

CONTENTS OF GÉOTECHNIQUE VOLUME LIX

February, March, April, May, June, August, September, October, November, December 2009

No. 1, 1–78; No. 2, 79–156; No. 3, 157–290; No. 4, 291–413; No. 5, 415–492; No. 6, 493–570; No. 7, 571–467; No. 8, 649–726; No. 9, 727–799; No. 10; 801–878

Editorial: Géotechnique—moving on.	<i>C. R. I. Clayton</i>	1
Response of caisson breakwater subjected to repeated impulsive loading.	<i>X. Y. Zhang, F. H. Lee and C. F. Leung</i>	3
Tilt displacement of caisson breakwater due to wave loading.	<i>X. Y. Zhang, F. H. Lee and C. F. Leung</i>	17
Numerical modelling of extraction of spudcans.	<i>X. X. Zhou, Y. K. Chow and C. F. Leung</i>	29
Rate effects on penetrometer resistance in kaolin.	<i>B. M. Lehane, C. D. O'Loughlin, C. Gaudin and M. F. Randolph</i>	41
Service limit state resistance factors for drilled shafts.	<i>A. Misra and L. A. Roberts</i>	53

Technical Notes

Field study of construction effects in jacked and driven steel H-piles.	<i>L. M. Zhang and H. Wang</i>	63
Hydraulic conductivity of biopolymer-treated silty sand.	<i>A. Bouazza, W. P. Gates and P. G. Ranjith</i>	71

Discussion

Variation of suction pressure during caisson installation in sand.	<i>M. N. Tran and M. F. Randolph</i>	73
Compaction behaviour of clay.	<i>A. Tarantino and E. De Col</i>	75
Erratum		78

Resistance of full-flow penetrometers in rate-dependent and strain-softening clay.	<i>H. Zhou and M. F. Randolph</i>	79
A multilaminate framework for modelling induced and inherent anisotropy of soils.	<i>H. F. Schweiger, C. Wiltafsky, F. Scharinger and V. Galavi</i>	87
The influence of grouting pressure on the pullout resistance of soil nails in compacted completely decomposed granite fill.	<i>J.-H. Yin, L.-J. Su, R. W. M. Cheung, Y.-K. Shiu and C. Tang</i>	103
The undrained capacity of skirted strip foundations under combined loading.	<i>M. F. Bransby and G.-J. Yun</i>	115
A continuum-based model for analysis of laterally loaded piles in layered soils.	<i>D. Basu, R. Salgado and M. Prezzi</i>	127

Technical Notes

The miniature wireless data-logger for pressure measurements in geotechnical applications.	<i>J. L. Brown, V. Sivakumar, J. D. McKinley, N. Harmon and K. McDonald</i>	141
Graphical representation of constitutive equations.	<i>G. Gudehus and D. Mašin</i>	147

Discussion

Physical characteristics of subglacial tills.	<i>B. G. Clarke, D. B. Hughes and S. Hashemi</i>	153
Géotechnique reviewers		156

Editorial.	<i>B. G. Clarke</i>	157
THM-coupled finite element analysis of frozen soil: formulation and application.	<i>S. Nishimura, A. Gens, S. Olivella and R. J. Jardine</i>	159
Modelling of cryogenic processes in permafrost and seasonally frozen soils.	<i>H. R. Thomas, P. Cleall, Y.-C. Li, C. Harris and M. Kern-Luetsch</i>	173
Modelling the thermomechanical volume change behaviour of compacted expansive clays.	<i>A.-M. Tang and Y.-J. Cui</i>	185
Explaining thermal failure in saturated clays.	<i>T. Hueckel, B. François and L. Laloui</i>	197
A new approach for assessing geothermal response to climate change in permafrost regions.	<i>S. Nishimura, C. J. Martin, R. J. Jardine and C. H. Fenton</i>	213
Energy from earth-coupled structures, foundations, tunnels and sewers.	<i>D. Adam and R. Markiewicz</i>	229
Energy pile test at Lambeth College, London: geotechnical and thermodynamic aspects of pile response to heat cycles.	<i>P. J. Bourne-Webb, B. Amatya, K. Soga, T. Amis, C. Davidson and P. Payne</i>	237
Aquifer thermal energy storage: theoretical and operational analysis.	<i>J. S. Dickinson, N. Buik, M. C. Matthews and A. Snijders</i>	249
Ground energy systems: from analysis to geotechnical design.	<i>M. Preene and W. Powrie</i>	261

