



Geotechnical Testing Journal

Contents:

-
- 979 A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands**
Morteza Mirshekari, Majid Ghayoomi, and Amin Borghei
-

- 998 A Test Method for Measuring Floc Size of Slurry**
Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan
-

- 1008 An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area**
Yan-ning Wang, Qiang Zhang, and Bin-song Jiang
-

- 1026 Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste**
B. P. Naveen, P. V. Sivapullaiah, and T. G. Sitharam
-

- 1040 Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test**
H. Choo, S. Lim, and W. Lee
-

- 1050 Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media**
Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu
-

- 1063 Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition**
Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi
-

- 1076 Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay**
Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikiatkamjorn, and Ana Heitor
-

- 1092 Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials**
Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima
-

- 1102 Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis**
Sayantan Chakraborty, Tejo V. Bheemasetti, Anand J. Puppala, and Louie Verreault
-

REVIEW PAPER

-
- 1117 The New Scope of Frictionless Triaxial Apparatus—Disturbed Sand Testing**
Tomas Sabaliauskas and Lars Bo Ibsen
-

TECHNICAL NOTES

-
- 1131 Considerations on the Experimental Calibration of the Fall Cone Test**
Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng
-



Volume 41, Number 6
November 2018
Coden: GTJODJ

(Contents continued on back cover)



ASTM INTERNATIONAL

CO-EDITORS

Dr. William J. Likos

Department of Civil and Environmental Engineering
University of Wisconsin-Madison
Madison, WI 53706, USA
Tel: 608-890-2662
E-mail: likos@wisc.edu

Dr. Majdi A. Othman

Geosyntec Consultants
1255 Roberts Blvd., NW
Suite 200
Kennesaw, GA 30144
Tel: 678-202-9508
E-mail: mothman@geosyntec.com

EDITORIAL OBJECTIVES

The Geotechnical Testing Journal is published in six issues per year by ASTM International, a nonprofit technical organization that develops and publishes voluntary consensus standards and related information for materials, products, systems, and services. Some issues, in whole or in part, may be Special Issues focused on a topic of interest to our readers. Contributions are peer reviewed prior to publication.

EDITORIAL SERVICES—SUBMISSIONS

Sara Welliver

Supervisor, Peer Review Services
Geotechnical Testing Journal Editorial Offices
J&J Editorial Services
201 Shannon Oaks Cir #124
Cary, NC 27511, USA
Tel: (919) 650-1459 ext. 210
E-mail: astm@jjeditorial.com

PURPOSE AND SCOPE

The purpose of the *Geotechnical Testing Journal* is (1) to provide a high-quality publication that informs the profession of new developments in soil and rock testing and related fields; (2) to provide a forum for the exchange of information, particularly that which leads to the development of new test procedures; and (3) to stimulate active participation of the profession in the work of ASTM International Committee D18 on Soil and Rock and related committees.

Contributions include papers, technical notes, letters to the editor, discussions of previously published papers, and book reviews. The editorial scope of this journal covers test methods for soil and rock, sampling, nomenclature, and practices relating to the determination of properties and behavior of soil and rock for engineering purposes, and for soil as a medium for plant growth. Topics of interest include: new testing equipment, apparatus, and procedures for both field and laboratory applications; evaluation of existing ASTM International standards and recommendations for new standards for apparatus or test procedures; and test results that give insights into test procedures, techniques, and data interpretation. Topics must be related to soil and rock, but may include use and testing of geosynthetic materials in conjunction with soil and rock, highway materials testing such as aggregate properties or pavement performance measurement, geophysical exploration, marine sediments, groundwater investigations, testing and stabilization of contaminated soils and soil and rock engineering related to waste management.

EDITORIAL BOARD

Dr. David W. Airey
University of Sydney, Australia

Dr. Khalid A. Alshibli
University of Tennessee
Knoxville, TN, USA

Dr. Charles Aubeny
Texas A&M University
College Station, TX, USA

Dr. Richard J. Bathurst
Royal Military College of Canada
Kingston, Ontario, Canada

Dr. Paul J. Bullock
Fugro Consultants, Inc. – Loadtest
Gainesville, FL, USA

Dr. Andrew P. Bunger
University of Pittsburgh
Pittsburgh, PA, USA

Dr. Guojun Cai
Southeast University
Nanjing, China

Dr. Giovanni Cascante
University of Waterloo, Canada

Dr. Andrew Corkum
Dalhousie University
Halifax, Nova Scotia, Canada

Dr. Pierre Delage
CERMES
Ecole Nationale des Ponts et Chaussées
France

Dr. Mandar Dewoolkar
University of Vermont
Burlington, VT, USA

Dr. Vincent P. Drnevich
Purdue University
W. Lafayette, IN, USA

Chadi El Mohtar
University of Texas at Austin
Austin, TX, USA

Dr. Dante Fratta
University of Wisconsin-Madison
Madison, WI, USA

Dr. Majid Ghayoomi
University of New Hampshire
Durham, NH, USA

Dr. Karen S. Henry
United States Air Force Academy
USAF Academy, CO, USA

Dr. Laureano R. Hoyos
The University of Texas at Arlington
Arlington, TX, USA

Dr. Zoubeir Lafhaj
Ecole Centrale de Lille
Lille, France

Mr. Michael W. Laney
Terracon Consultants, Inc.
Olathe, KS, USA

Professor Fook-Hou Lee
National University of Singapore
Singapore

Garland E. Likins
Pile Dynamics, Inc.
Cleveland, OH, USA

Dr. Michael Long
University College Dublin, Ireland

Dr. Ning Lu
Colorado School of Mines
Golden, CO, USA

Mr. Robert Mackey
S2L Inc.
Maitland, FL, USA

Dr. Ali Maher
Rutgers University
Piscataway, NJ, USA

Ms. Gabriela Mariscal
National Concrete Masonry Association
Herndon, VA, USA

Dr. John Scott McCartney
University of California San Diego
La Jolla, CA, USA

Mr. James A. McKelvey
Earth Engineering, Inc.
East Norriton, PA, USA

Dr. Jay N. Meegoda
New Jersey Institute of Technology
Newark, NJ, USA

Dr. Michael A. Mooney
Colorado School of Mines
Golden, CO, USA

Majdi Abou Najim
Beirut, Lebanon

Dr. Phillip S. K. Ooi
University of Hawaii at Manoa
Honolulu, HI, USA

Dr. Anand J. Puppala
University of Texas at Arlington
Arlington, TX, USA

Donald T. Robertson
Applied Foundation Testing, Inc.
Green Cove Springs, FL, USA

Dr. Joel Sarout
Commonwealth Scientific and Industrial
Research Organization
Bentley, Australia

Dr. Vincent Silvestri
Ecole Polytechnique de Montreal
Canada

Dr. Devendra N. Singh
Indian Institute of Technology
India

Dr. Khaled Sobhan
Florida Atlantic University
Boca Raton, FL, USA

Dr. Muhammed T. Suleiman
Bethlehem, PA, USA

Ingrid Tomac
San Diego, CA, USA

Dr. George Veyera
University of Rhode Island
Kingston, RI, USA

Dr. Dharma Wijekewreme
University of British Columbia
Canada

Dr. Nazli Yesiller
Global Waste Research Institute
California Polytechnic State University
San Luis Obispo, CA, USA

Dr. Xiong Yu
Case Western Reserve University
Cleveland, OH, USA

POSTMASTER: Send address change to ASTM International—GTJ, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

Printed in the USA.

Geotechnical Testing Journal

Table of Contents

Volume 41, 2018

No. 1, January

A Framework for Interpretation of the Compressibility Behavior of Soils—AMIN SOLTANI, AN DENG, ABBAS TAHERI, ASURI SRIDHARAN, AND A. R. ESTABRAGH	1
A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast—DONG ZHOU, ZONGHUI LIU, ROBERT Y. LIANG, HENG WU, AND YETIAN WANG	17
A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time—YUZHU ZHANG, WENBO LU, PENG YAN, MING CHEN, AND JIANHUA YANG	31
A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions—C. CHEN, L.-M. ZHANG, AND HONG ZHU	43
Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures—ZHEN WANG, MINGRONG SHEN, LINLIN GU, AND FENG ZHANG	55
Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge—DIPANKANA BHATTACHERJEE AND B. V. S. VISWANADHAM	72
Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus—QIANGYONG ZHANG, KANG DUAN, WEN XIANG, SHENGBO YUAN, AND YU-YONG JIAO	92
Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading—JAHANZAIB ISRAR AND JEHANGIR ISRAR	103
Incorporating the Strength Provided by Subgrade Stabilization in the Flexible Pavement Design Procedures—ANWER K. AL-JHAYYISH AND SHAD M. SARGAND	117
Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test—MENG-CHIA WENG, JIN-HONG LI, CHENG-HAN LIN, AND CHU-TSEN LIAO	132
Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI—TAREK ABDOUN, PANAGIOTA KOKKALI, AND MOURAD ZEGHAL	141
Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs—NA WEI, XIANGYANG ZHAO, YINGFENG MENG, GAO LI, HUA XIANG, JUN HE, WANTONG SUN, AND ZHIGUANG TANG	164
Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment—YEWEI ZHENG, ANDREW C. SANDER, WENYONG RONG, PATRICK J. FOX, P. BENSON SHING, AND JOHN S. MCCARTNEY	171
Shallow-Layer p - y Relationships for Micropiles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test—XIAOWEI WANG, AIJUN YE, ABDOLLAH SHAFIEEZADEH, AND JIANZHONG LI	193

TECHNICAL NOTES

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques—H. RAHARDJO, X. F. NONG, D. T. T. LEE, E. C. LEONG, AND Y. K. FONG	207
Permeability Test Device for Soil with Automatic Water Head Control—SANG INN WOO, JOONYOUNG KIM, AND CHOONG-KI CHUNG	218

No. 2, March

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength—CHIEN-TING TANG, ROY H. BORDEN, AND MOHAMMED A. GABR	223
Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test—Z. L. WANG, G. Y. SHI, J. G. WANG, AND Z. H. ZHANG	235
Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test—HAO SHEN, WIM HAEGEMAN, AND HERMAN PEIFFER	247
Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles—DIMITRIOS ZEKKOS, ADDA ATHANASOPOULOS-ZEKKOS, JONATHAN HUBLER, XUNCHANG FEI, KAVEH H. ZEHTAB, AND W. ALLEN MARR	263
Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils—MOHAMMED O. A. BAZNE, FARSHID VAHEDIFARD, AND ISAAC L. HOWARD	280
Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement—S. U. SUSA LEKSHMI, D. N. SINGH, ALESSANDRO TARANTINO, AND M. S. BAGHINI	292

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay—SWAGATA BISOI AND SUMANTA HALDAR	307
Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-Embedded Flaws under Uniaxial Compression—XIAO-PING ZHOU, JIAN-ZHI ZHANG, LU-HAO YANG, AND YU-LONG CUI	329
Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate—PATRICK J. FOX, STUART S. THIELMANN, MICHAEL J. SANDERS, CHRISTOPHER LATHAM, ISMAAIL GHAAOWD, AND JOHN S. MCCARTNEY	340
Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments—LAN LUO AND INGRID TOMAC	354
Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests—YUANHUI LI, LEIBO SONG, QUAN JIANG, CHENGXIANG YANG, CHANG LIU, AND BING YANG	371
Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress—ZHIKAI WANG, PENG YANG, WENSHENG LYU, GENBO YU, AND CHAO YANG	390
Validation of a Thermo-Time Domain Reflectometry Probe for Sand Thermal Conductivity Measurement in Drainage and Drying Processes—NAN ZHANG, XINBAO YU, AND XUELIN WANG	403
REVIEW PAPER	
Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure—SATOSHI TAMATE AND TOMOHITO HORI	413
TECHNICAL NOTE	
Constant Rate of Strain Consolidation Testing of Saturated Cohesive Soils Without Back Pressure Saturation—MELISSA E. LANDON, CHRISTOPHER MARCHETTI, AND DON J. DEGROOT	425
No. 3, May	
A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts—JIANHANG CHEN, PAUL C. HAGAN, AND SERKAN SAYDAM	435
An Apparatus for Testing Static Fatigue at Sand Grain Contacts—ZHIJIE WANG AND RADOSLAW L. MICHALOWSKI	448
An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces—JIAN-MIN ZHANG, DA-KUO FENG, AND WEN-JUN HOU	459
An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams—SAJAD ASMAEI, PILTAN TABATABAIE SHOURIJEH, SEYED MOHAMMAD BINESH, AND MOHAMMAD-HASSAN GHAEDSHARAFI	473
An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand—MOHAMMAD REZA SHAKERI, S. MOHSEN HAERI, M. MAHDI SHAHRABI, ALI KHOSRAVI, AND ALI AKBAR SAJADI	494
Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions—S. M. MAHDI NIKTABAR, K. SESAGIRI RAO, AND AMIT KUMAR SHRIVASTAVA	508
Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand—R. MATOS, P. PINTO, C. REBELO, M. VELJKOVIC, AND L. SIMÕES DA SILVA	526
Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors—FAUSTIN SALEH-MBEMBA AND MICHEL AUBERTIN	543
Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties—DAVOOD FEREIDOONI AND REZA KHAJEVAND	555
Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates—ANDREW M. DRUCKREY, KHALID ALSHIBLI, DANIEL T. CASEM, AND EMILY HUSKINS	574
Miniature Centrifuge Modeling for Conventional Consolidation Test—MEHMET C. BALCI, KAMIL KAYABALI, AND RAMIN ASADI	590
Stress-Strain Response and Dilatation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests—XIAOBIN CHEN, YU JIA, AND JIASHENG ZHANG	601
TECHNICAL NOTES	
A Thermal Direct Shear Device for Testing Polymer-Bonded Sands—LOUIS ROMERO, LENNY MENDOZA, ALI NASIRIAN, DOUGLAS D. CORTES, AND JULIO R. VALDES	611
Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils—ABDELLAH CHERIF TAIBA, YOUSSEF MAHMOUDI, MOSTEFA BELKHATIR, AND TOM SCHANZ	619
DISCUSSION	
Discussion of “Correlations for Fully Softened Shear Strength Parameters” by B. A. Castellanos, T. L. Brandon, and D. R. VandenBerge, This Article Was Published in <i>Geotechnical Testing Journal</i> , Vol. 39, No. 4, 2016. [DOI: 10.1520/GTJ20150184]—THOMAS J. O'MEARA	634

No. 4, July

A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures—JOSEPH R. GIAMPA AND AARON S. BRADSHAW	639
An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micropiles—TAE-HYUNG LEE, JONG-CHUL IM, CHANGYOUNG KIM, AND MINSU SEO	648
Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock—SHANTANU PATEL AND C. DEREK MARTIN	664
Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions—M. R. LAKSHMIKANTHA, PERE C. PRAT, AND ALBERTO LEDESMA	675
Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands—SAI K. VANAPALLI, MOHAMADJAVAD SHEIKHTAHERI, AND WON TAEK OH	698
Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression—QINGBIN MENG, MINGWEI ZHANG, ZHIZHEN ZHANG, LIJUN HAN, AND HAI PU	717
Implementation of Soil Pressure Sensors in Large-Scale Soil-Structure Interaction Studies—LOHRASB KEYKHOSROPOUR, ANNE LEMNITZER, LISA STAR, ANTONIO MARINUCCI, AND STEVE KEOWEN	730
Influence of Temperature on the Volume Change Behavior of Saturated Sand—HONG LIU, HANLONG LIU, YANG XIAO, AND JOHN S. McCARTNEY	747
Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China—YAJUN WANG AND XING ZHU	759
Rapid Estimation of Fouled Railroad Ballast Mechanical Properties—MADAN NEUPANE, ROBERT L. PARSONS, AND JIE HAN	777
Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring—FERNANDO H. M. PORTELINHA, VINICIUS R. G. PEREIRA, AND NATALIA S. CORREIA	787

REVIEW PAPER

An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation—HONGYAN LI, CHI LI, TUANJIE ZHOU, SHIHUI LIU, AND LIN LI	805
--	-----

TECHNICAL NOTES

Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests—YANG LI, GA ZHANG, AND CHUNYING LIU	815
Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock—A. V. GARCIA, R. M. RACHED, AND J. C. SANTAMARINA	821
The Microstructure and Water Distribution of Partially Saturated Hard Clay—LIUFENG CHEN, HUA PENG, AND DIANSEN YANG	830

No. 5, September

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice—SILVANO MARCHETTI AND PAOLA MONACO	837
Effective Stress Strength Parameters of Clays from DMT—ZHONGKUN OUYANG AND PAUL W. MAYNE	851
Interpretation of the DMT in Silts—FERNANDO SCHNAID, MARCUS V. A. BELLOLI, EDGAR ODEBRECHT, AND DIEGO MARCHETTI	868
Theoretical DMT Interpretation in Sensitive Clays—VINCENZO SILVESTRI	877
Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin—ZBIGNIEW MŁYNAREK, JĘDRZEJ WIERZBICKI, AND KATARZYNA STEFANIAK	890
The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications—HERMAN PEIFFER, BENNY MALENGIER, WIM HAEGERMAN, AND HAO SHEN	902
Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests—HYUNWOOK CHOO, WOOJIN LEE, AND CHANGHO LEE	915
Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber—JOANNA BUTLANSKA, MARCOS ARROYO, SARA AMOROSO, AND ANTONIO GENS	930
Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand—SARA AMOROSO, KYLE M. ROLLINS, PAOLA MONACO, MARCO HOLTRIGTER, AND ALAN THORP	946
Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments—DIEGO MARCHETTI	967

No. 6, November

A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands—MORTEZA MIRSHEKARI, MAJID GHAYOOMI, AND AMIN BORGHEI	979
A Test Method for Measuring Floc Size of Slurry—SILIN WU, WEI ZHU, FANLU MIN, AND XIHUI FAN	998
An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area—YAN-NING WANG, QIANG ZHANG, AND BIN-SONG JIANG	1008

Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste—B. P. NAVEEN, P. V. SIVAPULLAIAH, AND T. G. SITHARAM	1026
Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test—H. CHOO, S. LIM, AND W. LEE	1040
Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media—CHANG-GUANG QI, JIN-HUI ZHENG, DIAN-JUN ZUO, AND GAN-BIN LIU	1050
Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition—Z. L. WANG, H. R. LI, J. G. WANG, AND H. SHI	1063
Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay—FIRMAN SIAHAAN, BUDDHIMA INDRARATNA, NGOC TRUNG NGO, CHOLACHAT RUJKIATKAMJORN, AND ANA HEITOR	1076
Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials—MINAMI KATAOKA, SANG-SUN JEONG, YUZO OBARA, TORU YOSHINAGA, YOJI MINE, AND KAZUKI TAKASHIMA	1092
Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis—SAYANTAN CHAKRABORTY, TEJO V. BHEEMASETTI, ANAND J. PUPPALA, AND LOUIE VERREAU	1102
REVIEW PAPER	
The New Scope of Frictionless Triaxial Apparatus—Disturbed Sand Testing—TOMAS SABALIAUSKAS AND LARS BO IBSEN	1117
TECHNICAL NOTES	
Considerations on the Experimental Calibration of the Fall Cone Test—MARCELO A. LLANO-SERNA, MÁRCIO M. FARIAS, DORIVAL M. PEDROSO, DAVID J. WILLIAMS, AND DAICHAO SHENG	1131
Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength—SAMUEL BAURET AND PATRICE RIVARD	1139
Local Displacement Transducer with Miniature Position Encoder—MARCIN WITOWSKI	1147
Strength Behavior of Sedimented Gypsum Slurry—ALSIDQI HASAN, FAUZAN SAHDI, NORSUZAILINA MOHAMED SUTAN, NURUL ASIKIN MIJAN, AND SININ HAMDAN	1155
Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads—AMANEH E. KENARSARI, STANLEY J. VITTON, AND JOHN E. BEARD	1166

Geotechnical Testing Journal

Author Index to Volume 41

2018

Number	Month of Issue	Pages
1	January	1–222
2	March	223–434
3	May	435–638
4	July	639–836
5	September	837–978
6	November	979–1198

A

Abdoun, Tarek, Kokkali, Panagiota, and Zeghal, Mourad: Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI, Jan., 141

Al-Jhayyish, Anwer K. and Sargand, Shad M.: Incorporating the Strength Provided by Subgrade Stabilization in the Flexible Pavement Design Procedures, Jan., 117

Alshibli, Khalid: *see* Druckrey, Andrew M.

Amoroso, Sara: *see* Butlanska, Joanna

Amoroso, Sara, Rollins, Kyle M., Monaco, Paola, Holtrigter, Marco, and Thorp, Alan: Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand, Sep., 946

Arroyo, Marcos: *see* Butlanska, Joanna

Asadi, Ramin: *see* Balci, Mehmet C.

Asmaei, Sajad, Shourijeh, Piltan Tabatabaei, Binesh, Seyed Mohammad, and Ghaedsharafi, Mohammad-Hassan: An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams, May, 473

Athanopoulos-Zekkos, Adda: *see* Zekkos, Dimitrios

Aubertin, Michel: *see* Saleh-Mbemba, Faustin

B

Baghini, M. S.: *see* Susha Lekshmi, S. U.

Balci, Mehmet C., Kayabali, Kamil, and Asadi, Ramin: Miniature Centrifuge Modeling for Conventional Consolidation Test, May, 590

Bauret, Samuel and Rivard, Patrice: Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces:

Effects of Interface Roughness and Mortar Strength, Nov., 1139

Bazne, Mohammed O. A., Vahedifard, Farshid, and Howard, Isaac L.: Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils, Mar., 280

Beard, John E.: *see* Kenarsari, Amaneh E.

Belkhatir, Mostefa: *see* Cherif Taiba, Abdellah

Belloli, Marcus V. A.: *see* Schnaid, Fernando

Bhattacherjee, Dipankana and Viswanadham, B. V. S.: Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge, Jan., 72

Bheemasetti, Tejo V.: *see* Chakraborty, Sayantan

Binesh, Seyed Mohammad: *see* Asmaei, Sajad

Bisoi, Swagata and Haldar, Sumanta: Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay, Mar., 307

Borden, Roy H.: *see* Tang, Chien-Ting

Borghei, Amin: *see* Mirshekari, Morteza

Bradshaw, Aaron S.: *see* Giampa, Joseph R.

Butlanska, Joanna, Arroyo, Marcos, Amoroso, Sara, and Gens, Antonio: Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber, Sep., 930

C

Casem, Daniel T.: *see* Druckrey, Andrew M.

Chakraborty, Sayantan, Bheemasetti, Tejo V., Puppala, Anand J., and Verreault, Louie: Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis, Nov., 1102

Chen, Ming: *see* Zhang, Yuzhu

Chen, Jianhang, Hagan, Paul C., and Saydam, Serkan: A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts, May, 435

Chen, Xiaobin, Jia, Yu, and Zhang, Jia-sheng: Stress-Strain Response and Dilation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests, May, 601

Chen, Liufeng, Peng, Hua, and Yang, Di-anSEN: The Microstructure and Water Distribution of Partially Saturated Hard Clay, Jul., 830

Chen, C., Zhang, L. M., and Zhu, Hong: A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions, Jan., 43

Cherif Taiba, Abdellah, Mahmoudi, Youcef, Belkhatir, Mostefa, and Schanz, Tom: Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils, May, 619

Choo, Hyunwook, Lee, Woojin, and Lee, Changho: Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests, Sep., 915

Choo, H., Lim, S., and Lee, W.: Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test, Nov., 1040

Chung, Choong-Ki: *see* Woo, Sang Inn

Correia, Natalia S.: *see* Portelinha, Fernando H. M.

Cortes, Douglas D.: *see* Romero, Louis

Cui, Yu-Long: *see* Zhou, Xiao-Ping

D

DeGroot, Don J.: *see* Landon, Melissa E.

Deng, An: *see* Soltani, Amin

Druckrey, Andrew M., Alshibli, Khalid, Casem, Daniel T., and Huskins, Emily: Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates, May, 574

Duan, Kang: *see* Zhang, Qiangyong

E

Estabragh, A. R.: *see* Soltani, Amin

F

Fan, Xihui: *see* Wu, Silin

Farias, Márcio M.: *see* Llano-Serna, Marcelo A.

Fei, Xunchang: *see* Zekkos, Dimitrios

Feng, Da-Kuo: *see* Zhang, Jian-Min
Fereidooni, Davood and Khajevand, Reza: Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties, May, 555

Fong, Y. K.: *see* Rahardjo, H.

Fox, Patrick J.: *see* Zheng, Yewei

Fox, Patrick J., Thielmann, Stuart S., Sanders, Michael J., Latham, Christopher, Ghaoowd, Ismaail, and McCartney, John S.: Large-Scale Combination Direct Shear/ Simple Shear Device for Tire-Derived Aggregate, Mar., 340

G

Gabr, Mohammed A.: *see* Tang, Chien-Ting

Garcia, A. V., Rached, R. M., and Santamarina, J. C.: Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock, Jul., 821

Gens, Antonio: *see* Butlanska, Joanna

Ghaoowd, Ismaail: *see* Fox, Patrick J.

Ghaedsharafi, Mohammad-Hassan: *see* Asmaei, Sajad

Ghayoomi, Majid: *see* Mirshekari, Morteza

Giampa, Joseph R. and Bradshaw, Aaron S.: A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures, Jul., 639

Gu, Linlin: *see* Wang, Zhen

H

Haegeman, Wim: *see* Peiffer, Herman
see Shen, Hao

Haeri, S. Mohsen: *see* Shakeri, Mohammad Reza

Hagan, Paul C.: *see* Chen, Jianhang

Haldar, Sumanta: *see* Bisoi, Swagata

Hamdan, Sinin: *see* Hasan, Alsidqi

Han, Jie: *see* Neupane, Madan

Han, Lijun: *see* Meng, Qingbin

Hasan, Alsidqi, Sahdi, Fauzan, Sutan, Nor-suzailina Mohamed, Mijan, Nurul Asikin, and Hamdan, Sinin: Strength Behavior of Sedimented Gypsum Slurry, Nov., 1155

He, Jun: *see* Wei, Na

Heitor, Ana: *see* Sahaan, Firman

Holtrigter, Marco: *see* Amoroso, Sara

Hori, Tomohito: *see* Tamate, Satoshi

Hou, Wen-Jun: *see* Zhang, Jian-Min

Howard, Isaac L.: *see* Bazne, Mohammed O. A.

Hubler, Jonathan: *see* Zekkos, Dimitrios

Huskins, Emily: *see* Druckrey, Andrew M.

I

Ibsen, Lars Bo: *see* Sabaliauskas, Tomas

Im, Jong-Chul: *see* Lee, Tae-Hyung

Indraratna, Buddhima: *see* Sahaan, Firman

Israr, Jahanzaib and Israr, Jehangir: Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading, Jan., 103

Israr, Jehangir: *see* Israr, Jahanzaib

J

Jeong, Sang-Sun: *see* Kataoka, Minami

Jia, Yu: *see* Chen, Xiaobin

Jiang, Bin-song: *see* Wang, Yan-ning

Jiang, Quan: *see* Li, Yuanhui

Jiao, Yu-Yong: *see* Zhang, Qiangyong

K

Kataoka, Minami, Jeong, Sang-Sun, Obara, Yuzo, Yoshinaga, Toru, Mine, Yoji, and Takashima, Kazuki: Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials, Nov., 1092

Kayabali, Kamil: *see* Balci, Mehmet C.

Kenarsari, Amaneh E., Vitton, Stanley J., and Beard, John E.: Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads, Nov., 1166

Keowen, Steve: *see* Keykhosropour, Lohrasb

Keykhosropour, Lohrasb, Lemnitzer, Anne, Star, Lisa, Marinucci, Antonio, and Keowen, Steve: Implementation of Soil Pressure Sensors in Large-Scale Soil-Structure Interaction Studies, Jul., 730

Khajevand, Reza: *see* Fereidooni, Davood

Khosravi, Ali: *see* Shakeri, Mohammad Reza

Kim, Changyoung: *see* Lee, Tae-Hyung

Kim, Joonyoung: *see* Woo, Sang Inn

Kokkali, Panagiota: *see* Abdoun, Tarek

L

Lakshmikantha, M. R., Prat, Pere C., and Ledesma, Alberto: Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions, Jul., 675

Landon, Melissa E., Marchetti, Christopher, and DeGroot, Don J.: Constant Rate

of Strain Consolidation Testing of Saturated Cohesive Soils Without Back Pressure Saturation, Mar., 425

Latham, Christopher: *see* Fox, Patrick J.

Ledesma, Alberto: *see* Lakshmikantha, M. R.

Lee, Changho: *see* Choo, Hyunwook

Lee, D. T. T.: *see* Rahardjo, H.

Lee, Tae-Hyung, Im, Jong-Chul, Kim, Changyoung, and Seo, Minsu: An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micropiles, Jul., 648

Lee, W.: *see* Choo, H.

Lee, Woojin: *see* Choo, Hyunwook

Lemnitzer, Anne: *see* Keykhosropour, Lohrasb

Leong, E. C.: *see* Rahardjo, H.

Li, Chi: *see* Li, Hongyan

Li, Gao: *see* Wei, Na

Li, H. R.: *see* Wang, Z. L.

Li, Hongyan, Li, Chi, Zhou, Tuanjie, Liu, Shihui, and Li, Lin: An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation, Jul., 805

Li, Jianzhong: *see* Wang, Xiaowei

Li, Jin-Hong: *see* Weng, Meng-Chia

Li, Lin: *see* Li, Hongyan

Li, Yang, Zhang, Ga, and Liu, Chunying: Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests, Jul., 815

Li, Yuanhui, Song, Leibo, Jiang, Quan, Yang, Chengxiang, Liu, Chang, and Yang, Bing: Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests, Mar., 371

Liang, Robert Y.: *see* Zhou, Dong

Liao, Chu-Tsen: *see* Weng, Meng-Chia

Lim, S.: *see* Choo, H.

Lin, Cheng-Han: *see* Weng, Meng-Chia

Liu, Chang: *see* Li, Yuanhui

Liu, Chunying: *see* Li, Yang

Liu, Gan-Bin: *see* Qi, Chang-Guang

Liu, Hanlong: *see* Liu, Hong

Liu, Hong, Liu, Hanlong, Xiao, Yang, and McCartney, John S.: Influence of Temperature on the Volume Change Behavior of Saturated Sand, Jul., 747

Liu, Shihui: *see* Li, Hongyan

Liu, Zonghui: *see* Zhou, Dong

Llano-Serna, Marcelo A., Farias, Márcio M., Pedroso, Dorival M., Williams, David J., and Sheng, Daichao: Considerations on

the Experimental Calibration of the Fall Cone Test, Nov., 1131

Lu, Wenbo: *see* Zhang, Yuzhu

Luo, Lan and Tomac, Ingrid: Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments, Mar., 354

Lyu, Wensheng: *see* Wang, Zhikai

M

Mahmoudi, Youcef: *see* Cherif Taiba, Abdellah

Malengier, Benny: *see* Peiffer, Herman

Marchetti, Christopher: *see* Landon, Melissa E.

Marchetti, Diego: Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments, Sep., 967

Marchetti, Diego: *see* Schnaid, Fernando

Marchetti, Silvano and Monaco, Paola: Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice, Sep., 837

Marinucci, Antonio: *see* Keykhosropour, Lohrasb

Marr, W. Allen: *see* Zekkos, Dimitrios

Martin, C. Derek: *see* Patel, Shantanu

Matos, R., Pinto, P., Rebelo, C., Veljkovic, M., and Simões da Silva, L.: Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand, May, 526

Mayne, Paul W.: *see* Ouyang, Zhongkun

McCartney, John S.: *see* Fox, Patrick J.

see Liu, Hong

see Zheng, Yewei

Mendoza, Lenny: *see* Romero, Louis

Meng, Qingbin, Zhang, Mingwei, Zhang, Zhizhen, Han, Lijun, and Pu, Hai: Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression, Jul., 717

Meng, Yingfeng: *see* Wei, Na

Michalowski, Radoslaw L.: *see* Wang, Zhijie

Mijan, Nurul Asikin: *see* Hasan, Alsidqi

Min, Fanlu: *see* Wu, Silin

Mine, Yoji: *see* Kataoka, Minami

Mirshekari, Morteza, Ghayoomi, Majid, and Borghei, Amin: A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands, Nov., 979

Młynarek, Zbigniew, Wierzbicki, Jędrzej, and Stefaniak, Katarzyna: Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin, Sep., 890

Monaco, Paola: *see* Amoroso, Sara

see Marchetti, Silvano

N

Nasirian, Ali: *see* Romero, Louis

Naveen, B. P., Sivapullaiah, P. V., and Sitharam, T. G.: Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste, Nov., 1026

Neupane, Madan, Parsons, Robert L., and Han, Jie: Rapid Estimation of Fouled Railroad Ballast Mechanical Properties, Jul., 777

Ngo, Ngoc Trung: *see* Siahaan, Firman

Niktabar, S. M. Mahdi, Rao, K. Seshagiri, and Shrivastava, Amit Kumar: Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions, May, 508

Nong, X. F.: *see* Rahardjo, H.

O

O'Meara, Thomas J., May, 634

Obara, Yuzo: *see* Kataoka, Minami

Odebrecht, Edgar: *see* Schnaid, Fernando

Oh, Won Taek: *see* Vanapalli, Sai K.

Ouyang, Zhongkun and Mayne, Paul W.: Effective Stress Strength Parameters of Clays from DMT, Sep., 851

P

Parsons, Robert L.: *see* Neupane, Madan

Patel, Shantanu and Martin, C. Derek: Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock, Jul., 664

Pedroso, Dorival M.: *see* Llano-Serna, Marcelo A.

Peiffer, Herman: *see* Shen, Hao

Peiffer, Herman, Malengier, Benny, Haegeaman, Wim, and Shen, Hao: The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications, Sep., 902

Peng, Hua: *see* Chen, Liufeng

Pereira, Vinicius R. G.: *see* Portelinha, Fernando H. M.

Pinto, P.: *see* Matos, R.

Portelinha, Fernando H. M., Pereira, Vinicius R. G., and Correia, Natalia S.: Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring, Jul., 787

Prat, Pere C.: *see* Lakshmikantha, M. R.

Pu, Hai: *see* Meng, Qingbin

Puppala, Anand J.: *see* Chakraborty, Sayantan

Q

Qi, Chang-Guang, Zheng, Jin-Hui, Zuo, Dian-Jun, and Liu, Gan-Bin: Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media, Nov., 1050

R

Rached, R. M.: *see* Garcia, A. V.

Rahardjo, H., Nong, X. F., Lee, D. T. T., Leong, E. C., and Fong, Y. K.: Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques, Jan., 207

Rao, K. Seshagiri: *see* Niktabar, S. M. Mahdi

Rebelo, C.: *see* Matos, R.

Rivard, Patrice: *see* Bauret, Samuel

Rollins, Kyle M.: *see* Amoroso, Sara

Romero, Louis, Mendoza, Lenny, Nasirian, Ali, Cortes, Douglas D., and Valdes, Julio R.: A Thermal Direct Shear Device for Testing Polymer-Bonded Sands, May, 611

Rong, Wenyong: *see* Zheng, Yewei

Rujikiatkamjorn, Cholachat: *see* Siahaan, Firman

S

Sabaliauskas, Tomas and Ibsen, Lars Bo: The New Scope of Frictionless Triaxial Apparatus - Disturbed Sand Testing, Nov., 1117

Sahdi, Fauzan: *see* Hasan, Alsidqi

Sajadi, Ali Akbar: *see* Shakeri, Mohammad Reza

Saleh-Mbemba, Faustin and Aubertin, Michel: Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors, May, 543

Sander, Andrew C.: *see* Zheng, Yewei

Sanders, Michael J.: *see* Fox, Patrick J.

Santamarina, J. C.: *see* Garcia, A. V.

Sargand, Shad M.: *see* Al-Jhavyish, Anwer K.

Saydam, Serkan: *see* Chen, Jianhang

Schanz, Tom: *see* Cherif Taiba, Abdellah

Schnaid, Fernando, Belloli, Marcus V. A., Odebrecht, Edgar, and Marchetti, Diego: Interpretation of the DMT in Silts, Sep., 868

- T**
- Taheri, Abbas:** *see* Soltani, Amin
- Takashima, Kazuki:** *see* Kataoka, Minami
- Tamate, Satoshi and Hori, Tomohito:** Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure, Mar., 413
- Tang, Chien-Ting, Borden, Roy H., and Gabr, Mohammed A.:** A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength, Mar., 223
- Tang, Zhiguang:** *see* Wei, Na
- Tarantino, Alessandro:** *see* Susha Lekshmi, S. U.
- Thielmann, Stuart S.:** *see* Fox, Patrick J.
- Thorp, Alan:** *see* Amoroso, Sara
- Tomac, Ingrid:** *see* Luo, Lan
- V**
- Vahedifard, Farshid:** *see* Bazne, Mohammed O. A.
- Valdes, Julio R.:** *see* Romero, Louis
- Vanapalli, Sai K., Sheikhtaheri, Mohamadjavad, and Oh, Won Taek:** Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands, Jul., 698
- Veljkovic, M.:** *see* Matos, R.
- Verreault, Louie:** *see* Chakraborty, Sayantan
- Viswanadham, B. V. S.:** *see* Bhattacherjee, Dipankana
- Vitton, Stanley J.:** *see* Kenarsari, Amaneh E.,
- W**
- Wang, J. G.:** *see* Wang, Z. L.
see Wang, Z. L.
- Wang, Xiaowei, Ye, Aijun, Shafieezadeh, Abdollah, and Li, Jianzhong:** Shallow-Layer p - y Relationships for Micropiles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test, Jan., 193
- Wang, Xuelin:** *see* Zhang, Nan
- Wang, Yajun and Zhu, Xing:** Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China, Jul., 759
- Wang, Yan-ning, Zhang, Qiang, and Jiang, Bin-song:** An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area, Nov., 1008
- Wang, Yetian:** *see* Zhou, Dong
- Wang, Z. L., Li, H. R., Wang, J. G., and Shi, H.:** Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition, Nov., 1063
- Wang, Z. L., Shi, G. Y., Wang, J. G., and Zhang, Z. H.:** Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test, Mar., 235
- Wang, Zhen, Shen, Mingrong, Gu, Linlin, and Zhang, Feng:** Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures, Jan., 55
- Wang, Zhijie and Michalowski, Radoslaw L.:** An Apparatus for Testing Static Fatigue at Sand Grain Contacts, May, 448
- Wang, Zhikai, Yang, Peng, Lyu, Wensheng, Yu, Genbo, and Yang, Chao:** Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress, Mar., 390
- Wei, Na, Zhao, Xiangyang, Meng, Yingfeng, Li, Gao, Xiang, Hua, He, Jun, Sun, Wantong, and Tang, Zhiguang:** Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs, Jan., 164
- Weng, Meng-Chia, Li, Jin-Hong, Lin, Cheng-Han, and Liao, Chu-Tsen:** Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test, Jan., 132
- Wierzbicki, Jędrzej:** *see* Mlynarek, Zbigniew
- Williams, David J.:** *see* Llano-Serna, Marcelo A.
- Witowski, Marcin:** Nov., 1147
- Woo, Sang Inn, Kim, Joonyoung, and Chung, Choong-Ki:** Permeability Test Device for Soil with Automatic Water Head Control, Jan., 218
- Wu, Heng:** *see* Zhou, Dong
- Wu, Silin, Zhu, Wei, Min, Fanlu, and Fan, Xihui:** A Test Method for Measuring Floc Size of Slurry, Nov., 998
- X**
- Xiang, Hua:** *see* Wei, Na
- Xiang, Wen:** *see* Zhang, Qiangyong
- Xiao, Yang:** *see* Liu, Hong
- Y**
- Yan, Peng:** *see* Zhang, Yuzhu
- Yang, Bing:** *see* Li, Yuanhui
- Yang, Chao:** *see* Wang, Zhikai
- Yang, Chengxiang:** *see* Li, Yuanhui
- Yang, Diansen:** *see* Chen, Liufeng
- Yang, Jianhua:** *see* Zhang, Yuzhu

- Yang, Lu-Hao:** see Zhou, Xiao-Ping
- Yang, Peng:** see Wang, Zhikai
- Ye, Aijun:** see Wang, Xiaowei
- Yoshinaga, Toru:** see Kataoka, Minami
- Yu, Genbo:** see Wang, Zhikai
- Yu, Xinbao:** see Zhang, Nan
- Yuan, Shengbo:** see Zhang, Qiangyong
- Z**
- Zeghal, Mourad:** see Abdoun, Tarek
- Zehtab, Kaveh H.:** see Zekkos, Dimitrios
- Zekkos, Dimitrios, Athanasopoulos-Zekkos, Adda, Hubler, Jonathan, Fei, Xunchang, Zehtab, Kaveh H., and Marr, W. Allen:** Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles, Mar., 263
- Zhang, Feng:** see Wang, Zhen
- Zhang, Ga:** see Li, Yang
- Zhang, Jian-Min, Feng, Da-Kuo, and Hou, Wen-Jun:** An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces, May, 459
- Zhang, Jian-Zhi:** see Zhou, Xiao-Ping
- Zhang, Jiasheng:** see Chen, Xiaobin
- Zhang, L. M.:** see Chen, C.
- Zhang, Mingwei:** see Meng, Qingbin
- Zhang, Nan, Yu, Xinbao, and Wang, Xuelin:** Validation of a Thermo-Time Domain Reflectometry Probe for Sand Thermal Conductivity Measurement in Drainage and Drying Processes, Mar., 403
- Zhang, Qiang:** see Wang, Yan-ning
- Zhang, Qiangyong, Duan, Kang, Xiang, Wen, Yuan, Shengbo, and Jiao, Yu-Yong:** Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus, Jan., 92
- Zhang, Yuzhu, Lu, Wenbo, Yan, Peng, Chen, Ming, and Yang, Jianhua:** A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time, Jan., 31
- Zhang, Z. H.:** see Wang, Z. L.
- Zhang, Zhizhen:** see Meng, Qingbin
- Zhao, Xiangyang:** see Wei, Na
- Zheng, Jin-Hui:** see Qi, Chang-Guang
- Zheng, Yewei, Sander, Andrew C., Rong, Wenyong, Fox, Patrick J., Shing, P. Benson, and McCartney, John S.:** Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment, Jan., 171
- Zhou, Dong, Liu, Zonghui, Liang, Robert Y., Wu, Heng, and Wang, Yetian:** A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast, Jan., 17
- Zhou, Tuanjie:** see Li, Hongyan
- Zhou, Xiao-Ping, Zhang, Jian-Zhi, Yang, Lu-Hao, and Cui, Yu-Long:** Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-EMBEDDED Flaws under Uniaxial Compression, Mar., 329
- Zhu, Hong:** see Chen, C.
- Zhu, Wei:** see Wu, Silin
- Zhu, Xing:** see Wang, Yajun
- Zuo, Dian-Jun:** see Qi, Chang-Guang

Geotechnical Testing Journal

Subject Index to Volume 41

2018

NUMERICAL

3-D cross-embedded flaw

Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-EMBEDDED Flaws under Uniaxial Compression (Xiao-Ping Zhou, Jian-Zhi Zhang, Lu-Hao Yang, and Yu-Long Cui), Mar., 329

3-D cyclic behavior

An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces (Jian-Min Zhang, Da-Kuo Feng, and Wen-Jun Hou), May, 459

3-D printing

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

A

Accelerometers

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Additive and addition amount

An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation (Hongyan Li, Chi Li, Tuanjie Zhou, Shihui Liu, and Lin Li), Jul., 805

Amplitude

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Analysis of variance

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength (Samuel Bauret and Patrice Rivard), Nov., 1139

Automated dilatometer

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Automation

Permeability Test Device for Soil with Automatic Water Head Control (Sang Inn Woo,

Joonyoung Kim, and Choong-Ki Chung), Jan., 218

Axial strain

Influence of Temperature on the Volume Change Behavior of Saturated Sand (Hong Liu, Hanlong Liu, Yang Xiao, and John S. McCartney), Jul., 747

Axis-translation method

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

B

Ballast fouling

Rapid Estimation of Fouled Railroad Ballast Mechanical Properties (Madan Neupane, Robert L. Parsons, and Jie Han), Jul., 777

Base-subgrade relationships

Incorporating the Strength Provided by Sub-grade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhayyish and Shad M. Sargand), Jan., 117

Bearing capacity

An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area (Yan-ning Wang, Qiang Zhang, and Bin-song Jiang), Nov., 1008

Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests (Yang Li, Ga Zhang, and Chunying Liu), Jul., 815

Bender elements

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Beneficial reuse

Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils (Mohammed O. A. Bazne, Farshid Vahedifard, and Isaac L. Howard), Mar., 280

Bi-modularity

Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-

Modular Crystalline Rock (Shantanu Patel and C. Derek Martin), Jul., 664

Blasting-induced damage zone

A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time (Yuzhu Zhang, Wenbo Lu, Peng Yan, Ming Chen, and Jianhua Yang), Jan., 31

Bond failure

A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts (Jianhang Chen, Paul C. Hagan, and Serkan Saydam), May, 435

Boundary conditions

Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions (M. R. Lakshmikantha, Pere C. Prat, and Alberto Ledesma), Jul., 675

Brazilian test

Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock (Shantanu Patel and C. Derek Martin), Jul., 664

Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus (Qiangyong Zhang, Kang Duan, Wen Xiang, Shengbo Yuan, and Yu-Yong Jiao), Jan., 92

Bridge abutment

Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment (Yewei Zheng, Andrew C. Sander, Wenyong Rong, Patrick J. Fox, P. Benson Shing, and John S. McCartney), Jan., 171

Brittle rock

Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus (Qiangyong Zhang, Kang Duan, Wen Xiang, Shengbo Yuan, and Yu-Yong Jiao), Jan., 92

C

Cable/grout interface

A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts (Jianhang Chen, Paul C. Hagan, and Serkan Saydam), May, 435

Cableless dilatometer

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Calcite cementation

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen Haeri, M. Mahdi Shahrabi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Calibration

Considerations on the Experimental Calibration of the Fall Cone Test (Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng), Nov., 1131

Calibration chamber

Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

Calibration procedure

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Canterbury Earthquake Sequence

Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand (Sara Amoroso, Kyle M. Rollins, Paola Monaco, Marco Holtriger, and Alan Thorp), Sep., 946

Capacitance probe

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Susha Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Cementation

Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests (Hyunwook Choo, Woojin Lee, and Changho Lee), Sep., 915

Cemented sand

Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests (Hyunwook Choo, Woojin Lee, and Changho Lee), Sep., 915

Cemented tailings backfill

Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress (Zhihai Wang, Peng Yang, Wensheng Lyu, Genbo Yu, and Chao Yang), Mar., 390

Centering apparatus

Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus (Qiangyong Zhang, Kang Duan, Wen Xiang, Shengbo Yuan, and Yu-Yong Jiao), Jan., 92

Centrifuge

Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacherjee and B. V. S. Viswanadham), Jan., 72

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

Miniature Centrifuge Modeling for Conventional Consolidation Test (Mehmet C. Balci, Kamil Kayabali, and Ramin Asadi), May, 590

Centrifuge model test

Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests (Yang Li, Ga Zhang, and Chunying Liu), Jul., 815

Centrifuge modeling

A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands (Morteza Mirshekari, Majid Ghayoomi, and Amin Borghei), Nov., 979

Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI (Tarek Abdoun, Panagiota Kokkali, and Mourad Zeghal), Jan., 141

Chemical stabilization

Incorporating the Strength Provided by Subgrade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhayyish and Shad M. Sargand), Jan., 117

Chilled mirror

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

Clay

Considerations on the Experimental Calibration of the Fall Cone Test (Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng), Nov., 1131

Constant Rate of Strain Consolidation Testing of Saturated Cohesive Soils Without Back Pressure Saturation (Melissa E. Landon, Christopher Marchetti, and Don J. DeGroot), Mar., 425

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Mlynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Coarse-grained soils

Stress-Strain Response and Dilation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests (Xiaobin Chen, Yu Jia, and Jiasheng Zhang), May, 601

Coefficient of consolidation

Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste (B. P. Naveen, P. V. Sivapulalaiah, and T. G. Sitharam), Nov., 1026

Coherence

Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis (Sayantan Chakraborty, Tejo V. Bheemasetti, Anand J. Puppala, and Louie Verreault), Nov., 1102

Combined roundness

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhatir, and Tom Schanz), May, 619

Combined sphericity

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhatir, and Tom Schanz), May, 619

Compressibility

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Compression index

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Computed tomography

Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay (Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikratkamjorn, and Ana Heitor), Nov., 1076

Cone penetration test

Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand (Sara Amoroso, Kyle M. Rollins, Paola Monaco, Marco Holtriger, and Alan Thorp), Sep., 946

Cone penetrometer

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Confined consolidation

Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress (Zhihai Wang, Peng Yang, Wensheng Lyu, Genbo Yu, and Chao Yang), Mar., 390

Confining pressure

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Conformal mapping

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Consolidation

Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste (B. P. Naveen, P. V. Sivapulaliah, and T. G. Sitharam), Nov., 1026
 Miniature Centrifuge Modeling for Conventional Consolidation Test (Mehmet C. Balci, Kamil Kayabali, and Ramin Asadi), May, 590

Consolidation parameters

Miniature Centrifuge Modeling for Conventional Consolidation Test (Mehmet C. Balci, Kamil Kayabali, and Ramin Asadi), May, 590

Constant normal stiffness

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Constant rate of strain consolidation

Constant Rate of Strain Consolidation Testing of Saturated Cohesive Soils Without Back Pressure Saturation (Melissa E. Landon, Christopher Marchetti, and Don J. DeGroot), Mar., 425

Constant water head

Permeability Test Device for Soil with Automatic Water Head Control (Sang Inn Woo, Joonyoung Kim, and Choong-Ki Chung), Jan., 218

Construction safety

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Contact behavior

An Apparatus for Testing Static Fatigue at Sand Grain Contacts (Zhijie Wang and Radoslaw L. Michalowski), May, 448

Contact pressure

Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads (Amaneh E. Kenarsari, Stanley J. Vitton, and John E. Beard), Nov., 1166

Conventional consolidation test

Miniature Centrifuge Modeling for Conventional Consolidation Test (Mehmet C. Balci, Kamil Kayabali, and Ramin Asadi), May, 590

Correlation

Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties (Davood Fereidooni and Reza Khajevand), May, 555

Crack coalescence

Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-Embedded Flaws under Uniaxial Compression (Xiao-Ping

Zhou, Jian-Zhi Zhang, Lu-Hao Yang, and Yu-Long Cui), Mar., 329

Creep

Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures (Zhen Wang, Mingrong Shen, Linlin Gu, and Feng Zhang), Jan., 55

Creep constitutive model

Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress (Zhikai Wang, Peng Yang, Wensheng Lyu, Genbo Yu, and Chao Yang), Mar., 390

Creep phenomena

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Critical state

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Crushed rock sand

Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test (H. Choo, S. Lim, and W. Lee), Nov., 1040

Cyclic and dynamic properties of soils

The New Scope of Frictionless Triaxial Apparatus - Disturbed Sand Testing (Tomas Sabaliauskas and Lars Bo Ibsen), Nov., 1117

Cyclic direct simple shear

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Cyclic loading

Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand (R. Matos, P. Pinto, C. Rebelo, M. Veljkovic, and L. Simões da Silva), May, 526

Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading (Jahanzaib Israr and Jehangir Israr), Jan., 103

Cyclic loads

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Cyclic pore pressure

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen

Haeri, M. Mahdi Shahrabi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Cyclic strength ratio

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen Haeri, M. Mahdi Shahrabi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Cyclic triaxial test

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen Haeri, M. Mahdi Shahrabi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Cyclic uniaxial compression

Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression (Qingbin Meng, Mingwei Zhang, Zhizhen Zhang, Lijun Han, and Hai Pu), Jul., 717

Cylindrical cavity

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

D**Dam safety**

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength (Samuel Bauret and Patrice Rivard), Nov., 1139

Dense phase particle-fluid slurry

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Desiccation cracks

Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions (M. R. Lakshmikantha, Pere C. Prat, and Alberto Ledesma), Jul., 675

Destruktion

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Dielectric constant

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Susha Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Digital image correlation technique

Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock (Shantanu Patel and C. Derek Martin), Jul., 664

Dilatancy

Stress-Strain Response and Dilatation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests (Xiaobin Chen, Yu Jia, and Jiasheng Zhang), May, 601

Dilatometer

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications (Herman Peiffer, Benny Malengier, Wim Haegeman, and Hao Shen), Sep., 902

Dilatometer test (DMT)

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Mlynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests (Hyunwook Choo, Woojin Lee, and Changho Lee), Sep., 915

Direct shear

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate (Patrick J. Fox, Stuart S. Thielmann, Michael J. Sanders, Christopher Latham, Ismaail Ghaaowd, and John S. McCartney), Mar., 340

Direct shear test

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength (Chien-Ting Tang, Roy H. Borden, and Mohammed A. Gabr), Mar., 223

An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces (Jian-Min Zhang, Da-Kuo Feng, and Wen-Jun Hou), May, 459

Stress-Strain Response and Dilatation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests (Xiaobin Chen, Yu Jia, and Jiasheng Zhang), May, 601

Direct tensile test

Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus (Qiangyong Zhang, Kang Duan, Wen Xiang, Shengbo Yuan, and Yu-Yong Jiao), Jan., 92

Direct tension

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength (Samuel Bauré and Patrice Rivard), Nov., 1139

Discrete element method

Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

Drainage and drying processes

Validation of a Thermo-Time Domain Reflectometry Probe for Sand Thermal

Conductivity Measurement in Drainage and Drying Processes (Nan Zhang, Xinbao Yu, and Xuelin Wang), Mar., 403

Dredged soil

Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils (Mohammed O. A. Bazne, Farshid Vahedifard, and Isaac L. Howard), Mar., 280

Dynamic behavior

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay (Swagata Bisoi and Sumanta Halder), Mar., 307

Dynamic particle fracture

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

Dynamic property

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Dynamic splitting

Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test (Z. L. Wang, G. Y. Shi, J. G. Wang, and Z. H. Zhang), Mar., 235

E**Effective stress strength parameters**

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Elasticity

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Elastic-plastic response

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Electrical conductivity

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Susha Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Elliptical cavity

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Embankment dam

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabaei Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharafi), May, 473

End-bearing capacity

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load

Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Energy accumulation and dissipation

Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression (Qingbin Meng, Mingwei Zhang, Zhizhen Zhang, Lijun Han, and Hai Pu), Jul., 717

Energy dissipation

Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test (Z. L. Wang, G. Y. Shi, J. G. Wang, and Z. H. Zhang), Mar., 235

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Energy geostructures

Influence of Temperature on the Volume Change Behavior of Saturated Sand (Hong Liu, Hanlong Liu, Yang Xiao, and John S. McCartney), Jul., 747

Environmental chamber

Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions (M. R. Lakshmikantha, Pere C. Prat, and Alberto Ledesma), Jul., 675

Excavation

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Experimental tests

Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand (R. Matos, P. Pinto, C. Rebelo, M. Veljkovic, and L. Simões da Silva), May, 526

F**Failure mode**

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Failure probability

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

Fall cone test

Considerations on the Experimental Calibration of the Fall Cone Test (Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng), Nov., 1131

Fast inversion

A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel

Geological Anomaly Forecast (Dong Zhou, Zonghui Liu, Robert Y. Liang, Heng Wu, and Yetian Wang), Jan., 17

Field test

Rapid Estimation of Fouled Railroad Ballast Mechanical Properties (Madan Neupane, Robert L. Parsons, and Jie Han), Jul., 777

Filter

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabae Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharifi), May, 473

Fine-grained materials

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Fine-grained soils

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

Fines content

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhatir, and Tom Schanz), May, 619

Finite element model

Incorporating the Strength Provided by Subgrade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhayyish and Shad M. Sargand), Jan., 117

Flat dilatometer

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967
Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice (Silvano Marchetti and Paola Monaco), Sep., 837

Flat dilatometer test

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen, Wim Haegeman, and Herman Peiffer), Mar., 247

Interpretation of the DMT in Silts (Fernando Schnaid, Marcus V. A. Belloli, Edgar Odebrecht, and Diego Marchetti), Sep., 868
Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Flat dilatometer test indices

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen,

Wim Haegeman, and Herman Peiffer), Mar., 247

Floc breakage

A Test Method for Measuring Floc Size of Slurry (Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan), Nov., 998

Floc size distribution

A Test Method for Measuring Floc Size of Slurry (Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan), Nov., 998

Flocculation

A Test Method for Measuring Floc Size of Slurry (Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan), Nov., 998

Flue gas desulphurization

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Foliation

Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test (Meng-Chia Weng, Jin-Hong Li, Cheng-Han Lin, and Chu-Tsen Liao), Jan., 132

Footing

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micro-piles (Tae-Hyung Lee, Jong-Chul Im, Changgyoung Kim, and Minsu Seo), Jul., 648

Fracture network

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Fracture pressure

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Fractured rock

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Frequency

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading (Jahanzaib Israr and Jehangir Israr), Jan., 103

Friction angle

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Full-size agricultural tire

Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads (Amaneh

E. Kenarsari,, Stanley J. Vitton, and John E. Beard), Nov., 1166

Fully grouted cable bolts

A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts (Jianhang Chen, Paul C. Hagan, and Serkan Saydam), May, 435

Fully softened

Discussion of "Correlations for Fully Softened Shear Strength Parameters" by B. A. Castellanos, T. L. Brandon, and D. R. Vandenberghe, This Article Was Published in *Geotechnical Testing Journal*, Vol. 39, No. 4, 2016. [DOI: 10.1520/GTJ20150184] (Thomas J. O'Meara), May, 634

Fuzzy stochastic damage

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

G

Generalized reliability

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

Geogrid

Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment (Yewei Zheng, Andrew C. Sander, Wenqiong Rong, Patrick J. Fox, P. Benson Shing, and John S. McCartney), Jan., 171

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

Stress-Strain Response and Dilation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests (Xiaobin Chen, Yu Jia, and Jiasheng Zhang), May, 601

Geoparticle image velocimetry method

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Geophysics

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Geosynthetic-reinforced soil

Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment (Yewei Zheng, Andrew C. Sander, Wenqiong Rong, Patrick J. Fox, P. Benson Shing, and John S. McCartney), Jan., 171

Geosynthetics

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction

Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

Grain-scale testing

An Apparatus for Testing Static Fatigue at Sand Grain Contacts (Zhijie Wang and Radoslaw L. Michalowski), May, 448

Granite

Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test (Z. L. Wang, G. Y. Shi, J. G. Wang, and Z. H. Zhang), Mar., 235

Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials (Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima), Nov., 1092

Granite rock

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Granular filters

Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading (Jahanzaib Israr and Jehangir Israr), Jan., 103

Gravelly sand

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen Haeri, M. Mahdi Shahrabi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Gravelly soil

An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces (Jian-Min Zhang, Da-Kuo Feng, and Wen-Jun Hou), May, 459

Gravels

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Greenschist

Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures (Zhen Wang, Mingrong Shen, Linlin Gu, and Feng Zhang), Jan., 55

Ground improvement

Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay (Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikiatkamjorn, and Ana Heitor), Nov., 1076
Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand (Sara Amoroso, Kyle M.

Rollins, Paola Monaco, Marco Holtriger, and Alan Thorp), Sep., 946

Ground monitoring

Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs (Na Wei, Xiangyang Zhao, Yingfeng Meng, Gao Li, Hua Xiang, Jun He, Wantong Sun, and Zhiguang Tang), Jan., 164

Ground reinforcement effect

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micropiles (Tae-Hyung Lee, Jong-Chul Im, Changyoung Kim, and Minsu Seo), Jul., 648

Ground treatment

An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area (Yan-ning Wang, Qiang Zhang, and Bin-song Jiang), Nov., 1008

Gypsum

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

H

Healing

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Horizontal wells

Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs (Na Wei, Xiangyang Zhao, Yingfeng Meng, Gao Li, Hua Xiang, Jun He, Wantong Sun, and Zhiguang Tang), Jan., 164

Hybrid foundations

Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand (R. Matos, P. Pinto, C. Rebelo, M. Veljkovic, and L. Simões da Silva), May, 526

Hydraulic agitation

A Test Method for Measuring Floc Size of Slurry (Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan), Nov., 998

Hydraulic fracturing

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Hydrostatic core

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

I

Image processing

A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions (C. Chen, L. M. Zhang, and Hong Zhu), Jan., 43

In situ

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen, Wim Haegeman, and Herman Peiffer), Mar., 247

In situ stiffness decay curves

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice (Silvano Marchetti and Paola Monaco), Sep., 837

In situ test

An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area (Yan-ning Wang, Qiang Zhang, and Bin-song Jiang), Nov., 1008

Instrumentation

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen, Wim Haegeman, and Herman Peiffer), Mar., 247

Instrumentation and controllers

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Interface

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

Interface direct shear

Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate (Patrick J. Fox, Stuart S. Thielmann, Michael J. Sanders, Christopher Latham, Ismaail Ghaoowd, and John S. McCartney), Mar., 340

Intermediate permeability soils

Interpretation of the DMT in Silts (Fernando Schnaid, Marcus V. A. Belloli, Edgar Odebrecht, and Diego Marchetti), Sep., 868

Internal erosion

A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions (C. Chen, L. M. Zhang, and Hong Zhu), Jan., 43

Internal morphology

Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-Embedded Flaws under Uniaxial Compression (Xiao-Ping Zhou, Jian-Zhi Zhang, Lu-Hao Yang, and Yu-Long Cui), Mar., 329

Internal stability

Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading (Jahanzaib Israr and Jehangir Israr), Jan., 103

Isostrain-rate curve

Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures (Zhen Wang, Minguang Shen, Linlin Gu, and Feng Zhang), