geomaterials*, Vol. 1, (Proc. Lyon'03, France), Swets & Zeitlinger, Lisse, 81-87.
20. Mayne, P.W. (2003). "Class A footing response prediction from seismic cone tests". *Deformation Characteristics of Geomaterials*, Vol. 1, (Proc. Lyon'03, France), Swets & Zeitlinger, Lisse: 883-888.
21. Mayne, P.W. and Powell, J.J.M. (2011). Report of the TC16 - Ground property characteristics by in-situ tests. *Proceedings of the 17th ICSMGE*, Vol. 5 (Alexandria), Millpress/IOS Press, Amsterdam: 3754-3756.
22. \*Mayne, P.W. (2012). Invited keynote: Geotechnical exploration in the year 2012. *Proceedings 16th Nordic Geotechnical Meeting*, Vol. 1, Danish Geotechnical Society, Copenhagen: 11-27.

### **C1.b. Non-Refereed Conference Proceedings (without presentation)**

1. Mayne, P.W., and Kulhawy, F.H., "Load-Displacement Behavior of Laterally-Loaded Rigid Drilled Shafts in Clay", *Piling and Deep Foundations*, Vol. 1, Balkema, Rotterdam, 1991, 409-413.
2. Benson, C., Briaud, J-L., and Mayne, P.W., "In-Situ Tests and Nondestructive Tests: Research Needs", *Proceedings, U.S.-China Workshop on Cooperative Research in Geotechnical Engineering*, National Science Foundation/USA and National Natural Science Foundation/PRC, Shanghai, Sept. 1992, 99-116.
3. Chen, B.S.Y. and Mayne, P.W., "Piezocone Evaluation of Undrained Shear Strength in Clays", *Proceedings, 11th Southeast Asian Geotechnical Conference*, Singapore, May 1993, 91-98.
4. Mayne, P.W., "CPT-Based Prediction of Footing Response", *Predicted and Measured Behavior of Five Spread Footings on Sand (GSP 41)*, ASCE, New York, 1994, 214-218.
5. Circeo, L.J. and Mayne, P.W., "In-Situ Thermal Stabilization of Road and Airfield Foundation Soils Using Plasma Arc Technology", *Proceedings, 4th Intl. Conf. on Bearing Capacity of Roads and Airfields*, Minneapolis, July 17-21, 1994.
6. Mayne, P.W. and Chen, B.S.Y., "Preliminary Calibration of PCPT-OCR Model for Clays", *Proceedings, 13th International Conf. on Soil Mechanics and Foundation Engineering*, Vol. 1, New Delhi, 1994, 283-286.
7. Vidic, S.D., Beckwith, G.H. and Mayne, P.W., "Profiling Mine Tailings with CPT", *Proceedings, Cone Penetration Testing (CPT'95)*, Vol. 2, Linköping, Sweden, 1995, 607-612.
8. Mayne, P.W. and Kulhawy, F.H., "First-Order Estimate of Yield Stresses in Clays by Cone and Piezocone", *Proceedings, Cone Penetration Testing*, Vol. 2, Linköping, Sweden, 1995, 221-226.

9. Chen, B.S-Y. and Mayne, P.W., "Type 1 and 2 Piezocone Evaluations of OCR in Clays", *Proceedings, Cone Penetration Testing*, Vol. 2, Linköping, Sweden, 1995, 143-148.
10. Mayne, P.W., Mitchell, J.K., Auxt, J.A. and Yilmaz, R., "U.S. National Report on Cone Penetration Testing", *Proceedings, International Symposium on Cone Penetration Testing (CPT'95)*, Vol. 1, Linköping, Sweden, [invited paper for US National Society of ISSMGE], Oct. 1995, 263-276.
11. Burns, S.E. and Mayne, P.W., "Coefficient of Consolidation from Piezocone Dissipation Tests in Overconsolidated Clays", *Proc., Cone Penetration Testing (CPT'95)*, Vol. 2, Linköping, Swedish Geotech Society Report 3:95, 1995, 137-142.
12. Hegazy, Y.A. and Mayne, P.W., "Statistical Correlations Between Vs and CPT Data for Different Soil Types", *Proceedings, Cone Penetration Testing (CPT'95)*, Vol. 2, Linköping, Sweden, 1995, 173-178.
13. Vidic, S.D., Mayne, P.W., Beckwith, G.H. and Burns, S.E., "Seismic CPT Profiling of Mine Tailings Dams", *Proceedings, International Symposium on Seismic and Environmental Aspects of Dams Design*, ISSMFE & ICOLD, Santiago, Oct. 1996.
14. Hegazy, Y.A., Mayne, P.W., and Rouhani, S., "Three Dimensional Geostatistical Evaluation of Cone Data in Piedmont Residual Soils", *Proc, 14<sup>th</sup> Intl. Conf. Soil Mechanics & Foundation Engineering*, Vol. 1 Hamburg, Sept. 1997, A.A. Balkema, Rotterdam, 683-686.
15. Burns, S.E. and Mayne, P.W. (1998). "Integrated Opto-Electronic Chemical Sensor for BTEX Detection in Cone Penetration Testing", *Geotechnical Site Characterization*, Vol. 1, Balkema, Rotterdam, 623-628.
16. Hegazy, Y.A. and Mayne, P.W. (1998). "Delineating Geostatigraphy by Clustering of Piezocone Data", *Geotechnical Site Characterization*, Vol. 2, Balkema, Rotterdam, 1069-1074.
17. Finke, K. and Mayne, P.W., "Piezocone Tests in Residual Silts of the U.S. Atlantic Piedmont", *Proceedings, XI Pan American Conference on Soil Mechanics & Geotechnical Engineering*, Vol. 2, Iguazu, Brazil, August 1999, 329-334.
18. Wise, C.M., Mayne, P.W., and Schneider, J.A. (1999). "Prototype Piezovibrocone for Evaluating Soil Liquefaction Susceptibility", *Earthquake Geotechnical Engineering*, (Proc. 2<sup>nd</sup> ICEGE, Lisbon), Balkema, Rotterdam, 537-542.
19. Mayne, P.W., Schneider, J.A., and Martin, G.K. (1999). "Small- and High-Strain Soil Properties from Seismic Flat Dilatometer Tests", *Proc. Pre-Failure Deformation of Geomaterials*, Vol. 1 (Torino), Balkema, Rotterdam, 419-426.
20. Mayne, P.W. (1999), "Site Characterization Aspects of Piedmont Residual Soils in Eastern U.S.", *Proceedings, 14<sup>th</sup> International Conference in Soil Mechanics and Geotechnical Engineering*, Vol. 4, Hamburg, 2191-2195.
21. Mayne, P.W. and Elhakim, A.F. (2001). In-Situ Plasma Vitrification of Geomaterials. *Proceedings, 15<sup>th</sup> International Conference on Soil Mechanics & Geotechnical Engineering*, Vol. 3, Istanbul, Balkema/Rotterdam, 1807-1810.
22. Liao, T. and Mayne, P.W. (2002). "Evaluation of Dynamic Soil Properties and Soil Liquefaction Potential by Seismic Piezocone", *Proceedings, International Conference on Advances & New Challenges in Earthquake Engineering Research (ICANCEER)*, Session 3A, Shangri-La Hotel, Harbin, China.
23. Mayne, P.W. and Elhakim, A. (2002). "Axial Pile Response Evaluation by Geophysical Piezocone Tests", *Proc. Ninth Intl. Conf. on Piling & Deep Foundations*, DFI, Nice, Presses de l'école Nationale des Ponts et Chaussees: 543-550.

### C1.c. Technical Reports

1. Yokel, F.Y. and Mayne, P.W. (1986). Helical probe tests for shallow soil exploration, Report NBSIR 86-3351, National Bureau of Standards, Wash. D.C., p. 52.
2. Schneider, J., Waggener, K., and Mayne, P.W. (1996). Plasma vitrification experiments on SRS soils, Geosystems Engineering/CEE, Georgia Institute of Technology, Atlanta.
3. Mayne, P.W., Burns, S.E., Hegazy, Y.A., and Kates, G. (1996). Report of seismic piezocone and flat dilatometer tests, Pemiscot & Dunklin Counties, MO. GTRC Report E20-M04 to Missouri DOT, Jefferson City, MO, 85 p.
4. Schneider, J.A. and Mayne, P.W. (1998). Results of seismic piezocone penetration tests performed in Memphis TN and West Memphis AR. Report GT-3 to Mid-America Earthquake Center, GIT/CEE, 55 p.
5. Sabha-Kablawi, H., Mayne, P.W., Celes, J. and McGillivray, A. (1998). Geotechnical Calibration Program for an Optics-Chemical Sensor Module for CPT Detection of BTEX Contaminants, GTRI No. A-5507, CEE

- E20-601: 255 p.
6. Schneider, J.A. and Mayne, P.W. (1998). Results of seismic piezocone and flat plate dilatometer tests in Arkansas, Missouri, and TN. MAE Project GT-3, GTRC E-20-677 to Mid-America Earthquake Center.
  7. Casey, T., McGillivray, A., and Mayne, P.W. (1999). Results of seismic piezocone tests for Marriott expansion, Memphis, TN, GTRC Project E-20-E87 to Dames & Moore, San Francisco, CA, 44 pages.
  8. Liao, T., Zavala, G., Camp, W. and Mayne, P.W. (2000). Results from seismic piezocone tests: Five sites at Mud Island, Memphis, TN. GTRC Project E-20-F47 to U.S. Geological Survey Central District, Memphis.
  9. Liao, T., Zavala, G., McGillivray, and Mayne, P.W. (2001). Seismic Ground Hazard Mapping in New Madrid Seismic Zone by CPT (November 1, 2001). GTRC Report No. E-20-G42 to U.S. Geological Survey, Reston/VA.
  10. Liao, T., Zavala, G., McGillivray, Camp, W. and Mayne, P.W. (2001). Cone Penetration Testing for Seismic Hazards Evaluation in Memphis & Shelby County, TN (28 March, 2001). GTRC No. E-20-F47 to USGS, Reston/VA.
  11. Liao, T., Zavala, G., McGillivray, and Mayne, P.W. (2002). USGS Final Report - Seismic Ground Hazard Mapping in New Madrid Seismic Zone by CPT (March 1, 2002). GTRC No. E-20-G42, Georgia Tech, Atlanta, GA.
  12. Mayne, P.W. (2003). Report on Ground Deformation Modeling. MAE Project No. HD-7a, GTRC No. E-20-H53 to Mid-America Earthquake Center, UIUC, Urbana-Champaign, IL, 25 pages.
  13. Mayne, P.W. (2004). Final Report: Seismic Ground Deformation Modeling, Research Project HD-7 to Mid-America Earthquake Center, GT No. E-20-H53 and E-20-3F8, Geosystems Engineering/CEE, Atlanta, GA, 190 pages.
  14. Mayne, P.W. and Zavala, G. (2003). Cone Penetration Testing for Evaluating Bridge Pile Response. *GTRC Report E20-H71* to Georgia DOT (Project 2021), Forest Park GA: 201 p.
  15. Mayne, P.W., Liao, T., McGillivray, A. and Zavala, G. (2003). In-Situ Testing for Dynamic Compaction: Runway 5 at Atlanta Hartsfield Airport. *GTRC Project E20-855* to Archer Western Contractors, Inc., Atlanta, GA, 75 pages.
  16. Mayne, P.W. (2006). Interim Report on Reconnaissance Visits: *Assessing Highway Underdrain Performance in Georgia*. GTI R6038 Report to Georgia Dept of Transportation, Georgia Transportation Institute, Atlanta: 164 p.
  17. Larrahondo, J.M., Mayne, P.W., McGillivray, A.V., and Atalay, F. (2007). *Final Technical Report: Assessing Highway Underdrain Performance in Georgia*. GTI R6038 Report to Georgia DOT (Project B02-662), Georgia Transportation Institute, Atlanta: CEE Project No. E20-K86: 192 p.
  18. Mayne, P.W. (2012). Geotechnical Review of Laboratory Testing for Port of Anchorage Expansion, *GTRC Report No. E20-T32* submitted to CH2M-Hill Engineering, Bellevue, WA.
  19. Mayne, P.W. (2013). Geotechnical Advisement: LASHIP, Houma, Louisiana; *GTRC Final Report E20-U92* submitted to Terracon Engineering, San Antonio, TX by Georgia Tech Research Corporation.
  20. Tuttle, M.P., Wolf, L.W., Mayne, P.W., Dyer-Williams, K. and Lafferty, R.H. (2013). Guidance Document: Paleoliquefaction Studies (draft), U.S. Nuclear Regulatory Commission, Office of Nuclear Regulatory Research, Washington, DC 20555-0001, prepared by Tuttle & Associates, Maine; 137 p.
  21. Burns, S.E., Mayne, P.W. and Santamarina, J.C. (2013). Comprehensive GeoCharacterization of the Santee Formation and Its Implications for Engineering Behavior. *GTRC Report E20-P57* submitted to Savannah River Site (SRS), Aiken, SC and Defense Nuclear Facilities Safety Board (DNFSB), Washington, DC; prepared by CEE Geosystems Engineering, Georgia Tech Res. Corp., Atlanta, GA: 267 p.
  22. Mayne, P.W. (2014). GeoCharacterization at Power Plant Facilities, *GTRC Final Report E20-V14* to Tennessee Valley Authority, Chattanooga, TN; prepared by Geosystems Engineering/CEE Georgia Tech Research Corp.
  23. Mayne, P.W. (2014). Automated Methodology to Evaluate Undrained Shear Strength from Offshore Piezocone Tests, *GTRC Report E20-U94* submitted to Fugro Engineers, Leidschendam, The Netherlands, prepared by Georgia Tech Research Corp.
  24. Agaiby, S. and Mayne, P.W. (2016). *Geotechnical LRFD (load resistance factored design) Calculations of Settlement and Bearing Capacity of GDOT Shallow Bridge Foundations and Retaining Walls*. Report FHWA-GA-16-1426, Georgia Tech Res. Corp. Project 2006Y13 to Georgia Dept. of Transportation, Forest Park, GA: 160 pages plus spreadsheet appendices. <https://rosap.nrl.bts.gov/view/dot/31389>

## C2. Software

1. Mayne, P.W. and Swanson, P.G. (1980). "DYNFN: Dynamically-Loaded Foundations Under Transient & Steady-State Vibrations", [finite-difference solution], Law Engineering Associates, Washington, D.C.
2. Mayne, P.W. (1998). "INFLUENCE: Approximate Displacement Influence Factors for Shallow Foundation Systems", [numerical integration technique], CEE/Georgia Institute of Technology, Atlanta.
3. Liao, T., Mayne, P.W., and Zavala, G. (2001). "**ShearPro**: Filtering & Data Processing of Shear Wavelets from Downhole Seismic Tests", <http://geosystems.ce.gatech.edu/Faculty/Mayne/papers/index.html>
4. Mayne, P.W., Greig, J., McKilligan, B., and Woeller, D. (2010). Hybrid elastic continuum - limit plasticity evaluation of shallow foundation response. ConeTec CDS Applications, Richmond, BC.
5. Mayne, P.W., Greig, J., McKilligan, B., and Woeller, D. (2010). Randolph model for evaluation of deep foundations under axial compression loading. ConeTec CDS Applications, Richmond, BC.
6. Mayne, P.W., Greig, J., McKilligan, B., and Woeller, D. (2010). CPT evaluation of sand liquefaction and associated ground deformations shallow foundations. ConeTec CDS Applications, Richmond, BC.

### C3. Patents

1. U.S. Patent 7650962 (issued 26 January 2010): GTRC ID No. 2984 entitled "Rotary Actuated Seismic Source and Methods for Continuous Direct-Push Downhole Seismic Testing" was filed September 17, 2004, in the USPTO by M. Quinn, A.V. McGillivray, and P.W. Mayne.  
\*Note: Licenses awarded to (a) Finite Precision, GA (2011); (b) ConeTec, BC (2012); (c) Gregg Drilling, CA (2014).
2. Pending submission: "Wholetone ebony-ivory keyboard/synthesizer for guitarists". December 2007.

### C4. Other Creative Products

#### C4.1. Editorial Service for Workshops

1. Editor, *Proceedings on Lateral & Rotational Stiffness of Highway Bridges*, FHWA Technical Workshop, Crystal City, Virginia, June 1993, 313 p.
2. Editor, *Journal of Geotechnical Engineering, ASCE*: 1993-1994.
3. Associate Editor, *Journal of Geotechnical Engineering, ASCE*: 1992-1993.
4. Managing Editor, "Engineering Properties and Practice in Overconsolidated Clays", *Transportation Research Record 1479*, National Academy Press, Washington, D.C., 1995, 112 p.
5. Co-Editor (with Dr. J. Mulholland), *Proceedings, International Symposium on Environmental Technologies: Plasma Systems & Applications*, Atlanta, October 1995 (two volumes), 701 p.
6. Co-Editor (with A-B. Huang, Y-S. Fang, and S.G. Paikowsky), *Proceedings, U.S.-Taiwan Geotechnical Engineering Collaboration Workshop*, Taipei, 1995, 366 p.
7. Co-Editor (with Christopher Dumas), *Proc. Design for Bridges for Extreme Events*, Federal Highway Administration, Washington, DC: December 1996, 365 p.

#### C4.2. Magazine Articles

1. Mayne, P.W., "Plasma Vitrification of Contaminated Ground and Wastes", *Geotechnical News* 12 (4), December 1994, BiTech Publishers, Vancouver, pp. 41-43.
2. Mayne, P.W., "George F. Sowers (1921-1996)", *Geotechnical News* 12 (4), 1997, BiTech, Vancouver: p. 55.
3. Mayne, P.W. (2001). "Enhanced Geotechnical Site Characterization for Evaluating Drilled Shaft Response". *Foundation Drilling*, Vol. XXI, No.3, March 2001, Intl. Association of Foundation Drilling, Dallas: 30-32.
4. Mayne, P.W. (2008). Evaluating deep foundations by in-situ tests. *GeoStrata* Vol. 11, (Issue 8), Dec. 2008, ASCE GeoInstitute, Reston/Virginia: 18-20.
5. Brown, D.A. and Mayne, P.W. (2012). Piedmont residual soils and rocks. *GeoStrata* Vol. 16 (Issue 6), Dec. 2012, ASCE, Reston, Virginia: 18-22.

#### C4.3 Novel Publications



1. Mayne, P.W. and Beaver, J.R., “High-Temperature Plasma Vittrification of Geomaterials”, *Electronic Journal of Geotechnical Engineering*, October 1996, <http://www.civen.okstate.edu/ejge>.
2. Downloadable Educational Tools: Animated Powerpoint Presentations for Crosshole, Downhole, Refraction, and Seismic Cone Testing: <http://geosystems.ce.gatech.edu>
3. Downloadable Educational Tools: GROW = Geotechnical, Rock, and Water Resources Library: animated geophysics showing field test procedures. <http://www.grow.arizona.edu/>

#### C4.4. Editorials

1. Frost, J.D. and Mayne, P.W., “Professor George F. Sowers (1921-1996)”, *Journal of Geotechnical & Geoenvironmental Engineering*, Vol. 123, No. 6, p. 497.
2. Rix, G.J. and Mayne, P.W. "Professor Richard D. Barksdale (1938-2007)", *Geotechnical News*, BiTech Publishers, B.C.

#### C4.5 Television/Radio

1. Circeo, L.J. and Mayne, P.W. (1995). “Plasma Remediation of In-Situ Materials”, *CNN Futurewatch* with David George, Atlanta, GA.
2. Mayne, P.W. (1996). “Marriott Sinkhole Collapse in Midtown Atlanta”, *Channel 46 News*, Atlanta, GA.
3. Mayne, P.W. (1995). “In-Situ Plasma Vittrification of Soils”, *BBC Interview* by Dr. Chris Wescott, London.

### D. PRESENTATIONS

#### D1. Keynote Addresses and Plenary Lectures

1. *Keynote Lecture*, ASCE Annual Seminar, National Capital Section: “Profiling Overconsolidation Ratio in Clays by Dual-Element Piezocones”, National Institute of Standards and Technology, Gaithersburg, MD., Jan 27, 1994.
2. *Keynote Lecture* (with Prof. R.D. Holtz): “Enhanced In-Situ Testing for Site Characterization” 9<sup>th</sup> Colombian Geotechnical Jubilee, Bogota, Oct. 15-18, 1997, Ingeominas Society, Colombia.
3. *Keynote Lecture*, ASCE Annual Nebraska Section Seminar on *In-Situ Soil Testing & Analysis*, Kiewit Conference Center, Omaha; “Enhanced In-Situ Testing for Geotechnical Explorations,” February 27, 1998.
4. *Keynote Lecture*, 27th Midwest Geotechnical Conference - FHWA Region 5. “In-Situ Geotechnical Testing”; Participating DOTs from MI, IL, IN, OH, MN, NB, IO. Oct. 14 -16, 1998.
5. *Keynote Lecture*, 47th Annual Geotechnical Conference, University of Minnesota, St. Paul, Feb. 19, 1998: “Enhanced In-Situ Testing for Geotechnical Site Characterization.”
6. *Keynote Lecture*, “Hybrid Geotechnical Testing for Site Characterization,” Society of American Military Engineers (SAME), Atlanta, September 9, 1999.
7. *Keynote Lecture*, 1999 Annual ASCE Pittsburgh Geotechnical Engineering Seminar, “Enhanced In-Situ Geotechnical Testing”, November 13.
8. *Keynote Presentation*, “Seismic Piezocone Use for Foundation Analysis in the Piedmont”, ASCE Atlanta Geotechnical Section, Georgia Power, November 16, 1999.
9. *Keynote Lecture*, Fourth International Geotechnical Engineering Conference, “Applications of Seismic Penetration Testing in Geotechnical Explorations,” January 24 - 27, 2000 by Cairo University, Egypt.
10. *Keynote Lecture*. *In-Situ 2001*, International Conference on In-Situ Measurement of Soil Properties & Case Histories in Geotechnical Engineering, Bali, Indonesia.
11. *Invited Discussion Leader*, Session 1.2, Ground Property Characterization by In-Situ Tests, with M. Fahey, M. Ervin, R. Massarsch, A-B. Huang, & P. Tomukcu, 15th ICSMGE, Istanbul, August 28, 2001.
12. *Invited Keynote*: ASCE Geotechnical Section and University of Kentucky, December 9, 2003.
13. *Invited Keynote*: *CIGMAT 2004* (Center for Innovative Geomaterials and Testing), Univ. Houston, March 2004.
14. *Invited Keynote*: ASCE Geotechnical Spring Seminar, North Carolina Section, Charlotte, NC, May 5, 2004.
15. *Invited Keynote*: Integrated Ground Behavior: In-Situ and Laboratory Testing, *Deformation Characteristics of Geomaterials*, (Proc. Lyon 2003), published in Volume 2 (2005).
16. *James K. Mitchell Lecture* (05 June 2006), delivered at GeoShanghai Conference.
17. *Invited Presentation* (with Harry Poulos): *Enhanced Geotechnical Site Characterization*, Civil Engineering Dept., Tongji Univ., Shanghai, June 2006.
18. *Invited Keynote*: Overview on In-Situ Testing. *Characterization & Engineering Properties of Natural Soils*,