Technical Notes

Thermomechanical model for saturated clays.	<i>H. M. Abuel-Naga, D. T. Bergado, A. Bouazza and M. Pender</i>	273
Inclusion of higher-temperature effects in a soil behaviour model.	<i>H. R. Thomas, S. Siddiqua and S. C. Seetharam</i>	279
Fractal analysis of temperature-induced cracking in clays and rocks.	<i>L. E. Vallejo</i>	283
Use of energy piles in a residential building, and effects on ground temperature and heat pump efficiency.	<i>C. J. Wood, H. Liu and S. B. Riffat</i>	287

Editorial.	<i>B. G. Clarke</i>	291
Thermo-hydraulic characterisation of soft rock by means of heating pulse tests.	<i>J. J. Muñoz, E. E. Alonso and A. Lloret</i>	293
Bentonite THM behaviour at high temperatures: experimental and numerical analysis.	<i>M. Åkesson, A. C. Jacinto, C. Gatabin, M. Sanchez and A. Ledesma</i>	307

Investigating the time-dependent behaviour of Boom clay under thermomechanical loading. <i>Y.-J. Cui, T. T. Le, A. M. Tang, P. Delage and X. L. Li</i>	319
Assessing the impact of quartz content on the prediction of soil thermal conductivity. <i>V. R. Tarnawski, T. Momose and W. H. Leong</i>	331
Experimental investigation of thermo-hydro-mechanical behaviour of an unsaturated silt. <i>A. Uchaipichat and N. Khalili</i>	339
Solar heating of the soil and evaporation from a soil surface. <i>G. Blight</i>	355
Measured and simulated heat transfer to foundation soils. <i>H. R. Thomas and S. W. Rees</i>	365
A full-scale in situ heating test for high-level nuclear waste disposal: observations, analysis and interpretation. <i>A. Gens, M. Sánchez, L. Do N. Guimarães, E. E. Alonso, A. Lloret, S. Olivella, M. V. Villar and F. Huertas</i>	377
The coupled thermal-hydraulic-mechanical behaviour of a large-scale in situ heating experiment. <i>H. R. Thomas, P. J. Cleall, D. Dixon and H. P. Mitchell</i>	401
The mechanical behaviour of an unsaturated compacted silty clay. <i>A. Jotissankasa, M. Coop and A. Ridley</i>	415
The Stokoe resonant column apparatus: effects of stiffness, mass and specimen fixity. <i>C. R. I. Clayton, J. A. Priest, M. Bui, A. Zervos and S. G. Kim</i>	429
Consolidation analysis of a stratified soil with vertical and horizontal drainage using the spectral method. <i>R. Walker and B. Indraratna</i>	439
UH model: three-dimensional unified hardening model for overconsolidated clays. <i>Y.-P. Yao, W. Hou and A.-N. Zhou</i>	451
<i>Technical Notes</i>	
Effect of relative density on plate loading tests on fibre-reinforced sand. <i>N. C. Consoli, M. D. T. Casagrande, A. Thomé, F. Dalla Rosa and M. Fahey</i>	471
Particle breakage during cyclic triaxial loading of a carbonate sand. <i>S. Donohue, C. O'Sullivan and M. Long</i>	477
Undrained shear strength of soils under flow deformation. <i>Y. Tsukamoto, K. Ishihara and T. Kamata</i>	483
The strength of unstabilised rammed earth materials. <i>P. A. Jaquin, C. E. Augarde, D. Gallipoli and D. G. Toll</i>	487
<i>Obituary</i>	
Ralph B. Peck	491
A method of estimating the form of coarse particulates. <i>C. R. I. Clayton, C. O. R. Abbireddy and R. Schiebel</i>	493
A method of estimating the form of fine particulates. <i>C. O. R. Abbireddy, C. R. I. Clayton and V. A. I. Huvenne</i>	503
Hydro-mechanical modelling of landslides with a material instability criterion. <i>S. Lignon, F. Laouafa, F. Prunier, H. D. V. Khoa and F. Darve</i>	513
Experimental study of uplift resistance of shallow skirted foundations in clay under transient and sustained concentric loading. <i>S. Gourvenec, H. E. Acosta-Martinez and M. F. Randolph</i>	525
<i>Technical Notes</i>	
Shear viscosity of clays using the fall cone test. <i>S. P. Mahajan and M. Budhu</i>	539
Use of a genetic algorithm to perform reliability analysis of unsaturated soil slopes. <i>K. Gavin and J. Xue</i>	545
Darcy's law and the differential equation of motion. <i>J. J. Nader</i>	551
Coefficient of consolidation by plotting velocity against displacement. <i>J. D. McKinley and V. Sivakumar</i>	553
Book review	559
British PhD Theses: 2008	561
<i>Obituary</i>	
Robert Gibson	567
Influence of axial load on lateral pile response in liquefiable soils. Part I: physical modeling. <i>J. A. Knappett and S. P. G. Madabhushi</i>	571
Influence of axial load on lateral pile response in liquefiable soils. Part II: numerical modeling. <i>J. A. Knappett and S. P. G. Madabhushi</i>	583
Design of laterally loaded piles in clays based on cone penetration test data: a reliability-based approach. <i>S. Haldar and G. L. Sivakumar Babu</i>	593
Measurement depth of vibratory roller-measured soil stiffness. <i>R. V. Rinehart and M. A. Mooney</i>	609
Experimental measurements of the global anisotropic elastic behaviour of dry Hostun sand during triaxial tests, and effect of sample preparation. <i>A. Ezaoui and H. Di Benedetto</i>	621
<i>Technical Notes</i>	
Comparison of vacuum consolidation with surcharge load induced consolidation of a two-layer system. <i>J.-C. Chai, K. Matsunaga, A. Sakai and S. Hayashi</i>	637
Influence of particle breakage on the resilient modulus of railway ballast. <i>B. Indraratna, J. S. Vinod and J. Lackenby</i>	643
Book review	647
Ring shear tests to evaluate strength parameters in various remoulded soils. <i>H. Toyota, K. Nakamura, M. Sugimoto and N. Sakai</i>	649
Theoretical description of embankment erosion owing to overflow. <i>K. Fujisawa, A. Kobayashi and S. Aoyama</i>	661

	869
A predictive framework for liquefaction instability. <i>J. E. Andrade</i> .	673
A graphical method for producing yield surfaces for soils. <i>H. W. Chandler and C. M. Sands</i> .	683
Closed-form solution for plastic zone formation around a circular tunnel in half-space obeying Mohr–Coulomb criterion. <i>S. A. Massinas and M. G. Sakellariou</i> .	691
Lateral oedometer testing of anisotropic clay as affected by surface roughness. <i>A. Rohe, L. F. Gareau and F. Molenkamp</i>	703
<i>Technical Note</i>	
Parameters that influence the pressure filtration characteristics of bentonite grouts. <i>A. Bezuijen, M. P. M. Sanders and D. Den Hamer</i>	717
<i>Discussion</i>	
Geotechnics: The next 60 years. <i>B. Simpson and F. Tatsuoka</i>	723
Book review	725
Erratum	726
On the behaviour of Thanet Sand: an example of an uncemented natural sand. <i>K. Ventouras and M. R. Coop</i>	727
Post-liquefaction undrained monotonic behaviour of sands: experiments and DEM simulations. <i>T. G. Sitharam, J. S. Vinod and B. V. Ravishankar</i>	739
A water retention model for deformable soils. <i>A. Tarantino</i>	751
Dynamic centrifuge model tests on asphalt-concrete core dams. <i>M. H. Baziar, Sh. Salemi and C. M. Merrifield</i>	763
<i>Technical Notes</i>	
Macro-void structure and permeability of Auckland residual clay. <i>M. J. Pender, N. Kikkawa and P. Liu</i>	773
A clustered overlapping sphere algorithm to represent real particles in discrete element modelling. <i>X. Garcia, J.-P. Latham, J. Xiang and J. P. Harrison</i>	779
<i>Discussion</i>	
The founders of <i>Géotechnique</i> . <i>J. B. Burland</i>	785
Contributions to <i>Géotechnique</i> 1948–2008: Dynamics. <i>R. Lancellota and J. W. Pappin</i>	789
Book reviews.	793
<i>Obituaries</i>	
Jachen Huder.	795
William Robert Dearman	797
Numerical investigations into cycling of full-flow penetrometers in soft clay. <i>H. Zhou and M. F. Randolph</i>	801
A new method of measuring plastic limit of fine materials. <i>V. Sivakumar, D. Glynn, P. Cairns and J. A. Black</i>	813
An assessment of earth pressure coefficient in overconsolidated clays. <i>V. Sivakumar, T. Navaneethan, D. Hughes and G. Gallagher</i>	825
Three-dimensional stability of slopes and excavations. <i>R. L. Michalowski and A. Drescher</i>	839
<i>Technical Notes</i>	
Improved expressions for field values of compaction test parameters. <i>S. K. Shukla, N. Sivakugan, M. Gandhi and M. K. Ahmad</i>	851
Undrained collapse of a shallow plane-strain trapdoor. <i>C. M. Martin</i>	855
<i>Obituary</i>	
Victor Froilano Bachmann de Mello	865
Contents of volume 59	867
Index to volume 59	870