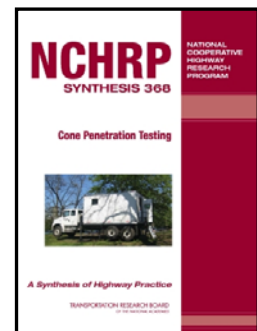


## 2007-2008 Annual Summary of Accomplishments - Paul W. Mayne, Professor, CEE

1. **NCHRP Synthesis 368 on Cone Penetration Testing (2007)**. This is a state-of-the-art report and state-of-the-practice summary of US and Canadian DOTs utilization of piezocone penetrometer for geotechnical site investigations. This document was published by the National Academies in October 2007 and is its first hard copy report produced with color printing of figures & graphs. It is also available as a downloadable PDF file from the Transportation Research Board ([www.trb.org](http://www.trb.org)).



2. **2007 Cross-Canada Lecture**: By invitation of the Canadian Geotechnical Society (arm of the National Research Council of Canada), this involved 14 presentations visiting 12 cities in 2 weeks during November and December of 2007. Cities and locations visited:

- Laval University, Quebec City Section
- RA Centre, Ottawa Section
- Carlton University, Ottawa
- Kingston Section, Kingston, Ontario
- Queens University, Kingston
- Toronto Section, Ontario
- Univ. New Brunswick, Fredericton
- Halifax, Nova Scotia
- GeoCentre, St. John's, Newfoundland
- Montreal Section\*, Quebec
- Manitoba Section, Winnipeg
- Univ. of Alberta, Edmonton
- Edmonton Geotech Section, Alberta
- Victoria Section, Vancouver Island
- Vancouver Geotech Section, BC

\*Note: snowed out and re-scheduled for June 11, 2008



### CONTINUING EDUCATION, LECTURES, and SEMINARS

1. *Cone Penetration Testing*, USAE Corps of Engineers, Vicksburg MS: 11-13 January 2007
2. *Enhanced In-Situ Testing & Geotechnical Site Characterization*, GT Global Learning Center, 06-07 March 2007.
3. CPT Seminars in Calgary, Edmonton, and Fort McMurray, Alberta (19-24 March 2007).
4. Invited Presentation: *Overview on In-Situ Test Calibration*. Atlanta ASCE Geotechnical Section, Georgia Power Building, April 17, 2007.
5. *CPT and DMT Training Course (DLPE)*, Minnesota Dept. of Transportation, St. Paul, MN 21-25 May 2007.
6. CPT Seminar for Russian Delegation with Vertek, Applied Research Associates, and S&ME, held in Charleston, SC, 12-13 July 2007.
7. Invited Talk on Critical State Soil Mechanics, Brisbane Office, Coffey & Partners, 17 August 2007.
8. Presentation on Piezocone Tests and Ground Modification, Port of Brisbane, 16 August 2007.
9. Invited Talk on In-Situ Testing, Sydney Office, Coffey & Partners, 24 August 2007.
10. *Enhanced In-Situ Testing & Site Characterization*, GT Global Learning Center, 12-13 September 2007.
11. *Foundation Systems - DLPE Course*, GLC, 14 December 2007.
12. Invited Keynote Lecture, ASCE Nebraska Geotechnical Section, Omaha, 14-15 February, 2008:  
<http://www.neasce.org/index.htm>



Participants in MnDOT Course

13. *Enhanced In-Situ Testing & Geotechnical Site Characterization*, GT Global Learning Center, 18-19 March 2007: [www.pe.gatech.edu](http://www.pe.gatech.edu)

### OTHER GEORGIA TECH ACTIVITIES

1. Eulogy at memorial service for Em. Prof. Richard Barksdale, 20 January 2007.
2. Geosystems Engineering PhD Comp Exams 2-7 Jan and 02 Feb. 2007.
3. GeoRetreat - 03 Feb. 2007
4. Earth Day at Georgia Tech - 20 April 2007: The band "Dr.Dr.Mr. M.D." ⇒ played at the Student Center stage:

<http://www.earthday.gatech.edu/performers.html>



5. Research Planning Meeting - GTI and GDOT at GLC - 01 May 2007.
6. 10th Sowers Symposium at the GT Student Center Auditorium & Ballroom.
7. Retirement Luncheon for Ken Thomas in CEE foyer: 07 May 2007.
8. Planning meeting with DLPE for IS-Atlanta at GLC on 07 June 2007:
- 4th International Symposium on Deformation Characteristics of Geomaterials

[www.isAtlanta2008.org](http://www.isAtlanta2008.org)

9. Guest lecturer for CEE Senior Design Course - 13 June 2007.
10. CEE SAC Committee - chaired by Prof. Kim Kurtis.
11. Planning meeting for IS-Atlanta on 22 June 2007.
12. Ice-Cream Social, School of Mechanical Engineering, live music by ⇒ the band "Dr.Dr.Mr. M.D." on 30 August 2007.