- Proceedings Singapore Workshop, Dec. 01, 2006.
19. Invited Lecturer: Cross-Canada Lecture Tour, Fall 2007, Canadian Geotechnical Society. Lectures given in Quebec City, Ottawa, Kingston (2), Toronto, Fredericton, St. John's/NL, Winnipeg, Edmonton (2), Victoria, and Vancouver.
  20. Invited Keynote: Geo-Omaha Annual Geotechnical Seminar, 15 Feb. 2008.
  21. Invited Lecturer: Montreal Section, Canadian Geotechnical Society, June 2008.
  22. Invited Seminar Lecturer: Enhanced In-Situ Testing for Offshore Investigations, Fugro Engineers BV (30 participants), Leidschendam, The Netherlands, July 2008.
  23. Invited Keynote: Piezocone Testing in Maritime Site Investigations, 11<sup>th</sup> Baltic Sea Geotechnical Conference, Gdansk, Poland, 22 Sept. 2008.
  24. *Michael W. O'Neill Lecture*, University of Houston, CIGMAT Conference (350 attendees), 09 March 2009.
  25. Invited Seminar Lecturer: *GeoMO'09* - Annual Seminar, Dept. Civil & Env. Engineering, Missouri Univ. Science & Technology (Rolla), 08 May 2009.
  26. Invited Seminar Lecturer: Enhanced In-Situ Testing for Geotechnical Site Characterization (44 participants), Universite Politecnica de Catalunya, 18-19 June 2009.
  27. Invited Keynote: Applied CPT to Site Investigations. Cone Penetrometer Seminar, Torremirona Club House, Girona, Spain, 21 June 2009, sponsored by iGeotest, Inc.
  28. Invited State-of-the Art (SOA-1) Keynote Presentation: Geomaterial Behavior and Testing: The 17th International Conference on Soil Mechanics and Geotechnical Engineering, Alexandria, Egypt (October 2009).
  29. Invited Opening Keynote: Summary of Regional Reports: 2nd International Symposium on Cone Penetration Testing (CPT'10), Huntington Beach, CA (May 2010).
  30. Invited Speaker: CPT Seminar. Geotechnical Engineers of Central America. Hyatt Hotel, Guatemala City (27 May 2010). Hosted by Swissboring Rodio and Conetec.
  31. Keynote Presentation: Geotechnical Site Characterization in the Year 2011. The 6<sup>th</sup> annual *Geo<sup>3</sup>T<sup>2</sup> Conference* by NCDOT in Raleigh on 05-06 April 2011: <http://www.ncdot.org/doh/preconstruct/highway/geotech/geo3t2/>
  32. Keynote Presentation: Modern Geotechnical Site Characterization. ASCE Geotechnical Engineers, National Capital Section, Washington DC on Wednesday 12 October 2011.
  33. Keynote Presentation: State-of-the-art on Geomaterial Testing & Behavior. Deltares/GeoDelft at TU Delft, Holland on 02 November 2011.
  34. Mayne, P.W. (2012). Invited SOA report: Geotechnical site characterization in the year 2012 and beyond. *State-of-the-Art and Practice*, ASCE GeoCongress (GSP), Oakland, CA: [www.geoinstitute.org](http://www.geoinstitute.org)
  35. Mayne, P.W. (2012). Invited keynote: Enhanced site investigation. *Proceedings, Nordic Geotechnical Conference*, Copenhagen, DK: 09 -12 May: <http://www.ngm2012.dk/>
  36. Mayne, P.W. (2012). Invited keynote: Quandry in geomaterial characterization: new vs. old. *Shaking the Foundations of Geotechnical Engineering*, Galway, IE: 04-06 July: [www.sfge2012.org](http://www.sfge2012.org)
  37. Mayne, P.W. (2013). Invited Keynote Lecture: Geotechnical site characterization and GeoEducation in 2013 and Beyond. 61<sup>st</sup> Annual Meeting of the Minnesota Geotechnical Society, St. Paul, MN (Feb. 2013)
  38. Mayne, P.W. (2013). Invited Keynote Lecture: Geocharacterization and GeoEducation in 2013 and Beyond. Queensland Section of the Australian Geomechanics Society, Brisbane (12 June 2013)
  39. Mayne, P.W. (2013). Invited Keynote Lecture: Geocharacterization and GeoEducation in 2013 and Beyond. New South Wales Section of the Australian Geomechanics Society, Brisbane (17 June 2013)
  40. Mayne, P.W. (2013). Invited Keynote Lecture: Geotechnical In-Situ Testing and GeoEducation in 2013 and Beyond. GeoTexas 2013: Raising the Bar in Geotechnical Engineering, Dallas, 13 Sept 2013.
  41. Mayne, P.W. (2013). Invited Keynote: Case Studies of Foundation Performance in the Piedmont Using In-Situ Tests. GeoVirginia 2013, Williamsburg, VA (Oct 1, 2013)
  42. Mayne, P.W. (2013). Invited Keynote: Geotechnical Site Exploration in 2014 and Beyond. 45<sup>th</sup> Annual Geotechnical Conference, Univ. of Kansas, Lawrence, KS (14 November 2013).
  43. Mayne, P.W., Invited Keynote: Interpretation of Geoparameters from Cone Penetration Tests. 44th Midwest Geotechnical Transportation Conference, Sheraton Hotel, Indianapolis (25 Sept 2015).
  43. Mayne, P.W. (2015). Invited Keynote Lecture on "In-Situ Geotechnical Testing", Civil Engineering Dept. Kansas State University, Manhattan, KS (13 Oct 2015).
  44. Mayne, P.W. (2016). Invited Keynote Talk on "Geocharacterization by SCPTu for Foundations", Oklahoma Geo-Institute Chapter, Hard Rock Café & Casino, Catoosa, OK.
  45. Invited Lecture: *Learnt Lessons in In-Situ Geotechnical Testing*, University of Melbourne, Australia (11 Sept 2016).
  46. Invited Lecture: *Versatile Geocharacterization by Seismic Piezocone Testing*, ASCE Los Angeles Geo-Institute

Section (18 April 2018), Queen Mary, Long Beach, CA.

## D2. Invited Presentations

1. *Invited Presentation*, “Dynamic Compaction for Site Improvement of Soil”, ASCE Louisville Chapter, Kentucky, 1984.
2. *Invited Presentation*, “Ground Improvement of Soil by Dynamic Compaction”, ASCE Tampa, Florida, 1984.
3. *Invited Presentation*, “CPT Determination of OCR and Lateral Stresses in Clean Quartz Sands”, *Proceedings, Cone Penetration Testing (CPT'95)*, Vol. 2, Linköping, Sweden, Oct. 1995, 215-220.
4. *Invited Presentation*, Southeast Asian Seminar Series, “Response of Drilled Shafts in Residual Soil and Partially-Weathered Rock”, Nanyang Technological University, Singapore, June 17, 1996.
5. *Invited Presentation*, Session 1.2 on Ground Characterization by In-Situ Tests, 14<sup>th</sup> ICSMFE, Hamburg, Sept. 12, 1997; “Site Characterization Aspects of Piedmont Residual Soils.”
6. *Invited Presentation*, Department of Civil Engineering, University of Alberta, Edmonton; Sept. 30, 1997: “High-Temperature Plasma Vitrification of Geomaterials.”
7. *Invited Presentation*, Cone Tec Seminar on Site Characterization for Environmental & Geotechnical Engineering, Delta Vancouver Airport Hotel, B.C., Oct. 1, 1997; “Plasma Magmavication of Geomaterials”.
8. *Invited Presentation*, 1997 Southeast Transportation Geotechnical Engineering Conference, by FHWA and DOTs from TN, GA, FL, KY, AL, SC, and NC, Chattanooga, Oct. 23, 1997: “Enhanced In-Situ Geotechnical Testing.”
9. *Invited Presentation*, Sociedad Colombiana de Ingenieros, “High-Temperature Plasma Vitrification of Soils”, 9<sup>th</sup> Colombian Geotechnical Jubilee, Bogota, Oct. 1997.
10. *Invited Presentation*, “Seismic Piezocone Testing for Geotechnical Foundation Analysis”, Center for Geotechnical Practice and Research, Virginia Tech, Feb. 1999.
11. *Invited Presentation*, “Seismic Piezocone Results for the Cooper River Bridge”, Joint ASCE Meeting, North Charleston, South Carolina, March 26, 1999.
12. *Invited Reporter*, “Ground Property Characterization,” XI Pan Am Conference, Iguassu, Brazil, Aug 8-13, 1999.
13. *Invited Lecturer*, “Enhanced Ground Characterization for Geotechnical Investigations”, Engineers Society of San Juan, Puerto Rico, August 6, 2001.
14. *Invited Lecturer on Enhanced In-Situ Testing*, Virginia Tech, Blacksburg, VA, May 31, 2002.
15. *Invited Lecture*, Padova University, Italy, June 14, 2002.
16. Field Demonstration of Cone Penetration Testing, Fugro Geosciences at CERI, Memphis, Sept. 2002.
17. *Invited Lecturer*, Characterization of Natural Soils Workshop, Singapore, Dec. 1-5, 2002.
18. *Invited Lecturer*, “Enhanced Ground Characterization for Liquefaction Assessment”, MoDOT Seminar in Cape Girardeau, MO, sponsored by MAE, March 3-5, 2003.
19. *Invited Lecturer*, “Evaluation of Liquefaction Potential by In-Situ Testing”, Geotechnical Earthquake Engineering Seminar, San Juan, P.R., May 21-22, 2003, for Mid-America Earthquake Center.
20. *Invited Reporter* – Session 5: In-situ tests applied to practical problems. 2<sup>nd</sup> Intl. Site Characterization Conference, Porto, Sept. 21, 2004.
21. *Invited Lecturer*: Characterization of Piedmont Residuum, Mini-Workshop, GeoQuebec October 24, 2004
22. *Invited Presentation*: Enhanced In-Situ Testing by Seismic Cone, Univ. of Tennessee, Knoxville, Oct. 2005.
22. *Invited Panelist*: Session 1c: In-Situ Testing. (16<sup>th</sup> ICSMGE), Osaka, Sept. 12-15, 2005.
23. *Invited Lecture*: Interrelationships of CPTU and DMT in Clays. Presented at the 2<sup>nd</sup> International Conference on Flat Dilatometer Test, Hyatt Regency, Arlington VA, May 4, 2006.
24. *Invited Lecture*: Interpretation of In-Situ Testing at New Orleans Levees, US Army Corps of Engineers, New Orleans District, 19 December 2006.
25. *Invited Presentation*: Overview on In-Situ Test Calibration. Atlanta ASCE Geotechnical Section, Georgia Power Building, April 17, 2007.
26. *Invited Lecture*: DFI-PCDA Seminar on Driven Piles, Baltimore, Maryland (March 12, 2010)
27. Invited Speaker: GeoCharacterization by Seismic Piezocone Tests, Sheraton Hotel, Norfolk VA (16 April 2010)
28. Invited Speaker: Site Characterization using the Cone Penetrometer, Radisson Hotel, Boston, MA (23 April 2010).
29. Invited Speaker: Geotechnical Exploration using the Seismic Cone, Marriott Residence Hotel, NYC (26 April 2010).
30. Invited Speaker: Geocharacterization in the Year 2012 and Beyond. ASCE Metropolitan Section, Engineers Club, New York, NY (15 October 2012).
31. Invited Speaker: Geocharacterization using the seismic piezocone. Norwegian Univ. Science & Technology,

Trondheim (26 Sept 2014).

32. Invited Lecture: Geocharacterization using the seismic piezocone in soils. Univ. Pisa (09 Oct. 2014).
33. Invited Lecture: Geotechnical Earthquake Engineering, NRC Training Workshop on Paleoliquefaction, Blytheville, AR (9-13 Nov. 2015).
34. Invited Presentation: TC 102 Session on In-Situ Testing: Cavity expansion nexus for CPTu-DMT in soft clays, ICSMGE, Seoul (20 Sept. 2017)
35. Invited Presentation: NTH method for DMTs in soft-firm clays - Special session on Marchetti flat dilatometer, ICSMGE, Seoul (20 Sept. 2017)
36. Invited Presentation: TC 214 Session on Soft Soils: Yield stress from CPTu in soft clays, ICSMGE, Seoul 21 (Sept. 2017)
37. Presentation - Training Session to 85 participants - ConeTec Group, Richmond, BC (03 Jan 2018).
38. Presentation - Soil liquefaction screening by CPT yield stress profiles - Session E01 - Geotechnical Earthquake Engineering & Soil Dynamics V - Univ. Austin-Texas (11 June 2018)
39. Presentation - Modified SCE-CSSM solution for sensitive Haney clay, British Columbia, GeoEdmonton (24 Sept. 2018).
40. Invited Presentations for the ASCE G-I Cross-USA series:

No.	DATE	LOCATION
1	9/7/2018	University of Michigan, Ann Arbor, MI
2	9/24/2018	GeoEdmonton, Alberta
3	10/10/2018	ASCE Oregon Geotechnical Group, Portland, OR
4	10/11/2018	Oregon State University, Corvallis, OR
5	10/26/2018	University of Illinois Urbana-Champaign
6	11/2/2018	St. Louis Chapter, Missouri
7	11/9/2018	North Carolina State University, Raleigh, NC
8	11/30/2018	Texas A&M University (Spencer Buchanan Lecture)
9	12/6/2018	Central Ohio G-I Chapter, Ohio
10	1/15/2019	G-I Arizona Chapter, Phoenix, AZ (Scottsdale)
11	1/16/2019	Arizona State Univ., Tempe
12	1/29/2019	Florida West Coast Branch Geo-Institute Chapter, Tampa, FL
13	1/31/2019	East Central Florida Geo-Institute Chapter, Orlando, FL
14	2/8/2019	Geo-Omaha 2019 - 36th Nebraska Conference
15	2/14/2019	GeoSyntec Consultants, Kennesaw GA
16	2/20/2019	University of Arkansas, Fayetteville, AR
17	3/5/2019	GeoCarolinas, Charlotte, NC
18	3/14/2019	Pittsburgh Chapter, PA (cancelled)
19	3/20/2019	RPI, Troy, New York
20	4/5/2019	Kansas City annual conference
21	4/9/2019	Case Western Institute
22	4/9/2019	Cleveland ASCE G-I Section
23	4/16/2019	Univ California San Diego (UCSD), San Diego, CA
24	4/24/2019	Utah G-I Section, Salt Lake City, UT
25	4/30/2019	Central New York G-I/Syracuse Univ, NY

41. Presentation - Effective friction angle of clays from piezocone tests, ASCE Connecticut Section, Annual Geotechnical Conference, Meriden, CT (20 Sept 2019).
42. Presentation - CPT evaluation of yield stress in soils, ASCE Connecticut Section, Annual Geotechnical Conference, Meriden, CT (20 Sept 2019).
43. Presentation, CPT evaluation of flow liquefaction potential using yield stress ratio, Tailings & Mine Wastes



Conference 2019, Hyatt Regency, Vancouver, BC.

### D3. Seminar Presentations (without proceedings)

1. Subsurface Improvement by Impact Densification, ASCE, Las Vegas, April 1982.
2. Ground Improvement by Dynamic Compaction, ASCE National Capital Section, Washington, D.C., 1983.
3. Laboratory Testing of Soil, George Washington University, Dept. of Civil Engineering, Washington, D.C., 1983.
4. Direct and Indirect Methods of Determining In-Situ  $K_0$  in Clays, IS - Penetration Testing, Orlando, March 1988.
5. Estimating Preconsolidation Stress of Clays from In-Situ Tests, IS-Penetration Testing, Orlando, March 1988.
6. Penetration Pore Pressures from Piezocone & Dilatometer, Intl. Symp. on Penetration Testing, Orlando, 1988.
7. Behavior of Laterally-Loaded Drilled Shafts, Georgia Institute of Technology, January 1990.
8. Lateral and Moment Behavior of Shafts in Clay, Johns Hopkins University, Baltimore, February 1990.
9. Laterally-Loaded Drilled Shafts in Clay, Northeastern University, Boston, February 1990.
10. Response of Shafts Under Lateral and Moment Loading in Clay, University of Texas, San Antonio, March 1990.
11. Experiments on Lateral-Moment Loading of Drilled Shafts, Univ. of Illinois, Urbana-Champaign, April 1990.
12. Drilled Shafts Under Lateral and Moment Loading, Purdue University, West Lafayette, IN, May 1991.
13. ASCE Student Chapter Seminar, Ground Modification by Dynamic Compaction, Georgia Inst. Tech, April 1991.
14. NSF Workshop on Ground Modification, Subcomm. on Dynamic Compaction, Univ. Washington, August 1991.
15. Determining OCR by In-Situ Tests; Univ. of Hong Kong, Civil & Structural Engineering, August 1992.
16. In-Situ Testing Techniques in the U.S., NSF Workshop, Tongji University, Shanghai, China, Sept. 1992.
17. Behavior of Drilled Shaft Foundations in Piedmont Residuum, ASCE, Atlanta Geotech Section, Nov. 1992.
18. Site Characterization of Structured/Residual Soils, NSF Workshop, CEMIG, Belo Horizonte, Brazil, Nov. 1992.
19. Cavity Expansion/Critical State Model for Piezocone-OCR in Clays, Golder Assoc., Atlanta, GA, Feb. 1993.
20. Stress History Profiling by Piezocone Tests, Law Engineering Companies, Atlanta, GA, Aug. 1993.
21. Field Characterization by In-Situ Test Methods, Georgia DOT, Forest Park, Georgia, Aug. 1993.
22. Site Characterization for Geotech-Environmental and Liquefaction, Westinghouse/Bechtel, S.C., Oct. 1993.
23. Magma Aggregates, TRB Committee A2H03, Transportation Research Board, Washington, D.C., January 1994.
24. Vittrification of Soils Using Plasma Technology, TRB Comm. A2L02, TRB, Washington, DC, Jan. 1994.
25. Piezocone Evaluation of Overconsolidation Ratio in Clays, University of Texas/Austin, Texas, June 1994.
26. Seismic Piezocone and Vibrocone Penetrometers, CPT Workshop, Army Research Office, Austin, June 1994.
27. Axial Behavior of Two Drilled Shafts in Piedmont Residuum, Schnabel Engrg, Springfield, VA, Feb. 1995.
28. Plasma Vittrification of Geomaterials, SE Transpo-Geotech Engrg Conf., FHWA, Huntsville, AL, Oct. 1995.
29. Baseline Plasma Experiments for Geoenvironmental Restoration, GT Environmental Seminar, April 10, 1995.
30. Characterization of Full-Scale Plasma Magmavication of Soils, NTNU, Trondheim, Nov. 11, 1996.
31. Site Characterization by Seismic Piezocone and Flat Dilatometer, Norwegian Geot. Inst., Oslo, Nov. 18, 1996.
32. Vibrocone for Evaluating Soil Liquefaction, Conf. on Earthquake Engineering, Univ. of Washington, Aug. 1998.
33. Seismic Piezocone Testing in New Madrid Seismic Zone, USGS and CERL, Univ. of Memphis, Nov. 1998.
34. Liquefaction Response of Soils by CPT, Mid-America Earthquake Center, Memphis, Dec 2-4, 1998.
35. Site Characterization by Seismic Piezocone, USGS Workshop with MAEC, St. Louis Univ., Jan. 6-8, 1999.
36. Liquefaction Response of Soils in New Madrid Seismic Zone by CPT, USGS, St. Louis, June 2000.
37. CPTs in the New Madrid Seismic Zone (NMSZ), Mid-America Earthquake Center, New Orleans, Oct. 2000.
38. Testing for Embayment Seismic Excitation Experiments (ESEE) by SCPTUs, MAEC Earthquake Center Meeting, San Juan, Jan 2004.
39. Piezo-dissipation testing at the Canadian Test Site No. 1, Ontario, GT GeoSeminar, 21 Oct. 2016.
40. Geotechnical site exploration using seismic piezocone tests, GT EAS Geophysics Seminar: 22 Nov. 2019.

### D4. Poster Sessions

1. Mayne, P.W. and Holtz, R.D. (1985). "Strength Anisotropy & Stress Rotation Effects in Clays", 11<sup>th</sup> International Conference on Soil Mechanics & Foundation Engineering, Mark Adams Hotel, San Francisco.
2. Mayne, P.W. (1992). "Cavity Expansion/Critical State Model for Piezocone Evaluation of Overconsolidation Ratio", Wroth Memorial Symposium, Oxford University.
3. Chen, B.S.-Y. and Mayne, P.W. (1993). "Effective Stress Model for Piezocones in Clays", International Conference on Case Histories in Geotechnical Engineering, Mark Adams Hotel, St. Louis.

4. Mayne, P.W. and Chen, B.S.-Y. (1995). "Type 1 and 2 Piezocones for Profiling OCR in Clays", International Symposium on Cone Penetration Testing, Linköping, Sweden.
5. Mayne, P.W. and Kulhawy, F.H. (1995). "First Order Estimates of OCR in Clays by In-Situ Tests", International Symposium on Cone Penetration Testing, Linköping, Sweden.
6. Mayne, P.W., Robertson, P.K., and Lunne, T. (April 1998). "Stress History of Clays by Seismic Piezocone Tests", International Conference on Site Characterization, Westin Hotel, Atlanta, Georgia.
7. Mayne, P.W. and Schneider, J.A. (Dec. 1998). "Liquefaction Evaluation of Soils by Piezocone Tests", Annual Workshop, Mid-America Earthquake Center, Peabody Hotel, Memphis, Tennessee.
8. Mayne, P.W. and Schneider, J.A. (Jan. 1999). "Seismic Piezocone Testing in New Madrid Seismic Zone", Mid-America Hazards Mapping Workshop, St. Louis University, Missouri.
9. Schneider, J.A. and Mayne, P.W. (May 1999). "Seismic Hazard Data from Cone Penetration Testing in Memphis", MAE Hazards Program, Fogelman Center, University of Memphis.
10. Mayne, P.W., Liao, T., Zavala, G., McGillivray, A., Camp, W. (May 2002). Cone Penetration Testing and Its Derivatives, The 5<sup>th</sup> Sowers Symposium, GCATT, Atlanta, GA.
11. Elhakim, A. and Mayne, P.W. (May 2002). Nonlinear stress-strain-strength applied to footing response. The 5<sup>th</sup> Sowers Symposium, GCATT, Atlanta, GA.
12. Zavala, G. and Mayne, P.W. (May 2003). Axial pile response determination from seismic penetrometer. The 6<sup>th</sup> George F. Sowers Symposium, GCATT, Atlanta, GA.
13. Camp, W. and Mayne, P.W. (May 2003). Results of O-cell and Statnamic Testing of drilled shaft foundations in the Cooper Marl. 6<sup>th</sup> George F. Sowers Symposium, GCATT, Atlanta, GA.
14. McGillivray, A. and Mayne, P.W. (May 2004). Improvements and developments in shear wave profiling of soils. The 7<sup>th</sup> George F. Sowers Symposium, GCATT, Atlanta, GA.
15. Liao, T. and Mayne, P.W. (May 2004). Explosives-induced liquefaction in the Mississippi Embayment. The 7<sup>th</sup> George F. Sowers Symposium, GCATT, Atlanta, GA.
16. Elhakim, A. and Mayne, P.W. (May 2005). FLAC analysis of footings with nonlinear stress-strain-strength soils. The 8<sup>th</sup> G.F. Sowers Symposium, GCATT, Atlanta, GA.
17. Larrahondo, J.M., Atalay, F. and Mayne, P.W. (May 2006). Geotechnical & geophysical investigations for GDOT highway drain performance. 9<sup>th</sup> Sowers Symposium, GCATT, Atlanta, GA.
18. McGillivray, A. and Mayne, P.W. (May 2007). Continuous shear wave velocity profiling during CPT. 10<sup>th</sup> Sowers Symposium, GT Student Ballroom, Atlanta, GA.
19. Niazi, F. and Mayne, P.W. (May 2008). O-cell load test interpretation via seismic piezocone tests. 11<sup>th</sup> Sowers Symposium, GT Student Ballroom, ASCE Atlanta Geotechnical Section, Georgia Tech, Atlanta, GA.
20. Ku, T. and Mayne, P.W. (May 2009). Directional shear wave velocities for assessing in-situ geostatic stress state. 12<sup>th</sup> Sowers Symposium, GT Student Ballroom, Atlanta, GA.
21. Niazi, F. and Mayne, P.W. (May 2009). Elastic continuum analysis for axial pile response. 12<sup>th</sup> Sowers Symposium, Georgia Institute of Technology, Atlanta, GA.
22. Ku, T., and Mayne, P.W. (May 2010). Shear wave velocity profiles from laboratory and in-situ field measurements in soils. 13<sup>th</sup> Sowers Symposium, Atlanta, GA.
23. Niazi, F. and Mayne, P.W. (May 2010). Evaluation of Euripides driven pile using seismic piezocone tests. 13<sup>th</sup> Sowers Symposium, Atlanta, GA.
24. Niazi, F.S. and Mayne, P.W. (2011). Evaluation of EURIPIDES pile load tests response from SCPTu results, GT Research & Innovation Conference (GTRIC).
25. Ku, T., Mayne, P.W. and Gutierrez, B. (2011). Shear wave velocity-stress relationships in geomaterials. GT Research & Innovation Conference (GTRIC).
26. Niazi, F.S. and Mayne, P.W. (2011). *Geo-Frontiers 2011 Student Poster Competition*: Axial pile foundation response from seismic piezocone tests, ASCE GeoCongress in Dallas, Texas.
27. Niazi, F.S. and Mayne, P.W. (2011). Axial pile foundation response using elastic continuum framework and seismic piezocone data, 14<sup>th</sup> Sowers Symposium, GT Ballroom (May), Atlanta.
28. Ku, T. and Mayne, P.W. (2011). Post-processing of continuous shear wave signals. 14<sup>th</sup> Sowers Symposium, GT Ballroom (May), Atlanta.
29. Niazi, F.W., Mayne, P.W. and Woeller, D.J. (2011): Calibration of hybrid SCE-CSSM analytical model for piezocone penetration in clays. SAIC Student Paper Contest (08 November 2011) at GT Hotel Ballroom.
30. Agaiby, S. and Mayne, P.W. (2014). Relationship between Shear Wave Velocity and Undrained Shear Strength for Normally Consolidated Clays. 17<sup>th</sup> Sowers Symposium, GT Ballroom, Atlanta.
31. Ouyang, Z. and Mayne, P.W. (2014). Methodology for Evaluating the Undrained Shear Strength Profile of Offshore Clays from CPT, 17<sup>th</sup> Sowers Symposium, GT Ballroom, Atlanta.

32. Agaiby, S. and Mayne, P.W. (2015). Load Resistance Factored Design for Shallow Foundations. Transportation Research Expo held on September 22, 2015, GDOT Project RP 14-26.
33. Ouyang, Z. and Mayne, P.W. (2017). Effective stress strength parameters of clays and silts from CPTu. GT Geosystems Poster Session, CEE Mason Building, 10 November 2017.
34. Agaiby, S. and Mayne, P.W. (2017). A unified approach for estimating stress history of different geomaterials using CPT. GT Geosystems Poster Session, CEE Mason Building, 10 November 2017.
35. Mayne, P.W. and Peuchen, J. (2018). Cone bearing factor for undrained strength evaluation by CPTu. Technical Univ. Delft (CPT'18), 22 June 2018.
36. Agaiby, S. and Mayne, P.W. (2018). Rigidity index interpretation from CPTU in clays. Technical Univ. Delft (CPT'18), 22 June 2018.
37. Agaiby, S. and Mayne, P.W. (2018). NTH solution applied to mini-CPTu in centrifuge clay deposits. Technical Univ. Delft (CPT'18), 22 June 2018.
38. Ouyang, Z. and Mayne, P.W. (2018). Effective stress strength parameters of clays from CPTu soundings in centrifuge, chamber, and field tests. GT Geosystems Poster Session, CEE Mason Building, 09 November 2018.
39. Ouyang, Z. and Mayne, P.W. (2019). "Cone Penetration Testing for Transportation Projects" presented at the 7<sup>th</sup> Annual Research Expo, Friday, September 13<sup>th</sup>, from 11 AM to 1 PM, GDOT/GTI.

## D5. Continuing Education

1. Lecturer on "Ground Improvement by Dynamic Compaction", Continuing Education Course on Site Improvement, Civil and Structural Engineering, University of Hong Kong, Aug. 1992.
2. Lecturer on "Drilled Shaft Foundations", Continuing Education Course on Foundation Design at University of Wisconsin, Madison, Feb. 27-30, 1995.
3. Lecturer on "Drilled Piers", Continuing Education Course on Pile and Pier Analysis, Design & Installation, Orlando, by Univ. Of Wisconsin/Madison, Aug. 22-23, 1995.
4. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, February/March 1996.
5. Instructor: "In-Situ Geotechnical Testing", Short Course on Estimation of Design Parameters for Soils & Rocks from Laboratory & In-Situ Tests, Asian Institute of Technology, Bangkok, June 10-14, 1996.
6. Instructor: "Cone Penetration Testing & Interpretation", Short Course on In-Situ Soil Penetration Testing & Applications, Nanyang Tech. University, Centre for Continuing Education, Singapore, June 18, 1996.
7. Lecturer on "Drilled Piers", Cont Ed Course on Foundation Design: University of Wisconsin, Madison, Feb. 5-7, 1997.
8. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, February 1997.
9. Instructor: In-Situ Testing & Site Characterization, 3-day Short Course at University of Hong Kong, Robert Black College, August 1997.
10. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, March 1998.
11. Lecturer at Short Course on "Flat Dilatometer Testing of Soils", International Site Characterization, April 19, 1998, Georgia Tech.
12. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, March 13, 1999.
13. Lecturer on "Geotechnical Site Characterization for Evaluating Liquefaction Potential" MAE Seminar on Liquefaction Evaluation & Geotechnical Data Collection, Collinville, IL, Dec. 2000.
14. Lecturer on "Geotechnical Site Characterization for Evaluating Liquefaction Potential" MAE Seminar on Liquefaction Evaluation & Geotechnical Data Collection, Memphis, TN, March 15, 2001.
15. CPT Workshop for FHWA, MoDOT, IL DOT, MN DOT, and University of MO-Rolla: Cape Girardeau, MO, May 9-10, 2001.
16. Short Course on "Foundations & Ground Improvement Evaluation by In-Situ Tests" with Prof. J.K. Mitchell, ASCE GeoOdyssey Conference, Virginia Polytechnic Institute, Blacksburg, VA, June 10, 2001.
17. Co-Instructor on "Subsurface Investigation" for NHI at Nevada DOT, Carson City, September 25, 2001, with Dr. Barry Christopher.
18. Lecturer on "Geotechnical Site Characterization for Evaluating Liquefaction Potential" MAE Seminar on Liquefaction Evaluation & Geotechnical Data Collection, Charleston, SC, November 18, 2001.
19. SCPTu Workshop for Fugro BV Offshore Engineering, Leidshendam, Holland, Dec. 17-18, 2001.

20. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, Feb. 23, 2001.
21. Co-Instructor on "Subsurface Investigation" for NHI at CALTRANS, Sacramento, March 6-9, 2002, with Dr. Barry Christopher.
22. Lecturer on Soil Mechanics & Foundations, Continuing Education on P.E. Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, March 2002.
23. Lecturer on "Geotechnical Site Investigations for Trenchless Technologies", SESST Conference on MicroTunnelling, Renaissance Hotel, Atlanta, April 17, 2002.
24. Co-Instructor on "Subsurface Investigation" for NHI at Utah DOT, Salt Lake City, April 23-25, 2002, with Dr. Barry Christopher.
25. Lecturer on "Geotechnical Site Characterization for Evaluating Liquefaction Potential" MAE Geotechnical Earthquake Engineering Seminar, Kansas City, MO, September 2002.
26. Co-Instructor on "Subsurface Investigation" for NHI at CALTRANS, Sacramento, February 2-5, 2003, with Dr. Barry Christopher.
27. Lecturer on Soil Mechanics & Foundations, Continuing Education on Professional Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, Feb. 22, 2003.
28. Lecturer on Soil Mechanics & Foundations, Continuing Education on Professional Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, March 6, 2004.
29. Co-Instructor on "Subsurface Investigation" for NHI at Penn DOT, Harrisburg, Pennsylvania, March 9-12, 2004, with Dr. Barry Christopher.
30. Co-Instructor on "Subsurface Investigation" for NHI at Penn DOT, Indiana/Pittsburgh, PA, April 5-8, with Dr. Barry Christopher.
31. Instructor: Enhanced Geotechnical Site Characterization by In-Situ Tests. Dept. of Civil Engineering, University of Sydney, Australia, 9 July 2004.
32. Guest Lecturer: Stiffness of Soils from In-Situ Tests for Foundation Design. Geomechanics and Offshore Group, University of Western Australia, Perth, 15 July 2004.
33. Co-Instructor on "Subsurface Investigation" for NHI at MNDOT, Jan. 18-21, 2005, with Dr. Barry Christopher.
34. Instructor: Enhanced In-Situ Testing for Foundation Systems. GT Global Learning Center, Jan. 28, 2005.
35. Co-Instructor on "Subsurface Investigation" for NHI at Montana DOT, March 21-23, 2005, with Dr. Barry Christopher.
36. Instructor: Enhanced In-Situ Geotechnical Testing for Foundation Systems. Universal Engineering Services (UES), Orlando, Florida, February 2005.
37. Lectures on Soil Mechanics & Foundations, Continuing Education on Professional Exam Refresher Course, Georgia Institute of Technology, Civil & Environmental Engineering, March 2005.
38. Instructor: Enhanced In-Situ Geotechnical Testing for Site Characterization. Fugro-McClelland Geosciences, Houston, Texas, April 2005.
39. Instructor: Enhanced In-Situ Geotechnical Testing for Foundation Systems. North Carolina Dept. of Transportation, Raleigh, NC, 9-10 August 2005.
40. Instructor: Enhanced In-Situ Geotechnical Testing for Foundation Systems. Georgia Tech Global Learning Center, 22-23 November 2005.
41. Instructor: Geotechnical Foundation Systems. GT Global Learning Center, 8 Dec. 2005.
42. Instructor: Enhanced In-Situ Testing for Geotechnical Site Characterization. ASCE Continuing Education Series, GeoCongress 2006 for the Geo-Institute, Hyatt Regency Hotel, Atlanta 25 Feb. 2006.
43. Co-Instructor on "Subsurface Investigation" for NHI at Penn DOT, Indiana, PA, June 2006 with Dr. Barry Christopher.
44. Co-Instructor on "Seismic Geotechnical Site Characterization" with Professor Glenn Rix, Georgia Tech Global Learning Center, Atlanta, GA: May 8, 2006.
45. Instructor: In-Situ Testing for Geotechnical Site Investigations, GeoCim, San Juan, May 11-12, 2006.
46. Instructor: Enhanced Site Characterization by Seismic Piezocone, Vancouver, BC, May 23, 2006.
47. Instructor: Enhanced Site Characterization by Seismic Piezocone, Salt Lake City, Utah, May 25, 2006.
48. Co-Instructor on "Subsurface Investigation" for NHI at Texas DOT, Austin July 2006, with Dr. Barry Christopher.
49. Instructor: In-Situ Tests for Geotechnical Foundation Analyses, GT Global Learning Center, 15-16 Aug. 2006.
50. Instructor: Enhanced Characterization by Seismic Piezocone, Marriott Hotel, New York City, Oct. 16, 2006.
51. Instructor: Site Characterization by Seismic Cone Tests, Sponsored by ConeTec Investigations, Richmond, Virginia, October 18, 2006.



52. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Nov. 2, 2006.
53. Instructor: Cone Penetration Testing, US Army Corps. Engineers, Vicksburg District, MS: 12 Jan. 2007.
54. Instructor: Enhanced In-Situ Testing for Geotechnical Site Investigations & Foundation Analyses, GT Global Learning Center, March 6-7, 2007.
55. Seminar Instructor: Geotechnical Characterization by Seismic Cone Tests, Calgary, Alberta, March 20, 2007.
56. Instructor: Enhanced Site Characterization by Seismic Piezocone, Edmonton, Alberta, March 21, 2007.
57. Seminar Instructor: Geotechnical Site Characterization by Seismic Cone Tests, Fort McMurray, sponsored by ConeTec Investigations, March 23, 2007;
58. Co-Instructor: In-Situ Testing for Geotechnical Studies (with Alec McGillivray), MnDOT, St. Paul, 22-24 May 2007.
59. Instructor: Enhanced In-Situ Testing for Geotechnical Site Investigations & Foundation Analyses, GT Global Learning Center, August 12-13, 2007.
60. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Dec. 14, 2007.
61. Instructor: Enhanced In-Situ Geotechnical Testing, GT Global Learning Center, March 18-19, 2008.
62. Instructor: Geotechnical Interpretation by Seismic Piezocone, Fugro Offshore, The Netherlands (July 2008).
63. Instructor: Enhanced In-Situ Geotechnical Testing, GT Global Learning Center, 13-14 October 2008.
64. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, 15 Dec. 2008.
65. Seminar Instructor: In-Situ Testing for Geotechnical Site Investigation, Toronto Section, Canadian Geotechnical Society (71 participants), Mississauga, Ontario. (19-20 Feb 2009).
66. Instructor: Enhanced In-Situ Testing for Geotechnical Site Characterization & Foundation Analyses, GT Global Learning Center, 30-31 March 2009.
67. Seminar Instructor: Foundation Design by Seismic Piezocone Testing. Annual GeoMO Seminar, Missouri Univ. Science & Technology, Rolla, 08 May 2009.
68. Seminar Instructor: GeoEngineering Design Using the Cone Penetration Test, Edmonton, Alberta (44 participants). Fairmont Hotel, 28 October 2009.
69. Seminar Instructor: GeoEngineering Design Using the Cone Penetration Test, Vancouver, British Columbia (58 participants). Fairmont Hotel, 30 October 2009.
70. Seminar Instructor: GeoEngineering Design Using the Cone Penetration Test, Barr Engineering, Minneapolis, MN (18 participants). 18 November 2009.
71. Seminar Instructor: GeoEngineering Design Using the Cone Penetration Test, Doubletree Hotel Southeast, Denver (14 participants). 20 November 2009.
72. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Tuesday 15 Dec. 2009.
73. Instructor: Enhanced In-Situ Testing for Geotechnical Site Characterization & Foundation Analyses, GT Global Learning Center, 22-23 March 2010.
74. Seminar Instructor: Design & Analysis Using the Cone Penetration Test, Vancouver, British Columbia (66 participants). Fairmont Hotel, Monday 29 November 2010.
75. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Thursday 16 Dec. 2010.
76. Instructor: Foundation Systems Using Situ Tests, MNDOT Offices, St. Paul, MN: 4 February 2011.
77. Instructor: Enhanced In-Situ Testing for Geotechnical Site Characterization & Foundation Analyses, GT Global Learning Center, 21-22 March 2011.
78. Instructor: Site Characterization by Cone Penetrometers, INDOT Center, Indianapolis, 24-25 March 2011.
79. Speaker: Engineering Design Using the Cone Penetration Test, Monaco Hotel, Baltimore MD 23 May 2011
80. Speaker: Engineering Design Using the Cone Penetrometer, Fairmont Hotel, Toronto: 25 May 2011
81. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Friday 09 Dec. 2011.
82. Seminar Lecturer: Geotechnical Site Characterization in 2012, Fairmont Calgary, AB, 16 Jan 2012.
83. Seminar Lecturer: Geotechnical Site Characterization in 2012, Fairmont Edmonton, AB, 17 Jan 2012.
84. Seminar Lecturer: Geotechnical Site Characterization in 2012, Fairmont Hotel, Vancouver, BC, 18 Jan 2012.
85. Instructor: Enhanced In-Situ Testing for Geocharacterization, GT Global Learning Center, 19-20 March 2012.
86. Seminar Lecturer: Geotechnical Site Characterization, Fairmont Hotel, Ottawa, Ontario, 16 April 2012.
87. Seminar Lecturer: Geotechnical Site Characterization, Westin Hotel, Montreal, Quebec, 18 April 2012.
88. Course Lecture: Foundation Design Using In-Situ and Geophysical Tests, Pernambuco, Brazil, 17 Sept 2012.
89. Seminar Lecturer: Geotechnical Site Characterization in 2012, Hilton North, Raleigh, NC: 29 October 2012.
90. Seminar Lecturer: Geotechnical Site Characterization in 2012, Marriott Times Square, NYC: 10 Dec 2012.
91. Seminar Lecturer: Geotechnical Site Characterization, Ritz-Carlton, Tysons Corner, VA: 12 December 2012.
92. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Tuesday 18 Dec. 2012.
93. Instructor, Geocharacterization by In-Situ Testing, Minnesota Geotechnical Society, St. Paul, MN, 21 Feb 2013

94. Instructor, Enhanced In-Situ Testing, Georgia Tech Global Learning Center, March 2013
95. Instructor, Enhanced In-Situ Testing, TVA Chattanooga, Tennessee, May 2013
96. Instructor, Geocharacterization by In-Situ Testing, Univ. New South Wales, Australia, June 2013.
97. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Dec 08-09, 2013.
98. Instructor: CPT Seminar for Geotechnical Analysis and Mine Tailings, Westin, Lima, Peru, 18 Jan 2014.
99. Instructor: Geocharacterization by In-Situ Testing in 2014 and Beyond, Midrand, South Africa, 08 Feb 2014.
100. Instructor: CPT Seminar for Geotechnical Analysis and Design, Fairmont Hotel, Toronto, 23 April 2014.
101. Instructor: Enhanced In-Situ Testing for GeoCharacterization, GT Global Learning Center: 03-04 June 2014.
102. Speaker: Geocharacterization Using the Seismic Piezocone, Univ. Pisa, Italy: 09 October 2014.
103. Instructor: Geotechnical Foundation Systems, Georgia Tech Global Learning Center, Dec 15-16, 2014.
104. Workshop Lecturer: Enhanced In-Situ Testing. Sandman Signature Hotel, Vancouver: 06-08 Jan 2015.
105. Instructor, *Enhanced In-Situ Geotechnical Testing*, GT Global Learning Center, 20-21 April 2015.
106. Instructor, *Geotechnical Foundation Systems*, Georgia Tech Global Learning Center, 14-15 December 2015.
107. Instructor, Seminar on Cone Penetration Testing, Fairmont Hotel, Montreal: 2 March 2016
108. Instructor, Seminar on Cone Penetration Testing, Fairmont Hotel, Toronto: 4 March 2016
109. Instructor, *Enhanced In-Situ Testing*, GT Global Learning Center, Atlanta: 20-21 March 2016.
110. Instructor, *Geotechnical Foundation Systems*, MnDOT Training Center, Oakdale, MN: 23-24 March 2016.
111. Co-Instructor, CPT for mine tailings and geotechnical studies, Shell Oil, Calgary, AB: 7-8 April 2016.
112. Instructor, CPT Seminar for Ground Modification, Pittsburgh, PA - 21 June 2016.
113. Instructor, *Geocharacterization using the Seismic Piezocone*, Marina Inn, San Leandro, CA (28 Oct 2016).
114. Instructor, *Geotechnical Foundation Systems*, Georgia Tech Global Learning Center, 14-15 December 2016.
115. Instructor, Geocharacterization using the CPT, Eventos do Sol, San Jose, Costa Rica: 19 January 2017.
116. Instructor, *Geocharacterization using the Seismic Piezocone*, Grand Sheraton, Chicago, 12 March 2017.
117. Instructor, *Geocharacterization using the Seismic Piezocone*, Marriott Marquis, New York, 19 March 2017.
118. Instructor, *Enhanced In-Situ Testing*, GT Global Learning Center, Atlanta: 11-12 May 2017.
119. Instructor, *Geotechnical Foundation Systems*, GT Global Learning Center: 11-12 December 2017.
120. Instructor, *Geocharacterization using the CPT*, Pacific Gateway Hotel, Richmond BC (03 Jan 2018).
121. Instructor, *Enhanced In-Situ Testing*, GT Global Learning Center, Atlanta: 11-12 March 2018.
122. Instructor, *Geocharacterization using the Cone Penetrometer*, Canadian Geot. Society, Edmonton (Sept 2018)
123. Instructor, *Enhanced In-Situ Testing*, GT Global Learning Center, Atlanta: 14-15 May 2018.
124. Instructor, *Geocharacterization using the Cone Penetrometer*, Columbia Tower, Seattle 21 May 2019.
125. Instructor, *Geocharacterization using the Cone Penetrometer*, Sheraton Grand, Chicago 23 May 2019.
124. Co-Instructor, *Use of the Cone Penetration Test*, Southern Ontario Section (CGS), Toronto, 17 July 2019.
125. Instructor, *Geotechnical Foundation Systems*, GT Global Learning Center: 01-02 October 2019.

## V. EDUCATION

### A. Courses Taught

Semester-Year	Course Number	Course Title	Number of Students
Fall 2019	CEE 6443	Geotech Foundation Systems	14
Spring 2018	CEE 6423	In-Situ Geotechnical Testing	15
Spring 2018	CEE 4406	Applied Geotechnics	13
Fall 2018	CEE 6443	Geotech Foundation Systems	18
Spring 2017	CEE 6423	In-Situ Geotechnical Testing	15
Spring 2017	CEE 4406	Applied Geotechnics	11
Fall 2017	CEE 6443	Geotech Foundation Systems	18

Spring 2016	CEE 6423	In-Situ Geotechnical Testing	11
Fall 2016	CEE 6443	Geotech Foundation Systems	33
Spring 2015	CEE 4406	Applied Geotechnics	12
Spring 2015	CEE 6423	In-Situ Geotechnical Testing	15
Fall 2015	CEE 6443	Geotech Foundation Systems	21
Spring 2014	CEE4406	Applied Geotechnics	13
Fall 2014	CEE6443	Geotech Foundation Systems	35
Spring 2014	CEE6423	In-Situ Geotechnical Testing	17

## B. Individual Student Guidance

### PhD Students

#### B.1a. Graduated PhD Students

Barry Shi-Yo Chen, PhD, P.E.

Starting Term: September 1990; Completion: August 1994

PhD Dissertation: "Profiling Stress History of Clays Using Dual Element Piezocones"

Funded by NSF CAREER Grant and FAA Contract

Current Position: Senior Principal, Hart-Crowser, Seattle.

Susan E. Burns, PhD, P.E., F. ASCE

Starting Term: September 1992; Completion: August 1997

PhD Dissertation: "Development of Penetrometers for Permeability & Detecting Contaminants"

Funded by NSF, ERDA/DOE, and ARO Contracts

Positions: Assoc. Prof., Univ. of Virginia (1997- 2004);

Professor, Georgia Tech (Jan. 2005 - present)

Associate Chair, CEE Undergraduate Studies, Georgia Tech (2013-present)

NSF CAREER Award (2000)

ASCE Casagrande Award

ASCE Friedman Award 2000

Georgia Power Distinguished Professor, Georgia Tech (2013 - present)

Associate Chair CEE: Undergraduate Studies (2013-2018)

Associate Chair CEE: Finance (2018 - present)

Yasser Ali Hegazy, PhD, P.E.

Starting Quarter: September 1993; Completion: June 1998

PhD Dissertation: "Delineating Geostratigraphy by Cluster Analysis of Piezocone Data"

Funded by NSF Award (NYI) and ERDA Contract

Position: Project Engineer, D'Appolonia Consulting Engrs, Pittsburgh, PA (1998-2004)

Associate Professor, King Abdulaziz University, Saudi Arabia (2004 – 2008)

Associate Professor, Cairo University, Egypt (2008-present)

Project Engineer, D'Appolonia Consulting Engrs, Cairo, Egypt (2009-present)

Amr Elhakim, PhD

Starting Quarter: Fall 1998; Graduation: 5 August 2005

PhD Topic: "Load-Displacement-Capacity Response of Footings Related to Small-Strain Stiffness"

Funded by ARO, ERDA, NSF, MAE, and ITRE

Positions: Research Engineer, Tensar Corporation, Atlanta, GA  
 Project Engineer, DarGroup, Cairo, Egypt (2008 - present)  
 Faculty - Cairo University, Soil Mechanics Laboratory, Egypt (2007 - present)  
 Senior Engineer, DAR Group, Cairo, Egypt (2007-present)

Tianfei Liao, PhD

Starting Semester: August 1999; Graduation: 5 August 2005

PhD Topic: "Automated Cone Penetration Test Data Processing for Seismic Ground Hazards"

Funded by USGS, MAE, and NSF

Current Position: Project Engineer, Bechtel Power Corporation, Frederick, MD  
 Senior Geotechnical Engineer, Bechtel, Reston, VA (2012-present).

Alec McGillivray, PhD

Starting Semester: December 1999; Defense: November 22, 2007; Graduation: Dec. 14, 2007

PhD Topic: "Enhanced Integration of Shear Wave Velocity Profiling in SCPTu"

Funded by NSF, MAE, ARO, GDOT, and USGS

Positions: Research Engineer with Berkel & Company, Pile Foundation Systems, Tampa FL.  
 Geotechnical Engineer, Ardaman & Associates, Tampa, FL  
 Project Engineering, Nicholson Construction Company, Tampa, FL  
 Chief Geotechnical Engineer, Precast Piling Tech. Inc., Tampa FL (2017-present)

Taeseo Ku, PhD

Started: January 2009; Completion: Dec. 2012

PhD Topic: "Geostatic Stress State Evaluation by Directional Shear Wave Velocities", with  
 Application towards GeoCharacterization at Aiken, South Carolina

Funded by US Dept. of Energy at Savannah River Site

Currently: Assistant Professor, National University Singapore (2013-present)

Fawad S. Niazi, PhD

Started: August 2008; Defended: 19 December 2013

PhD Topic: Axial response of deep foundations by seismic piezocone tests"

Funded by ConeTec Investigations:

Also served as GRA for In-Situ Research Group; GTA for Materials Course at GT CEE; COE

Positions: Post-doc Research Engineer, GT In-Situ Research Group  
 Instructor: Statics - College of Engineering, Georgia Tech  
 Faculty: Purdue University, Fort Wayne, Indiana (June 2015 - present)

Shehab Wissa Agaiby

Started: August 2013; Completion: Dec. 2017; Graduated May 2018

PhD Topic: Advancements in the interpretation of seismic piezocone tests in clays

Funded by Design House Engineering Consultancy, NYC and Funded by ConeTec Investigations

Funded by GDOT LRFD Research Project RP 14-26 (2015-2016)

Current Position: Faculty member at Cairo University, Egypt (Jan. 2018 - present)  
 Geotechnical Engineer, DAR Group, Cairo Egypt (Jan. 2018-present)

Zhongkun Ouyang

Started: August 2014; Expected Completion: May 2019

PhD Topic: Interpretation of effective stress friction angle of clays from CPTU and DMT

Funding provided by ConeTec Group, Richmond, BC and Design House Consultancy, New York

Positions: GTA, GRA, and Instructor, GT CEE  
 Instructor, geotechnical program, Oregon State Univ. (Sept 2019-present).

### B.1.b. PhDs in Process

none



### **B1.c. Long Term PhD Candidates\***

\*Note: all have passed comprehensive examination and completed their coursework!

Aaron Geiger

Started: August 2011; Planned Completion: Dec. 2014; Funded by ConeTec Group

PhD Topic: Toward improved cone penetration interpretation in geotechnical site investigations

Employment: Golder Associates, Tucker, GA 2012-2015; ECS Ltd 2016-present

Nick Meloy

Started: August 2010; Planned Completion: Dec. 2014

PhD Topic: Practical applications of in-situ cone penetrometer tests in soils.

Current position: Geotechnical project engineer, ECS Limited, Fairfax, Virginia

Billy Camp

Starting Semester: August 1999; Planned Completion: December 2012

Funded by NSF, MAE, and ADSC

PhD Topic: "Geotechnical Characterization and Engineering Properties of Cooper Marl"

Positions: Senior Principal Engineer, S&ME, Charleston, SC (2012-present).

President, ASCE Geo-Institute (2013)

Mark K. Quinn

Starting Quarter: Fall 1997; Planned Completion: December 2007

PhD Topic: "Flow Cone Piezocone for Assessing Soil Permeability of Silty and Sandy Soils"

Partially Funded by NSF

Current Position: Administrator, US Treasury Department, Atlanta, GA

Hoda Sabha Kablawi

Starting Quarter: Spring 1996

Completion: Left program in 2003 because of deteriorated health (fibromyalgia)

PhD Topic: "Geoenvironmental Subsurface Fluid Sampling by Direct-Push Membrane Probes"

Partially Funded by ARO, NSF, and co-sponsored by Geoprobe Systems.

Guillermo Zavala

Starting Term: June 2001; Planned Completion: January 2012

Thesis: "Evaluating Axial Pile Response from Seismic Cone Penetrometer Results"

Funded by USGS, Georgia DOT, MAE, and NSF

Positions: Project Engineer with Ardaman Associates, Tampa, FL

Faculty - Civil Engineering at Catholic University, Lima, Peru (2009-present)

Brian Lawrence (co-advised with Dr. G.J. Rix)

Starting Term: January 2004; Expected Completion: December 2007

Thesis: "Verification of the Site Amplification Paradigm in New Madrid Seismic Zone"

Funded by NSF Mid-America Earthquake Center (MAEC).

Currently: Project Engineer with Federal Highway Administration, Maine

### **B.1.d. Special PhDs - Graduated**

Gehan Abdel-Rahman

Visiting Scholar (Nov. 1993-Jan. 1995): Cooperative Research between GT & Cairo University

PhD Thesis: "Time-Dependent Behavior of Laterally-Loaded Piles in Clay," Cairo Univ., Egypt

Positions: Faculty, Soil Mechanics Laboratory, Cairo University (1995-2007)

Head, Geotechnical Engineering Dept., Fayoum University, Cairo, Egypt (2007-present)

## **B.2. Masters Students**

### **B.2.a. Graduated MS Students**

Jong-Shin Fang

Completion: December 1991

Topic: Analysis of Laterally-Loaded Piers for FAA Low-Level Warning Alert System Tower Systems.

Funding: Federal Aviation Administration (FAA)

Stewart R. Garcia

Completion: December 1991

Topic: Interrelationships of Flat Blade Dilatometer  $p_o$  and  $p_1$  Measurements in Soils.

Daniel G. Blaydes

Completion: January 1992

Topic: Analysis of Laterally-Loaded Behavior of Socketed Drilled Shafts in Rock.

Alberto Bechara

Completion: January 1993

Topic: Feasibility of Plasma Vitrification of Soils

Funding: NSF SGER and GTRI

Joseph Kowalski

Completion: April 1994

Topic: Geosynthetics Direct Shear Box Testing Program for Landfill Design

Funding: GeoSyntec Corporation, Atlanta

Scott Thomson

Completion: March 1994

Topic: Investigation of Structural Properties of Plastic Fiber Mesh-Reinforced Concrete

Funding: Tensar Corporation, Atlanta

Luis Ruiz

Completion: August 1994

Topic: Interpreted Densities from Cone Penetration Testing for Kissimmee Fill, Florida

Funding: USACE Corps, Jacksonville, FL

J. Reid Horne

Completion: August 1995

Topic: Pre-Bored Texam Pressuremeter Operation and Testing in Piedmont Residuum.

A.V. McGillivray

Completion: Dec. 1999

Topic: Porewater Pressures in Piedmont Saprolite at Opelika, Alabama.

Funding: NSF

G. Zavala

Completion: Aug 2000

Topic: Cross Correlation Method for Post-Processing of Downhole Shear Wave Results

Funding: USGS and Mid-America Earthquake Engineering

Positions: Ardaman Associates, Tampa, FL (2007-2009)

Associate Professor, Catholic University, Lima, Peru (Feb 2000-present).

Douglas Neil Brown

Starting Quarter: Sept. 1990; Completion: June 1993. Funded by NSF/NYI

Thesis: "Evaluation of Piezocone Porewater Pressure Response in Clay Soils"

Current Position: Senior Sales Engineer, Tensar Corporation, Atlanta

Dean E. Harris

Starting Quarter: Sept. 1991; Completion: March 1993. Funded by ADSC and FHWA

Thesis: "Axial Load Behavior of Drilled Shaft Foundations in Residuals of the Piedmont Geology"

Current Position: Project Engineer for CH<sub>2</sub>M-Hill, Boise, Idaho.

Randall Pool

Starting Quarter: Sept. 1992; Completion: June 1994

Thesis: "Rational Interpretation of Flat Dilatometer Tests in Clay by Cavity Expansion-Critical State"

Current Position: Project Engineer at Federal Energy Regulatory Commission, Atlanta.

Jamie Beaver

Started: January 1995; Completion: December 1995. Funded by FHWA

Thesis: "Plasma Vitrification of Geomaterials"

Current Position: Project Geotechnical Engineer for Hart-Crowser, Boston.

Gina Kates (Martin)

Starting Quarter: June 1995; Completion: December 1996. Funded by ERDA and ITRE

Thesis: "Development of a Seismic Flat Dilatometer for Small- and High-Strain Soil Properties"

Notes: Awarded 1995 GT President's Scholarship. Awarded 1995 ADSC Scholarship Award.

Current Position: Sales Marketing for Nortel, Atlanta, GA. Funded by NSF/NYI

Kate Waggener (Mayer)

Starting Quarter: Sept. 1995; Completion: March 1997. Funded by ERDA and DOE/SRS

Thesis: "Chamber Tests Simulating In-Situ Plasma Vitrification for Geoenvironmental Concerns"

Current Position: Engineering Manager, Engineering & Fire Investigations, Lexington, KY.

Craig M. Wise

Starting Quarter: Sept. 1996; Completion: June 1998. Funded by USGS and NSF

Thesis: "Piezovibrocone Penetrometer for In-Situ Evaluation of Soil Liquefaction Susceptibility"

Position: Project Geotechnical Engineer for Black & Veatch, North Canton, Ohio

Current: Faculty, Construction Technology, Univ. of Akron

Kimberly (Finke) Morrison

Starting Quarter: Sept. 1996; Completion: June 1998. Funded by NSF/NYI

Thesis: "Piezocone Penetration Tests in Piedmont Residual Soils"

Positions: Project Engineer -URS Corp. Denver (1998-2000)

Geot Engineer, Golder Assoc. Denver (2000-2011)

Senior Project Manager, AMEC, Denver CO (2011-2013)

President, Morrison Geotechnical Solutions (2013 to present)

Joseph (Celes) Taylor

Starting Term, Jan. 1998; Completion: Aug. 1999. Funded by ERDA and DSWA

Thesis: "Characterization of Vitrified Kaolin Produced by Nontransferred Plasma Arc"

Current Position: Project Engineer, San Diego, CA

James A. Schneider

Starting Quarter: Sept. 1997; Completion: Aug. 1999. Funded by NSF, MAE, and USGS

Thesis: "Liquefaction Response of Soils in Mid-America by Seismic Piezocone Tests"

Notes: CEE Barksdale Award, May 1997. Sigma Xi Undergraduate Research Award, June 1997.

Positions: GeoSyntec Consultants (1999-2001); Fugro West, (2001-2003),

PhD (UWA 2007) - Centre for Offshore Structures, Perth, Australia

Faculty, CEE, Univ. of Wisconsin-Madison (2007-2011).

US Naval Port Hueneme, CA (2011 - 2016).

US Army Corps of Engineers, St. Paul, MN (2016-present)

Thomas Casey

Starting Term: Sept. 1998; Completion: Jan. 2000. Funded by MAE and NSF

Thesis: "Development of an Automatic Electrical Impulse Source for Seismic Cone Tests"

Position: Project Engineer/Manager with Wright-Padgett-Christopher Engineering, Charleston, SC  
Project Geotechnical Engineer, Illinois  
Chief Engineer, SCI Engineering, O'Fallon, Illinois (2015-present)

Katherine (Wehrle) Aguilar

Starting Term: Aug. 1999; Completion: January 2001. Funded by ERDA and ITRE

Thesis: "Drained Strength Characteristics of Residual Clay Derived from Mudstone"

Positions: FMSM Engineers, Lexington, KY (2001-2006);  
Sales Manager, Dataforensics, Atlanta (2006-present)  
Software engineer, Bentley, Atlanta, GA (2011)

Abhijeet Chordia

Starting term: August 2015; Completion: Fall 2016

Self-funded; Current position (2017): Project engineer with PSI, Atlanta.

Helen Heindl

Starting term: August 2015; Completion: Fall 2016

Self-funded; Current position (2017): Project engineer with Global, Alpharetta

John Daly

Starting term: Aug. 2014; Completed: August 2015

Funding: US Navy ROTC; now stationed at Norfolk, VA.

Sean Gann

Starting term: Aug. 2014; Completed: Dec. 2015

Funding: US Air Force

R. Austin Nall

Starting term: Aug. 2012; Completion: May 2013

Funding: ConeTec Investigations

Research: Piezodissipation testing evaluation at South Gloucester test site, Ontario

Current Position: Ardaman & Associates, Jefferson, LA (2017)

Meena Viswanath

Starting term: Aug. 2011; Completion: May 2012

Funding: In-Situ Research Group, GIT; ConeTec Investigations

Research: Direct SPT method for shallow foundations on sands

Position: Geotechnical Engineer with Geosyntec Consultants, Kennesaw, GA  
Geotechnical Engineer, Boston, MA

Tyler Wood

Starting term: August 2012; Completion: August 2016

Current Position: Vice President, Ahlberg Engineering, Atlanta GA (fulltime)

Zhongkun Ouyang

Starting term: August 2013; Completion Dec 2014

Funding for Spring and Summer 2014: Fugro Engineers, The Netherlands

Kellie Sak

Starting Term: Aug. 2003; Completion: May 2005

Funding: Cargill Incorporated and GTRI

Positions: Project Engineer, Golder Associates, Atlanta, GA  
Regional Vice President, Zappata Inc., Atlanta, GA



Maria Robert

Starting Semester: August 2001; Completion: May 2003

Position: Geotechnical Engineer with GeoCim, San Juan, P.R.

Kimberly Burgess

Starting Semester: January 2001; Completion: December 2005

Current Position: Geotechnical Engineer in Ocala, FL

William Tate

Starting Term: August 2004; Completion: Expected December 2005

Positions: S&ME Engineers, Charleston, SC

Law School Graduate: Georgia State University

Associate Attorney at Thompson, Meier and King, P.C.

Yasser A. Hegazy

Starting Term: Sept. 1994; Completion: June 1996

Position: D'Appolonia Engineers, Pittsburgh, PA and Cairo Egypt

Assistant Professor; King Abdulaziz University, Saudia Arabia

Professor, Geotechnical/Civil Engineering Cairo University, Egypt (Feb 2009)

James Earl Travis

Starting Term: Fall 1993; Completion: Fall 1994

Funding: FHWA Regional Office, Jacksonville, FL

Current: USAE, Virginia

Holli Jones (Greene)

Starting Term: August 2005; Completion: May 2006. Awarded: 2005 W.J. van Reenen Fellowship

Positions: Terracon/Titan Atlantic Engineering, Raleigh, NC; MacTec Engineering, Augusta, GA

GeoHydro Engineers, Atlanta, GA

Tracy Hendren

Starting Term Aug. 1999; Completion: May 2006

Current Position: Project Engineer, US Army Corps of Engineers

Joan Manual Larrahondo-Cruz

Starting Term: August 2005; Completion: December 2006

Topic: Highway Drain Performance in Georgia

Funding provided by GA Transportation Research Institute and Georgia Dept. of Transportation

Positions: PhD candidate - Georgia Tech CEE (2006 - 2011)

Senior Geotechnical Engineer, INGETEC S.A. Bogotá, Colombia (2011-2014)

Assistant Professor - Pontificia Universidad Javeriana, Bogota, Colombia (2014 - present)

Fikret Atalay

Starting Term: August 2005; Completion: December 2006

Topic: Nondestructive Investigative Methods for Evaluation Highway Underdrains

Funding provided by GA Transportation Research Institute and Georgia Dept. of Transportation

Positions: GeoEngineer with Ardaman Associates, Tampa, FL (2006-2010)

Lead Geotechnical Engineer, Enercon Services (2011-2013)

Completed PhD: Georgia Tech Geotechnical (May 2019)

Chad Rodgers

Starting Term: August 2006: Expected Completion: August 2007

Funded by US Air Force (MS completed 2017).

Fernando Illingworth

Started MS/BS: June 2009; Completed: December 2010  
Topic: Direct CPT method for spread footings on sand  
Positions: ConeTec, Richmond (2010), VA  
Langan Engrg, Miami, FL (2011)  
Project Engineer, TECNAC, Ecuador (2012 - 2015)  
Graduate studies - Barcelona (2015-2017)  
Chief Engineer, Subterra Company, Ecuador (2017 to present).

### **B.2.a. In Process MS Students**

none

### **B.3. Undergraduate Students**

Scott Phillips  
Completion: Winter 1992  
Topic: Review of Axial Compression Load Test Data on Drilled Shafts in the Piedmont Geologic Province.

Darrel Webb  
Completion: Winter 1995  
Topic: Drilled Shaft Foundation Design for 1996 Olympics Pedestrian Bridge over 10th Street, Atlanta.

James A. Schneider  
Completion: Spring 1996  
Topic: Numerical Modeling of Plasma Magmavication Experiments Involving Savannah River Soils, SC

James A. Schneider  
Completion: Winter 1997  
Topic: Experimental Design of Offgas Simulation Chambers During In-Situ Plasma Magmavication.

Keith Quarles  
Completion: Spring 1999  
Topic: Borehole Size Effects on Performance of Nontransferred Arc Plasma Transformation of Soils

Anna-Britt Mahler  
Completion: Summer 2000  
Topic: Application of Resistivity Piezocone Soundings in High Seismicity Regions of Mid-America  
Funding: Research Experience for Undergraduates (REU) with Mid-America Earthquake Center (MAE)

Alisha Kaplan  
Completion: May 2004  
Topic: Liquefaction Effects on Piled Foundation Systems  
Funding: Undergraduate Research Assistant (URA) by Mid-America Earthquake Center (MAE)

Ali Boga  
Completed May 2006  
Topic: Hydrology Requirements for Highway Underdrains  
Funding: GTI and GDOT  
Currently: Project Engineer, Tampa, Florida

Pilar Soler Arnal  
Started (Transfer): Jan. 2009      Completed: May 2009  
Topic: Review of preconsolidation stress determination methods for lab consolidation testing of soils.  
Funding: University of Valencia, Spain

Amanda Magabo

Complete: December 2010

Topic: Digitization and Graphing of Geotechnical Databases for Site Exploration using Flat Dilatometer

Justin Goehring

Completion: Dec. 2012

Topic: Use of helical pile anchors in Piedmont residual soils with Foundation Technologies, Lawrence, GA

## **B4. Service on Thesis or Dissertation Committees**

### **B4.a. PhD Graduate Committees at GT (Comps, Exams & Defenses):**

1. Roger W. Meier, PhD candidate; Jan.10, 1990; Oct.15, 1991; Defended Dec. 1994.
2. Jorge Alba, PhD candidate; Nov. 29, 1990; Oct. 6, 1992; Defended: 15, 1993.
3. John Anderson, PhD candidate; Oct. 20, 1991.
4. Barry Shi-Yo Chen, PhD candidate; Apr.17, 1991; Jul.13, 1992; Defended June 1994.
5. Erol Tutumluer, PhD candidate; March 13, 1992; Defended: July 26, 1995.
6. Dayakar Penumadu, PhD candidate; April 1, 1992; Defended: Aug. 1993.
7. Kevin Sutterer, PhD candidate; March 5, 1993; Defended: July 1993.
8. Wes Spang, PhD candidate; Feb. 9, 1993; March 18, 1994; Defended: Aug. 2, 1995.
9. James Yi-Chang Tsai, PhD candidate; March 12, 1993; June 24, 1994; Defended Dec. 1996.
10. Susan E. Burns, PhD candidate, April 9, 1993; July 5, 1995; Nov. 21, 1995; Defended Aug. 1997.
11. Haroon Shami, PhD candidate, May 19, 1993, July 8, 1994; Oral: Oct. 7, 1994; Defended: June 1996.
12. Chun-Yi Kuo, PhD candidate, Oct. 19, 1993; Defended: Aug. 16, 1994; Defended July 1996.
13. Ronaldo Luna, PhD candidate, Dec. 8, 1993. Defended: Feb. 1995.
14. Richard Reid, PhD candidate, June 27, 1994; Oct. 4, 1994; Defended: Mar. 1995.
15. Yasser Ali Hegazy, PhD candidate, May 1995; Nov. 6, 1995; April 3, 1996, Defended April 25, 1998.
16. Joseph E. Dove, PhD candidate, March 3, 1995; July 14, 1995; Aug. 31, 1995; Defended Dec. 1996.
17. Jie Han, PhD candidate, March 3, 1995; Oct. 9, 1995; Nov. 20, 1995; Defended Dec. 17 1996.
18. Thomas Rockaway, PhD candidate, July 14, 1995; Defended March 12, 1997.
19. Jin-Young Park, PhD candidate, Aug. 4, 1995.
20. Daren Zywicki, PhD candidate, guidance in fellowship proposal, Nov. 18, 1996.
21. Lin-Bing Wang, PhD comprehensive exam, May 31, 1996.
22. Seokwon Lee, PhD comprehensive exam, June 1996.
23. Laureano R. Hoyos, Jr., PhD candidate, Sept. 2, 1996; December 1996; Defended November 19, 1998.
24. Robert L. Parsons, PhD candidate, September 1996; April 28, 1997; Aug. 4, 1997; Defended June 1998.
25. Americo Fernandez, PhD guidance; Comps. March 31, 1999; Defense April 17, 2000.
26. Deh-Jeng (David) Jang, PhD Defended, May 21, 1997.
27. Katherine Klein, PhD guidance Committee, Oct. 10, 1997; Defended June 11, 1999.
28. Yong Shao, PhD guidance & Comps Committee, Jan 1997; March 18, 1997; July 1998; Defended May 21, 1999.
29. Taecil Choi, PhD guidance, April 1997; Aug. 1998. Nov 23, 2001.
30. Tim Wyatt, PhD comprehensive exam, Dec. 21, 1998.
31. Jason DeJong, PhD guidance comm., January 29, 1999; Comps May 14, 1999, Defense, May 2001.
32. Dmitriy Astakhov, PhD comprehensive exam, March 22, 1999.
33. Gye-Chun Cho, PhD Comps, March 29, 1999, Defense, July 5, 2001.
34. Yu-Hsing Wang, PhD Comps, March 29, 1999.
35. Amr Elhakim, PhD Guidance Comm, Comps March 2001, Defense: May 2005.
36. Maria Guimaraes, PhD, March 2001, Defense Feb. 8, 2002.
37. Denis Saussus, PhD, Oct. 2000; Defense June 22, 2001.
38. Tianfei Liao, PhD, guidance Committee, October 29, 2001; Comps Oct. 2002, Defense: June 2005.
39. Kimberlie Staheli Louch, guidance comm, April 25, 2001. Defense June 29, 2006.
40. Julio Valdez, guidance Committee, March 1, 2002; Defense, August 2002.
41. Sungsoo Yoon, guidance committee, Jan. 24, 2003.
42. Guillermo Zavala, PhD guidance comm., Dec. 2002; Comp Exam, March 2003.
43. Alec McGillivray, PhD guidance committee Dec. 16, 2003. Comp Exam, March 2003. Defense: 05 Nov. 2007.

44. Chanin Ruangthaveekoon, PhD guidance committee, July 23, 2003.
45. Tae-Sup Yun, PhD Guidance Committee, Aug. 24, 2004; Defense July 2005.
46. Hyunki Kim, PhD Guidance Committee, August 24, 2004; Defense June 2005.
47. Catalina Orozco, PhD Defense, Dec. 5, 2003.
48. Gaurav Chawla, PhD Comp Exam – Nov 4, 2004.
49. (Jose) Alfredo Fernández (Leon), PhD Comp Exam – Nov. 4, 2004
50. Jong-Hee Kim, PhD Comp Exam – Nov. 4, 2004.
51. Catherine Black, PhD Comp Exam – Nov. 4, 2004; Defense Committee: 05 Nov. 2009
52. Brian Lawrence, Guidance Comm. Meeting, Nov. 9, 2004.
53. Matt Evans, Reading & Defense Committee, 17 November 2005.
54. Xuan Wang, Reading & Defense Committee, 18 November 2005.
55. Guillermo Narsilio, PhD Defense Comm. 13 Feb 2006; currently faculty - Melbourne, Australia.
56. Ahmed Bayoumi, PhD Defense Comm, 23 March 2006, currently with CH<sub>2</sub>M-Hill, CA.
57. Cem Ozan, Special Geo-Bio-Engineering PhD Comp Exam - Nov. 3, 2004; Defense Jan. 30, 2007.
58. Bate Bate, PhD Guidance Committee, Dec. 13, 2007
59. Varun Varun, PhD Guidance Committee, Jan 24, 2008. PhD Defense (16 June 2010)
60. Jong Hee Kim, PhD Defense Committee, 10 Sept. 2008.
61. Hosung Shin, PhD Reading and Defense Committee, 26 May 2009.
62. Minsu Cha: Comp Exam Comm (09 April 2010); Defense (27 July 2012)
63. Fawad Niazi: Advisor; Comp Exam Committee (09 April 2010). PhD Defense (19 Dec 2013)
64. Junbong Jang: Comp Exam Committee (09 April 2010); Guidance Committee (Aug 2010).
65. Sheng Dai: Comp Exam Committee (09 April 2010).
66. Cesar Pasten: Comp Exam Committee (09 April 2010).
67. Seunghee Kim: Comp Exam Committee (09 April 2010).
68. Aditya Bhatt: Comp Exam Committee (09 April 2010).
69. Taeseo Ku: Advisor; Comp Exam Committee (09 April 2010); Defense (24 Oct 2012); Commencement (14 Dec 2012).
70. Seokho Jeong: Comp Exam Committee (09 April 2010).
71. Fengshou Zhang: Guidance Comm. (21 May 2010); Comp Exam Committee (09 April 2010).
72. Nortey Yeboah: Comp Exam Committee (09 April 2010). Dissertation Proposal (02 Feb 2012). PhD Defense (17 Dec 2013).
73. Qian Zhao: Comp Exam Committee (09 April 2010).
74. Douglas Cortez: Defense Committee (12 October 2010).
75. Hyunwook Choo: Comp Exam (02 April 2011); dissertation proposal (30 Nov 2012). PhD Defense (2013)
76. Kip Gray: Comp Exam (02 April 2011); PhD Proposal (13 April 2015); PhD Defense (08 Jan 2016).
77. Joan M. Larrahondo: Comp Exam, PhD Defense Committee (25 Oct. 2011).
78. Kami Mohammadi: PhD Comp Exam (17 March 2012).
79. Alejandro Martinez: PhD Proposal Committee (18 Dec 2013); PhD Defense: 9 November 2015.
80. Song-hun Chong: PhD Proposal Committee (10 March 2014); PhD Defense: 11 August 2014.
81. Marco Terzariol, PhD Comp Exam; PhD Defense: 10 Dec. 2014.
82. Shahrzad Roshankhah, PhD Comp Exam; PhD Defense: 04 Feb 2015.
83. Cao, Jie: PhD Comp Exam: 07 May written; oral 13 May 2015;
84. Faroughi, Salah: PhD Comp Exam: 07 May written; oral 13 May 2015;
85. Ouyang, Zhongkun "Frankie": PhD Comp Exam: 07 May written; oral 13 May 2015; PhD Defense 08 March 2019;
86. Gwaba, Devon, PhD proposal (spring 2016), PhD Reading Committee and Defense; 17 Oct 2016.
87. Lee, Junghwoon: PhD written comps (07 Oct 2016); Oral comps (07 Nov 2016).
88. Shen, Xianda: PhD written comps (07 Oct 2016); Oral comps (07 Nov 2016).
89. Atalay, Fikret: PhD written comps (07 Oct 2016); Oral comps (07 Nov 2016); PhD Proposal (17 Oct 2017); PhD Defense (12 March 2019)
90. Kim, Jongchan: PhD written comps (07 Oct 2016); Oral comps (07 Nov 2016).
91. Su, Jiaying ("Jackson"), PhD proposal (29 Nov 2016); Defense (03 Jan 2019)
92. Agaiby, Shehab, PhD proposal (14 Dec 2016); Defense (07 December 2017).
93. Xu, Yue: PhD Comp Exam (01 June 2017)
94. Ji Koochul: PhD Comp Exam (01 June 2017)
95. Patino-Ramirez, Fernando: PhD Comp Exam (01 June 2017)



96. Somashekar, Sangy: PhD Comp Exam (01 June 2017)
97. Mallet, Seth: PhD Proposal (23 Oct 2017); PhD Defense (10 Oct 2019)
98. Borela Valente, Rodrigo; Comp Exam (Jan 2018)
99. Espinoza, Wilson; Comp Exam (Jan 2018)
100. Jeong, Boyong; Comp Exam (Jan 2018)
101. Liu, Ming; Comp Exam (Jan 2018); PhD Proposal (05 Dec 2019).
102. Xu, Tianlong: PhD Defense; Comp Exam; PhD Defense (12 March 2019)
103. Jung, Yongsuk: PhD Comps (13 May 2019)
104. Liu, Jiaojun (June): PhD Comps (13 May 2019)
105. Huang, Hejintao: PhD Comps (13 May 2019)
106. Xu, Tingting: PhD Comps (13 May 2019)

#### **B4.b. MS Committee Member (Exit Exams and Defenses):**

1. Jamie R. Beaver, MS Defense, Nov. 20, 1995.
2. Janet Denk, November 21, 1995.
3. J. Reid Horne, December 1995
4. Xue-Hua Xu, MS Exam, March 5, 1996.
5. Gina Kates (Martin), MS Defense, Oct. 25, 1996.
6. Kate Waggener (Mayer), MS Defense, Dec. 13, 1996.
7. Vasilis Vandolis, MS Exam, March 1997.
8. Laurel Empie, MS Graduate Defense, Dec 1997.
9. Kimberly Finke, MS Defense, March 2, 1998.
10. Craig Wise, MS Defense, March 27, 1998.
11. Christopher Long, MS Examination, March 12, 1999.
12. John Murray, MS Defense, June 17, 1999.
13. Ethan Cargill, MS Defense, July 28, 1999.
14. James A. Schneider, MS Defense, July 20, 1999.
15. Josepha Celes, MS Defense, August 17, 1999.
16. Lois Boxill, MS Defense, August 25, 1999.
17. Thomas Casey, MS Defense, January 5, 2000
18. Kate Wehrle, MS Defense, January 2001.
19. Prateek Goel, guidance committee, March 1, 2002
20. Vasilios Drosos, MS Defense Aug. 5, 2003.
21. Jake Dodds, MS Defense, Jan. 5, 2004.
22. Ana Martin, MS Defense, Dec. 28, 2004.
23. Varun, MS Defense - December 2006.

#### **B4.c External Reading Committees**

##### **B4.c1. Ph.D. Dissertation and Defense**

1. Soheil Eslaamizaad      Defense: October 2, 1997  
University of Alberta, Edmonton, Dept. of Civil Engineering  
“Application of Seismic CPT for Foundation Design” (reader & external examiner)  
Advisor: Prof. & Associate Dean Peter K. Robertson
2. John Bonita      Defense: Aug. 2000, Grad. December, 2000  
Virginia Polytechnic Institute  
“Piezovibrocone Liquefaction Tests in Calibration Chambers”  
Advisor: Prof. J.K. Mitchell
3. Deepthi Udakara      Defense: April 2000  
Hong Kong University, Faculty of Engineering  
“Experimental Study of a Modified Flat Dilatometer Under Plane Strain”  
Advisor: P.K.K. Lee
4. Muthusamy Karthikeyan      Defense: February 2005

5. Shin Fun Chung  
National University of Singapore, Dept. of Civil Engineering  
"Application of a radioisotope cone penetrometer to characterize a lumpy fill"  
Advisor: Prof. Tan Thiam Soon  
Defense: May 2005  
University of Western Australia, Perth  
"Characterization of soft soils for deep water developments"  
Advisor: Professor Mark Randolph
6. Ali Amini  
Defense: Nov. 26, 2006  
University of British Columbia, Vancouver  
"Application of seismic cone for characterization of ground improved by vibro-replacement"  
Advisor: Professor John Howie
7. Han Eng Low  
Defense: June 2009  
University of Western Australia, Perth  
"Performance of penetrometers in deepwater soft soil characterization"  
Advisor: Professor Mark Randolph
8. Paul Doherty  
Defense: 11 June 2010  
University College Dublin, Ireland  
"Factors affecting the capacity of offshore piles in clay"  
Advisor: Dr. Kenneth Gavin
9. Mohsen Ghafghazi  
Defense: May 2011  
University of British Columbia ; Dept. of Civil & Environmental Engineering  
"Towards comprehensive interpretation of state parameter from CPT in cohesionless soil"  
Advisor: Professor John Howie
10. Shiao Huey Chow  
Defense: Dec. 2012  
University of Sydney, Australia - Civil Engineering  
"Free Falling Penetrometers into Clay"  
Advisor: Professor David Airey
11. Priscilla Paniagua  
Defense: 25 September 2014  
Norwegian Univ. Science & Technology (NTNU), Trondheim  
"Model testing of cone penetration in silt with numerical simulations "  
Advisor: Professor Steinar Nordal
12. Yusuke Suzuki  
Defense: October 2014  
University of Western Australia, Perth  
"Investigation and interpretation of cone penetration rate effects"  
Advisor: Professor Barry Lehane
13. Cathal Colreavy  
Defense (Dissertation Reading Committee): Dec. 2016 - Jan. 2017  
Univ. of Western Australia  
"Use of Piezoball Penetrometers for Measuring Shear Strength and Consolidation Characteristics of Soft Soil"  
Advisor: Assoc. Prof. Conleth O'Loughlin

#### **B4.c.2. MS or ME Thesis**

- |                  |  |
|------------------|--|
| Robert F. Murray | 1994-1995<br>MS: University of New Hampshire, Civil Engineering, Durham<br>"Piezocone Exploration for Marine Clay at Pease Air Force Base"<br>Advisor: Prof. Jean Benoit                           |
| Chiu Chung Fai   | 1995-1996<br>MS: The University of Hong Kong, Civil & Structural Engineering<br>"A Modified Flat Dilatometer for Measuring Nonlinear Soil Behavior at Small Strains"<br>Advisor: Prof. J. Neil Kay |
| Yu Jin           | 1997-1999<br>ME: Nanyang Technological University, Singapore<br>"Effect of Construction on Axial Load Transfer along Bored Piles in Residual Soils"  |

Andre Archer

Advisor: Prof. Ming-Fang Chang  
2014

ME: University of Pretoria, South Africa

"Using Small-Strain Stiffness to Predict the Settlement of Shallow Foundations"

Advisor: Professor G. Heymann

## **B5. Mentorships of Postdoctoral Fellows and Visiting Scholars.**

### **B5.a Post-Doctoral Fellows**

Dr. Laureano Hoyos – Ph.D. received from Georgia Tech, December 1998.

Research: Dynamic Properties of Sands from Mid-America, April 1999-September 1999. Funded by NSF

Current Position: Professor, Univ. of Texas-Arlington.

Dr. Mingzhan Wu – Doctoral received from Tongji University, Shanghai, June 1997.

Research: Mobile System Design for In-Situ Plasma Vitrification, September 1997-August 1998.

Funded by ERDA and ARO

Jon-Won Choi - PhD from Georgia Tech 2007

Research: Sensors for Instrumentation and Monitoring of Highway Drains and Underdrains

Funded by GTI-GDOT (Project Number E20-K86)

Dr. Taeseo Ku - PhD from GT (Dec 2012 - April 2013)

Research: Stress history from in-situ and geophysical tests

Funded by DOE/SRS and ConeTec Investigations

Dr. Fawad S. Niazi - PhD from GT (Jan 2014-present)

Research: Pile response from cone penetration tests

Post-doc funding from ConeTec

Current Position: CEE Faculty at Purdue University, Fort Wayne Indiana campus (2015-present)

### **B5.b. Visiting Scholars**

Bruno Di Buo, Tampere University of Technology, Finland

15 January 2018 to 15 March 2018

Juha Selanpaa, Tampere University of Technology, Finland

15 March 2018 to 15 May 2018

## **C. Educational Innovations and Other Contributions**

### **C1. Curriculum Development**

- Revised course: CE 6183, Soil Construction, Fall 1990. Course covered use of soil and rock materials in civil engineering construction, including properties characterization, quality control, and behavior.
- Revised course: CE 6172, Geotechnical Testing, Spring 1991. Completely updated course on laboratory testing of soils with significant component emphasizing field methods to evaluate properties and parameters in-situ.
- Revised course: CE 6159, Rock Mechanics, Summer 1991. Re-instated course on rock engineering using principles of geomechanics, geophysics, laboratory and field testing, supplemented with case histories and seminars with Regents & Emeritus Professor George F. Sowers.
- Revised course, CE 6199, Constitutive Modeling, Winter 1992. Re-developed a course on Theoretical & Applied Geomechanics in modern adaptation of limit plasticity, cavity expansion, and critical-state soil mechanics.
- New course: CE 4173, Geotechnical Engineering, Fall 1994. Completely updated version of older CE 4163 required senior class covering geotechnical site characterization and foundation engineering.

- New course: CE 6162, In-Situ Testing. Winter 1995. Introduction to field measurements and interpretation of drilling, penetrometers, and probes for determination of geostratigraphy, in-situ soil properties, and behavior of geomaterials.
- New course: CE 6177, Foundation Systems, Spring 1995. Important graduate class on applications of elastic and plastic solutions for soil and rock mechanics for shallow and deep foundations.
- Revised course: CE 4404, Senior Design Project, Winter 1997. A required capstone design project with integrated civil aspects and a geotechnical flavor involving a bridge crossing over the Chattahoochee River.
- CEE 4410 – New Semester Undergraduate Course - Geosystems Engineering Design – second term senior course on site investigation, shallow foundation analysis, stability evaluation, walls, piling, and drilled shaft foundations.
- CEE 6423 – New Semester Graduate Class - In-Situ Geotechnical Testing: Exploration practices & interpretation of field drilling, sampling, coring, & in-situ measurements by cone, geophysics, dilatometers, vanes, & pressuremeters.
- CEE 6443 – New Semester Graduate Course – Foundation Systems: Evaluation of shallow footings, structural mats, driven piles, bored pilings, and drilled shafts using elastic continuum, limit plasticity, and extensive case studies.
- CEE 4406 - New Undergraduate Course - Applied Geotechnics: Using principles of soil & rock mechanics, case studies and analytical methods for evaluating geotechnical mechanics situations. (Approved 2011).

## **C2. Participation in Teaching Development Programs**

- Participant, “Continuous Quality Improvement (CGI)”, a GT-sponsored seminar on the educational-based version of total quality management (TQM) used in industry and business, 1992.
- Participant, “Gender Equity In and Out of the Classroom”, NSF Workshop In Gear, facilitated by C.S. Kiang and Llewellyn and CEISMC, Feb. 1997.
- Participant, “University-Industry Research Collaboration in Georgia”, GT Workshop by President G.W. Clough to establish a business, industry, and university coalition in Georgia, Oct. 1997.
- Participant, “Technology in the Classroom”, GT Workshop on WebCT, internet, and Classroom 2000; facilitated by Dr. Nelson Baker and SUCCEED Coalition, May 10, 1999.
- Lecturer and Co-Course-Developer (with Dr. Barry Christopher), “Subsurface Investigations”, National Highway Institute, Arlington, VA, Feb. 2000.
- Certified Instructor for National Highway Institute (NHI) Course on Subsurface Investigation by Federal Highway Administration, Washington, DC. Awarded June 2004.

## **VI. SERVICE**

### **V.1. Military Service (1970-1972):**

Midshipman, USS Intrepid (6th Fleet)

US Navy, Honorable Discharge (18 May 1972).

## **A. Professional Contributions**

### **A1. Chairmanship of Technical Conference Sessions**

1. Facilitator, FHWA Workshop on "Lateral and Rotational Stiffness of Highway Bridges", Crystal City, VA 1993.
2. Facilitator, FHWA Workshop on "Design of Highway Bridges for Extreme Events", San Francisco, September 1994.
3. Moderator and Co-PI, NSF Workshop on U.S.-Taiwan Geotechnical Collaboration, Taipei, January 9-12, 1995.
4. Moderator, Technical Session 67 on Overconsolidated Clays, Transportation Research Board, January 1995.
5. Moderator, Session 11, Intl. Symposium on Environmental Technologies, Omni Hotel, Atlanta, October, 1995.
6. Moderator, Breakout Session C on Practical Applications, Uncertainty in the Geologic Environment, University of Wisconsin, Madison, August 3, 1996.
7. Session Moderator, In-Situ Stresses, First International Conf. on Site Characterization, Atlanta, April 1998.
8. Organizing Committee, 3<sup>rd</sup> National USUCGER Workshop, Newport, RI, November 19-22, 1998.



9. Session Moderator, National Geotechnical Experimentation Sites, USUCGER Workshop, Nov. 20, 1999.
10. Session Leader: “Structures, Materials, and Pavements”, Georgia Transportation Inst., Atlanta, May 25, 1999.
11. Chair, Session of Ground Property Characterization XI Pan American Conference on Soil Mechanics, Iquassu Falls, Brazil, August 11, 1999.
12. Chair, Session C (5 Tech Sessions): Innovations & Applications of In-Situ Testing, GeoDenver, Aug. 2000.
13. Discussion Leader, Session 1.2., In-Situ Ground Characterization, 15<sup>th</sup> ICSMGE, Istanbul, Aug. 29, 2001.
14. Session Chair, Hong Kong Polytechnic: Liquefaction Assessment, ICANCEER Workshop, Aug. 19-20, 2002.
15. Session Chair, Engineering Properties of Natural Soils, National University of Singapore, Dec. 4, 2002.
16. Chair, Technical Committee TC 16, Annual Meeting - Ground Property Characterization, sponsored travel by ASCE International Activities Committee, Singapore Dec. 1, 2002.
17. Chair, Technical Committee TC 16, Annual Meeting - Ground Property Characterization, Boston June 24, 2003. Planning for ISC-2 Conference.
18. Invited Visiting Member, TC 29 Committee on Stress-Strain-Strength Behavior of Soils, Sept. 22, 2004.
19. Moderator, Plenary Session 11: Keynote by P.K. Robertson, Sept. 22, 2004.
20. Invited Visiting Member to TC 01 Committee on Offshore Geotechnics, Sept. 19, 2004.
21. Chair, Technical Committee TC 16 – Annual Meeting, Porto Portugal, Sept. 20, 2004.
22. Organizing Co-Host & Co-Editor, GeoShanghai International Conference, June 2-4, 2006.
23. CCC Meeting at ASCE Headquarters, Reston VA, Dec. 15, 2006.
24. CCC Meeting at ASCE Conference: GeoDenver, Feb. 2007.
25. Chair, TC 16 Workshop and Meeting (ECSMGE), Madrid, Sept. 2007.
26. CCC Meeting at ASCE Conference: GeoCongress held in New Orleans, Sheraton, March 2008.
27. Chair, TC 16 Planning Meeting for CPT'10, held during the GeoInstitute Conference, Orlando, March 2009.
28. CCC Meeting at ASCE Congress: International Foundations Conference & Equipment Expo (IFCEE'09), held at the Buena Vista Resort, Orlando (09-15 March 2009).
29. Chair, TC 16 Planning Meeting, held during ICSMGE, Alexandria, Tuesday 6 Oct. 2009.
30. Chair of Tech Session on In-Situ Testing, ASCE GeoFlorida (24 Feb 2010), West Palm Beach, FL
31. Chair TC 102 Meeting, ISSMGE, Paris Sept 2013: Planning for CPT'14 and ISC-5 Brisbane
32. Organizing Committee: 5<sup>th</sup> Intl. Conf. on Site Characterization (ISC'5), Gold Coast - June 2014.
33. Expert Panel member at closing session: ISC-5, Gold Coast, Australia (Sept 2016).
34. Member, Scientific Team, 4<sup>th</sup> Intl. Symposium on Cone Penetration Testing (CPT'18), Technical Univ. Delft, The Netherlands: <http://www.cpt18.org/scientific-committee-2/>
35. Session Chair - CPT'18, Delft: Session 6 - numerical modeling of cone penetration testing (21-23 June 2018)

## A2. Professional Committee Service

### A2.1 American Society of Civil Engineers (ASCE) – 1976-Present

- National Capital Section, Washington, D.C., 1977-1987.
- Editorial Board, Journal of Geotechnical Engineering, 1983-1994.
- Geotechnical Executive Committee, ASCE National Capital Section, 1985-1987.
- Member, Ithaca New York Section, 1987-1990.
- Member, Atlanta Geotechnical Section, 1990-present.
- US Representative to TC 16, International Activities Committee, 2002 to present
- Chair, Technical Sessions & Papers: Site Characterization, GeoFrontiers 2005, Austin.
- Appointed to CCC Executive Board – Conferences Coordinating Committee (CEC), Nov 2004 to 2010.
- ASCE Rep for Intl. Activities Committee to 16<sup>th</sup> ICSMGE, Osaka, Sept. 2005.
- Organizing Committee – ASCE GeoCongress, Atlanta, February 2006.
- Appointed CCC member to ASCE 2009 GeoCongress on Foundations, Dallas, TX. (Dec. 2006 to present)
- Publications Committee - GSP Guidelines for Authors and Editors (2006-2007)
- Appointed to Task Force - Conference Scheduling Committee, GeoInstitute (Aug. 2009 - 2012).
- Member: Engineering Geology & Site Characterization (EGSC) Comm. (2004-present):  
<http://www.asce-egsc.org/>
- Member, Geocongress Conference Committee (GOC), ASCE GeoCongress, Atlanta 2014).
- Organizing Committee (IFCEE'15, San Antonio): solicitation of plenary lecturer: G. Wayne Clough
- Awarded Life ASCE membership (Aug 2016).
- IAC (International Activities Council) meeting at GeoFrontiers, Orlando (13 March 2017)

- EGSC Meeting on 14 March 2017 at GeoFrontiers (Engrg. Geology and Site Characterization Committee)
- Affiliate, Shallow Foundations Committee Meeting (15 March 2017) at GeoFrontiers, Orlando.

#### **A2.2. American Society for Testing and Materials (ASTM) – 1980-2014**

- Member (GTJ), Subcommittee D18.92, 1985-2014.
- Editorial Board, Geotechnical Testing Journal, 1986-2001
- Member, Subcommittee D18.09 on Soil Dynamics, 1980-1984.
- Member, Subcommittee D18.13 on Marine Geotechnics, 1983-1987.
- Member, Subcommittee on Cone Penetrometer, Subcommittee D18.01.
- Senior Author - Revision of D 5778 on Cone Penetrometer Testing. Revision approved Dec. 2007.
- Member and Author, Vane Shear Standard (2007) Subcommittee, Revision of D-2573, 2002-present.
- Reviewer, Papers submitted to the ASTM Geotechnical Testing Journal (2009 - 2015, 2017-2019).
- Reviewer for updating of standard ASTM D5778 on CPT and D6631 on DMT (2019)

#### **A.2.3. International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)**

- Member, US National Society Committee Member (USNS), 1982-Present.
- Host Chair, Organizing Committee, Intl. Conf. on Site Characterization (ISC'98), Atlanta, 1996-1998.
- Core Member, Tech. Comm. 16 (Ground Property Characterization from In-Situ Testing), 1994-present.
- Organizer, GeoMusic Session at ISC '98, April 20, 1998: Prof. A.J. Lutenege (guitar), Prof. David Elton (vocals), Prof. Gianfranco Totani (sax), Prof. Paul Neitzel (guitar), Prof. Paul W. Mayne (bass).
- Chair, TC 16 - Committee on Ground Property Characterization by In-Situ Tests, Nov. 2001 – present.
- Webmaster for TC 16 Website: <http://www.geoforum.com/tc16>
- Organizer for GeoMusic Session at ISC'04, Sept 22, 2004 in Porto featuring: Em. Prof. James K. Mitchell (sax), Prof. Martin Fahey (mandolin), Prof. Nuno Cruz (guitar), Prof. Jean Nuyens (piano), and Prof. Paul Mayne (bass).
- Planning Committee for ISC-3: Meeting chair in Singapore, Dec. 01, 2006.
- Attendee for ECSMGE-Madrid, Sept. 2007. Held TC 16 Workshop during the conference.
- Organizing Committee for 3rd Intl. Conf. on Site Characterization, Taipei (April 01-04, 2008).
- Held TC 16 Meeting at the 11th Baltic Geotechnical Conference, Gdansk University, Sept. 2008.
- Chair: Held TC 16 Planning meeting for CPT'10 during the IFCEE'09 (Orlando).
- Held TC 16 Planning meetings for ISC-4 and CPT'10 during ICSMGE (2009) in Alexandria.
- Reappointment for 3<sup>rd</sup> term as chair: TC on In-Situ Testing by ISSMGE Technical Oversight Committee, June 2010.
- Chair of TC 16/TC 102 organization meetings (May 10, 2010) at Hyatt Resort, Huntington Beach, CA.
- Chair for TC 102 meeting held at ISC-4 (Pernambuco Brazil) in planning for ISC-5 (Sept 2012).
- Chair for TC 102 meeting held at 18<sup>th</sup> ICSMGE (Sept 2013).
- Vice President for North America (appointed at 18<sup>th</sup> ICSMGE, Paris, 2013).
- IAC meeting with SMIG (24 Feb 2014): International Activities Committee (IAC) with Mexican Society Soil Mechanics at Westin Hotel, Atlanta
- ISSMGE Board Meeting, London UK (18-19 March 2014); and subsequent Ambraseys Symposium and Rankine Lecture (Prof. Guy Houlsby) at Imperial College
- ISSMGE Board Meeting at the 2015 Australia-New Zealand Conf. on Geomechanics, Wellington (22-24 Feb 2015)
- ISSMGE Board Meeting, in conjunction with the XVI European Conf. on Soil Mechanics & Geotechnical Engineering, Edinburgh, Scotland (11-19 Sept 2015).
- PanAm Board Meeting - planning for the 2019 PCSMGE in Mexico - during the 2015 Pan Am Conf. Soil Mech & Geotech Engrg, Buenos Aires (13-20 Nov 2015)
- Host and organizer, ISSMGE Board Meeting during the ASCE Joint GI-SI National Conference, Sheraton Hotel, Phoenix Arizona (13 Feb 2016).
- Session ISSMGE speaker at Geo-Institute Conference, "Geotech Activities in North America", Phoenix, AZ (15 February 2016).
- Member TC102 - Planning meeting for ISC-6 (2020 Budapest), held at Jupiters-Gold Coast Australia (06

Sept. 2016).

- Attended special dinner for 6th Intl. Young Geotechnical Engineers Conference, GECE (16 Sept 2017)
- Session Chair for TC 102 In-Situ Testing Paper Presentations, 19th ICSMGE, Seoul (20 Sept 2017)
- Attended special dinner by Australian Geotechnical Society at Intercontinental Hotel, Seoul (16 Sept 2017)
- Session Chairman for Special Proctor Lecture by Prof. Del Fredlund (18 Sept 2017), 19th ICSMGE.
- Attended special VIP dinner by Korean Geotechnical Society at Restaurant Philkyungjae (20 Sept 2017)
- Member, Planning meeting for 6<sup>th</sup> Intl. Conf. on Site Characterization (ISC-6, Budapest) in June 2018
- Participant at IS'18 Atlanta - Micro- to Macro- in Geomechanics, Academy of Medicine (10-13 Sept 2018)
- Member, Intl. Activities Comm., ISC-6 planned for Budapest for Sept 2020: [www.isc6.org](http://www.isc6.org)
- Attended meeting for ISC-6 planning, Harpa Conference Hall, Reykjavik (04 Sept 2019).

#### **A.2.4. Canadian Geotechnical Society**

- Member, Soil Mechanics Division (Dec. 2000 - present).
- Reviewer of Technical Papers for CGJ (1995 to present)
- Participant – 57<sup>th</sup> Canadian Geotechnical Conference, Quebec – Oct. 24-26, 2004.
- Reviewer of NSERC Proposals (Dec. 2006)
- Invited speaker for Cross-Canada Lecture series, Fall 2007.
- Nominator for FEIC\* Award (David Woeller), July 2015 (\*Fellow Engineer Institute of Canada)
- Attended FEIC Award for David Woeller bestowed at formal CGS awards event in Ottawa at the Westin Hotel - 12 March 2016
- Coordinated transition of new ISSMGE VP for North America: Prof. Tim Newson of Univ. Western Ontario (2017)
- Attended GeoEdmonton 2018 - 71<sup>st</sup> Canadian Geotechnical Conference (Sept 2018)

#### **A2.5. Transportation Research Board**

- Member, Transportation Research Board (TRB), Washington, D.C., 1987-2014.
- Member, Soil Properties Committee A2LO2, 1990-present.
- Friend of A2K03, Foundations Committee, 1995-present.
- Member, Site Characterization Committee, A2L01, 1998-present.
- USUCGER PhD Geotechnical Research Sessions, Jan. 7, 2001.
- GATI Reception, TRB Annual Meeting, January 2003.
- USUCGER PhD Research Sessions, January 12, 2003.
- Paper Review for Committee AFP30 on Soil and Rock Properties, September 2004.
- Author for TRB NCHRP Synthesis on CPT (Jan 2006 - Dec. 2007).
- Reviewer of papers for annual conferences (*Transportation Research Records*). 2011, 2016, 2018, 2019
- Assisted in preparation of Research Needs Statement on CPT for AFP 30 with M. Mulla - NCDOT (Feb 2017)

#### **A2.6. International Association of Foundation Drilling**

- Member, International Association of Drilled Shaft Contractors (ADSC), Dallas, TX, 1994-Present.
- Technical Affiliate, 1995-present.
- Workshop Participant, Geotechnical faculty continuing education program at Fort Collins & Colorado State Pingree Park, CO, July 2000.
- Organizing Committee for Joint ADSC-ASCE Conference: GeoSupport 2004, Meeting held in Orlando, Feb. 26-27, 2003. Editor for Proceedings published as GSP 124 by ASCE.
- Organizing Committee for Joint ADSC-ASCE-PDCA Conference: Planning meeting held at GT CEE in May 2008.
- Seminar Participant for Drilled Shaft Foundations, Best Western Perimeter, Atlanta (Nov. 2008).
- Chair and Technical Session Coordinator for In-Situ Testing and Problematic Soils, IFCEE'09 (March 15-19, 2009).
- Organizing committee for technical program (IFCEE'15, San Antonio)

**A2.7. Virginia Society of Professional Engineers (VSPE/NSPE) - 1978-1986**

- Elected to Board of Directors, Northern Virginia Chapter, 1979-1982.

**A2.8. Deep Foundations Institute (DFI)**

- Member of deep foundations society on driven piles and drilled shafts, Dec. 2000- present
- Speaker for DFI-PDCA seminar held in Baltimore (12 March 2010).
- Advisor to Fawad Niazi - winner of the 9th Annual DFI Educational Trust - Best Student Paper Award (30 Aug. 2011)
- Participant, DFI Annual Deep Foundations Conference, Atlanta, GA (2014)
- Member - new DFI Committee on Subsurface Characterization (2014 - present)
- Attended DFI Subsurface Characterization meeting (19 March 2015) during IFCEE, Texas.
- Review 3 papers for EEFC 2018 Conference Proceedings to be held by DFI (Dec. 2017)
- Re-review paper for DFI Conference (2018)

**A2.9. Technical Journal Referee and Refereed Proceedings**

- Reviewer, *ASCE Journal of Geotechnical Engineering*, 1982-2000.
- Reviewer, *Canadian Geotechnical Journal*, 1987- 2000.
- Reviewer, *ASTM Geotechnical Testing Journal*, 1988-2012; 2017-2019
- Reviewer, Technical Books Division, John Wiley & Sons, New York, 1990.
- Reviewer, ASCE Geotechnical Special Publications (GSP Nos. 9, 22, 30, 40, 45 and 58).
- Reviewer, *Transportation Research Record*, Washington, DC, 1990-2019.
- Reviewer, 3<sup>rd</sup> *International Conference on Case Histories in Geotechnical Engineering*, St. Louis, 1993.
- Reviewer, 13<sup>th</sup> *International Conf. on Soil Mechanics and Foundation Engineering*, New Delhi, 1994.
- Reviewer, *Soils & Foundations*, Japanese Geotechnical Society, 1994-2017.
- Reviewer, *ASCE Journal of Geotechnical & Geoenvironmental Engineering*, 1994-2019.
- Reviewer, *FHWA International Conference: Design and Construction of Deep Foundations*, Dec 1995.
- Reviewer, Book Manuscripts, Prentice-Hall, Salt Lake City, 1995.
- Reviewer, *XI Pan American Conf. on Soil Mechanics & Geotechnical Engineering*, Brazil, Aug. 1999.
- Reviewer, *Geotechnical & Geological Engineering*, Kluwer Academic Publishers, Netherlands, 2000.
- Organizing Committee, *ASCE Geotechnical Special Committee No. 118*, 2002.
- Reviewer for *GeoSupport 2004* papers (GSP 124), 2003 – 2004
- Reviewer for ISSMGE papers on site characterization for ISC proceedings: 1998, 2004, 2008, 2012.
- Reviewer for *Geotechnique* papers, 2004 - 2017.
- Reviewer for Proposal Book on SPT-CPT for *ASCE Press*, January 2005.
- Reviewer for ISFOG proceedings paper, 2005.
- Reviewer for Australian Research Council (ARC) proposals for funding, 2006.
- Review of selected papers for DMT 2006 conference proceedings.
- Review of paper for *Intl J. Pavements* (Oct. 2006)
- Review of papers for *Geotechnique* (2006 - 2012, 2016-2019)
- Review of multiple papers for *Canadian Geotechnical Journal* (2000-2019).
- Paper reviews for *ASCE Journal of Geotechnical & Geoenvironmental Engineering*, (2000-2019).
- Reviewers: *Geomechanics & GeoEngineering* (2006 - 2014).
- Reviewer of proposals, *NSERC - Canadian National Research Council*, Feb. 2007.
- Reviewer: *International Journal for GeoEngineering Case Histories* (2007, 2009, 2010, 2012, 2015).
- Panel Reviewer: Proposals to the U.S. Geological Survey, Reston, VA (July 2009).
- Reviewer of papers: *Engineering Geology* international journal, Elsevier (2010-2018).
- Paper reviewer: *Journal of Engineering Mechanics*, ASCE (2010).
- Paper reviewer: *Transportation Research Record* (2010, 2016, 2019).
- Review of paper for Proceedings, CPT'10 (2009-2010).
- Reviewer of papers for *Geophysics* (2011-2012)
- Reviewer for papers in *Intl. J. Numerical & Analytical Methods in Geomechanics* (2011)

- Review of paper for *Computers & Geotechnics* (2011-2013)
- Paper Reviewer for: ASCE Geotechnical Special Publication in honour of R.D. Holtz (2012)
- Reviewer of technical papers for *Acta Geotechnica* (2012 - 2017)
- Review of papers for *Geotechnique Letters* (2012, 2015, 2019)
- Reviewer of papers for 2012 GeoCongress, ASCE (Oakland)
- Review and Session Chairman for papers - 2014 GeoCongress Atlanta.
- Session Chair and Reviewer of papers for 2015 IFCEE San Antonio.
- Review of paper for the DFI Journal - Deep Foundations Institute (2015).
- Reviewer of papers for *Geotechnical Engineering*, intl. journal published by ICE London (2014-2016).
- Reviewer of paper for *Geomechanics & Engineering* (2016).
- Reviewer for *International Journal of Geomechanics* (2016 - 2019).
- Reviewer for journal papers - *Soils & Rocks* (2017 - 2018)
- Review for proceedings papers submitted to CPT'14, Delft (2018)
- Reviewer for paper submitted to *Journal of Zhejiang University* (July 2017).
- Book review for Taylor & Francis Group, London (2018-2019)
- Reviewer of journal manuscripts for AIMS Geosciences (2019).

#### **A2.10 Federal Highway Administration - U.S. Department of Transportation**

- ◆ Technical Advisor, *FHWA CPT Users Group for Cone Penetrometer Testing*. Includes quarterly meetings by TeleConference with DOT Geotechnical Engineers from MN, LA, FL, IN, CA, VA, NC, WA, MO, and others.
- ◆ VideoConference meetings held. Important dates of activities:
  - 11 June 2008 - Initial establishment with Dr. Naser Abu-Hejleh of the FHWA
  - 30 September 2008 - Presentation by Michael McVay, Florida DOT
  - 04 March 2009 - Presentation by Darrick Dasenbrock, Minnesota DOT
  - 30 June 2009 - Presentation by Murad Abu-Farsakh, Louisiana DOT
  - 09 December 2009 - Presentation by Professor Rodrigo Salgado, Purdue University and Indiana DOT
  - 12 April 2010 - Presentation by Kevin McLain, Missouri DOT
  - 30 September 2010 - Presentation by Professor Paul W. Mayne, Georgia Institute of Technology.
  - 15 June 2011 - Presentation by Prof. Anand Puppala, Univ. Texas - Arlington
  - 10 November 2011 - Presentation by Mickey Cronin, Ohio Dept. of Transportation
  - 23 Sept 2015 - Planning for CPT session at transportation geotechnics session, Indianapolis
  - 12 Dec. 2016 - Video Conf. Presentation: "Evaluation of total and effective strength parameters of soft clays from CPTu" by P.W. Mayne; FHWA CPT Users Group.
  - 12 Feb 2018 - participant in FHWA Users Group: Video Presentation and Discussion "Role of Cone Penetration Test (CPT) in Highway Bridge Design in California." By Dr. Sharid Amiri from Caltrans

#### **A2.11 Network for Earthquake Engineering Simulation (NEES)**

- Member, Individual Member, 2003.

#### **A2.12 Society for Underwater Technology**

- Member, Scientific Committee 2016 - 8th Intl. Offshore Site Investigation and Geotechnics Conference, 12-14 September 2017, Royal Geographical Society, London. <http://www.sut.org/event/osig2017>

#### **A2.13 Editorial Board Memberships**

- *Editorial Board Member*, Journal of Geotechnical Engineering Division, ASCE, 1983-1988.
- *Editorial Board Member*, ASTM Geotechnical Testing Journal, 1986-2000.
- *Associate Editor*, Journal of Geotechnical Engineering, 1992-1993.
- *Editor*, Journal of Geotechnical Engineering, 1993-1994.
- *Editorial Board Member*, Electronic Journal of Geotechnical Engineering, 1996-2003: [www.ejge.com](http://www.ejge.com)
- *Editorial Board Member*, International J. Geoengineering Case Histories (2004-2018): [www.geoengineer.org](http://www.geoengineer.org)



- *Editorial Board: Geomechanics & Geoengineering: an international journal* (2006-2018): [www.tandf.co.uk](http://www.tandf.co.uk)

#### **A2.14 Advisory Boards**

- Meeting September 17, 1998 at Center for Earthquake Research and Information (CERI), University of Memphis.
- Memphis-Shelby County Seismic Hazards Mapping Project, U.S. Geological Survey, Memphis
- Meeting November 10, 1998 at CERI.
- Meeting April 22, 1998 at CERI
- Panel Board to CALTRANS (with Dr. Bengt Fellenius, Dr. Mike O'Neill, Dr. Don Anderson) for Prof. Roy Olson & Rollins Brown/Univ. of Texas Austin: Axial Pile Load Test Study in California, June 1998-July 2001.
- USUCGER Advisory Board, 2003-2004: [www.usucger.org](http://www.usucger.org)
- *Invited* U.S. Correspondent for *Geotechnique* (Institution of Civil Engineers, London), 2004-2007.
- Advisory role for in-situ testing, Markermeer Dikes/Levees for Deltares (GeoDelft), The Netherlands (2011)
- Intl. Scientific Board - 4<sup>th</sup> International Symposium on Cone Penetration Testing, TU-Delft (2017-2018).

#### **A2.15. Other Involvement**

1. Technical Reviewer for Individual Unsolicited NSF Proposals, 1987-present.
2. NSF Participant, Workshop on "Designated Sites for Geotechnical Experimentation in the U.S.", University of New Hampshire, September 1988.
3. NSF Participant, Workshop on "Site Improvement and Foundation Remediation in Seismically Hazardous Areas", University of Washington, Seattle, August 1991.
4. Reviewer, Technical Proposal, Louisiana State Board of Regents, February 1992.
5. NSF Panel Reviewer for Proposals submitted to Geomechanics Division, June 1992.
6. NSF Participant, Workshop on US-China Cooperation in Geotechnical Engineering, Tongji University, Shanghai, China, September 1992.
7. NSF Participant, Workshop on US-Brazil Cooperative Research on Structured and Residual Soils, CEMIG, Belo Horizonte, Brazil, November 1992.
8. NSF Panel Reviewer for Proposals submitted to Geomechanics Division, January 1993.
9. Reviewer, Geotechnical Proposals, Research Grants Council, Hong Kong, February 1993.
10. Participant, ASCE CERF Task Force on Geo-Engineering, Workshop in Leesburg, Virginia, May 1994.
11. Reviewer for Proposals, US Army Research Office, Raleigh, August 1995.
12. Member of NSF Task Force for final review of Offshore Technology Research Center (University of Texas/Austin and Texas A&M), June 1997.
13. Proposal review for the *American Chemical Society*, Petroleum Fund, January 1999.
14. Invited Reporter on Ground Characterization, Pan American Conference on Soil Mechanics & Geotechnical Engineering, Brazil, August 1999.
15. Discussion Leader and Participant, NSF Workshop on Autoadaptive Media in Geotechnical Earthquake Engineering, Austin, TX, January 10, 2001.
16. Participant, ASCE Deep Foundations Conference, Orlando, Feb. 2002.
17. Panel Member, NSF CMS Review, March 10-12, 2002.
18. Participant, NSF Workshop on Constitutive Modeling & Numerical Simulation, Johns Hopkins, Nov. 2005.
19. Reference Letters for Tenure & Promotion of various geotech faculty in the U.S.A., 2002-2018 (List confidential)
20. Reference Letters for PhD candidates to universities in USA and international centers (2018-2019); confidential.

### **B. Public and Community Service**

1. Consultant (with Dr. Larry Kahn) for GTRI/BRO Assistance Program to McIntosh County, Darien, GA on design and construction of a new riverfront bulkhead, 1991.
2. Tour Guide of Geotechnical Labs, Rowland Elementary Schools, May 15, 1991.
3. Presentation and Tour of Geotechnical Facilities, Canby Elementary Schools, May 16, 1991.
4. Coordinator of Task Committee for Drilled Shaft Load Test Program: Association of Drilled Shaft Contractors (ADSC) and ASCE Atlanta Geotechnical Section, 1992 conducted at Georgia Tech campus, 1992-1993.
5. Ground Vibration Study, E.A. Weiler Residence, 650 Windsor Parkway, Atlanta, Georgia; for Office of the

- President, Georgia Institute of Technology, July 1993.
6. Geotech Lab Tour Guide, Pre-College Engineering Program (PREP), June 1994.
  7. Lab Tour Guide, Minority Introduction to Engineering (MITE), June 1994.
  8. In-Situ Testing & Foundation Report, 10<sup>th</sup> Street Pedestrian Bridge, Atlanta, Feb. 1995.
  9. United Way Campaign, CEE Faculty Contact Representative, Fall 1995.
  10. Grounds Committee, Hanover Woods Subdivision, 1995.
  11. Eulogy for Em. Prof. George F. Sowers at Northside United Methodist Church, Oct. 26, 1996.
  12. Pool Landscape Committee, Hanover Woods & Spring Creek Subdivisions, Marietta, GA, 1997.
  13. Repair Committee, Sedalia Park Elementary School, East Cobb County, Georgia, March 1998.
  14. Lectures on Rock Mechanics to three Grade 6 classes, Haynes Bridge Middle School, Alpharetta, May 1998.
  15. Geotechnical Engineering Presentation, ASCE Student Member Chapter, Georgia Tech, Feb. 1999.
  16. ASCE Student Chapter, presentation on *Geotechnical Engineering*, Sept. 2000.
  17. PTA member, Sedalia Park Elementary School, 2001-2003.
  18. Hanover Woods, Grounds Restoration Committee, Pool & Tennis Association, 2001.
  19. Videocam Operation, Annual Talent Show, Sedalia Park, March 2002.
  20. Chaperone, *Science Olympiad*, Cobb County Elementary Schools, Southern Tech, June 2002.
  21. *Powersurge* musical ensemble, Powers Ferry United Methodist Church, Marietta, 2003-2011.
  22. Tour host, 6<sup>th</sup> grade science classes from East Cobb Middle School to Georgia Tech, April 2004.
  23. *Powersurge* Service at Fairburn UM Church, Sept. 12, 2004.
  24. Videocam Operation, Fall Chorus Show, East Cobb Middle School, Dec. 16, 2004.
  25. Tour host, 6<sup>th</sup> & 7<sup>th</sup> grade science classes, East Cobb Middle School to GT Plasma Lab, March 2005.
  26. Earth Day Celebration - Music Quartet - Dr. Neitzel & Dr. Mayne - Student Center - April 2006.
  27. Lecture to 8th Grade Engineering Class, East Cobb Middle School (Fred Stillwell), May 2006.
  28. Earth Day - Live Performance (*Dr.Dr.Mr.MD*). Professors Neitzel (ME) and Mayne (CEE) - April 2007.
  29. Advice to Marie Mecham, homeowner in western Georgia (2007)
  30. Mechanical Engineering "Social Orientation" (outside of Love Building) - *Dr.Dr.Mr.MD* - August 2007.
  31. Home inspection and advice: Paul Hewitt - GT Coach, west Cobb County, GA (2007).
  32. Earth Day - Live Performance (*Dr.Dr.Mr.MD*). Professors Neitzel (ME) and Mayne (CEE) - April 2008.
  33. Banquet Dinner - Entertainment Variety Show - The Biltmore (4th DCG) - 24 Sept. 2008.
  34. Wheeler HS Chorus Event, Cobb. County - played bass accompaniment "Skatin' with my baby" - Dec. 2008.
  35. Earth Day - Live Performance (*Dr.Dr.Mr.MD*). Professors Neitzel (ME) and Mayne (CEE) - April 2009.
  36. Advisor, Foundation Re-Design and Load Tests using O-cell, Clough Center, Georgia Tech - Sept - Dec. 2009.
  37. Reunion band for 40th anniversary graduation: Cherry Hill HS West '70, Mt. Laurel, NJ 01-02 May 2010.
  38. Host of Georgia Tech Geotechnical Society - spring picnic in Marietta, GA: 17 April 2011.
  39. Live Performance at Earth Day (*Dr.Dr.Mr.MD*) at ISyE quad on GT campus (22 April 2011).
  40. PhD signing for EIT exams - CEE students (28 April 2011).
  41. Fund Raiser: Georgia Cancer Specialists (31 July 2011) in Dallas, GA with the band: "*Screaming Daddies*".
  42. Fund Raiser Event: Underprivileged Children of Cherokee County with the band "*Out of Nazareth*" (25 Sept 2011) at Boling Park: <http://www.serviceleague.net/Riverfest-2011.htm>
  43. Benefit: Rocktoberfest at Mountain View United Methodist Church (08 Oct 2011) by band "*Out of Nazareth*"
  44. Live Performance at Earth Day (*Dr.Dr.Mr.MD*) at the Camponile on GT campus (20 April 2012).
  45. Performance at Melia Hotel for CEE Holiday Party with band: "*The Maniacs*" (30 Nov 2012).
  46. Musical performance - pool party - Wyndcliff Subdivision, Cobb County, GA 17 Aug 2013.
  47. Hosted Geotech Fall Bash - GT Geotechnical Society - Marietta, GA (24 Aug 2013).
  48. Participant - 2014 Sowers Symposium, GT Ballroom and Auditorium (06 May 2014)
  49. Hosted Geotechnical Fall Party - GT Geotechnical Society, Marietta, GA (23 Aug 2014).
  50. Hosted\* tour of 55 GT Students via coach bus to the new Falcons Stadium under construction (16 Sept 2014).
  51. Goodbye dinner for Carlos & Cecilia Santamarina to KAUST, Marietta GA (17 Jan 2015).
  52. Musical entertainment - *GT Earth Day* at Student Center (Dr.Dr.Mr. MD) - 17 April 2015.
  53. Hosted\*tour of 45 GT Students via coach bus to ground improvement site, Juniper St. Atlanta (01 Oct 2015).
  54. GT Faculty Women's Club - Holiday Party setup and cleanup committee - Dec. 2015.
  55. Musical entertainment - *GT Earth Day* at Student Center (Dr.Dr.Mr.MD with Murray Dabby) - 22 April 2016.
  56. GT Geotechnical Society - Fall 2016 Social - held at Prof. H. Huang's house (24 Sept. 2016).
  57. Hosted\* tour of 40 GT Students to ground improvement site at the Masquerade, Atlanta with ASCE Geo-Institute Georgia Section (20 Sept. 2016). \*Note: jointly organized with Prof. Haiying Huang/CEE
  58. Musical band for GT Campus Services Holiday Party (the band Dr.Dr.Mr.MD featuring Chris Hartmann),

- Student Center Ballroom (07 Dec. 2016).
59. GT Geotech Society - Holiday party at Prof. J. David Frost house (17 Dec. 2016).
  60. Musical entertainment - *GT Earth Day* at Campanile (Dr.Dr.Mr.MD) - 21 April 2017.
  61. GT Geotech Society - Spring Party at our house in Marietta (13 May 2017).
  62. Attended the GTFWC Holiday Party hosted by Prof. Edwin Romeijn, chair ISyE (13 Dec 2017)
  63. Fund-raising musical event for Marietta Museum of History (10 March 2018)
  64. Musical entertainment - *GT Earth Day* at Campanile by the band "Dr.Dr.Mr.MD" (22 April 2018)
  65. Host welcome dinner for new assistant professor Jorge Macedo for GeoFaculty (02 Sept. 2018)
  66. Musical entertainment for IS'18 Atlanta banquet at Ponce City Market (11 Sept 2018).
  67. Attended the GTFWC Holiday Party (12 Dec 2018)

## C. INSTITUTE CONTRIBUTIONS

### C1. Program Development

- Dr. Mayne prepared the revised geotechnical program of 14 graduate classes to the GT Graduate Committee and Registrar for 1995-1996 General Catalog.
- From 2000-2006, Dr. Mayne served as group leader for the CEE Geosystems Engineering Group comprised of 46 graduate students, 7 faculty (including hires Jan. 2002, May 2004, July 2004, June 2006), two technicians, one administrative aide, and 11 laboratories. Details at: [www.ce.gatech.edu/~geosys](http://www.ce.gatech.edu/~geosys)
- Interim team leader (Sept. 2010-Dec. 2010) for geosystems engineering (Note: while Dr. Rix in Pavia)
- GTPE Courses on Civil Engineering, Global Learning Center, Georgia Institute of Technology
- New Revised Course Descriptions: <https://pe.gatech.edu/subjects#engineering>
  - Geotechnical Foundation Systems: COURSE ID: CIVE 2004P
  - Enhanced In-Situ Geotechnical Testing: COURSE ID: CIVE 2001P

### C2. Institute and School Committees

#### *Georgia Institute of Technology*

1. Graduate Committee, School of Civil & Environmental Engineering, 1990-1994.
2. Co-Founder, GT Geotechnical Society (with Dr. G.J. Rix), September 1990.
3. Seminar Chairman, Geotechnical Society Lectures, 1990-1993.
4. CEE Capstone Course Committee, Senior Design Projects, 1992.
5. Co-Advisor, ASCE Regional Student Chapter, Geotechnical Competition, 1993.
6. CEE Ad-Hoc Math Committee, 1993-1994.
7. Sensors Committee, Office of Environmental Science and Technology Program, 1994.
8. CEE Faculty Representative, GT Commencement Program, June, 1994.
9. Awards Committee, School of Civil & Environmental Engineering, 1994-1996.
10. Organizing Committee and Scientific Committee, International Conference on Environmental Remediation: Plasma Systems & Applications (co-sponsored with University of Bordeaux I, France), Atlanta, 1994-1995.
11. CEE Laboratory Safety Committee, 1995-1996.
12. CEE Ad-Hoc Committee, Geostatistics for Semesters Conversion, Dec. 1996.
13. Geosystems Engineering Coordinator, Graduate Student Applicants, 1996-1999.
14. CEE Faculty Representative, GT Commencement Program, August 1997.
15. CEE Graduate Committee, Jan. 1997-2000.
16. CEE Committee for the First George F. Sowers Lecture by President G.W. Clough, April 22, 1998.
17. Special Lecture Coordinator for "Geotechnical Engineering in the 21<sup>st</sup> Century" by Prof. G.W. Clough, April 6, 1999.
18. Lecture on "In-Situ Plasma Remediation of Contaminated Soils" to Environmental Engineering CEE 8002, April 16, 1999.
19. CEE Host for the Second G.F. Sowers Lecture by Prof. J. Mike Duncan, May 17, 1999.
20. Lecture on "Nontransferred Arc Plasma Applications in Civil Engineering" to NE 6618, Fusion Center, May 25, 1999.
21. Chair, CEE Awards Committee, September 1999-2001.
22. Chair, College of Engineering, Tenure & Promotion to Full Professor Committee, June 2000-June 2001.
23. Member - College of Engineering, Tenure & Promotion Committee, June 2001-June 2002.
24. Host Member for Sessions at Sowers Symposium and ASCE Anniversary Celebration, GCATT, May 2002.
25. Member of CEE Promotion & Tenure Committee, 2001.
26. Host for Geotechnical Tour, CEE Graduate Committee Invite on Graduate Student Interviews, Feb. 7, 2003.
27. Member of CEE Undergraduate Committee, 2003-2004.
28. Chair, Geosystems Engineering Awards Committee (Sowers, Lai, & Barksdale Awards), April-May 2004.
29. Member of CEE Promotion & Tenure Committee 2003-2005.

30. Member GeoFaculty Search Comm, 2006.
31. Member, CEE iii/SAC Ad-Hoc Committee on 680's, August 2004 to 2007.
32. Member, CEE Awards Committee (2007 to 2011)
33. Chair, Geosystems Sowers Award Committee (May 2009).
34. Interim Group Leader, Geosystems Engineering, GT (Sept-Dec. 2010).
35. Elected member: Reappointment-Promotion-Tenure Committee, Civil & Environmental Engineering (2010-2011).
36. Graduate Applicant Coordinator, Geosystems Engineering, CEE/Georgia Tech (2010-2011).
37. Instructor for Chi Epsilon Review Session (Fundamentals Exam Review: geotechnical engineering), Oct. 13, 2010.
38. Member - CEE Graduate Committee - School of Civil & Environmental Engineering (2010-2011).
39. Instructor for Chi Epsilon Review Session (Fundamentals Exam Review: geotechnical engineering), Mar 28, 2011.
40. CEE-Arch Construction Committee (Integrated Program at GT), May 2012-present
41. Instructor for Chi Epsilon Review Session (Fundamentals Exam Review: geotechnical engineering), April 5, 2012.
42. Chair - Area Committee Letter for CEE candidate - June - Sept 2012.
43. Member- interview search team - GT/CEE geosystems engineering (2014).
44. Member of Periodic Peer Review (PPR) Committee for CEE (elected 2014-2017). Chair (2015).
45. Liaison – CEE – GTPE, Georgia Tech Professional Education (2013-2016).
46. Organizer of field demonstrations of CPTu, CiSCPTu, and MASW at W21 Parking Lot for GT Students (22 April 2015).
47. Host for four visitors from Norwegian Public Roads Administration (April 2015).
48. Area Committee Letter Author for Geofaculty Member at GT CEE (July 2015).
49. Member of CEE Capstone Project Review Committee (Fall 2015). Instructors: M. Rodgers and K. Watkins.
50. Member to CEE SAC - December 2017 (chair: Prof. Herman Fritz).
51. Attended the 20th Sowers Symposium at the GT Academy of Medicine (09 May 2017); held annually by GT Geosystems and ASCE Atlanta Geo-Institute Section
52. Hosted GT Geotech Society spring party at our house in Marietta for about 50 students & family members (13 May 2017)
53. Attended good-bye party for Dean Gary May who became chancellor at U-Cal-Davis (13 July 2017 at GT Academy of Medicine).
54. Meeting with Univ. Panama and Georgia Tech at Nanotechnology 1117 (07 Sept 2017).
55. Attended going away dinner for Professor Leonid Germanovich at Cafe Bombay with Dr. J. D. Frost et al. (28 Sept. 2017)
56. Hosted onsite demonstration of CPT rig by EGSci at W21 test site, GT campus (26 Sept 2017)
57. Attended GT Geotech Society fall party at Dr. Frost's house (01 Oct 2017)
58. GTPE Liaison Meeting at Global Learning Center (31 Oct 2017), representing CEE
59. Attended GT Geotechnical Poster Session with ASCE Atlanta Geotechnical Section members (10 Nov 2017)
60. Member, Geofaculty Search Committee for CEE (Fall 2017-Spring 2018)
61. Attended GT Geotech Society - Winter social event at home of Dr. Susan Burns (13 Jan 2018).
62. Member of CEE SAC - elected chair (June 2018).
63. Attended the 21<sup>st</sup> Sowers Symposium at the GT Academy of Medicine (08 May 2018); held annually by GT Geosystems and ASCE Atlanta Geo-Institute Section
64. Chair, Instructor selection committee for CEE 4405 - Summer 2018 term for 5 candidates with Dr. T. Sturm and Dr. L. Rosenstein (13 April 2018)
65. Attended GeoParty sponsored by Prof. H. Huang for GT Geotechnical Society (12 May 2018)
66. Area Committee Member for promotion of Dean N. Baker (09 August 2018)
67. Attended the 22<sup>nd</sup> Sowers Symposium at the GT Academy of Medicine (07 May 2019); held annually by GT Geosystems and ASCE Atlanta Geo-Institute Section
68. CEE Review Committee (08 Oct 2019) to interview PhD candidates and select Instructor for Def Bods - Spring 2020 (Committee = Prof. Kevin Haas; Prof. Phanish Suryanarayana, Prof. Paul Mayne)
69. Attended GT Geotech Student Poster Session and ASCE G-I meeting at Georgia Power Building: 12 Nov. 2019

#### **D. Professional License and Registration**

- P.E. Registered Professional Engineer, Commonwealth of Virginia – 1983; License No. 0402-013865. (issue 18 Feb. 1983; current to 2020).
- P.E. Registered Professional Engineer, District of Columbia – 1981; License No. 7731 (issued 16 June 1981).

#### **E. Engineering Consulting (since 1989)**

1. John P. Stopen Structural Engineers: "Interpretation of Piezocone Soundings for Carousel Mall", Syracuse, NY; 1989.
2. Empire State Electric Energy Research Corp: "Interpretation of In-Situ Test Results", Transmission Tower Foundation Load Test Project, New York State Electric, Elmira, New York, 1989.
3. Law Engineering, Chantilly, VA: "Dynamic Compaction Operations and Ground Vibration Control", Mt. Storm Power Facility, Grant County, WV, Jan. 1992.



4. Morris-Shea Bridge Company, Birmingham, AL: "Cone Penetration Tests for Bridge Pile Foundations", Plymouth, NC, Aug. 1992.
5. J.S. Jones & Associates, Purcellville, VA: "Interpretation of Piezocone and Dilatometer Soundings", Michigan DOT, Project, Port Huron, MI, Feb. 1993.
6. Virginia Geotechnical Services, Richmond, VA: "Piezocone Interpretation and Analysis", US Army Corps of Engineers, Indefinite Delivery Contract, Craney Island Reclamation, Virginia, Awarded August 1995.
7. Satellite Antenna Foundations for Goodson & Associates and Scientific Atlanta in Thornton/CO, AF-Nevada, Fairbanks/Alaska, and Oklahoma City, 1996-1997.
8. Parsons-Brinckerhoff, New York: Review of Seismic Piezocone Testing & Interpretations for Cooper River Bridge, Charleston, SC May 1998 - Jan. 2001.
9. Schnabel Engineering Associates, Virginia: "Deformation Analysis of Sheet Pile Cofferdam, Whitewater Dam, Macon County, Georgia", Oct. 1998 - June 1999.
40. URS-Greiner-Woodward Clyde and FHWA, "Site Characterization and Ground Modification Program for the Virginia Approach to the Woodrow Wilson Bridge", Oct. 1998 - June 2000.
41. Trigon Engineering Consultants, "Harris Blvd Office Complex", Charlotte, NC, July 2000.
42. Ardaman Associates, "Pile Capacity by Seismic Cone Tests, Trinidad", June-Aug. 2000.
43. Salut Inc. and FHWA "Axial Pile Response of James River Bridge", Aug-Dec. 2000.
44. Virginia Geotechnical Services and VA DOT: "Pinners Point Interchange, VA", Jan. 2001-August 2001.
45. Southern Companies/Georgia Power: "Wansley Plant Foundations, Newnan, GA", May 2001-Sept. 2001.
46. Modjesky & Masters, VDOT, Mactec/Law and SES: "Gilmerton Bridge, Chesapeake, VA", Nov. 2002 to Dec. 2003.
47. Hartsfield Atlanta International Airport (HAIA) for Archer-Western: Runway 5 Development, Feb. 2003 – June 2003.
48. Port of Anchorage Expansion, 2003-2006, Alaska for Terracon/Titan Atlantic.
49. Failure investigation: Berth 8 mooring dolphins, Savannah, Georgia, 2004-2005.
50. Failure investigation: Wellons Forehand Route 17 Bridge & Embankments, Chesapeake, VA 2004-2005.
51. CPTs for Dynamic Compaction at Bahia Beach, Puerto Rico for GeoCim Engineers, 2005.
52. SDMTs and SCPTUs at SRS, Aiken, SC for Parsons Group-Shannon & Wilson-GeoSyntec, 2006.
53. Senior Visiting Principal, Coffey & Partners, Brisbane and Chatsworth, Australia (2007).
54. Offshore data evaluation of unit weight from CPTU soundings, Fugro Engineers BV, Holland (2008).
55. Interpretation Methodologies for Cone Penetrometer Testing, ConeTec, Vancouver (2009).
56. Piezocone dissipation evaluation, NC Dept. of Transportation and S&ME, North Carolina (2010).
57. Evaluation of porewater pressures during penetration, Fugro Engineers, The Netherlands (2010).
58. Piezocone dissipation evaluations at Mer Bleue, Ottawa: Golder Associates (2011).
59. Expert geotechnical testimony - CPTs at Port Montevideo, Jan de Nul, Belgium (2010-2012).
60. Geotechnical consultancy, ConeTec Investigations (2012-2017)
61. Geotechnical review of Site Characterization Data for Washington State Bridge, Kiewit Engineers (2013).
62. Geotechnical expert for Woods & Aitken LLP, Omaha, NE (2014).
63. Geotechnical advisor, CPTu and Lab Data, BR Dam, GeoSyntec (2015).
64. Expert Testimony for Greenfield, Bost & Kliros, PC, Excavation for Stormwater Project in Decatur, Georgia (2015-2016).
65. GeoSyntec Consultants, advice on interpreting CPTu and Triaxial Data, Blue Ridge Dam Review, Georgia (2015).
66. Geotechnical expert to McDowell, Rice, Smith & Buchanan, Kansas City, regarding Anchorage lawsuit (2015-2016).
67. Geotechnical expert to Hudson-Parrott-Walker regarding Sun City lawsuit (2017).
68. Geotechnical expertise to Chubb Group on dock failure, Amapa Port of Santana, Amazon River (2017).
69. Geotechnical advice on CPT data from copper tailings to Klohn Crippen Berger Ltd., Australia (2017).
70. Geotechnical analysis of PMT and SPT data, GADOT 400 Retaining Wall Settlement, North Perimeter Contractors (2018).
71. Geotechnical consultancy to ConeTec Group, Richmond, BC (2018)
72. Consultant to The Collin Group, Maryland concerning CPTs in Norfolk, VA (2019)
73. Consultant to Klohn, Crippen, Berger concerning CPT in tailings, Australia (2019).
74. Geotechnical Review, CPTs for Vibrocompaction, Menard Group, Paris (2019).

## VII. GRANTS AND CONTRACTS

### A. AS PRINCIPAL AND CO-PRINCIPAL INVESTIGATOR

#### Principal -- Funded

1. Profiling Stress History of Clays Using Dual Piezocone Penetrometers  
National Science Foundation/Geomechanics Program: Amount: \$128,000 (1991-1994)
2. Optimization and Analysis of LLWAS Pole Foundation System (with Dr. R.C. Bachus)  
Federal Aviation Administration, Southern Region, Atlanta, GA; Amount: \$30,000 (1991-1992)
3. Axial Load Response of Drilled Shaft Foundations in Piedmont  
International Association of Drilling Contractors, Dallas, TX; Amount: \$1,000 (1992)



4. Behavior of Drilled Shaft Foundations in Piedmont Residuum  
Federal Highway Administration, McLean, VA; Amount: \$10,000 (1992-1993)
5. National Young Investigator (NYI) - National Science Foundation  
Engineering Directorate, Geomechanics Program, Washington, D.C.  
Amount: \$500,000 (1992-1999); includes matching from industry
6. U.S.-Taiwan Geotechnical Engineering Collaboration  
National Science Foundation, Arlington, VA; Amount: \$74,400 (1995)
7. Plasma Vittrification of Geomaterials  
Federal Highway Administration, Washington, D.C. Amount: \$75,000 (1994)
8. International Environmental Conference on Plasma Remediation  
Federal Highway Administration, Washington, D.C. Amount: \$3,000 (1995)
9. Seismic Piezocone Tests at Three Bridge Sites, Hayti, Missouri  
Missouri Dept. of Transportation, Jefferson City; Amount: \$5,000 (1996)
10. Seismic Piezocone Testing for Site Improvement Program, EcoElectrica, Penuelas, Puerto Rico  
GeoCim, Black & Veatch, and Dames & Moore Group; Amount: \$53,050 (1996-1998)
11. Development of a Piezovibrocone for In-Situ Evaluation of Liquefaction Potential  
Joint proposal between Georgia Tech & Virginia Tech (PI: Prof. Jim Mitchell)  
US Geological Survey NEHRP; Amount: \$65,000 (1997) and \$20,000 (1998)
12. Seismic Piezocone Tests, Jackson County Turbines  
Southern Company Services, Atlanta; Amount: \$3,500 (1998)
13. Soil Liquefaction Assessment by Piezovibrocone Penetrometer: Joint proposal submitted to NSF Earthquake  
Hazard Mitigation Program by Georgia Tech/Virginia Tech. Amount: \$160,100, 2 years (1998)
14. Liquefaction Response of Soils by Seismic Piezocone Tests  
Mid-America Earthquake Center (MAEC) Project GT-3; Amount: \$100,000 - 2 years (01/98-12/99)
15. Shear Wave Velocity Profiles: Marriott Hotel, Memphis Dames & Moore Group, San Francisco  
Amount: \$4,500 (June-August 1999)
16. Liquefaction-Induced Permanent Deformations  
Mid-America Earthquake Center (MAE) project GT-12; Amount: \$120,000 - 3 years (10/99-09/02)
17. Hazard Mapping of Memphis & Shelby County/TN by CPTs  
U.S. Geological Survey, Central Region; Amount \$70,000 (2000)
18. Seismic Hazard Mapping of New Madrid Seismic Region by SCPTus  
U.S. Geological Survey, Central Region; Amount \$70,000 (2001)
19. Ground Deformation Modeling (HD-7a); Mid-America Earthquake Center (2002-2005)  
Amount: \$ 155,000 (3 years).
20. Cone Penetration Testing for Highway Bridge Pile Foundations  
Georgia Department of Transportation, May 2002- May 2003. Amount: \$47,300 (1 year).
21. Seismic Flat Dilatometer & Piezocone Tests at Treporti Embankments, Italy  
Italian Ministry of Defense and L'Aquila University; June 2002 – August 2002: Amount: \$7900 + \$5000.
22. In-Situ Testing Verification of Dynamic Compaction at Hartsfield Runway 5  
Archer Western Contractors, Atlanta, GA; May – July 2003: Amount: \$15,000
23. Geotechnical Site Characterization for Integrated Excavation Tools  
National Science Foundation/CMS Geomechanics Program; Funded: 2004: Amount: \$38,919
24. Cone Penetration Testing for Dynamic Compaction – Marietta Street Dorm Foundations  
ECS Engineering Consultants, Marietta, GA; Funded: 2004: Amount: \$10,500.
25. Performance of Highway Underdrains in Georgia  
Georgia Dept. of Transportation – Georgia Transportation Institute; funded: 2005-2007: Amount: \$233,000.
26. Enhancements to Shear Wave Measurements  
National Science Foundation; Requested: \$85,000, Sept. 2006 (unfunded).
27. Geotechnical Site Characterization by Cone Penetrometer Testing  
New Orleans East Levees - USACE and URS Corporation; 2006-2007: funded: \$42,000
28. Characterization by Piezocone and Vane Shear Testing  
New Orleans Citrus Land Levees - USACE and Terracon Corporation; 2006-2007: funded: \$40,000
29. Site Characterization by Piezocone Penetration Tests  
New Orleans Plaquemines Parish Levees - USACE and Arcadis; 2007: \$62,000 unfunded.
30. In-Situ Testing Short Course, Minneapolis (with Dr. Alec McGillivray)  
Minnesota Dept. Transportation: Requested: \$10,890 (awarded Feb 2007)

31. Cone Penetration Testing: State-of-Practice  
National Academies, Washington D.C. Requested: \$29,000 (awarded Jan 2006-June 2007).
32. Applications Manual - Engineering Design Using the Cone Penetration Test  
ConeTec Investigations, Vancouver, BC; Requested: \$20,000 (funded 2009).
33. Enhanced In-Situ Probes for Geotechnical Site Characterization at Construction Sites  
Submitted to NIST - ARRA Program Requested Amount: \$620,444 (2009); Unfunded (2011).
34. Geotechnical Foundation Systems Course: Minnesota Dept. of Transportation: \$6600 (Jan. 2011)
35. Site Characterization by Cone Penetration Tests - Indiana Dept. of Transportation: \$9100 (March 2011)
36. Upgrade of Cone Penetrometer Equipment and CPT Rig, GT Tech Fees, \$22,220 (October 2011) pending
37. Review of Lab Testing - Bootlegger Cove Formation (CH2M-Hill): \$11,111 (May-Oct 2012)
38. In-situ testing advancements, part 1, Design House Consultancy, New York (July 2013): \$45k
39. Methodology for evaluating undrained shear strength from offshore piezocone tests. Fugro Engineers, Lidschendam, The Netherlands; \$30k (Nov. 2013-Dec 2014).
40. Load Resistance Factored Design of Shallow Foundations and Walls, Georgia DOT, pending (2014).
41. Enhancements to In-Situ Geotechnical Testing, Vancouver Foundation: \$210k (2011-2014).
42. In-situ testing advancements, part 2, Design House Consultancy, New York (Sept 2014): \$45k
43. LRFD for shallow foundations, GDOT Project RP 14-26, accepted April 2015: \$ 67k
44. Advanced In-Situ Geotechnical Testing, Vancouver Foundation (15 Jan 2015). \$ 45k
45. In-situ testing advancements, part 3, Design House Consultancy, New York (Jan 2016): \$45k
46. New developments in SCPT and DMT: Vancouver Foundation (Feb 2016): \$15k
47. CPT manual for state highway geotechnical engineers, MnDOT, August 2016 - June 2018 (\$100k, shared with Co-PI Prof. David Saftner, Univ. Minnesota-Duluth).
48. In-situ testing advancements, part 4, Design House Consultancy, New York (31 Jan 2017): \$45k
49. New developments in SCPTU and SDMT: Vancouver Foundation (02 Feb 2017): \$15k
50. Additional donations made by: Dr. R. Bonaparte; GeoHydro Engineers, Ahberg Engineers, United Consulting (approx. 5k total) 2017.
51. Advancements to SCPTu and DMT by Vancouver Fdn: ConeTec Group, Richmond, BC (17 April 2018): \$15k
52. Improved interpretation of CPT data, Vancouver Foundation, (30 Jan 2019): \$15k
53. Cone Penetration Testing for Illinois, sponsored by Illinois Center for Transportation and Illinois Dept. of Transportation (Nov. 2019), with co-PIs: Dr. Sheng Dai and Dr. Jorge Macedo: \$500k (3-year project).

### **Co-Principal – Funded**

1. In-Situ Vittrification of Soils Using Plasma Arc. Focused Research Project E20-G30  
Georgia Institute of Technology. Co-PI with Dr. Louis Circeo (lead), CRC; Amount: \$20,000 (1991)
2. In-Situ Ground Modification Using Plasma Arc Technology  
Co-PI with Dr. Louis Circeo, GTRI to National Science Foundation SGER. Amount: \$29,874 (1992)
3. Geostatistical Assessment of In-Situ Engineering Properties of H-Area/ITP - Savannah River Site,  
ERDA/Westinghouse, Aiken, SC, January 1994; Co-PI with Dr. S. Rouhani/GT CEE. Amount: \$168,327 (1994)
4. Site Characterization for Nontransferred Arc Plasma Vittrification of Soils (with Dr Lou Circeo/Arch and Dr. John Nemeth/GTRI)  
Submitted: August 1996 to ERDA/Westinghouse/Savannah River Tech. Center; Amount: \$80,000 (1996)
5. Plasma Magmavication of Problematic Sedimentary Rocks (with Dr. L.J. Circeo)  
ARO Project with Plasma Processing Enterprises/Raleigh, NC  
Amount: \$100,000 (1997) – Phase I study, 6 months; Amount: \$500,000 (1999) – Phase II study, 2 years
6. Portable Plasma Remediation of Contaminated Ground and Wastes (with Dr. L.J. Circeo)  
ERDA Funding with GTRI, Westinghouse/SRS, and CRC/Arch  
Amount: \$1.35 Million – 3 years (1997)
7. Regional Site Characterization of Soils in Mid-America (with Dr. G.J. Rix, Dr. Jose Pujol, and Dr. S. Pezeshk)  
Mid-America Earthquake Center (MAEC)/ Univ. Memphis (project GT-8); Amount: \$120,000 - 3-years (10/99-10/2002)
8. Stabilization of Mudstone Landslide, Route 1, Raleigh, NC  
Institute for Transportation Research & Education; with Dr. Mohammed Gabr, NC State University  
Funded \$50,000 for 6 months (Sept. 2000-Jan. 2001).
9. Verification of site response at NMSZ broadband stations (HD-9).  
Co-PIs: C. Langston and P. Bodin/Univ. Memphis, G.J. Rix and P.W. Mayne/GT

- Mid-America Earthquake Center, Univ. Illinois/NSF; Funded: 2004-2006: Amount: \$80,000 (2 years).
10. Site Characterization of Soft Zones - Santee Formation (co-PI with Drs. Susan Burns, Glenn Rix, Carlos Santamarina) plus 6 PhD students  
Savannah River Site - US Department of Energy (SRS/DOE) - Washington D.C. Funded: \$2.1 M (2008-2014).

## B. AS INVESTIGATOR

### Funded

1. Vittrification of Flyash - Europlasma, Bourdeau, France  
PI: Dr. L. J. Circeo, Director, GIT Construction Research Center; Amount: \$75,000 (1993)
2. Development of an Integrated Optoelectronic Chemical Sensor Module: Geoenvironmental Cone Penetrometer Testing for Subsurface BETX Contamination; with Photonic System Sensors and GTRI Environmental Science; ARO STTR Program; Amount: \$100,000 – Phase I, 12 mo. (1996); Amount: \$500,000 – Phase II, 24 months (1997-1999)
3. Plasma Vittrification of Contaminated Soils  
PI: Dr. L.J. Circeo, Director, GTRI Construction Research Center  
Defense Special Weapons Agency funding with Clark Atlanta University and GTRI; Amount: \$282,000 (1998)
4. Geotechnical Engineering Circular (GEC-5) on Soil Properties - Federal Highway Administration  
PIs: Dr. Rudy Bonaparte, Dr. Paul Sabbatini, Dr. Bob Bachus, GeoSyntec Consultants, Atlanta, GA  
Amount: \$150,000 (1998-2001).
5. Plasma Vittrification of Phosphatic Clays  
PI: Dr. L.J. Circeo, GTRI Plasma Arc Research Facility; Cargill Mining Applications, Florida; Amount: \$45,000 (2004).
6. NEES – National Earthquake Engineering Simulation  
Grand Challenge – Led by Drs. Glenn J. Rix, R. DesRoches, A. Araha, A. Bostrom  
Amount Requested: \$1.2 M/year for 4 years; Submitted Jan 2004; Resub: Mar 2005; Awarded June 2005.
7. Use of Geotechnical Data in Paleoliquefaction and Paleoseismology of the New Madrid Seismic Zone  
PI: Dr. Martitia Tuttle, Tuttle & Associates - Funded by US Nuclear Regulatory Commission (2011 - 2017)
8. GeoCharacterization on Seismic Assessments at Electric Power Generating Facilities, Tenn. Valley Authority, Chattanooga, TN (2013-2014): \$45,000

\*\*Note: Science Applications Intl. Corp. (SAIC), Marietta, GA.

\*\*\*DFI = Deep Foundations Institute: [www.dfi.org](http://www.dfi.org)

## VIII. PROFESSIONAL EXPERIENCE

Prior to entering academe, Paul Mayne spent 11 years in consulting practice in the Washington DC- Virginia-Maryland region where he worked on 455 projects located in 22 states, as well as Greenland and Italy. During this time, he developed several areas of expertise, including shallow and deep foundation systems, ground vibration monitoring, site improvement by dynamic compaction, soil dynamics, and geotechnical site characterization. At age 35, he began doctoral studies and was awarded a PhD in 1990. In addition to his academic career, he continues to serve as an advisor and consultant to various geotechnical firms, construction contractors, and agencies on a variety of projects.

### Experience in Building Foundations

Selected prestigious geotechnical projects involving building foundations that Paul worked on include:

- White House Expansion, Oval Office and Rose Garden, Washington, DC.
- First American Bank, 20-story office tower on a 40-m square mat foundation, Tysons Corner Virginia.
- White House Communications Agency (WHCA), Anacostia Naval Station, Washington, D.C.
- Smithsonian Support Facilities & Museum Warehouse, Suitland, MD.
- Nato III Satellite Tracking Antenna Foundations, Thule, Greenland.
- International Monetary Fund Expansion (Largest column load in DC), Washington, DC.
- Thomas Jefferson Accelerator (CEBAF) for nuclear physics research, Newport News, VA.

- Intercultural Center, Georgetown University, Washington, DC.
- Tysons Two Office Tower, 22-story building on mat foundation, Westpark, Virginia
- Freddie Mac Headquarters Complex, McLean, VA.
- Embassy Suites Hotel Foundations, Crystal City, VA.
- Nato III Satellite Tracking Antenna, Mount Etna, Sicily.
- Lincoln-American Center, 10-story Twin Office Towers, McLean, VA.
- Treasury Building Retaining Wall Study, Pennsylvania Avenue, Washington, D.C.
- Documentation: Dorm B Settlement - Excessive Settlements, Georgia State University: [www.geoengineer.org](http://www.geoengineer.org)
- Predictor, Footing load test on soft Ballina clay, Univ. New South Wales, Australia (Aug. 2016).

### Experience in Deep Foundations

With respect to deep foundation systems, Dr. Mayne has developed extensive field experience and analytical capabilities. He has served as project engineer for the design, analysis, installation, and construction monitoring of numerous types of deep foundation systems including driven piles, bored piles, augered, and drilled shafts. Representative projects include:

- 788 large 24-inch prestressed concrete piles driven for the I-295 Bridge over the James River, VA. The two main span piers each have total loads of 40,000 kips for the 1428-m concrete cable-stayed bridge. This bridge was cited in *Transportation News* 179 as one of America's Top 12 Bridges (Aug. 1995). It was also featured on *CNN News* after a freak tornado collided with the bridge after having killed 4 people in nearby Petersburg, VA. A tractor trailer was flipped upside down onto the bridge deck.
- 70 drilled piers for the International Monetary Fund (IMF) office tower, including the largest structural column load in Washington, D.C. (4875 kips on a single straight shaft foundation bearing on granitic rock).
- 144 driven PSC piles for Rt. 213 Bridge over Bohemia River for the MD DOT.
- 202 driven PSC piles adjacent to Pentagon Federal Credit Union, VA.
- 150 driven H-piles for Old Colony Inn expansion, Alexandria, VA.
- 175 timber piles for two Allied Chemical compressor foundations in Hopewell, VA.
- 90 drilled shafts for the 10-story Stafford office in Tysons Corner, VA for Westpark Group.
- 120 pressure-injected footings for Westpark Hotel in McLean, Virginia.
- 210 steel pipe piles for the Massey Coal Facility in Newport News, VA for Dravo Corp.
- 90 precast concrete piles for a Port of Virginia wharf in Portsmouth, VA.
- 60 augercast/bored piles for Fairfax Hospital Ambulatory Center in Fairfax, VA.
- 96 driven pipe piles for Merck Chemical Powerhouse in Elkton, VA.
- 144 pipe piles for the Columbia Gas powerhouse structure in Elkton, WV.
- 50 drilled shafts for the Intercultural Center, Georgetown University, DC.
- 50 driven steel monotube piles for Robinson Terminal pier in Alexandria, Virginia
- 80 driven precast concrete piles for the White House Communications Agency; Anacostia NAS, Wash. DC.
- 150 driven H-piles for GSA Depot Warehouse in Springfield, VA.
- 80 drilled shafts for Quince Orchard transmission lines, Potomac, MD
- 88 drilled shafts for Holiday Inn Hotel, Crystal City, VA
- 54 driven H-piles for Charles Center, Baltimore, MD
- 66 driven H-piles for O'Gara Hall, Georgetown University, DC.
- Analysis of axial loaded drilled shaft, I-85, Coweta County, for GA DOT using SCPTu data.
- Evaluation of axial pile tests at James River Bridge, Richmond, VA for FHWA and VA-DOT using CPT data
- Prediction of axial pile response using SCPTu, Power Substation in Center GA for Southern Companies
- Large diameter drilled shafts for Gilmerton Bridge, Virginia – VDOT, MacTec, and Modjesky-Masters
- Analysis of 12 O-cell tests for Arthur Ravenel Bridge over the Cooper River, Charleston, SC (2002)
- Class "A" prediction of axial drilled shaft response, O-cell test, GA-DOT Viaduct at CNN (2004).
- Prediction of O-cell load test, Foothills Medical Center, Calgary, AB for ConeTec and Golder Asso. (2007).
- O-cell testing program for G.W. Clough Center, Georgia Institute of Technology, Atlanta, GA (Oct. 2009).
- O-cell test shafts: ADSC-ASCE Atlanta Geotechnical Section, Lawrenceville test site, GA (2009-2012).
- Participant, Araquari Pile Load Test Predictions, Brazil (May 2015).

- Invited Keynote Speaker for B.E.S.T - 3<sup>rd</sup> Bolivian Intl. Conf. on Deep Foundations, Santa Cruz (April 2017).

### Experience in Soil Dynamics

Paul Mayne was an active member of ASTM Subcommittee D18.09 on Cyclic and Dynamic Soil Testing, responsible for developing the industry standards, and participated in the original standard for crosshole geophysical testing (ASTM D 4428). He has conducted numerous ground vibration studies and dynamic analyses, including both field measurements and analytical predictions. Dr. Mayne has taken and published the highest known measured impact stresses of a falling weight (23 tonnes dropped from 18 meters) during dynamic compaction operations. Paul Mayne has coordinated extensive field and laboratory testing programs for liquefaction analyses at the Calvert Cliffs nuclear power facility site for Bechtel, Maryland and managed exploration programs for facilities at the Surry and North Anna Nuclear Power Plants, Virginia. Paul also directed a large USGS laboratory cyclic triaxial testing program for the slope failures near Yakutat and Kodiak, Alaska. He is familiar with use of resonant column devices, cyclic triaxial, cyclic simple shear, Instron, and MTS cyclic loading systems, velocity recorders, seismographs, spectrum analyzers, and ground vibration measurements. Selected dynamics problems include:

- Compressor Foundation Design, Cryogenics Facility for Allied Chemical, Hopewell, VA.
- Foundation Design, Ripley Compressor, Columbia Gas Transmission Corp., Jackson Co., W.VA
- Geotechnical Dynamics Study, Columbia Gas Compressor Station, Elkview, W.VA
- Air Compressor Failure Investigation, Owens-Corning, Delmar, N.Y.
- Geotechnical Analysis for Antenna Foundation Site, Bjerkvik, Norway
- Geotechnical Analysis, Antenna Foundation Site, Kinross, Scotland
- Soil Dynamics Evaluation, Western Union Antenna, Reston, VA
- Geotechnical Dynamics Study, NATO Satellite Antenna, Catania, Sicily
- Geotechnical Analysis, DOE Antenna Site, Kansas City, Missouri
- Soil Dynamics Evaluation, NRL Antenna Foundation, Chesapeake Beach, MD
- Soil Dynamic Properties, Antenna and Radome, Thule, Greenland
- Geotechnical Dynamics Study, DOE Earth Station, Germantown, Maryland
- Soil Dynamics Evaluation, General Electric Monomer Compressor Foundation, Selkirk, N.Y.
- Geotechnical Dynamics Properties, NRL Antenna Foundation, Quantico, VA
- Soil Dynamics Properties, Wahiawa Antenna Foundation, Oahu, Hawaii
- Satellite Antenna Foundation, Scientific-Atlanta, Norman, OK (with Dr. G.J. Rix)
- Satellite Antenna Foundation with Les Goodson & Associates, North Denver, CO (with Dr. G.J. Rix).
- Soil Dynamics Properties, Powerstation, Brownsville, TN (2004).

A list of ground vibration projects which Paul Mayne has been involved with include:

- Vibration Monitoring, PSC Pile Driving Operations, Old Colony Inn Expansion, Alexandria, VA
- Vibration Monitoring, Ramhoe Operations, World Bank, Washington, DC
- Ground Vibration Monitoring, Driven PSC/Steel H-Piles, TransPotomac Plaza, Alexandria, VA
- Vibration Monitoring, H-Pile Driving Operations, O'Gara Hall, Georgetown University, Washington, DC
- Ground Vibration Monitoring, H-Pile Driving, Charles Center, Baltimore, MD
- Monitoring of Blast Vibrations, Rock Excavation for Diamond Intl. Tissue Mill, Penobscot, Old Town, Maine
- Vibration Prediction Study, Impact Densification for Virginia Coal Terminal, Portsmouth, VA
- Vibration Measurement & Prediction, Blast Test Facility, Naval Weapons Center, White Oak, MD
- Vibration Measurement and Prediction Study, FRA Corridor Improvement, Stamford Train Station, CT
- Vibration Measurement and Evaluation, Treasure Chest Printing Press Machines, Manassas, VA
- Vibration Prediction Study, Proposed Railroad Tracks, Churchland West Development, Portsmouth, VA
- Vibration Measurements, Franki Pile Driving Operations, Univ. of Maryland, MD
- Deceleration Measurements & Vibration Monitoring, I-65 Highway, Dynamic Compaction, Birmingham, AL
- Acceleration Monitoring, Reinforced Seismic Wall, Harpers Ferry, W.VA
- Vibration Monitoring, Landmark Mews Townhouses, Alexandria, Virginia
- Ground Vibration Monitoring, Site Improvement Test Program, Harbour Island, Tampa, FL



- Ground Vibration Measurement & Prediction Model Using Mass Vibrator, CEBAF Electron Beam Accelerator Facility, Newport News, VA for Daniel-Mann-Johnson-Mendenhall/D.C.
- Vibration Measurements, L'Enfant Plaza Post Office, Washington, DC
- Floor Vibration Measurements, United Technologies, E. Hartford, CN
- Compaction Vibrations, Radisson Hotel, Charlottesville, VA
- Ground Vibration Measurements, Caton 95 Office Park, Baltimore, MD
- Vibrations Monitoring, Construction for Norfolk Hilton Hotel, VA
- Deceleration Measurements, Site Improvement Operations, Waterford, NY
- Printing Press Vibration Measurements for National Bureau of Standards, Engraving & Printing, Washington, DC
- Pile Driving Vibration Monitoring, Pentagon Federal Credit Union, Alexandria, VA

Miscellaneous Soil Dynamics Projects that Dr. Mayne has worked on include:

- NDT Pavement Evaluation by Heavy Mass Vibrator, Southeast Freeway, Washington, DC
- Cyclic Triaxial Testing Program, USGS Study of offshore settlements near Yakutat & Kodiak Islands, Alaska
- NDT Pavement Subgrade Evaluation by Heavy Mass Vibrator, Anacostia Naval Station, Washington, DC
- Liquefaction and Dynamic Studies, Calvert Cliffs Facility, Maryland for Bechtel Power Corp.
- Cyclic Simple Shear Testing of McManus Clay Cornell University.

### **Specialized Expertise in Dynamic Compaction**

Paul W. Mayne developed an international reputation in the ground modification technique of dynamic compaction (also termed heavy tamping and dynamic consolidation). In 1984, the program was in fact so successful that Law Companies established a completely separate firm (Geosystems Inc.) that was entirely devoted to the marketing & implementation of dynamic compaction. (The firm eventually split into three factions that engage in site improvement to this day: Densification Inc., John S. Jones & Associates, and GeoCon Inc.).

Paul became well known to international colleagues in the dynamic compaction field, including: Jean Dumas of Geopac/Canada; Mike Gambin of Menard/France, Tom Dobson of Keller/UK, Robert Lukas of Soil Testing Services/IL, Joe Welsh of Hayward-Baker, Barrie Slocumbe and Tom Dobson of Keller Foundation/UK, Serge Varaksin of Entrefecour/France, and Christian Guyot and David D'Appolonia of MCI/PA. Paul developed both empirical and theoretical approaches which have been well-cited in the current literature on dynamic compaction, as noted in the following technical papers and reports:

- Gazetas, G. and Selig, E.T., ed. (1985). *Vibration Problems in Geotechnical Engineering*, ASCE, New York: 304 p.
- Lukas, R.G. (1986). Dynamic Compaction for Highway Construction. *Report No. FHWA/RD- 86/133*, Federal Highway Administration, Washington, DC: 230 p.
- Van Impe, W.F. (1988). *Soil Improvement Techniques and Their Evolution*. Balkema, Rotterdam: 131 p.
- Cheremisinoff, P.N., ed. (1988). *Civil Engineering Practice, Vol. 3, Geotechnical Engineering*, Technomic Pub., Lancaster: 870 p.
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Dynamic compaction projects that Paul has specifically worked on include:

- Massey Coal Terminal (33-acres of site improvement) - the largest such project in the USA as of 1980, conducted by joint venture of ECI-Menard using three 150-tonne crawler cranes, Newport News, VA (see paper by Mayne, et al. 1984)
- Interstate I-65 Project, Morris County, with the Alabama DOT, Birmingham, AL. (see paper by Mayne & Jones, 1983).
- Harbour Island Development, Test Program, with Hayward Baker Co., Tampa, FL.
- 4-story Hilton Hotel, Norfolk Airport, VA
- TOF Storage Tanks, with Mueser-Rutledge, Alexandria, Egypt.
- Landmark Mews Townhouses, Buildings 6 and 17, Alexandria, VA.
- 5-story Coquina Harbour Condominiums, Little River, SC
- Vinegar Hill Parking Garage, Omni-Radisson Hotel, Charlottesville, VA
- Caton 95 Office Park, Baltimore, MD
- The Corner Shopping Center, Route 7, Falls Church, VA
- South Park Mall Expansion, Charlotte, NC
- 3-story NEC Corporate Office Building, Route 28, Dulles Airport, Herndon, VA
- General Electric Silicone Division, Landfill Improvement, Waterford, NY
- Westpark Office, Horsepen Road, Reston, VA
- Navy NRL Satellite Antenna for Ford-Aerospace, Chesapeake Beach, MD
- Riverpark Towers Foundation Mat, Newport News, VA
- Runway 5 west approach embankment for Atlanta Hartsfield Airport expansion with Hayward Baker Company and Archer-Western Group (2003).
- Dormitory Foundation Preparations, Marietta Street, Atlanta with J.S. Jones & Associates and ECS (2004).
- Bahia Beach Resort Development, San Juan, Puerto Rico with Geocim and Densification Inc (2005-2006).
- Dynamic compaction trial program, interpretation of CPT results, Port of Brisbane, Australia with Coffey & Partners (2007).