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I. EARNED DEGREES

- Ph.D. 1991 Cornell University Geotechnical Engineering
- ME-Civil 1977 Cornell University Geotechnical Engineering
- BSCE 1976 Cornell University Civil & Environmental Engineering

II. EMPLOYMENT

- 2000-2006 Group Leader - Geosystems Engrg 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. SCHOLARLY ACCOMPLISHMENTS

A. PUBLISHED BOOKS AND PARTS OF BOOKS

1. Mayne, P.W. (1988). "Ground Improvement by Dynamic Compaction," ***Civil Engineering Practice: Geotechnical and Ocean Engineering***, Chapter 32, Technomic Publishing, N.J.
2. Mayne, P.W., (1993). "In-Situ Determination of Clay Stess History by Piezocone Tests," ***Predictive Soil Mechanics,*** Thomas Telford, London, pp. 361-373.
3. Robertson, P.K. and Mayne, P.W., editors (1998), ***Geotechnical Site Characterization,*** 2-volumes, (Proc. International Site Characterization, Atlanta), Balkema Publishers, Rotterdam, 1555 p.
4. Mayne, P.W. and Hryciw, R.D., editors (2000). ***Innovations and Applications in Geotechnical Site Characterizatio***n (GSP 97), ASCE, Reston, Virginia (Proc., GeoDenver Conference), 248 pages
5. 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).
6. 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).

B. PUBLISHED MANUALS

1. 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, August 1990, 306 p.

2. 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, CA., Jan. 1992, 390 p.

3. 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 Report to Federal Highway Administration, Washington, D.C. 162 pages. Downloadable from:

   http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/Axial%20Drilled%20Shafts%20in%20the%20Piedmont.pdf

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* to National Science Foundation by Georgia Tech, Atlanta, August 1994, 280 p. Download from:

   http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/OCR-CPTu%20by%20Chen%20&%20Mayne%201994.pdf

5. 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://www.ce.gatech.edu/~sburns/Burns%20and%20Mayne%201998.pdf

6. 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. Download from:

   http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/MAE%20GT3%20Liquefaction%20by%20CPT%20in%20Mid-America%202000.pdf

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. Downloadable from:

   http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/Evaluation%20of%20Soil%20&%20Rock%20Properties.pdf

8. 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 pages. Downloadable from:

   http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/NHI%202002%20Subsurface%20Investigations.pdf

9. Mayne, P.W. (2007), **Synthesis on Cone Penetration Testing: State-of-Practice**, NCHRP Project 20-05; Task 37-14, Transportation Research Board, National Academies Press, Washington, D.C.

   http://www.trb.org/CRP/NCHRP/NCHRPProjects.asp

C. REFEREED PUBLICATIONS

Articles in Refereed Archival Journals

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.

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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 Pore Water Stresses During Piezocone Penetration in Clays", *Canadian Geotechnical Journal*, Vol. 27 (4), 418-428.
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23. Mayne, P.W. (1995). "Undrained Plastic Modulus From Original Cam-Clay", ASCE *Journal of Geotechnical Engineering* 121 (5), 448-451.
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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.
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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
47. Mayne, P.W. (2006). "The 2006 James K. Mitchell Lecture: Undisturbed sand strength from seismic cone tests. *Geomechanics & Geoengineering: An International Journal* 1 (4): 239-257.

Peer-Reviewed Proceedings (full paper review) [*Note: indicates presenter]