13. Technical committee meeting for IS-Atlanta: 05 September 2007.
14. Guest lecturer for GT GeoSeminar by John Wolosick, Hayward Baker Co. 14 Sept. 2007.
15. Visit to GT by Rick Pearce, Terracon Consulting Engineers, 05 Oct. 2007.
16. Visit to GT by Prof. Kenichi Soga, Cambridge University, 02 Nov. 2007.
17. Commencement Activities at the GT Coliseum: 14 December 2007.
18. Meeting with visiting Prof. Goran Sallfors, Sweden, 16-17 Jan. 2008.
19. Award Reception & Luncheon - GT and Southern Companies - Offshore Windmill Feasibility Team, Druid Hills Country Clubhouse, 05 Feb. 2008.
20. Planning meeting Geosystems-DLPE for IS-Atlanta, 04 February 2008.
21. Appointed to CEE Awards Committee - chaired by Marc Stieglitz, 14 Feb. 2008.
22. Geosystems PhD Comp Exams: 17-21 March 2008.
23. Oral Examinations, PhD Candidates for Spring 2008: 26 March 2008.

### PROFESSIONAL ACTIVITIES

1. ASCE *Conference Coordinating Committee* Meeting - Denver, Sunday 18 Feb. 2007; appointed leadership position by the Geo-Institute. ASCE GeoCongress, Denver - 16-20 Feb 2007.
2. ASCE GeoCongress on Deep Foundations, planning committee meeting held Monday 19 Feb. 2007. Joint ASCE-ADSC-PDCA event scheduled for March 2009 in Orlando, Florida: International Foundation Conference & Equipment Expo '09:

<http://www.ifcee09.org/i4a/pages/index.cfm?pageid=1>

3. ASCE CCC teleconference meeting on 14 June 2007.
4. ASTM Committee D18.09. *Standard for Electronic Cone Penetration and Piezocone Testing of Soils* (ASTM D-5778); Final revised version approved and published, December 2007.

5. ASCE CCC teleconference meeting on 11 Sept. 2007.
6. **Chair** TC 16 Committee Meeting on 25 September 2007, International Society on Soil Mechanics & Geotechnical Engineering. ISSMGE Committee TC 16 Meeting & Workshop on Ground Property Characterization by In-Situ Tests: [www.geoforum.com/tc16](http://www.geoforum.com/tc16)

The Workshop Group on Pressuremeter Testing at ECSMGE-Madrid ⇒

7. 14th European Conference on Soil Mechanics & Geotechnical Engineering, Madrid: 22-28 September 2007.
8. Visit with Univ. British Columbia cone truck at the Kidd 2 CANLEX test site, Vancouver, 29 October 2007.
9. Organizing and Review Committees for 3rd International Conference on Site Characterization (ISC-3): 01-04 April 2008, Taipei, Taiwan:

<http://www.elitepc.com.tw/ISC3/>

10. Dr. Mayne was the senior editor in developing the current guidelines for proceedings papers for GSP (Geotechnical Special Publications) by ASCE: <http://content.geoinstitute.org/publications.html>



#### Refereed Journal and Proceedings Publications:

- Liao, T. and Mayne, P.W. (2007). "Stratigraphic delineation by three-dimensional clustering of piezocone data", *GeoRisk: Assessment and Management of Risk for Engineered Systems and Geohazards*, Vol. 1 (2), Taylor & Francis Group: 107-119.
- Mayne, P.W. (2007). Cone Penetration Test: State-of-Practice. *NCHRP Synthesis 368*, Transportation Research Board, National Academies Press, Washington, DC: 118 pages:

[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_syn\\_368.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_368.pdf)

