

Geotechnical Testing Journal

Index to Volume 14

1991

Number	Issue	Pages
1	March	1-120
2	June	121-230
3	September	231-338
4	December	339-479

A

- Abedinzadeh, R.:** *see* Yudhbir and Abedinzadeh, R.
- Abraham, B. M.:** *see* Sridharan, A., Jose, B. T., and Abraham, B. M.
- Acar, Y. B., Puppala, A. J., and Seals, R. K.:** Calibration of a dynamic penetrometer for compaction quality control of boiler slag, March, 56
- Accuracy:** Development of a combination inclinometer-deflectometer and ADAAS (Kumbhojkar, Israel, Arnstan, and Lee), Dec., 451
- Alfaro, M. C.:** *see* Bergado, D. T., Daria, P. M., Sampaco, C. L., and Alfaro, M. C.
- Al-Joulani, N.:** *see* Fatani, M. N., Bauer, G. E., and Al-Joulani, N.
- Anderson, W. F., Pyrah, I. C., and Fryer, S. J.:** Clay calibration chamber for testing field devices, Dec., 440
- Anisotropy**
- Anisotropy of normally consolidated San Francisco Bay mud (Kirkgard and Lade), Sept., 231
- Stress nonuniformities in hollow cylinder torsional specimens (Wijewickreme and Vaid), Dec., 349
- Arnstan, D.:** *see* Kumbhojkar, A. S., Israel, T. D., Arnstan, D., and Lee, S. M.
- Atwood, M. J. and Benoit, J.:** Sled for in situ penetration testing, Dec., 401
- Automated data acquisition and analysis system (ADAAS):** Development of a combination inclinometer-deflectometer and ADAAS (Kumbhojkar, Israel, Arnstan, and Lee), Dec., 451
- Automation**
- Closure to "Discussion of 'automated triaxial testing of soft clays: an upgraded commercial system' by T. C. Sheahan, J. T. Germaine, and C. C. Ladd" by Bruce K. Menzies and Patrick Hooker, Sept., 328
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Kumbhojkar, Hashim, and Kale), June, 219
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Lo and Chu), June, 217
- Discussion of "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine,
- and C. C. Ladd (Menzies and Hooker), March, 110
- Axial load cells:** Design and performance of the Imperial College instrumented pile (Bond, Jardine, and Dalton), Dec., 413

B

- Back pressure:** Effects of back pressure on geotextile transmissivity tests (Huang, Holtz, and Wilcox), Dec., 395
- Baez, J. I.:** *see* Borden, R. H. and Baez, J. I.
- Bauer, G. E.:** *see* Fatani, M. N., Bauer, G. E., and Al-Joulani, N.
- Bekkouche, N.:** *see* Silvestri, V., Sarkis, G., Bekkouche, N., Soulie, M., and Tabib, C.
- Bellotti, R., Ghionna, V. N., and Morabito, P.:** Uniformity tests in calibration chamber samples by the thermal probe method, June, 195
- Benoit, J.:** *see* Atwood, M. J. and Benoit, J.
- Bergado, D. T., Daria, P. M., Sampaco, C. L., and Alfaro, M. C.:** Prediction of embankment settlements by in-situ tests, Dec., 425
- Bianchini, G., Saada, A., Puccin, P., Lanier, J., and Zitouni, Z.:** Complex stress paths and validation of constitutive models, March, 13
- Blaney, G. W. and O'Neill, W. O.:** Procedures for prediction of dynamic lateral pile group response in clay from single pile tests, March, 3
- Bluemel, W. F.:** *see* Dif, A. E. and Bluemel, W. F.
- Bond, A. J., Jardine, R. J., and Dalton, J. C. P.:** Design and performance of the Imperial College instrumented pile, Dec., 413
- Borden, R. H. and Baez, J. I.:** Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil, Sept., 247
- Brandon, T. L., Clough, G. W., and Rahardjo, P. P.:** Fabrication of silty sand specimens for large- and small-scale tests, March, 46
- Bujany, B. K. H.:** *see* Craig, W. H., Bujany, B. K. H., and Merrifield, C. M.

C

Calibrations

- Clay calibration chamber for testing field devices (Anderson, Pyrah, and Fryer), Dec., 440
- Laboratory and field calibration of a neutron depth moisture gauge for use in high water content soils (Silvestri, Sarkis, Bekkouche, Soulie, and Tabib), March, 64
- Sample size for laboratory calibration of subsurface neutron moisture gauges (Morris and Williams), March, 71
- Uniformity tests in calibration chamber

