

# Geotechnical Testing Journal

## Author Index to Volume 16

### 1993

#### A

##### Abrasion index

Continuous abrasion index for the assessment of rock abrasion (Al-Ameen, SI and Waller, MD), Dec., 525

##### Abrasive minerals

Continuous abrasion index for the assessment of rock abrasion (Al-Ameen, SI and Waller, MD), Dec., 525

##### Accelerometers

Compactor force and energy measurements (Filz, GM and Brandon, TL), Dec., 442

##### Arctic structures

Multidirectional direct simple shear apparatus (DeGroot, DJ, Germaine, JT, and Ladd, CC), Sept., 283

##### Automation

Hollow cylinder torsional simple shear apparatus capable of a wide range of shear strain measurement (Ampadu, SK and Tatsuoka, F), March, 3

##### Axisymmetric testing

Axisymmetric tension testing of geomembranes (Merry, SM, Bray, JD, and Bourdeau, PL), Sept., 384

#### B

##### B-value

B-value measurements for granular materials at high confining pressures (Yamamuro, JA and Lade, PV), June, 165

##### Backfills

Shear strength tests for coarse granular backfill and reinforced soils (Bauer, GE and Zhao, Y), March, 115

##### Bearing capacity ratio

Bearing capacity of strip foundation on geogrid-reinforced clay (Shin, EC, Das, BM, Puri, VK, Yen, S-C, and Cook, EE), Dec., 534

Ultimate bearing capacity of rectangular foundations on geogrid-reinforced sand (Omar, MT, Das, BM, Yen, S-C, Puri, VK, and Cook, EE), June, 246

##### Bentonite

Discussion on "characteristics of a bentonite slurry as a sealant" by Tuncer B. Edil and Ahmed S. H. Muhanna (DeGroot, DJ and Lutenege, AJ), March, 135

##### Bi-directional

Low-compliance bi-directional cyclic simple shear apparatus (Boulanger, RW, Chan, CK, Seed, HB, Seed, RB, and Sousa, JB), March, 36

##### Bimodularity

Indirect tension tests on rock—analytical/numerical correction for material bimodularity (Chen, R and Stimpson, B), June, 238

#### C

##### Calcareous soils

Influence of test chamber boundary conditions on sand bed response (Al-Douri, RH, Hull, TS, and Poulos, HG), Dec., 550

##### Calibrations

Drift of flush-mounted pressure cell readings (Filz, GM and Duncan, JM), Dec., 432

New traveling sand pluviator to reconstitute specimens of well-graded silty sands (Lo Presti, DCF, Berardi, R, Pedroni, S, and Crippa, V), March, 18

Preparation of large-size cohesive specimens for calibration chamber testing (Voyiadjis, GZ, Kurup, PU, and Tumay, MT), Sept., 339

Preparation of large-size laboratory deposits of cohesive soil (McManus, KJ and Kulhawy, FH), Sept., 372

Soft oedometer—a new testing device and its application for the calibration of hypoplastic constitutive laws (Kolymbas, D and Bauer, E), June, 263

##### Cation exchange

Determination of cation exchange capacity of clayey soils by the methylene blue test (Cokca, E and Birand, A), Dec., 518

##### Cemented soil

Behavior of fiber-reinforced cemented sand under static and cyclic loads (Maher, MH and Ho, YC), Sept., 330

##### Centrifuges

Dynamic centrifuge testing of soil-nailed excavations (Vucetic, M, Tufenkjian, MR, and Doroudian, M), June, 172

Simulation of ground loss in centrifuge model tests (Stone, KJL and Brown, TA), June, 253

##### Clays

Bearing capacity of strip foundation on geogrid-reinforced clay (Shin, EC, Das, BM, Puri, VK, Yen, S-C, and Cook, EE), Dec., 534

Consolidation, pre- and post-peak shearing responses from internally instrumented biaxial compression device (Finno, RJ and Rhee, Y), Dec., 496

$\delta$ - $t/\delta$  method for determination of coefficient of consolidation (Sridharan, A and Prakash, K), March, 131

Determination of cation exchange capacity of clayey soils by the methylene blue test (Cokca, E and Birand, A), Dec., 518