- Mayne, P.W. (2007). "Overview Paper: In-situ test calibrations for evaluating soil parameters", *Characterisation & Engineering Properties of Natural Soils*, Vol. 3, Taylor & Francis Group, London: 1602-1652.
- Peuchen, J. and Mayne, P.W. (2007). "Rate effects in vane shear testing", *Proceedings 6th Intl. Offshore Site Investigation & Geotechnics Conference*, Royal Geographical Society, Society for Underwater Technology, London: 187-194.
- Mayne, P.W. and Burns, S.E. (2008). "Common analytical model for piezocone and dilatometer in clays", *Proceedings, 3rd Intl. Conference on Site Characterization (ISC-3, Taipei, Taiwan)*, Taylor & Francis Group, London.
- Mayne, P.W. and Woeller, D.J. (2008). "O-cell response using elastic pile and seismic piezocone tests". *Proceedings, British Conference on Foundations*, Dundee, Scotland.
- McGillivray, A.V. and Mayne, P.W. (2008). "An automated seismic source for continuous-push shear wave velocity profiling with SCPT and frequent-interval SDMT", *Proceedings, 3rd Intl. Conference on Site Characterization, (ISC-3, Taipei, Taiwan)*, Taylor & Francis Group, London.
- Uzielli, M. and Mayne, P.W. (2008). "Comparative CPT-based classification of Cooper Marl", *Proceedings, 3rd Intl. Conference on Site Characterization, (ISC-3, Taipei, Taiwan)*, Taylor & Francis Group, London.
- Larrahondo, J.M., Atalay, F., McGillivray, A.V. and Mayne, P.W. (2008). "Evaluation of road subsurface drain performance by geophysical methods", *Proceedings ASCE GeoCongress*, New Orleans: The Challenge of Sustainability in the GeoEnvironment. 9-12 March.

#### Technical Reports

Larrahondo, J.M., Atalay, F., Mayne, P.W. and McGillivray, A.V. (November 2007). **Report of Highway Drain Performance in Georgia**, GTRC-GTI Report No. E-20-K86 to Georgia Dept. of Transportation, 165 pages.

## PROPOSALS

1. DLPE Proposal to USAE for short course, issued 9 Jan. 2007. Accepted.
2. DLPE Proposal to MnDOT for training course, issued 24 Jan. 2007. Accepted.
3. Geotechnical Characterization of Levees at Plaquemines Parish, to Arcadis - G&M/Chattanooga, TN. Pending
4. Geotechnical Advice on In-Situ and Lab Characterization Citrus Levees, Terracon/Drash Consulting Engineers/San Antonio, TX. Accepted May 2007.
5. GTRC Proposal to Bechtel on Dulles Corridor Rail, Virginia, issued 6 July 2007 - Accepted.
6. Proposal planning meeting with SRS/Bechtel on 04 September 2007.
7. Development of In-String P-S Wave Profiler for Cone Penetrometer Testing. Fugro Engineers, Holland. Pending
8. Comprehensive Geocharacterization of Santee Formation and Its Implications. USDOE with Drs. Burns, Rix, and Santamarina. Pending
9. GTRC Proposal to Fort Benning: SCPTU Testing, submitted 14 Jan. 2008. Pending.

## DOCTORAL RESEARCH COMMITTEES

Alec McGillivray, Defense 05 November 2007  
 Jong Hee Kim, Defense, Oct. 2007  
 Bate Bate, Guidance Committee, Dec. 2008  
 Varun Varun, Guidance Committee, Jan 2008

## GRADUATE STUDENT ADVISOR

Fikret Atalay, MS Graduation, January 2007  
 Joan Larrahondo, MS Graduation, May 2007  
 Alec McGillivray, PhD Graduation, Dec. 2007.

## PROFESSION REVIEW and LETTERS OF REFERENCE:

Candidate: Dr. Hyunki Kim for City University New York, 17 Feb. 2007  
 Candidate: Dr. Tae Sup Yun for Washington State Univ., 22 Feb. 2007.  
 Promotion: Dr. Thiam Soon TAN, National University of Singapore, 16 March 2007  
 Candidate: Dr. Hyunki Kim for Wollongong University, 24 April 2007  
 Candidate: Dr. Jong-Won Choi for Univ. Texas at Austin, 14 May 2007.  
 Candidate: Dr. Yasser Hegazy to Bradley University, 02 July 2007.  
 Promotion & Tenure: Dr. Giovanna Biscontin, Texas A&M University: 11 July 2007.  
 Promotion: Dr. Erol Tutumluer, University of Illinois - Urbana-Champaign: 19 July 2007.  
 Promotion & Tenure: Dr. Murad Abu-Farsakh, Louisiana State University, 22 Oct. 2007.  
 Candidate: Dr. Guillermo Narsilio, Melbourne University, 06 Nov. 2007.  
 Promotion & Tenure: Dr. Sabanayagam Thevanayagam, Univ. Buffalo, 07 Nov. 2007.  
 Promotion & Tenure: Dr. Craig Benson, Univ. Washington, 07 January 2008.  
 Citizenship - Testimonial: Dr. Peter K. Robertson (formerly Univ. Alberta), 23 January 2008.

## OTHER ACTIVITIES:

1. Family vacation in Arizona: 27 May to 02 June 2007  
 Sedona, AZ ⇒
2. Powers Ferry United Methodist Church - Powersurge band.
3. PTSA - Parent-Teacher-Student Association at Wheeler High School, Cobb County, GA
4. Technical support - drilled water well feasibility for Hanover Woods Homeowners Association.