- samples by the thermal probe method (Bellotti, Ghionna, and Morabito), June, 195
- Capillary phenomena:** Resonant column tests on partially saturated sands (Qian, Gray, and Woods), Sept., 266
- Carino, N. J.:** *see* Lin, Y., Sansalone, M., and Carino, N. J.
- Centrifuges**
- Simulation of climatic conditions in centrifuge model tests (Craig, Bujany, and Merrifield), Dec., 406
- Soil column drainage modelling using a geotechnical centrifuge (Cooke and Mitchell), Sept., 323
- Chang, C.-Y.:** *see* Chang, D. T.-T., Chiang, C.-E., and Chang, C.-Y.
- Chang, D. T.-T., Chiang, C.-E., and Chang, C.-Y.:** Modified testing device to evaluate M_R properties on fly ash treated subgrade soil, March, 88
- Chiang, C.-E.:** *see* Chang, D. T.-T., Chiang, C.-E., and Chang, C.-Y.
- Chu, J.:** *see* Lo, S.-C. R. and Chu, J.
- Clays**
- Clay calibration chamber for testing field devices (Anderson, Pyrah, and Fryer), Dec., 440
- Clay-on-steel ring shear tests and their implications for displacement piles (Tika-Vassilikos), Dec., 457
- Determination of clay size fraction of marine clays (Sridharan, Jose, and Abraham), March, 203
- Effective stress hyperbolic stress-strain parameters for clay (Stark and Vettel), June, 146
- Hydrodynamic aspects in the rotating cylinder erosivity test (Rohan and Lefebvre), June, 166
- Large-scale laboratory permeability testing of a compacted clay soil (Shackelford and Javed), June, 171
- Toluene and wax-freezing method of determining volumetric free swell, Sept., 309
- Clough, G. W.:** *see* Brandon, T. L., Clough, G. W., and Rahardjo, P. P.
- Cohesionless soils:** Resonant column tests on partially saturated sands (Qian, Gray, and Woods), Sept., 266
- Cohesive soils**
- Automated electropneumatic control system for direct simple shear testing (DeGroot, Germaine, and Gedney), Dec., 339
- Cohesive soil for large-size laboratory deposits (McManus and Kulhawy), March, 26
- Closure to "Discussion of 'automated triaxial testing of soft clays: an upgraded commercial system' by T. C. Sheahan, J. T. Germaine, and C. C. Ladd" by Bruce K. Menzies and Patrick Hooker, Sept., 328
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine,

- and C. C. Ladd (Kumbhojkar, Hashim, and Kale), June, 219
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Lo and Chu), June, 217
- Discussion of "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Menziez and Hooker), March, 110
- Combination inclinometer-deflectometer (CID):** Development of a combination inclinometer-deflectometer and ADAAS (Kumbhojkar, Israel, Arnstan, and Lee), Dec., 451
- Compaction**
- Calibration of a dynamic penetrometer for compaction quality control of boiler slag (Acar, Puppala, and Seals), March, 56
- Fabrication of silty sand specimens for large- and small-scale tests (Brandon, Clough, and Rahardjo), March, 46
- Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles (Indraratna, Satkunseelan, and Rasul), Sept., 288
- Large-scale laboratory permeability testing of a compacted clay soil (Shackelford and Javed), June, 171
- Compressibility**
- Cohesive soil for large-size laboratory deposits (McManus and Kulhawy), March, 26
- Discussion on "simplified heave prediction model for extensive shale," by A. W. Dhowian (Crilly), Dec., 464
- Compressive strength:** Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles (Indraratna, Satkunseelan, and Rasul), Sept., 288
- Computer applications**
- Closure to "Discussion of 'automated triaxial testing of soft clays: an upgraded commercial system' by T. C. Sheahan, J. T. Germaine, and C. C. Ladd" by Bruce K. Menziez and Patrick Hooker, Sept., 328
- Discussion of "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Menziez and Hooker), March, 110
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Kumbhojkar, Hashim, and Kale), June, 219
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Lo and Chu), June, 217
- Concrete dams:** Measurements of strength parameters on concrete-rock contact at the dam-foundation interface (Lo, Ogawa, Lukajic, and Dupak), Dec., 383
- Concrete shafts:** Impact-echo response of concrete shafts (Lin, Sansalone, and Carion), June, 121
- Cone penetrometer:** Small diameter piston sampling with cone penetrometer equipment (Kay), March, 108
- Confinement:** Measuring inherent load-extension properties of geotextiles for design of reinforced structures (Wu), June, 157
- Consolidated clays:** Anisotropy of normally consolidated San Francisco Bay mud (Kirkgard and Lade), Sept., 231
- Consolidated undrained tests**
- Closure to "Discussion of 'automated triaxial testing of soft clays: an upgraded commercial system' by T. C. Sheahan, J. T. Germaine, and C. C. Ladd" by Bruce K. Menziez and Patrick Hooker, Sept., 328
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Kumbhojkar, Hashim, and Kale), June, 219
- Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd (Lo and Chu), June, 217
- Consolidation**
- Automated electropneumatic control system for direct simple shear testing (DeGroot, Germaine, and Gedney), Dec., 339
- Cohesive soil for large-size laboratory deposits (McManus and Kulhawy), March, 26
- Fabrication of silty sand specimens for large- and small-scale tests (Brandon, Clough, and Rahardjo), March, 46
- Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles (Indraratna, Satkunseelan, and Rasul), Sept., 288
- Prediction of embankment settlements by in-situ tests (Bergado, Daria, Sampaco, and Alfaro), Dec., 425
- Constitutive equations:** Complex stress paths and validation of constitutive models (Bianchini, Saada, Puccini, Lanier, and Zitouni), March, 13
- Contour gauges:** New technique for measuring the roughness profile of rock joints (Lee and Juang), Sept., 320
- Cooke, A. B. and Mitchell, R. J.:** Soil column drainage modelling using a geotechnical centrifuge, Sept., 323
- Craig, W. H., Bujany, B. K. H., and Merrifield, C. M.:** Simulation of climatic conditions in centrifuge model tests, Dec., 406
- Crilly, M. S.:** Discussion on "simplified heave prediction model for extensive shale," by A. W. Dhowian, Dec., 464
- Cross-anisotropic parameters:** Anisotropy of normally consolidated San Francisco Bay mud (Kirkgard and Lade), Sept., 231
- Cyclic loading:** Microscopic measurement of sand fabric from cyclic tests causing liquefaction (Ibrahim and Kagawa), Dec., 371
- Cyclic strain:** Expansive soils under cyclic drying and wetting (Dif and Bluemel), March, 96
- Cylinders:** Complex stress paths and validation of constitutive models (Bianchini, Saada, Puccini, Lanier, and Zitouni), March, 13