Determination of swell potential of Al-Qatif clay (Abduljawwad, SN and Al-Sulaimani, GJ), Dec., 469

Discussion on "the behavior at the shrinkage limit of clay undergoing drying" by David J. Williams and John W. Sibley (Marinho, FAM and Chandler, RJ), Dec., 563

$G_{max}$ - $q_c$  relationships for clays (Mayne, PW and Rix, GJ), March, 54

Modified Bromhead ring shear apparatus (Stark, TD and Eid, HT), March, 100

Prediction of expansion degree for natural compacted clays (Basma, AA), Dec., 542

##### Coal measures

Continuous abrasion index for the assessment of rock abrasion (Al-Ameen, SI and Waller, MD), Dec., 525

##### Cohesion

Preparation of large-size laboratory deposits of cohesive soil (McManus, KJ and Kulhawy, FH), Sept., 372

##### Cohesive soils

$G_{max}$ - $q_c$  relationships for clays (Mayne, PW and Rix, GJ), March, 54

1 g small-scale modelling of saturated cohesive soils (Bray, JD, Seed, RB, and Seed, HB), March, 46

Preparation of large-size cohesive specimens for calibration chamber testing (Voyiadjis, GZ, Kurup, PU, and Tumay, MT), Sept., 339

##### Compaction

Compactor force and energy measurements (Filz, GM and Brandon, TL), Dec., 442

Compatibility of compacted soils with municipal waste combustion ash leachates (Sai, JO, Anderson, DC, and Sullivan, BP), March, 108

Evaluation of fill compaction (Sikh, TS), June, 276

Prediction of expansion degree for natural compacted clays (Basma, AA), Dec., 542

Rockfill placement and compaction guidelines (Breitenbach, AJ), March, 76

##### Compressibility

$\delta$ - $t/\delta$  method for determination of coefficient of consolidation (Sridharan, A and Prakash, K), March, 131

##### Concrete

Evaluation of the drop bar test for concrete and rock quality (Charlie, WA, Ross, CA, Skinner, MM, and Burleigh, JB), Sept., 350

##### Cone penetrometer

$G_{max}$ - $q_c$  relationships for clays (Mayne, PW and Rix, GJ), March, 54

New approach to measuring dilatancy in saturated sands (Campanella, RG and Kokan, MJ), Dec., 469

Use of CPTu to estimate equivalent SPT  $N_{60}$  (Jefferies, MG and Davies, MP), Dec., 458

##### Cone penetration tests

Use of CPTu to estimate equivalent SPT  $N_{60}$  (Jefferies, MG and Davies, MP), Dec., 458

##### Consolidation

$\delta$ - $t/\delta$  method for determination of coefficient of consolidation (Sridharan, A and Prakash, K), March, 131

Hollow cylinder torsional simple shear apparatus capable of a wide range of shear strain measurement (Ampadu, SK and Tatsuoka, F), March, 3

Influence of test chamber boundary conditions on sand bed response (Al-Douri, RH, Hull, TS, and Poulos, HG), Dec., 550  
Preparation of large-size laboratory deposits of cohesive soil (McManus, KJ and Kulhawy, FH), Sept., 372

#### Correlation techniques

$G_{\max}$ - $q_c$  relationships for clays (Mayne, PW and Rix, GJ), March, 54

Use of CPTu to estimate equivalent SPT  $N_{60}$  (Jefferies, MG and Davies, MP), Dec., 458

#### Cracks

Some experiments on restrained shrinkage of clays undergoing drying (Sibley, JW and Williams, DJ), Sept., 365

Time-temperature superposition in mechanical durability testing of polyethylene geomembranes (Lord, AE, Jr., Hsuan, G., and Koerner, RM), June, 259

#### Critical state

On the measurement of critical state parameters of dense granular soils (Chu, J and Lo, S-CR), March, 27

## D

#### Dams

Rockfill placement and compaction guidelines (Breitenbach, AJ) March, 76

#### Deformation

Indirect tension tests on rock—analytical/numerical correction for material bimodularity (Chen, R and Stimpson, B), June, 238

#### Diffraction

Geotechnical tomography: the effects of diffraction (Potts, BD and Santmarina, C), Dec., 510

#### Dilatancy

New approach to measuring dilatancy in saturated sands (Campanella, RG and Kokan, MJ), Dec., 469

#### Direct shear testing

Mikasa's direct shear apparatus, test procedures and results (Takada, N), Sept., 314  
Multidirectional direct simple shear apparatus (DeGroot, DJ, Germaine, JT, and Ladd, CC), Sept., 283

#### Drive samplers

Evaluation of fill compaction (Sikh, TS), June, 276

#### Drying

Some experiments on restrained shrinkage of clays undergoing drying (Sibley, JW and Williams, DJ), Sept., 365

#### Durability

Time-temperature superposition in mechanical durability testing of polyethylene geomembranes (Lord, AE, Jr., Hsuan, G., and Koerner, RM), June, 259

## E

#### Earth pressure cells

Drift of flush-mounted pressure cell readings (Filz, GM and Duncan, JM), Dec., 432

#### Earthquakes

1 g small-scale modelling of saturated cohesive soils (Bray, JD, Seed, RB, and Seed, HB), March, 46

#### Electrical properties

Discussion on "a new apparatus for the evaluation of electrokinetic processes in hazardous waste management" by Albert T. Yeung, Salah M. Sadek, and James K. Mitchell (Alshawabkeh, AN and Acar, YB), Sept., 397

ardous waste management" by Albert T. Yeung, Salah M. Sadek, and James K. Mitchell (Alshawabkeh, AN and Acar, YB), Sept., 397

#### Electrical resistivity

Estimating water content of soils from electrical resistivity (Kalinski, RJ and Kelly, WE), Sept., 323

#### Excavation

Dynamic centrifuge testing of soil-nailed excavations (Vucetic, M, Tufenkjian, MR, and Doroudian, M), June, 172

#### Expansion

Prediction of expansion degree for natural compacted clays (Basma, AA), Dec., 542

#### Expansive clays

Some experiments on restrained shrinkage of clays undergoing drying (Sibley, JW and Williams, DJ), Sept., 365

#### Expansive soils

Determination of swell potential of Al-Qatif clay (Abduljawad, SN and Al-Sulaimani, GJ), Dec., 469

Swelling pressure behavior under controlled suction (Habib, SA and Karube, D), June, 271

#### Experimental data

Statistical methodology to analyze the effect of changes in testing technology on measurement results (Livneh, M and Ben-Akiva, M), March, 216

## F

#### Failure

1 g small-scale modelling of saturated cohesive soils (Bray, JD, Seed, RB, and Seed, HB), March, 46

#### Failure criteria

Time-temperature superposition in mechanical durability testing of polyethylene geomembranes (Lord, AE, Jr., Hsuan, G., and Koerner, RM), June, 259

#### Fiber-reinforced soil

Behavior of fiber-reinforced cemented sand under static and cyclic loads (Maher, MH and Ho, YC), Sept., 330

#### Filters

Filtration opening size of geotextiles by hydrodynamic sieving (Mlynarek, J, Lafleur, J, Rollin, A, and Lombard, G), March, 61

#### Flow

Coupled heat and water flow apparatus (Mohamed, A-MO, Yong, RN, Caporuscio, F, Cheung, SCH, and Kjartanson, BH), March, 85

#### Four-probe resistivity cells

Estimating water content of soils from electrical resistivity (Kalinski, RJ and Kelly, WE), Sept., 323

## G

#### Geocell

Large-scale triaxial compression testing of geocell-reinforced granular soils (Bathurst, RJ and Karpurapu, R), Sept., 296

#### Geogrid reinforcement

Bearing capacity of strip foundation on geogrid-reinforced clay (Shin, EC, Das, BM, Puri, VK, Yen, S-C, and Cook, EE), Dec., 534

Ultimate bearing capacity of rectangular foundations on geogrid-reinforced sand

(Omar, MT, Das, BM, Yen, S-C, Puri, VK, and Cook, EE), June, 246

#### Geomembranes

Notched constant tensile load (NCTL) test for high-density polyethylene geomembranes (Hsuan, YG, Koerner, RM, and Lord, AE, Jr.), Dec. 450