1. Mayne, P.W. and Swanson, P.G., (1981). "The Critical-State Pore Pressure Parameter from Consolidated Undrained Shear Tests", *Laboratory Shear Strength of Soil* (STP 740), ASTM, Philadelphia, pp. 410-430.
2. Mayne, P.W. and Holtz, R.D., (`1985). "Effect of Principal Stress Rotation on Clay Strength", *Proceedings*, 11th International Conference on Soil Mechanics and Foundation Engineering (2), San Francisco, pp. 579-582.
3. Mayne, P.W., (1985). "Ground Vibrations During Dynamic Compaction", *Vibration Problems in Geotechnical Engineering*, ASCE, New York, NY, pp. 247-265.
4. *Mayne, P.W., (1986). "CPT Indexing of In-Situ OCR in Clays", *Use of In-Situ Tests in Geotechnical Engineering* (GSP 6), ASCE, New York, NY, pp. 780-793.
5. *Mayne, P.W. and Bachus, R.C., (1988). "Profiling OCR in Clays by Piezocone Soundings", *Penetration Testing 1988*, Vol. 2 (ISOPT-1), Balkema, Rotterdam, pp. 857-864.
6. Mayne, P.W. and Bachus, R.C., (1989). "Penetration Porewater Pressures in Clay by CPTU, DMT, and SBP", *Proceedings*, 12th Intl. Conference on Soil Mechanics and Foundation Engineering, Vol. 1, Rio de Janeiro, pp. 291-294.
7. *Mayne, P.W., (1989). "Site Characterization of Yorktown Formation for New Accelerator", *Foundation Engineering: Current Principles and Practices (GSP 22)*, Vol. 1, ASCE, NY, pp. 1-15.
8. Kulhawy, F.H., Jackson, C.S., and *Mayne, P.W., (1989). "First Order Estimation of K_o in Sands and Clays", *Foundation Engineering: Current Principles and Practices (GSP 22)*, Vol. 1, ASCE, NY, pp. 121-134.
9. *Mayne, P.W., Kulhawy, F.H., and Trautmann, C.H., (1994). "Nonlinear Undrained Lateral Response of Rigid Drilled Shafts Using Continuum Theory", *Vertical and Horizontal Deformations of Foundations and Embankments* (1), ASCE GSP 40, pp. 663-676.
10. *Harris, D.E. and Mayne, P.W., (1994). "Axial Load Behavior of Drilled Shaft Foundations in Piedmont Residuum", *Proceedings*, International Conference on Design and Construction of Deep Foundations, Vol. II (Orlando), Federal Highway Administration, pp. 352-368.
11. *Hegazy, Y.A., Mayne, P.W., and Rouhani, S., (1996). "Geostatistical Assessment of Spatial Variability in Piezocone Tests", *Uncertainty in the Geologic Environment: From Theory to Practice* (GSP 58), Vol. 1, ASCE, NY, pp. 254-268.
12. *Mayne, P.W., Martin, G.K., and Schneider, J.A. (1999). "Flat Dilatometer Modulus Applied to Drilled Shaft Foundations in Piedmont Residuum", *Geotechnical Special Publication*, ASCE National Convention, Charlotte.
13. *Finke, K.A., Mayne, P.W., and Klopp, R.A. (1999). "Characteristic Piezocone Response in Piedmont Residual Soils," *Behavioral Characteristics of Residual Soils*, GSP 92, ASCE, Reston, 1-11.
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15. *Mayne, P.W., Brown, D.A., Vinson, J., Schneider, J.A. and Finke, K.A. (2000). "Site Characterization of Piedmont Residuum at the NGES, Opelika, Alabama", *National Geotechnical Experimentation Sites*, GSP 93, ASCE: 160-185.
16. *Schneider, J.A. and Mayne, P.W. (2000). "Liquefaction Response of Soils in Mid-America Evaluated by Seismic Cone Tests", *Innovations & Applications in Geotechnical Site Characterization* (GSP 97), ASCE, Reston 1-16.
17. *McGillivray, A., Casey, T., Mayne, P.W. and Schneider, J.A. (2000). "An Electro-Vibrocone for Site-Specific Evaluation of Soil Liquefaction Potential", *Innovations & Applications in Geotechnical Site Characterization* (GSP 97), ASCE, Reston/VA: 106-117.
18. *Schneider, J.A. and Mayne, P.W. (2000). "Ground Improvement Assessment Using SCPTUs and Crosshole Data", *Innovations & Applications in Geotechnical Site Characterization* (GSP 97), ASCE, Reston, 169-180.
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20. *Mayne, P.W. (2001). Invited Keynote Lecture: "Stress-Strain-Strength-Flow Parameters from Enhanced In-Situ Tests", *Proceedings, Intl. Conf. on In-Situ Measurement of Soil Properties & Case Histories* (In-Situ 2001), Bali, Indonesia, 27-47.
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22. Camp, W., *Brown, D.A., and Mayne, P.W. (2002). "Construction Method Effects on Axial Drilled Shaft Performance", *Deep Foundations 2002*, Vol. 1, GSP No. 116, ASCE, Reston/VA, 193-208.

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25. *Mayne, P.W. and Zavala, G. (2004). "Axial shaft response from seismic piezocone tests". *GeoSupport 2004*, GSP No. 124, ASCE, Reston/VA, 428-440.
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27. *Mayne, P.W. (2004). “CPT-DMT interrelationships in Piedmont residuum”, *Geotechnical & Geophysical Site Characterization*, Vol. 1, (Proc. ISC-2, Porto), Millpress, Rotterdam, 345-350.
28. *Trevor, F. and Mayne, P.W. (2004). “Undrained shear strength and OCR of marine clays from piezocone test results”, *Geotechnical & Geophysical Site Characterization*, Vol. 1, (Proc. ISC-2, Porto), Millpress, Rotterdam, 391-398.
29. *Schneider, J.A., McGillivray, A.V. and Mayne, P.W. (2004). “Evaluation of SCPTU intra-correlations at sand sites in the Lower Mississippi River valley, USA”, *Geotechnical & Geophysical Site Characterization*, Vol. 1 (Proc. ISC-2, Porto), Millpress, Rotterdam, 1003-1010.
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32. McGillivray, A.V. and Mayne, P.W. (2004). “Seismic piezocone and seismic flat dilatometer tests at Treporti”, *Geotechnical & Geophysical Site Characterization*, Vol. 2, (Proc. ISC-2, Porto), Millpress, Rotterdam, 1695-1700.
33. *Mayne, P.W. (2005). "Integrated Ground Behavior: In-Situ and Lab Tests", *Deformation Characteristics of Geomaterials*, Vol. 2 (Proceedings IS Lyon), Taylor & Francis, London: 155-177.
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35. *Mayne, P.W. and Campanella, R.G. (2005). “Versatile site characterization by seismic piezocone tests”, *Proceedings, 16th International Conference on Soil Mechanics & Geotechnical Engineering*, Vol. 2, Osaka: 721-724; Millpress, Rotterdam.
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38. Elhakim, A.F. and Mayne, P.W. (2006). "Evaluating footing response from seismic piezocone tests", *Site & Geomaterial Characterization* (GSP 149), Proc. GeoShanghai, ASCE: 255-260.
39. Mayne, P.W. (2006). "Interrelationships of DMT and CPTU readings in soft clays", *Flat Dilatometer Testing* (Proc. 2nd Intl. Conf. DMT), Washington, DC: 231-236.
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2. Mayne, P.W. (1982). Discussion of "Undrained Settlement of Plastic and Organic Clays", *Journal of Geotechnical Engineering* (ASCE) 108 (GT10), pp. 1354-1357.
3. Mayne, P.W. (1983). Discussion of "Triaxial Testing at NGI", *Geotechnical Testing Journal*, ASTM, Vol. 6, No. 3, p. 160.
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5. Mayne, P.W. (1984). Discussion of "Stability Analysis with the Simple and Advanced Methods" and "Three Case Studies of Soft Clay Deposits", *Soils and Foundations*, Vol. 24 (2), pp. 133-134.
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D. OTHER PUBLICATIONS

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5. Circeo, L.J. and Mayne, P.W., "In-Situ Thermal Stabilization of Road and Airfield Foundation Soils Using Plasma Arc Technology", *Proceedings, 4th International Conference on Bearing Capacity of Roads and Airfields*, Minneapolis, July 17-21, 1994.
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15. Burns, S.E. and Mayne, P.W. (1998). "Integrated Opto-Electronic Chemical Sensor for BTEX Detection in Cone Penetra-tion Testing", *Geotechnical Site Characterization*, Vol. 1, Balkema, Rotterdam, 623-628.
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19. Mayne, P.W., Schneider, J.A., and Martin, G.K. (1999). "Small- and High-Strain Soil Properties From Seismic Flat Dilatometer Tests", *Proceedings, Pre-Failure Deformation of Geomaterials*, Vol. 1, Politecnico di Torino, Italy, A.A. Balkema, Rotterdam, 419-426.
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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, Bridge sites, Missouri. GTRC Report E20-M04 to Missouri Dept. Highways & Transportation, Jefferson City, MO, 85 pages.
4. Schneider, J.A. and Mayne, P.W. (1998). Results of seismic piezocone penetration tests performed in Memphis TN and West Memphis AR. Interim Report GT-3 to Mid-America Earthquake Center, GIT/CEE, 55 pages.
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6. Schneider, J.A. and Mayne, P.W. (1998). Results of seismic piezocone and flat plate dilatometer tests in Arkansas, Missouri, and Tennessee. MAE Project GT-3, GTRC No. 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.
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14. Mayne, P.W. and Zavala, G. (2003). **Cone Penetration Testing for Evaluating Bridge Pile Response**. GTRC Report E20-H71 to Georgia Dept. of Transportation (GDOT Res. Proj. 2021), Forest Park, Georgia, 201 pages. http://www.ce.gatech.edu/~geosys/Faculty/Mayne/papers/
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Editorial Service

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), *Proceedings, Design for Bridges for Extreme Events*, Federal Highway Administration, December 1996, 365 p.

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.

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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, 30-32.

Novel Publications

1. Mayne, P.W. and Beaver, J.R. , "High-Temperature Plasma Vitrification 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://www.ce.gatech.edu/~geosys
3. Downloadable Educational Tools: GROW = Geotechnical, Rock, and Water Resources Library: animated geophysics showing field test procedures. http://www.grow.arizona.edu/

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, Vancouver, B.C., in press.

Television

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.

Radio

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E. PRESENTATIONS

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., January 27, 1994.
2. *Keynote Lecture* (with Prof. R.D. Holtz): "Enhanced In-Situ Testing for Site Characterization" 9th 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 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: *Enhanced Geotechnical Site Characterization*, Civil Engineering, Tongji University, 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, CGS.

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 Section, 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, 14th International Conference on Soil Mechanics & Foundation Engineering, Hamburg, Sept. 12, 1997; "Site Characterization Aspects of Piedmont Residual Soils." Panelist with Dr. S. Lacasse, Dr. P.K. Robertson, Dr. M. Fahey, Dr. J. Berrill, and Dr. F. Schnaid.
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", 9th 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, August 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. 2nd International Site Characterization Conference, 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. The 16th International Conference on Soil Mechanics & Geotechnical Engineering (ICSMGE), Osaka, Sept. 12-15, 2005.
23. *Invited Lecture:* Interrelationships of CPTU and DMT in Clays. Presented at the 2nd 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 Engineering, 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.

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, Department of Civil Engineering, Washington, D.C., 1983.

4. Direct and Indirect Methods of Determining In-Situ K_o in Clays, International Symposium on Penetration Testing, Orlando, March 1988.
5. Statistical Correlations for Estimating Preconsolidation Stress of Clays from In-Situ Tests, Intl. Symposium on Penetration Testing, Orlando, March 1988.
6. Penetration Pore Pressures from Piezocone & Dilatometer, International Symposium 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, School of Civil Engineering, 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. Experimental Studies on Lateral and Moment Loading of Drilled Shaft Foundations, University 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 Institute of Technology, April 1991.
14. NSF Workshop on Ground Modification, Subcommittee on Dynamic Compaction Research, University of Washington, Seattle, August 1991.
15. Determining OCR by In-Situ Tests and Cavity Expansion Theory for Piezocone; University 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 Geotechnical Section, Georgia Power, Atlanta, Nov. 1992.
18. Site Characterization of Structured and Residual Soils, Reporter to Plenary Session, NSF Workshop, CEMIG, Belo Horizonte, Brazil, Nov. 1992.
19. Cavity Expansion/Critical State Model for Piezocone-OCR Mapping in Clays, Golder Associates Seminar, 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 Department of Transportation, Forest Park, Georgia, Aug. 1993.
22. Site Characterization Methods for Geotechnical, Environmental, and Liquefaction Evaluation Studies, Westinghouse/Bechtel, Aiken, S.C., October 1993.
23. Magma Aggregates, TRB Committee A2H03 on Mineral Aggregates, Transportation Research Board, Washington, D.C., January 1994.
24. Vitrification of Soils Using Plasma Technology, TRB Committee A2L02 on Soil and Rock Properties, Transportation Research Board, Washington, D.C., Jan. 1994.
25. Piezocone Evaluation of Overconsolidation Ratio in Clays, University of Texas/Austin, Texas, June 1994.
26. Piezocone, Seismic Cone, Vibrocone, and Geoenvironmental Cone Penetrometers, CPT Workshop, U.S. Army Research Office sponsor, Austin, Texas, June 1994.
27. Axial Load Behavior of Two Drilled Shafts in Piedmont Residuum, Schnabel Engineering Associates Annual Seminar, Springfield, VA, Feb. 1995.
28. Plasma Vitrification of Geomaterials, Southeastern Transportation Geotechnical Engineering Conference, FHWA Huntsville, AL, Oct. 1995.
29. Baseline Plasma Experiments for Geoenvironmental Restoration, GT Environmental Engineering Seminar Series, April 10, 1995.
30. In-Situ Testing and Characterization of Full-Scale Plasma Magmavication of Soils, Civil Engineering, Norwegian University of Science & Technology, Trondheim, Nov. 11, 1996.
31. Site Characterization by Seismic Piezocone and Seismic Flat Dilatometer Tests, Norwegian Geotechnical Institute, Oslo, Nov. 18, 1996.
32. Vibrocone Penetrometer for Evaluating Soil Liquefaction Potential, ASCE Conference on Earthquake Engineering & Soil Dynamics, Session 1, Univ. Of Washington, Seattle, August 1998.
33. Seismic Piezocone Testing in New Madrid Seismic Zone, Seminar by USGS and Center for Earthquake Research & Information (CERI), Univ. Of Memphis, Nov. 1998.
34. Liquefaction Response of Soils by Cone Penetration Testing, Workshop by Mid-America Earthquake Center (MAEC), Memphis, December 2-4, 1998.
35. Site Characterization by Seismic Piezocone, USGS Hazard Map Workshop with MAEC and CUSEC, St. Louis University, Jan. 6-8, 1999.
36. Liquefaction Response of Soils in New Madrid Seismic Zone by CPT, USGS Hazard Mapping Group, St. Louis, June 2000.
37. Geotechnical Site Characterization by CPTs in the New Madrid Seismic Zone (NMSZ), New Orleans, Mid-America Earthquake Center Meeting, New Orleans, Oct. 2000.

38. Site Characterization for Embayment Seismic Excitation Experiments (ESEE) by SCPTUs, San Juan, Mid-America Earthquake Center Meeting, January 2004.

F. OTHER SCHOLARLY ACCOMPLISHMENTS

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 Wave Trains from Downhole Tests", [C++ compiled program]. CEE/Georgia Institute of Technology, Atlanta.

Patents

1. Invention Disclosure and Patent: GTRC ID No. 2984 entitled "Rotary Actuated Seismic Source for Geotechnical Investigations" was filed September 17, 2004, in the USPTO by M. Quinn, A.V. McGillivray, and P.W. Mayne.
2. Pending submission: "Wholetone ebony-ivory keyboard/synthesizer for guitarists". December 2004.

Poster Sessions

1. Mayne, P.W. and Holtz, R.D. (1985). "Strength Anisotropy & Stress Rotation Effects in Clays", 11th 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 5th Sowers Symposium, GCATT, Atlanta, GA.
11. Elhakim, A. and Mayne, P.W. (May 2002). Nonlinear stress-strain-strength applied to footing response. The 5th Sowers Symposium, GCATT, Atlanta, GA.
12. Zavala, G. and Mayne, P.W. (May 2003). Axial pile response determination from seismic penetrometer. The 6th George F. Sowers Symposium, GCATT, Atlanta, GA.
13. Camp, W. and Mayne, P.W. (May 2003). Results of O-cell and Statnamics Testing of drilled shaft foundations in the Cooper Marl. 6th 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 7th George F. Sowers Symposium, GCATT, Atlanta, GA.
15. Liao, T. and Mayne, P.W. (May 2004). Explosives-induced liquefaction in the Mississippi Embayment. The 7th George F. Sowers Symposium, GCATT, Atlanta, GA.

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", Continuing Education Course on Foundation Design at 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 Univ. MO-Rolla, held in Cape Girardeau, Missouri, 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 Nevado 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 Minnesota DOT, Jan. 18-21, 2005, with Dr. Barry Christopher.
34. Instructor: Enhanced In-Situ Testing for Foundation Systems. Georgia Tech 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 in July 2006, with Dr. Barry Christopher.
49. Instructor: In-Situ Testing for Geotechnical Foundation Analyses, GT Global Learning Center, 15-16 Aug. 2006.
50. Instructor: Enhanced Site Characterization by Seismic Piezocone, 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. Instructor: Geotechnical Site Characterization by Seismic Cone Tests, Calgary, Alberta, March 20, 2007.
56. Instructor: Enhanced Site Characterization by Seismic Piezocone, Edmonton, Alberta, March 21, 2007.
57. Instructor: Geotechnical Site Characterization by Seismic Cone Tests, Ft. McMurray, sponsored by ConeTec Investigations, March 23, 2007;
58. Co-Instructor: In-Situ Testing for Geotechnical Site Investigation (with Alec McGillivray), Minnesota DOT, Minneapolis, 22-24 May 2007.

IV. TEACHING

A. INDIVIDUAL STUDENT GUIDANCE

Ph. D. Students

Graduated

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: Principal Engineer, Hart-Crowser, Seattle.

Susan E. Burns, PhD, P.E.
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); Assoc. Prof., Georgia Tech (Jan. 2005 - present)
Notes: NSF CAREER Award (2000); ASCE Casagrande Award; Friedman Young Engineer Award 2000

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
Current Position: Project Engineer, D'Appolonia Consulting Engrs, Pittsburgh, PA (1998-2004)
Associate Professor, King Abdulaziz University, Saudi Arabia (2004 – 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
Current Positions: Research Engineer, Tensar Corporation, Atlanta, GA;
Faculty - Cairo University, Soil Mechanics Laboratory, Egypt.

Tianfei Liao, PhD
Starting Semester: August 1999; Graduation: 5 August 2005
PhD Topic: "Automated Cone Penetration Test Data Processing for Seismic Ground Hazards Evaluation"
Funded by USGS, MAE, and NSF
Current Position: Project Engineer, Bechtel Power Corporation, Frederick, MD

PhDs In Process

Alec McGillivray
Starting Semester: December 1999; Expected Completion: May 2007
PhD Topic: "Improved Downhole Shear Wave Velocity Profiling During Direct Push Technology"
Funded by NSF, MAE, ARO, GDOT, and USGS

Billy Camp
Starting Semester: August 1999; Expected Completion: December 2007
PhD Topic: "Geotechnical Characterization and Engineering Properties of Cooper Marl"
Funded by NSF, MAE, and ADSC

Mark K. Quinn
Starting Quarter: Fall 1997; Expected Completion: December 2007
PhD Topic: "Flow Cone Piezocone for Assessing Soil Permeability of Silty and Sandy Soils"
Partially Funded by NSF

(Mrs) Hoda Sabha Kablawi
Starting Quarter: Spring 1996
Expected 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; Completion: January 2008
Thesis: "Evaluating Axial Pile Response from Seismic Cone Penetrometer Results"
Funded by USGS, Georgia DOT, MAE, and NSF
Current Position: Project Engineer with Ardaman Associates, Tampa, FL

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, Sterling, VA.

Special PhDs - Graduated

Gehan Abdel-Rahman
Visiting Scholar (Nov. 1993-Jan. 1995): Cooperative Research Program between GT & Cairo University
PhD Thesis: "Time-Dependent Behavior of Laterally-Loaded Piles in Clay," Cairo University, Egypt
Current Position: Faculty member, Soil Mechanics Laboratory, Cairo University.

M.S. Thesis Students

Graduated

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 Residua of the Piedmont Geology"
Current Position: Project Engineer for CH_2M-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: 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, 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"
Current Position: Project Geotechnical Engineer for Black & Veatch, North Canton, Ohio

Kimberly Finke
Starting Quarter: Sept. 1996; Completion: June 1998. Funded by NSF/NYI
Thesis: "Piezocone Penetration Tests in Piedmont Residual Soils"
Positions: Project Engineer with URS Corporation, Denver
Project Geotechnical Engineer, Golder Associates, Denver

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: Project Engineer, GeoSyntec Consultants (1999-2001)
Project Geotechnical Engineer, Fugro West, (2001-2003), CA.
Currently: PhD Candidate with Prof. Barry Lehane, Univ. of Western Australia (Oct. 2003-present).

Josepha (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

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"
Current Position: Project Engineer/Manager with Wright-Padgett-Christopher, Charleston, SC.

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"
Position: FMSM Consulting Engineers, Lexington, KY; Sales Manager, Dataforensic, Atlanta (2006)

MS – Coursework Only

Kellie Sak
Starting Term: Aug. 2003; Completion: May 2005
Funding: Cargill Incorporated and GTRI
Current Position: Project Engineer, Golder Associates, 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; Expected Completion: December 2005
Current Position: Geotechnical Engineer in Ocala, FL

William Tate
Starting Term: August 2004; Completion: Expected December 2005
Current Position: S&ME Engineers, Charleston, SC

Yasser A. Hegazy
Starting Term: Sept. 1994; Completion: June 1996
Position: D'Appolonia Engineers, Pittsburgh, PA

James Earl Travis
Starting Term: Fall 1993; Completion: Fall 1994
Funding: FHWA Regional Office, Jacksonville, FL
Current: USAE, Virginia

Holli Jones
Starting Term: August 2005; Completion: May 2006. Awarded: 2005 W.J. van Reenen Fellowship
Current: Terracon/Titan Atlantic Engineering, Raleigh, NC

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

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

Chad Rodgers
Starting Term: August 2006: Expected Completion: August 2007
Funded by US Air Force

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.
Current Position: Assistant Professor, Univ. of Texas-Arlington.
Funded by NSF

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

MS Special Research Projects

Jong-Shin Fang
Topic: Analysis of Laterally-Loaded Piers for FAA Low-Level Warning Alert System (LLWAS) Tower Systems.
Completion: December 1991; Funding: Federal Aviation Administration (FAA)

Stewart R. Garcia
Topic: Interrelationships of Flat Blade Dilatometer p_o and p_1 Measurements in Soils.
Completion: December 1991

Daniel G. Blaydes
Topic: Analysis of Laterally-Loaded Behavior of Socketed Drilled Shafts in Rock.
Completion: January 1992

Alberto Bechara
Topic: Feasibility of Plasma Vitrification of Soils
Completion: January 1993 Funding: NSF SGER and GTRI

Joseph Kowalski
Topic: Geosynthetics Direct Shear Box Testing Program for Landfill Design
Completion: April 1994
Funding: GeoSyntec Corporation, Atlanta

Scott Thomson
Topic: Investigation of Structural Properties of Plastic Fiber Mesh-Reinforced Concrete
Completion: March 1994
Funding: Tensar Corporation, Atlanta

Luis Ruiz
Topic: Interpreted Densities from Cone Penetration Testing for Kissimmee Fill, Florida
Completion: August 1994
Funding: USACE Corps, Jacksonville, FL

J. Reid Horne
Topic: Pre-Bored Texam Pressuremeter Operation and Testing in Piedmont Residuum.
Completion: August 1995

A. McGillivray
Topic: Porewater Pressures in Piedmont Saprolite at Opelika, Alabama.
Completion: Dec. 1999
Funding: NSF

G. Zavala
Topic: Cross Correlation Method for Post-Processing of Downhole Shear Wave Results
Completion: Aug 2000.
Funding: USGS and Mid-America Earthquake Engineering
Current: Ardaman Associates, Tampa, FL

Undergraduate Research Students

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

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

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

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

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

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

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

Ali Boga
Started: August 2005
Topic: Hydrology of Highway Underdrains
Funding: GTI and GDOT
Currently: Project Engineer, Tampa, Florida

B. OTHER TEACHING ACTIVITIES

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 procedures, 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.

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.

V. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

Organization and Chairmanship of Technical Sessions and Workshops

1. Facilitator, FHWA Workshop on "Lateral and Rotational Stiffness of Highway Bridges", Crystal City, Virginia, 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 Conference on Site Characterization, Atlanta, April 1998.

8. Organizing Committee, 3rd National USUCGER Workshop, Newport, RI, November 19-22, 1998.
9. Session Moderator, National Geotechnical Experimentation Sites, USUCGER Worshop, Nov. 20, 1999.
10. Session Leader on "Structures, Materials, and Pavements", GTI Symposium, Georgia Transportation Institute, 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 and Coordinator (all 5 Tech Sessions) on Innovations & Applications of In-Situ Testing, GeoDenver, Aug. 2000.
13. Discussion Leader, Session 1.2., Ground Property Characterization by In-Situ Tests, 15th ICSMGE, Istanbul, August 29, 2001.
14. Session Chair, Hong Kong Polytechnic Sessions on Liquefaction Assessment, ICANCEER Workshop, August 19-20, 2002.
15. Session Chair, Stiff Soils, 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.

Professional Committee Service

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.
- Ithaca New York Section, 1987-1990.
- Atlanta Geotechnical Section, 1990-present.
- Member, Engineering Geology & Site Characterization Committee, 1998-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), November 2004 to present.
- ASCE Rep for Intl. Activities Committee to 16th ICSMGE, Osaka, Sept. 2005.
- Organizing Committee – ASCE GeoCongress, Atlanta, February 2006.
- Appointed CCC member to ASCE 2009 GeoCongress on Foundations, Dallas, TX. (Dec. 2006)
- Publications Committee - GSP Guidelines for Authors and Editors (2006-2007)

American Society for Testing and Materials (ASTM) – 1980-Present

- Member (GTJ), Subcommittee D18.92, 1985-Present.
- 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.
- Rewrite of Standard Revision of D 5778 on Cone Penetrometer Testing 2002-present.
- Member, Vane Shear Subcommittee, Revision of D-2573, 2002-present.

International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)

- Member, US National Society Committee Member (USNS), 1982-Present.
- Host Chair, Organizing Committee, International Conf. on Site Characterization (ISC'98), Atlanta, 1996-1998.
- Core Member, Tech. Comm. 16 (Ground Property Characterization from In-Situ Testing), 1994-present.

- Organizer, International GeoMusic Session at ISC '98, April 20, 1998: Prof. A.J. Lutenegger (guitar), Prof. David Elton (vocals), Prof. Gianfranco Totani (sax), Professor 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, September 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 (Taipei, 2008): Meeting chair in Singapore, Dec. 01, 2006.

Canadian Geotechnical Society

- Member, Soil Mechanics Division (Dec. 2000 - present).
- Reviewer of Technical Papers for CGJ (1995 to present)
- Participant – 57th Canadian Geotechnical Conference, Quebec – Oct. 24-26, 2004.
- Reviewer of NSERC Proposals (Dec. 2006)

Transportation Research Board

- Member, Transportation Research Board (TRB), Washington, D.C., 1987-present.
- 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.

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 at Fort Collins & 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.

Deep Foundations Institute (DFI)

- Member of deep foundations society on driven piles and drilled shafts, Dec. 2000- present

Virginia Society of Professional Engineers (VSPE/NSPE) - 1978-1986

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

Network for Earthquake Engineering Simulation (NEES)

- Member, Individual Member, 2003.

<u>Technical Journal Referee and Refereed Proceedings</u>

- Reviewer, ASCE *Journal of Geotechnical Engineering*, 1982-Present
- Reviewer, *Canadian Geotechnical Journal*, 1987-present.
- Reviewer, ASTM *Geotechnical Testing Journal*, 1988-present.
- 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-present.
- Reviewer, 3rd *International Conference on Case Histories in Geotechnical Engineering*, St. Louis, 1993.
- Reviewer, 13th *International Conf. on Soil Mechanics and Foundation Engineering*, New Delhi, 1994.
- Reviewer, *Soils & Foundations*, Japanese Geotechnical Society, 1994-present.
- Reviewer, ASCE *Journal of Geotechnical & Geoenvironmental Engineering*, 1994-present.
- Reviewer, FHWA *International Conference: Design and Construction of Deep Foundations*, December, 1995.
- Reviewer, Book Manuscripts, Prentice-Hall, Salt Lake City, 1995.
- Reviewer, *XI Pan American Conference on Soil Mechanics & Geotechnical Engineering*, Brazil, August 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-2 proceedings, 2004.
- Reviewer for *Geotechnique* papers, 2004 - present.
- 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 papers for DMT 2006 conference proceedings.
- Reviewer of papers for ASCE JGGE (Sept 2006)
- Review of paper for Intl J. Pavements (Oct. 2006)
- Review of paper for Geotechnique (Nov. 2006)
- Review of paper for Canadian Geot. J. (Dec. 2006).
- Paper Review for ASCE *Journal of Geotechnical & Geoenvironmental Engrg*, Jan. 2007.
- Reviewer of proposals, NSERC - Canadian National Research Council, Feb. 2007.

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
- *Editorial Board Member (2004-2007)*, International Journal of Geoengineering Case Histories: www.geoengineer.org
- *Geomechanics & Geoengineering: an international journal (2006-2007):* www.tandf.co.uk

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) to Professor Roy Olson & Rollins Brown/Univ. of Texas Austin: Axial Pile Foundation Load Test Study in California, June 1998-July 2001.
- USUCGER Advisory Board, 2003-2004: www.usucger.org
- *Invited* U.S. Correspondent for *Geotechnique* (Institution of Civil Engineers, London), 2004-2007.

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., 2002-2007 (List confidential)

Professional Registration

- P.E. Registered Professional Engineer, Commonwealth of Virginia – 1983; License No. 013865.
- P.E. Registered Professional Engineer, District of Columbia – 1981; License No. 7731.

B. CAMPUS CONTRIBUTIONS

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.
- Dr. Mayne has 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

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 21st 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.

C. OTHER CONTRIBUTIONS

Engineering Consulting (post-doctoral)

1. John P. Stopen Structural Engineers: "Interpretation of Piezocone Soundings for Carousel Mall Development", Syracuse NY, 1989.
2. Empire State Electric Energy Research Corporation: "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, S.C.", May 1998 - Jan. 2001.
9. Schnabel Engineering Associates, Virginia: "Deformation Analysis of Sheet Pile Cofferdam, Whitewater Dam, Macon County, Georgia", Oct. 1998 - June 1999.
16. 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.
17. Trigon Engineering Consultants, "Harris Blvd Office Complex", Charlotte, NC, July 2000.
18. Ardaman Associates, "Pile Capacity by Seismic Cone Tests, Trinidad", June-Aug. 2000.
19. Salut Inc. and FHWA "Axial Pile Response of James River Bridge", Aug-Dec. 2000.
20. Virginia Geotechnical Services and VA DOT: "Pinners Point Interchange, VA", Jan. 2001-August 2001.
21. Southern Companies/Georgia Power: "Wansley Plant Foundations, Newnan, GA", May 2001-Sept. 2001.
22. Modjesky & Masters, VDOT, Mactec/Law and SES: "Gilmerton Bridge, Chesapeake, VA", Nov. 2002 to Dec. 2003.
23. Hartsfield Atlanta International Airport (HAIA): Runway 5 Development, Feb. 2003 – June 2003.
24. Port of Anchorage Expansion, 2003-2006, Alaska for Terracon/Titan Atlantic.
25. Failure investigation: Berth 8 mooring dolphins, Savannah, Georgia, 2004-2005.
26. Failure investigation: Wellons Forehand Route 17 Bridge & Embankments, Chesapeake, VA 2004-2005.
27. CPTs for Dynamic Compaction at Bahia Beach, Puerto Rico; for GeoCim Engineers, 2005.
28. SDMTs and SCPTUs at SRS, Aiken, SC for Parsons Group-Shannon & Wilson-GeoSyntec, 2006.

Other Campus Activities

Ph.D. Graduate Committees *(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.
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
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 post doc - Melbourne, Australia.
56. Ahmed Bayoumi, PhD Defense Comm, 23 March 2006, currently with CH2M-Hill, CA.
57. Cem Ozan, Special Geo-Bio-Engineering PhD Comp Exam - Nov. 3, 2004; Defense Jan. 30, 2007.

MS Committee Member *(Exit Exams and Defenses)**:***

1. Jamie R. Beaver, MS Defense, November 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, October 25, 1996.
6. Kate Waggener (Mayer), MS Defense, December 13, 1996.
7. Vasilis Vandolis, MS Exam, March 1997.
8. Laurel Empie, MS Graduate Defense, December 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.

External Reading Committees

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 National University of Singapore, Dept. of Civil Engineering “Application of a radioisotope cone penetrometer to characterize a lumpy fill” Advisor: Prof. Tan Thiam Soon
5. Shin Fun Chung	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 Seismic Cone for Characterization of Ground Improved by Vibro-Replacement" Advisor: Professor John Howie

M.S. Thesis

Robert F. Murray	1994-1995 University of New Hampshire, Civil Engineering, Durham "Piezocone Exploration for Marine Clay at Pease Air Force Base" Advisor: Prof. Jean Benoit

Chiu Chung Fai 1995-1996
The University of Hong Kong, Civil & Structural Engineering
"A Modified Flat Dilatometer for Measuring Nonlinear Soil Behavior at Small Strains"
Advisor: Prof. J. Neil Kay

Master of Engineering Thesis

Yu Jin 1997-1999
Nanyang Technological University, Singapore
"Effect of Construction on Axial Load Transfer along Bored Piles in Residual Soils"
Advisor: Prof. Ming-Fang Chang

Other Noteworthy Activities

Civic Activities:

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, 10th 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 in three separate presentations to the grade 6 elementary classes, Haynes Bridge Middle School, Alpharetta, GA, May 1998.
29. Geotechnical Engineering Presentation, ASCE Student Member Chapter, Georgia Tech, Feb. 1999.
30. ASCE Student Chapter, presentation on *Geotechnical Engineering*, Sept. 2000.
31. PTA member, Sedalia Park Elementary School, 2001-2003.
32. Hanover Woods, Grounds Restoration Committee, Pool & Tennis Association, 2001.
33. Videocam Operation, Annual Talent Show, Sedalia Park, March 2002.
34. Chaperone, *Science Olympiad*, Cobb County Elementary Schools, Southern Tech, June 2002.
35. Powersurge musical ensemble, Powers Ferry United Methodist Church, Marietta, 2003-present.
36. Tour host, 6th grade science classes from East Cobb Middle School to Georgia Tech, April 2004.
37. Powersurge Service at Fairburn UM Church, Sept. 12, 2004.
38. Videocam Operation, Fall Chorus Show, East Cobb Middle School, Dec. 16, 2004.
39. Tour host, 6th & 7th grade science classes, East Cobb Middle School to GT Plasma Lab, March 2005.
40. Earth Day Celebration - Music Quartet - Dr. Neitzel & Dr. Mayne - Student Center
41. Lecture to 8th Grade Engineering Class, East Cobb Middle School (Fred Stillwell), May 2006.
42. Advice to Marie Mecham, homeowner in western Georgia
43. Home inspection and advice: Paul Hewitt - GT Coach, west Cobb County, GA.

VI. 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, Washington, D.C.
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
   Joint Proposal with Dr. Samuel Paikowsky, University of Massachusetts/Lowell
   National Science Foundation, Arlington, VA; Amount: $74,400 (1995)
7. Plasma Vitrification 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 Transporation, 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.
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 (Pending).
27. Geotechnical Site Characterization by Cone Penetrometer Testing
    New Orleans East Levees - USACE and URS Corporation
    2006-2007: $42,000
28. Characterization by Piezocone and Vane Shear Testing
    New Orleans Citrus Land Levees - USACE and Terracon Corp.
    2006-2007 - $40,000
29. Site Characterization by Piezocone Penetration Tests
    New Orleans Plaquemines Parish Levees - USACE and Arcadis
    2007: $62,000 pending.
30. In-Situ Testing Short Course, Minneapolis.
    Minnesota Dept. Transportation: Requested: $10,890 (awarded Feb 2007)

Co-Principal – <u>Funded</u>

1. In-Situ Vitrification 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 (lead), School of Civil & Environmental Engineering, GIT
   Amount: $168,327 (1994)
4. Site Characterization for In-Situ Nontransferred Arc Plasma Vitrification of Soils
   (with Dr. Lou Circeo/Arch and Dr. J. Nemeth/GTRI)
   Submitted: August 1996 to ERDA/Westinghouse/Savannah River Tech. Center
   Amount: $80,000 (1996) – Phase I, 4 months
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) with University of 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).

B. AS INVESTIGATOR

<u>Funded</u>

1. Vitrification 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 Cone Module
   Geoenvironmental Cone Penetrometer Testing of Subsurface BETX Contamination
   Co-PI with Photonic System Sensors and GTRI Environmental Science; Submitted to US ARO STTR Program
   Amount: $100,000 – Phase I, 12 months (1996)
   Amount: $500,000 – Phase II, 24 months (1997-1999)
3. Plasma Vitrification 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 – 12 month study (1998)
4. Geotechnical Engineering Circular (GEC-5) on Soil Properties
   Federal Highway Administration, Washington, D.C. [FHWA DTFH61-94-R-00099]
   PIs : Dr. Rudy Bonaparte, Dr. Paul Sabbatini, Dr. Bob Bachus, GeoSyntec Consultants, Atlanta, GA
   Amount: $150,000 (1998-2001).
5. Plasma Vitrification of Phosphatic Clays
   PI: Dr. L.J. Circeo, Director, 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 January 2004; Resub: March 2005; Awarded June 2005.

VII. HONORS AND AWARDS

Professional

- Invited Keynote: *James K. Mitchell Lecture* during GeoShanghai Conference (June 2006).
- *Synthesis on Cone Penetration Testing*, Awarded by National Academies (January 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_0-OCR Relationships in Soils" was selected as a **classic reading reference** and chosen for reprint in *A History of Progress*, ASCE Geotechnical Special Publication 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.
- Nominee, Wellington Prize, American Society of Civil Engineers for JGGE paper, Oct. 1999.
- President-Elect, U.S. Universities Council on Geotechnical Engineering Research (USUCGER)*****, May 1999.
- 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.

Institute

- 2006 *Outstanding Professional Education Award*, bestowed by President G.W. Clough, Georgia Institute of Technology, April 2006.
- *Innovation Award*, School of Civil & Environmental Engineering, 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.

Other

- Award for "Geosystems Team Leader (2000-2006)" given by Geosystems Engineering 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. Engrg., 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:
*****See: http://www.usucger.org
******Note: Science Applications Intl. Corp. (SAIC), Marietta, GA.

VIII. PROFESSIONAL EXPERIENCE

Prior to entering academe, Paul Mayne spent 10+ years in consulting practice in the Washington DC- Virginia-Maryland region where he worked on 455 projects located in 22 states and several international countries. During his engineering practice, 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.

Experience in Building Foundations

Selected presigious 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.

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 structure at Anacostia NAS, Washington 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 VDOT using CPT data
- Evaluation of lateral pile load test data, Kentland Farms,VA for FHWA/Virginia Tech.
- Prediction of axial & lateral pile response, Substation in Center GA for Southern Companies using SCPTu data.
- Large diameter drilled shafts for Gilmerton Bridge Replacement, Virginia – VDOT, MacTec, and Modjesky-Masters

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

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, 1990.

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 Mayne 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, D.C., 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, Geot. Engrg*, Technomic Pub., Lancaster, 870 p.
- Hausmann, M.R. (1990). *Engineering Principles of Ground Modification*. McGraw-Hill, New York, 632 p.
- Rollins, K.M., ed. (1994). *In-Situ Deep Soil Improvement*. GSP No. 45, ASCE, New York, 148 p.
- Lukas, R.G. (1995). *Dynamic Compaction*, Geot. Engrg. Circular 1, (FHWA-SA-95-037), Washington, D.C., 97 p.
- Schaefer, V.R., editor (1997). *Ground Improvement, Ground Reinforcement, Ground Treatment*, ASCE GSP. 69, 619 p.

Dynamic compaction projects that Paul has 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
- Interstate I-65 Project, Morris County, with the Alabama DOT, Birmingham, AL.
- 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, Atlanta Hartsfield Airport with Hayward Baker Company (A-W), 2003.
- Dormitory Foundation Preparations, Marietta Street, Atlanta with J.S. Jones & Associates (ECS), 2004.
- Bahia Beach Resort Development, San Juan, Puerto Rico, 2005-2006.