D

- Dalton, J. C. P.:** *see* Bond, A. J., Jardine, R. J., and Dalton, J. C. P.
- Daria, P. M.:** *see* Bergado, D. T., Daria, P. M., Sampaco, C. L., and Alfaro, M. C.
- Deflocculants:** Determination of clay size frac-

tion of marine clays (Sridharan, Jose, and Abraham), March, 203

Deformation modulus: Effective stress hyperbolic stress-strain parameters for clay (Stark and Vettel), June, 146

DeGroot, D. J., Germaine, J. T., and Gedney, R.: Automated electropneumatic control system for direct simple shear testing, Dec., 339

Denham, M.: *see* Smith, T. D. and Denham, M.

Density

Calibration of a dynamic penetrometer for compaction quality control of boiler slag (Acar, Puppala, and Seals), March 56

Resonant column tests on partially saturated sands (Qian, Gray, and Woods), Sept., 266

Desiccation: Swelling/shrinkage characteristic curve of desiccated expansive clays (Hanafy), June, 206

Dif, A. E. and Bluemel, W. F.: Expansive soils under cyclic drying and wetting, March, 96

Dispersing agents: Determination of clay size fraction of marine clays (Sridharan, Jose, and Abraham), March, 203

Displacement piles: Clay-on-steel ring shear tests and their implications for displacement piles (Tika-Vassilikos), Dec., 457

Displacements: Advantages of midheight pore pressure measurements in undrained triaxial testing (Fourie and Xiaobi), June, 138

Drainage: Soil column drainage modelling using a geotechnical centrifuge (Cooke and Mitchell), Sept., 323

Drains: Use of side drains in triaxial testing at moderate to high pressures (Oswell, Graham, Lingnau, and King), Sept., 315

Drill holes: Development of a combination inclinometer-deflectometer and ADAAS (Kumbhojkar, Israel, Arnstan, and Lee), Dec., 451

Drilling equipment: Sled for in situ penetration testing (Atwood and Benoit), Dec., 401

Dupak, D. D.: *see* Lo, K. Y., Ogawa, T., Lukajic, B., and Dupak, D. D.

Dynamic penetration test: Calibration of a dynamic penetrometer for compaction quality control of boiler slag (Acar, Puppala, and Seals), March, 56

E

Effective stress: Effective stress hyperbolic stress-strain parameters for clay (Stark and Vettel), June, 146

Elastic properties: Anisotropy of normally consolidated San Francisco Bay mud (Kirkgard and Lade), Sept., 231

Elasticity modulus: Effective stress hyperbolic stress-strain parameters for clay (Stark and Vettel), June, 146

End platens: Advantages of midheight pore pressure measurements in undrained triaxial testing (Fourie and Xiaobi), June, 138

Environmental effects: Simulation of climatic conditions in centrifuge model tests (Craig, Bujany, and Merrifield), Dec., 406

Erosion: Hydrodynamic aspects in the rotating cylinder erosivity test (Rohan and LeFebvre), June, 166

Expansive clays: Swelling/shrinkage charac-

teristic curve of desiccated expansive clays (Hanafy), June, 206

Expansive soils: Expansive soils under cyclic drying and wetting (Dif and Bluemel), March, 96

F

Fabrics: Microscopic measurement of sand fabric from cyclic tests causing liquefaction (Ibrahim and Kagawa), Dec., 371

Fatani, M. N., Bauer, G. E., and Al-Joulani, N.: Reinforcing soil with aligned and randomly oriented metallic fibers, March, 78

Field tests

Clay calibration chamber for testing field devices (Anderson, Pyrah, and Fryer), Dec., 440

Multicylinder control units for prebored hydraulic pressuremeters (Smith and Denham), June, 212