#### Geophysical methods

Geotechnical tomography: the effects of diffraction (Potts, BD and Santmarina, C), Dec., 510

#### Geosynthetics

Axisymmetric tension testing of geomembranes (Merry, SM, Bray, JD, and Bourdeau, PL), Sept., 384

#### Geotextiles

Filtration opening size of geotextiles by hydrodynamic sieving (Mlynarek, J, Lafleur, J, Rollin, A, and Lombard, G), March, 61  
In-plane air flow through needle-punched, nonwoven geotextiles under normal loading (Weggel, JR and Gontar, WA), June, 207

#### Granular soils

Effects of strain rate on instability of granular soils (Yamamuro, JA and Lade, PV), Sept., 304

On the measurement of critical state parameters of dense granular soils (Chu, J and Lo, S-CR), March, 27

## H

#### Heat of wetting

Discussion on "the behavior at the shrinkage limit of clay undergoing drying" by David J. Williams and John W. Sibley (Marinho, FAM and Chandler, RJ), Dec., 563

#### High-density polyethylene

Notched constant tensile load (NCTL) test for high-density polyethylene geomembranes (Hsuan, YG, Koerner, RM, and Lord, AE, Jr.), Dec. 450

#### High pressure

Effects of strain rate on instability of granular soils (Yamamuro, JA and Lade, PV), Sept., 304

#### Hydraulic conductivity

Compatibility of compacted soils with municipal waste combustion ash leachates (Sai, JO, Anderson, DC, and Sullivan, BP), March, 108

Discussion on "a new apparatus for the evaluation of electrokinetic processes in hazardous waste management" by Albert T. Yeung, Salah M. Sadek, and James K. Mitchell (Alshawabkeh, AN and Acar, YB), Sept., 397

#### Hydrodynamic sieving technique

Filtration opening size of geotextiles by hydrodynamic sieving (Mlynarek, J, Lafleur, J, Rollin, A, and Lombard, G), March, 61

## I-J

#### Impact tests

Evaluation of the drop bar test for concrete and rock quality (Charlie, WA, Ross, CA, Skinner, MM, and Burleigh, JB), Sept., 350

#### In-plane airflow

In-plane air flow through needle-punched, nonwoven geotextiles under normal loading (Weggel, JR and Gontar, WA), June, 207

**In-situ tests**

Some factors affecting in situ measurement using the Cambridge self-boring pressure-meter (Findlay, RC and Benoit, J), June, 188

**Instrumentation**

Compactor force and energy measurements (Filz, GM and Brandon, TL), Dec., 442

Drift of flush-mounted pressure cell readings (Filz, GM and Duncan, JM), Dec., 432

**Inversion**

Geotechnical tomography: the effects of diffraction (Potts, BD and Santmarina, C), Dec., 510

Initial study of surface wave inversion using artificial neural networks (Meier, RW and Rix, GJ), Dec., 425

**Joints**

New model of shear strength of simulated rock joints (Juang, CH, Lee, D-H, and Chang, C-I), March, 70

**L****Laboratory testing**

Discussion on "a new apparatus for the evaluation of electrokinetic processes in hazardous waste management" by Albert T. Yeung, Salah M. Sadek, and James K. Mitchell (Alshawabkeh, AN and Acar, YB), Sept., 397

**Liquefaction**

Low-compliance bi-directional cyclic simple shear apparatus (Boulanger, RW, Chan, CK, Seed, HB, Seed, RB, and Sousa, JB), March, 36

**M****Methylene blue test**

Determination of cation exchange capacity of clayey soils by the methylene blue test (Cokca, E and Birand, A), Dec., 518

**Mining**

Simulation of ground loss in centrifuge model tests (Stone, KJL and Brown, TA), June, 253

**Model tests**

Influence of test chamber boundary conditions on sand bed response (Al-Douri, RH, Hull, TS, and Poulos, HG), Dec., 550

Simulation of ground loss in centrifuge model tests (Stone, KJL and Brown, TA), June, 253

Ultimate bearing capacity of rectangular foundations on geogrid-reinforced sand (Omar, MT, Das, BM, Yen, S-C, Puri, VK, and Cook, EE), June, 246

**Moisture**

Coupled heat and water flow apparatus (Mohamed, A-MO, Yong, RN, Caporuscio, F, Cheung, SCH, and Kjartanson, BH), March, 85

**O****Oedometer testing**

Soft oedometer—a new testing device and its application for the calibration of hypoplastic constitutive laws (Kolymbas, D and Bauer, E), June, 263

**Overburden**

Swell potential versus overburden pressure (Sikh, TS), Sept., 393

**Overconsolidation**

Hollow cylinder torsional simple shear apparatus capable of a wide range of shear strain measurement (Ampadu, SK and Tatsuoaka, F), March, 3

**P****Permeability**

In-plane air flow through needle-punched, nonwoven geotextiles under normal loading (Weggel, JR and Gontar, WA), June, 207

**Physical models**

1 g small-scale modelling of saturated cohesive soils (Bray, JD, Seed, RB, and Seed, HB), March, 46

**Pile-bearing capacities**

Simple pile load test (SPLT) (Lee, MW, Paik, SW, Lee, WJ, Yi, CT, Kim, DY, and Yoon, SJ), June, 198

**Pile foundations**

Simple pile load test (SPLT) (Lee, MW, Paik, SW, Lee, WJ, Yi, CT, Kim, DY, and Yoon, SJ), June, 198

**Pile-loading tests**

Simple pile load test (SPLT) (Lee, MW, Paik, SW, Lee, WJ, Yi, CT, Kim, DY, and Yoon, SJ), June, 198

**Polyethylene geomembranes**

Time-temperature superposition in mechanical durability testing of polyethylene geomembranes (Lord, AE, Jr., Hsuan, G., and Koerner, RM), June, 259

**Pore pressures**

B-value measurements for granular materials at high confining pressures (Yamamuro, JA and Lade, PV), June, 165

Consolidation, pre- and post-peak shearing responses from internally instrumented biaxial compression device (Finno, RJ and Rhee, Y), Dec., 496

Preparation of large-size cohesive specimens for calibration chamber testing (Voyiadjis, GZ, Kurup, PU, and Tumay, MT), Sept., 339

**Pressure**

Swell potential versus overburden pressure (Sikh, TS), Sept., 393

**Pressuremeter**

Friction at the cohesionless soil-structure interface: effect of various parameters according to a classic study and a new approach (Abderrahim, A and Tisot, JP), March, 122

Some factors affecting in situ measurement using the Cambridge self-boring pressure-meter (Findlay, RC and Benoit, J), June, 188

**R****Reinforced soil**

Behavior of fiber-reinforced cemented sand under static and cyclic loads (Maher, MH and Ho, YC), Sept., 330

Large-scale triaxial compression testing of geocell-reinforced granular soils (Bathurst, RJ and Karpurapu, R), Sept., 296

**Resistivity**

New approach to measuring dilatancy in saturated sands (Campanella, RG and Kalkan, MJ), Dec., 469

**Resonance**

Monotonic and cyclic loading behavior of two sands at small strains (Lo Presti, DCF, Pallara, O, Lancellotta, R, Armandi, M, and Maniscalco, R), Dec., 409

**Rockfills**

Rockfill placement and compaction guidelines (Breitenbach, AJ), March, 76

**Rocks**

Continuous abrasion index for the assessment of rock abrasion (Al-Ameen, SI and Waller, MD), Dec., 525

Evaluation of the drop bar test for concrete and rock quality (Charlie, WA, Ross, CA, Skinner, MM, and Burleigh, JB), Sept., 350

Indirect tension tests on rock—analytical/numerical correction for material bimodularity (Chen, R and Stimpson, B), June, 238

New model of shear strength of simulated rock joints (Juang, CH, Lee, D-H, and Chang, C-I), March, 70

**S****Sand cone method**

Evaluation of fill compaction (Sikh, TS), June, 276

**Sand foundations**

Influence of test chamber boundary conditions on sand bed response (Al-Douri, RH, Hull, TS, and Poulos, HG), Dec., 550

**Sands**

Friction at the cohesionless soil-structure interface: effect of various parameters according to a classic study and a new approach (Abderrahim, A and Tisot, JP), March, 122

Monotonic and cyclic loading behavior of two sands at small strains (Lo Presti, DCF, Pallara, O, Lancellotta, R, Armandi, M, and Maniscalco, R), Dec., 409

New traveling sand pluviator to reconstitute specimens of well-graded silty sands (Lo Presti, DCF, Berardi, R, Pedroni, S, and Crippa, V), March, 18

**Saturation**

B-value measurements for granular materials at high confining pressures (Yamamuro, JA and Lade, PV), June, 165

**Seismic effects**

Dynamic centrifuge testing of soil-nailed excavations (Vucetic, M, Tufenkjian, MR, and Doroudian, M), June, 172

**Seismic investigations**

Initial study of surface wave inversion using artificial neural networks (Meier, RW and Rix, GJ), Dec., 425

**Shales**

Modified Bromhead ring shear apparatus (Stark, TD and Eid, HT), March, 100

**Shear**

Consolidation, pre- and post-peak shearing responses from internally instrumented biaxial compression device (Finno, RJ and Rhee, Y), Dec., 496

Monotonic and cyclic loading behavior of two sands at small strains (Lo Presti, DCF, Palara, O, Lancellotta, R, Armandi, M, and Maniscalco, R), Dec., 409

#### Shear apparatus

Friction at the cohesionless soil-structure interface: effect of various parameters according to a classic study and a new approach (Abderrahim, A and Tisot, JP), March, 122

Shear strength tests for coarse granular backfill and reinforced soils (Bauer, GE and Zhao, Y), March, 115

#### Shear strength

New model of shear strength of simulated rock joints (Juang, CH, Lee, D-H, and Chang, C-I), March, 70

Shear strength tests for coarse granular backfill and reinforced soils (Bauer, GE and Zhao, Y), March, 115

Study of undrained shear strength using various vanes (Silvestri, V, Aubertin, M, and Chapuis, RP), June, 228

#### Shear tests

Modified Bromhead ring shear apparatus (Stark, TD and Eid, HT), March, 100

#### Shear wave

Initial study of surface wave inversion using artificial neural networks (Meier, RW and Rix, GJ), Dec., 425

#### Shrinkage desiccation

Discussion on "the behavior at the shrinkage limit of clay undergoing drying" by David J. Williams and John W. Sibley (Marinho, FAM and Chandler, RJ), Dec., 563

#### Sieving

Filtration opening size of geotextiles by hydrodynamic sieving (Mlynarek, J, Lafleur, J, Rollin, A, and Lombard, G), March, 61

#### Silts

New traveling sand pluviator to reconstitute specimens of well-graded silty sands (Lo Presti, DCF, Berardi, R, Pedroni, S, and Crippa, V), March, 18

#### Simple shear

Low-compliance bi-directional cyclic simple shear apparatus (Boulanger, RW, Chan, CK, Seed, HB, Seed, RB, and Sousa, JB), March, 36

#### Slurries

Discussion on "characteristics of a bentonite slurry as a sealant" by Tuncer B. Edil and Ahmed S. H. Muhanna (DeGroot, DJ and Lutenegeger, AJ), March, 135

#### Soil instability

Effects of strain rate on instability of granular soils (Yamamoto, JA and Lade, PV), Sept., 304

#### Soil nailing

Dynamic centrifuge testing of soil-nailed excavations (Vucetic, M, Tufenkjian, MR, and Doroudian, M), June, 172

#### Soil tests

Multidirectional direct simple shear apparatus (DeGroot, DJ, Germaine, JT, and Ladd, CC), Sept., 283

#### Soil water potential

Discussion on "temperature dependence of soil-water potential" by Abdel-Mohsen O. Mohamed, Raymond N. Yong, and Steven C. H. Cheung (Sridharan, A), Sept., 400

#### Soils

Compatibility of compacted soils with municipal waste combustion ash leachates (Sai, JO, Anderson, DC, and Sullivan, BP), March, 108

Determination of cation exchange capacity of clayey soils by the methylene blue test (Cokca, E and Birand, A), Dec., 518

Discussion on "temperature dependence of soil-water potential" by Abdel-Mohsen O. Mohamed, Raymond N. Yong, and Steven C. H. Cheung (Sridharan, A), Sept., 400

On the measurement of critical state parameters of dense granular soils (Chu, J and Lo, S-CR), March, 27

#### Sound

Evaluation of the drop bar test for concrete and rock quality (Charlie, WA, Ross, CA, Skinner, MM, and Burleigh, JB), Sept., 350

#### Statistical analysis

Statistical methodology to analyze the effect of changes in testing technology on measurement results (Livneh, M and Ben-Akiva, M), March, 216

#### Stiffness

Some factors affecting in situ measurement using the Cambridge self-boring pressuremeter (Findlay, RC and Benoit, J), June, 188

#### Strain rate

Effects of strain rate on instability of granular soils (Yamamoto, JA and Lade, PV), Sept., 304

#### Stress

Notched constant tensile load (NCTL) test for high-density polyethylene geomembranes (Hsuan, YG, Koerner, RM, and Lord, AE, Jr.), Dec., 450

Some factors affecting in situ measurement using the Cambridge self-boring pressuremeter (Findlay, RC and Benoit, J), June, 188

#### Suction

Swelling pressure behavior under controlled suction (Habib, SA and Karube, D), June, 271

#### Surface waves

Initial study of surface wave inversion using artificial neural networks (Meier, RW and Rix, GJ), Dec., 425

#### Swell potential

Determination of swell potential of Al-Qatif clay (Abduljawad, SN and Al-Sulaimani, GJ), Dec., 469

#### Swelling pressure

Swell potential versus overburden pressure (Sikh, TS), Sept., 393

Swelling pressure behavior under controlled suction (Habib, SA and Karube, D), June, 271

## T

#### Temperature

Coupled heat and water flow apparatus (Mohamed, A-MO, Yong, RN, Caporuscio, F, Cheung, SCH, and Kjartanson, BH), March, 85

Discussion on "temperature dependence of soil-water potential" by Abdel-Mohsen O. Mohamed, Raymond N. Yong, and Steven C. H. Cheung (Sridharan, A), Sept., 400

#### Tension

Axisymmetric tension testing of geomembranes (Merry, SM, Bray, JD, and Bourdeau, PL), Sept., 384

#### Test fill

Rockfill placement and compaction guidelines (Breitenbach, AJ), March, 76

#### Test procedures

Mikasa's direct shear apparatus, test procedures and results (Takada, N), Sept., 314

#### Testing device

Soft oedometer—a new testing device and its application for the calibration of hypoplastic constitutive laws (Kolymbas, D and Bauer, E), June, 263

#### Testing machines

Mikasa's direct shear apparatus, test procedures and results (Takada, N), Sept., 314

Statistical methodology to analyze the effect of changes in testing technology on measurement results (Livneh, M and Ben-Akiva, M), March, 216

#### Tomography

Geotechnical tomography: the effects of diffraction (Potts, BD and Santmarina, C), Dec., 510

#### Triaxial compression

Large-scale triaxial compression testing of geocell-reinforced granular soils (Bathurst, RJ and Karpurapu, R), Sept., 296

## U-W

#### Undrained shear strength

Study of undrained shear strength using various vanes (Silvestri, V, Aubertin, M, and Chapuis, RP), June, 228

#### Vane configurations

Study of undrained shear strength using various vanes (Silvestri, V, Aubertin, M, and Chapuis, RP), June, 228

#### Viscosity

Discussion on "characteristics of a bentonite slurry as a sealant" by Tuncer B. Edil and Ahmed S. H. Muhanna (DeGroot, DJ and Lutenegeger, AJ), March, 135

#### Volume change

New approach to measuring dilatancy in saturated sands (Campanella, RG and Ko-kan, MJ), Dec., 469

#### Water content

Estimating water content of soils from electrical resistivity (Kalinski, RJ and Kelly, WE), Sept., 323