Filters: Use of side drains in triaxial testing at moderate to high pressures (Oswell, Graham, Lingnau, and King), Sept., 315

Finite element method

Effective stress hyperbolic stress-strain parameters for clay (Stark and Vettel), June, 146

Impact-echo response of concrete shafts (Lin, Sansalone, and Carion), June, 121

Fly ash

Modified testing device to evaluate M_R properties on fly ash treated subgrade soil (Chang, Chiang, and Chang), March, 88

Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil (Borden and Baez), Sept., 247

Foundations: Measurements of strength parameters on concrete-rock contact at the dam-foundation interface (Lo, Ogawa, Lukajic, and Dupak), Dec., 383

Fourie, A. B. and Xiaobi, D.: Advantages of midheight pore pressure measurements in undrained triaxial testing, June, 138

Frydman, S.: *see* Talesnick, M. and Frydman, S.

Fryer, S. J.: *see* Anderson, W. F., Pyrah, I. C., and Fryer, S. J.

Fwa, T.-F.: *see* Tan, S.-A. and Fwa, T.-F.

G

Gamma radiation: Influence of voids on density measurements of granular materials using gamma radiation techniques (Tan and Fwa), Sept., 257

Garga, V. K., Townsend, R., and Hansen, D.: Method for determining the surface area of quarried rocks, March, 35

Gedney, R.: *see* DeGroot, D. J., Germaine, J. T., and Gedney, R.

Geotextiles

Effects of back pressure on geotextile transmissivity tests (Huang, Holtz, and Wilcox), Dec., 395

Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles (Indraratna, Satkunseelan, and Rasul), Sept., 288

Measuring inherent load-extension properties of geotextiles for design of reinforced structures (Wu), June, 157

Germaine, J. T.:

see DeGroot, D. J., Germaine, J. T., and Gedney, R.

see Sheahan, T. C., Germaine, J. T., and Ladd, C. C.

Ghionna, V. N.: *see* Bellotti, R., Ghionna, V. N., and Morabito, P.

Graham, J.: *see* Oswell, J. M., Graham, J., Lingnau, B. E., and King, M. W.

Grain-size analysis: Determination of clay size fraction of marine clays (Sridharan, Jose, and Abraham), March, 203

Granular soils: Influence of voids on density measurements of granular materials using gamma radiation techniques (Tan and Fwa), Sept., 257

Gray, D. H.: *see* Qian, X., Gray, D. H., and Woods, R. D.

H

Hanafy, E. A. D. E.: Swelling/shrinkage characteristic curve of desiccated expansive clays, June, 206

Hansen, D.: *see* Garga, V. K., Townsend, R., and Hansen, D.

Hashim, S.: *see* Kumbhojkar, A. S., Hashim, S., and Kale, U.

Hooker, P.: *see* Menzies, B. K. and Hooker, P.

Heaving: Discussion on "simplified heave prediction model for extensive shale," by A. W. Dhowian (Crilly), Dec., 464

Hollow cylinder torsional tests: Stress non-uniformities in hollow cylinder torsional specimens (Wijewickreme and Vaid), Dec., 349

Holtz, R. D.: *see* Huang, A.-B., Holtz, R. D., and Wilcox, A. M.

Huang, A.-B., Holtz, R. D., and Wilcox, A. M.: Effects of back pressure on geotextile transmissivity tests, Dec., 395

I

Ibrahim, A. A. and Kagawa, T.: Microscopic measurement of sand fabric from cyclic tests causing liquefaction, Dec., 371

Image analyzer: Quantification of particle shape and angularity using the image analyzer (Yudhbir and Abedinzadeh), Sept., 296

Impact tests: Impact-echo response of concrete shafts (Lin, Sansalone, and Carion), June, 121

In situ tests: Sled for in situ penetration testing (Atwood and Benoit), Dec., 401

Indraratna, B., Satkunseelan, K. S., and Rasul, M. G.: Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles, Sept., 288

Instrumentation: Design and performance of the Imperial College instrumented pile (Bond, Jardine, and Dalton), Dec., 413

Israel, T. D.: *see* Kumbhojkar, A. S., Israel, T. D., Arnstan, D., and Lee, S. M.

J

Jardine, R. J.: *see* Bond, A. J., Jardine, R. J., and Dalton, J. C. P.

Javed, F.: *see* Shackelford, C. D. and Javed, F.

Joints: New technique for measuring the roughness profile of rock joints (Lee and Juang), Sept., 320

Jose, B. T.: *see* Sridharan, A., Jose, B. T., and Abraham, B. M.

Juang, C. H.: *see* Lee, D.-H. and Juang, C. H.

K

Kagawa, T.: *see* Ibrahim, A. A. and Kagawa, T.

Kale, U.: *see* Kumbhojkar, A. S., Hashim, S., and Kale, U.

Kay, J. N.: Small diameter piston sampling with cone penetrometer equipment, March, 108

King, M. W.: *see* Oswell, J. M., Graham, J., Lingnau, B. E., and King, M. W.

Kirkgard, M. M. and Lade, P. V.: Anisotropy of normally consolidated San Francisco Bay mud, Sept., 231

Kolymbas, D.: *see* Wu, W. and Kolymbas, D.

Kulhawy, F. H.: *see* McManus, K. J. and Kulhawy, F. H.

Kumbhojkar, A. S.,

Hashim, S., and Kale, U.: Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd, June, 219

Israel, T. D., Arnstan, D., and Lee, S. M.: Development of a combination inclinometer-deflectometer and ADASS, Dec., 451

L

Laboratory gamma density gage: Influence of voids on density measurements of granular materials using gamma radiation techniques (Tan and Fwa), Sept., 257

Ladd, C. C.: *see* Sheahan, T. C., Germaine, J. T., and Ladd, C. C.

Lade, P. V.: *see* Kirkgard, M. M. and Lade, P. V.

Lanier, J.: *see* Bianchini, G., Saada, A., Puccini, P., Lanier, J., and Zitouni, Z.

Laser displacement meter: New technique for measuring the roughness profile of rock joints (Lee and Juang), Sept., 320

Lee, D.-H. and Juang, C. H.: New technique for measuring the roughness profile of rock joints, Sept., 320

Lee, S. M.: *see* Kumbhojkar, A. S., Israel, T. D., Arnstan, D., and Lee, S. M.

Lefebvre, G.: *see* Rohan, K. and Lefebvre, G.

Lime: Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil (Borden and Baez), Sept., 247

Lin, Y., Sansalone, M., and Carino, N. J.: Impact-echo response of concrete shafts, June, 121

Lingnau, B. E.: *see* Oswell, J. M., Graham, J., Lingnau, B. E., and King, M. W.

Liquefaction: Microscopic measurement of sand fabric from cyclic tests causing liquefaction (Ibrahim and Kagawa), Dec., 371

Lo, K. Y., Ogawa, T., Lukajic, B., and Dupak, D. D.: Measurements of strength pa-

- rameters on concrete-rock contact at the dam-foundation interface, Dec., 383
- Lo, S.-C. R. and Chu, J.:** Discussion on "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd, June, 217
- Load-extension properties:** Measuring inherent load-extension properties of geotextiles for design of reinforced structures (Wu), June, 157
- Loads:** Procedures for prediction of dynamic lateral pile group response in clay from single pile tests (Blaney and O'Neill), March, 3
- Loose soils:** Small diameter piston sampling with cone penetrometer equipment (Kay), March, 108
- Lukajic, B.:** *see* Lo, K. Y., Ogawa, T., Lukajic, B., and Dupak, D. D.

M

- Marine clays**
- Laboratory properties of a soft marine clay reinforced with woven and nonwoven geotextiles (Indraratna, Satkunseelan, and Rasul), Sept., 288
- Simple shear of an undisturbed soft marine clay in NGI and torsional shear equipment (Talesnick and Frydman), June, 180
- McManus, K. J. and Kulhawy, F. H.:** Cohesive soil for large-size laboratory deposits, March, 26
- Menzies, B. K. and Hooker, P.:** Discussion of "automated triaxial testing of soft clays: an upgraded commercial system" by T. C. Sheahan, J. T. Germaine, and C. C. Ladd, March, 110
- Merrifield, C. M.:** *see* Craig, W. H., Bujany, B. K. H., and Merrifield, C. M.
- Metallic fibers:** Reinforcing soil with aligned and randomly oriented metallic fibers (Fatani, Bauer, and Al-Joulani), March, 78
- Mitchell, R. J.:** *see* Cooke, A. B. and Mitchell, R. J.
- Model tests:** Simulation of climatic conditions in centrifuge model tests (Craig, Bujany, and Merrifield), Dec., 406
- Moisture content:** Sample size for laboratory calibration of subsurface neutron moisture gauges (Morris and Williams), March, 71
- Morabito, P.:** *see* Bellotti, R., Ghionna, V. N., and Morabito, P.
- Morris, P. H. and Williams, D. J.:** Sample size for laboratory calibration of subsurface neutron moisture gauges, March, 71

N

- Neutron gauges**
- Laboratory and field calibration of a neutron depth moisture gauge for use in high water content soils (Silvestri, Sarkis, Bekkouche, Soulie, and Tabib), March, 64
- Sample size for laboratory calibration of subsurface neutron moisture gauges (Morris and Williams), March, 71
- Nondestructive density tests:** Influence of voids on density measurements of granular materials using gamma radiation techniques (Tan and Fwa), Sept., 257

- Nondestructive tests:** Impact-echo response of concrete shafts (Lin, Sansalone, and Carion), June, 121

O

- Ogawa, T.:** *see* Lo, K. Y., Ogawa, T., Lukajic, B., and Dupak, D. D.
- O'Neill, W. O.:** *see* Blaney, G. W. and O'Neill, W. O.
- Oswell, J. M., Graham, J., Lingnau, B. E., and King, M. W.:** Use of side drains in triaxial testing at moderate to high pressures, Sept., 315
- Overconsolidated soils:** Procedures for prediction of dynamic lateral pile group response in clay from single pile tests (Blaney and O'Neill), March, 3

P

- Particle angularity:** Quantification of particle shape and angularity using the image analyzer (Yudhbir and Abedinzadeh), Sept., 296
- Particle shape:** Quantification of particle shape and angularity using the image analyzer (Yudhbir and Abedinzadeh), Sept., 296
- Pellissier, J. P.:** Toluene and wax-freezing method of determining volumetric free swell, Sept., 309
- Permeability**
- Effects of back pressure on geotextile transmissivity tests (Huang, Holtz, and Wilcox), Dec., 395
- Large-scale laboratory permeability testing of a compacted clay soil (Shackelford and Javed), June, 171
- Soil column drainage modelling using a geotechnical centrifuge (Cooke and Mitchell), Sept., 323
- Phase diagrams:** Swelling/shrinkage characteristic curve of desiccated expansive clays (Hanafy), June, 206
- Piezoelectric effects:** Piezo film technology and applications in geotechnical testing (Santamarina, Wakim, Tallin, Rab, and Wong), Dec., 363
- Piezofilm:** Piezo film technology and applications in geotechnical testing (Santamarina, Wakim, Tallin, Rab, and Wong), Dec., 363
- Piezometers:** Design and performance of the Imperial College instrumented pile (Bond, Jardine, and Dalton), Dec., 413
- Pile foundations:** Procedures for prediction of dynamic lateral pile group response in clay from single pile tests (Blaney and O'Neill), March, 3
- Piles:** Design and performance of the Imperial College instrumented pile (Bond, Jardine, and Dalton), Dec., 413
- Piston samplers:** Small diameter piston sampling with cone penetrometer equipment (Kay), March, 108
- Pluviation:** Fabrication of silty sand specimens for large- and small-scale tests (Brandon, Clough, and Rahardjo), March, 46
- Pore pressures**
- Advantages of midheight pore pressure measurements in undrained triaxial testing (Fourie and Xiaobi), June, 138

- Use of side drains in triaxial testing at moderate to high pressures (Oswell, Graham, Lingnau, and King), Sept., 315
- Pressure cells:** Design and performance of the Imperial College instrumented pile (Bond, Jardine, and Dalton), Dec., 413
- Pressuremeters**
- Multicylinder control units for prebored hydraulic pressuremeters (Smith and Denham), June, 212
- Prediction of embankment settlements by in-situ tests (Bergado, Daria, Sampaco, and Alfaro), Dec., 425
- Puccini, P.:** *see* Bianchini, G., Saada, A., Puccini, P., Lanier, J., and Zitouni, Z.
- Puppala, A. J.:** *see* Acar, Y. B., Puppala, A. J., and Seals, R. K.
- Pushing frame:** Sled for in situ penetration testing (Atwood and Benoit), Dec., 401
- Pyrah, I. C.:** *see* Anderson, W. F., Pyrah, I. C., and Fryer, S. J.

Q

- Qian, X., Gray, D. H., and Woods, R. D.:** Resonant column tests on partially saturated sands, Sept., 266
- Quarried rock:** Method for determining the surface area of quarried rocks (Garga, Townsend, and Hansen), March, 35

R

- Rab, F.:** *see* Santamarina, J. C., Wakim, T. N., Tallin, A. G., Rab, F., and Wong, J.
- Rahardjo, P. P.:** *see* Brandon, T. L., Clough, G. W., and Rahardjo, P. P.
- Rasul, M. G.:** *see* Indraratna, B., Satkunseelan, K. S., and Rasul, M. G.
- Reinforced soil:** Reinforcing soil with aligned and randomly oriented metallic fibers (Fatani, Bauer, and Al-Joulani), March, 78
- Relative density:** Uniformity tests in calibration chamber samples by the thermal probe method (Bellotti, Ghionna, and Morabito), June, 195
- Research devices:** Hydrodynamic aspects in the rotating cylinder erosivity test (Rohan and Lefebvre), June, 166
- Residual strength:** Clay-on-steel ring shear tests and their implications for displacement piles (Tika-Vassilikos), Dec., 457
- Resilient modulus testing device:** Modified testing device to evaluate M_R properties on fly ash treated subgrade soil (Chang, Chiang, and Chang), March, 88
- Resonance:** Piezo film technology and applications in geotechnical testing (Santamarina, Wakim, Tallin, Rab, and Wong), Dec., 363
- Resonant column tests:** Resonant column tests on partially saturated sands (Qian, Gray, and Woods), Sept., 266
- Rock shapes:** Method for determining the surface area of quarried rocks (Garga, Townsend, and Hansen), March, 35
- Rohan, K. and Lefebvre, G.:** Hydrodynamic aspects in the rotating cylinder erosivity test, June, 166
- Rotating cylinder test:** Hydrodynamic aspects

in the rotating cylinder erosivity test (Rohan and Lefebvre), June, 166

Roughness coefficient: New technique for measuring the roughness profile of rock joints (Lee and Juang), Sept., 320

S

Saada, A.: *see* Bianchini, G., Saada, A., Puccini, P., Lanier, J., and Zitouni, Z.

Sampaco, C. L.: *see* Bergado, D. T., Daria, P. M., Sampaco, C. L., and Alfaro, M. C.

Sample fabrication: Fabrication of silty sand specimens for large- and small-scale tests (Brandon, Clough, and Rahardjo), March, 46

Sample recovery: Small diameter piston sampling with cone penetrometer equipment (Kay), March, 108

Sample size: Sample size for laboratory calibration of subsurface neutron moisture gauges (Morris and Williams), March, 71

Sands

Complex stress paths and validation of constitutive models (Bianchini, Saada, Puccini, Lanier, and Zitouni), March, 13

Fabrication of silty sand specimens for large- and small-scale tests (Brandon, Clough, and Rahardjo), March, 46

Microscopic measurement of sand fabric from cyclic tests causing liquefaction (Ibrahim and Kagawa), Dec., 371

On some issues in triaxial extension tests (Wu and Kolymbas), Sept., 276

Uniformity tests in calibration chamber samples by the thermal probe method (Bellotti, Ghionna, and Morabito), June, 195

Sansalone, M.: *see* Lin, Y., Sansalone, M., and Carino, N. J.

Santamarina, J. C., Wakim, T. N., Tallin, A. G., Rab, F., and Wong, J.: Piezo film technology and applications in geotechnical testing, Dec., 363

Sarkis, G.: *see* Silvestri, V., Sarkis, G., Bekkouche, N., Soulie, M., and Tabib, C.

Satkunaseelan, K. S.: *see* Indraratna, B., Satkunaseelan, K. S., and Rasul, M. G.

Screw plate tests: Prediction of embankment settlements by in-situ tests (Bergado, Daria, Sampaco, and Alfaro), Dec., 425

Seals, R.: *see* Acar, Y. B., Puppala, A. J., and Seals, R. K.

Servocontrol systems: Automated electropneumatic control system for direct simple shear testing (DeGroot, Germaine, and Gedney), Dec., 339

Settlement: Prediction of embankment settlements by in-situ tests (Bergado, Daria, Sampaco, and Alfaro), Dec., 425

Shackelford, C. D. and Javed, F.: Large-scale laboratory permeability testing of a compacted clay soil, June, 171

Shales: Discussion on "simplified heave prediction model for extensive shale," by A. W. Dhowian (Crilly), Dec., 464

Sheahan, T. C., Germaine, J. T., and Ladd, C. C.: Closure to "Discussion of 'automated triaxial testing of soft clays: an upgraded commercial system' by T. C. Sheahan, J. T. Germaine, and C. C. Ladd" by Bruce K. Menzies and Patrick Hooker, Sept., 328

Shear strength

On some issues in triaxial extension tests (Wu and Kolymbas), Sept., 276

Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil (Borden and Baez), Sept., 247

Shear tests

Automated electropneumatic control system for direct simple shear testing (DeGroot, Germaine, and Gedney), Dec., 339

Simple shear of an undisturbed soft marine clay in NGI and torsional shear equipment (Talesnick and Frydman), June, 180

Shearing rate: Clay-on-steel ring shear tests and their implications for displacement piles (Tika-Vassilikos), Dec., 457

Shrinkage: Expansive soils under cyclic drying and wetting (Dif and Bluemel), March, 96

Silvestri, V., Sarkis, G., Bekkouche, N., Soulie, M., and Tabib, C.: Laboratory and field calibration of a neutron depth moisture gauge for use in high water content soils, March, 64

Slags: Calibration of a dynamic penetrometer for compaction quality control of boiler slag (Acar, Puppala, and Seals), March, 56

Slurries: Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil (Borden and Baez), Sept., 247

Smith, T. D. and Denham, M.: Multicylinder control units for prebored hydraulic pressuremeters, June, 212

Soil columns: Soil column drainage modelling using a geotechnical centrifuge (Cooke and Mitchell), Sept., 323

Soil tests: Complex stress paths and validation of constitutive models (Bianchini, Saada, Puccini, Lanier, and Zitouni), March, 13

Soils: Laboratory and field calibration of a neutron depth moisture gauge for use in high water content soils (Silvestri, Sarkis, Bekkouche, Soulie, and Tabib), March, 64

Soulie, M.: *see* Silvestri, V., Sarkis, G., Bekkouche, N., Soulie, M., and Tabib, C.

Sridharan, A., Jose, B. T., and Abraham, B. M.: Determination of clay size fraction of marine clays, March, 103

Stabilization: Testing techniques for evaluating the shear strength of lime/fly ash slurry stabilized soil (Borden and Baez), Sept., 247

Stark, T. D. and Vettel, J. J.: Effective stress hyperbolic stress-strain parameters for clay, June, 146

Stiffness: Reinforcing soil with aligned and randomly oriented metallic fibers (Fatani, Bauer, and Al-Joulani), March, 78

Stress: Stress nonuniformities in hollow cylinder torsional specimens (Wijewickreme and Vaid), Dec., 349

Stress-strain behavior: On some issues in triaxial extension tests (Wu and Kolymbas), Sept., 276

Stress-strain curves

Measuring inherent load-extension properties of geotextiles for design of reinforced structures (Wu), June, 157

Multicylinder control units for prebored hydraulic pressuremeters (Smith and Denham), June, 212

Subgrade soil: Modified testing device to evaluate M_R properties on fly ash treated

subgrade soil (Chang, Chiang, and Chang), March, 88

Surface area: Method for determining the surface area of quarried rocks (Garga, Townsend, and Hansen), March, 35

Swelling

Expansive soils under cyclic drying and wetting (Dif and Bluemel), March, 96

Toluene and wax-freezing method of determining volumetric free swell, Sept., 309

Swelling/shrinkage conditions: Swelling/shrinkage characteristic curve of desiccated expansive clays (Hanafy), June, 206

T

Tabib, C.: *see* Silvestri, V., Sarkis, G., Bekkouche, N., Soulie, M., and Tabib, C.

Talesnick, M. and Frydman, S.: Simple shear of an undisturbed soft marine clay in NGI and torsional shear equipment, June, 180

Tallin, A. G.: *see* Santamarina, J. C., Wakim, T. N., Tallin, A. G., Rab, F., and Wong, J.

Tan, S.-A. and Fwa, T.-F.: Influence of voids on density measurements of granular materials using gamma radiation techniques, Sept., 257

Tensile strength: Measurements of strength parameters on concrete-rock contact at the dam-foundation interface (Lo, Ogawa, Lukajic, and Dupak), Dec., 383

Thermal conductivity: Uniformity tests in calibration chamber samples by the thermal probe method (Bellotti, Ghionna, and Morabito), June, 195

Tika-Vassilikos, T.: Clay-on-steel ring shear tests and their implications for displacement piles, Dec., 457

Torsion: Stress nonuniformities in hollow cylinder torsional specimens (Wijewickreme and Vaid), Dec., 349

Torsional shear equipment: Simple shear of an undisturbed soft marine clay in NGI and torsional shear equipment (Talesnick and Frydman), June, 180

Townsend, R.: *see* Garga, V. K., Townsend, R., and Hansen, D.

Transmissivity: Effects of back pressure on geotextile transmissivity tests (Huang, Holtz, and Wilcox), Dec., 395

Triaxial tests

Advantages of midheight pore pressure measurements in undrained triaxial testing (Fourie and Xiaobi), June, 138

On some issues in triaxial extension tests (Wu and Kolymbas), Sept., 276

Use of side drains in triaxial testing at moderate to high pressures (Oswell, Graham, Lingnau, and King), Sept., 315

V

Vaid, Y. P.: *see* Wijewickreme, W. K. D. and Vaid, Y. P.

Vettel, J. J.: *see* Stark, T. D. and Vettel, J. J.

Vibrations: Procedures for prediction of dynamic lateral pile group response in clay from single pile tests (Blaney and O'Neill), March, 3

Volumetric free swell: Toluene and wax-freezing method of determining volumetric free swell, Sept., 309

W

- Wakim, T. N.:** *see* Santamarina, J. C., Wakim, T. N., Tallin, A. G., Rab, F., and Wong, J.
- Waste disposal:** Large-scale laboratory permeability testing of a compacted clay soil (Shackelford and Javed), June, 171
- Water content:** Laboratory and field calibration of a neutron depth moisture gauge for use in high water content soils (Silvestri, Sarkis, Bekkouche, Soulie, and Tabib), March, 64
- Wave velocity:** Piezo film technology and applications in geotechnical testing (Santamarina, Wakim, Tallin, Rab, and Wong), Dec., 363
- Wijewickreme, W. K. D. and Vaid, Y. P.:** Stress nonuniformities in hollow cylinder torsional specimens, Dec., 349
- Wilcox, A. M.:** *see* Huang, A.-B., Holtz, R. D., and Wilcox, A. M.
- Williams, D. J.:** *see* Morris, P. H. and Williams, D. J.
- Wong, J.:** *see* Santamarina, J. C., Wakim, T. N., Tallin, A. G., Rab, F., and Wong, J.
- Woods, R. D.:** *see* Qian, X., Gray, D. H., and Woods, R. D.
- Wu, J. T. H.:** Measuring inherent load-extension properties of geotextiles for design of reinforced structures, June, 157
- Wu, W. and Kolymbas, D.:** On some issues in triaxial extension tests, Sept., 276

X-Z

- Xiaobi, D.:** *see* Fourie, A. B. and Xiaobi, D.
- Yudhbir and Abedinzadeh, R.:** Quantification of particle shape and angularity using the image analyzer, Sept., 296
- Zitouni, Z.:** *see* Bianchini, G., Saada, A., Puccini, P., Lanier, J., and Zitouni, Z.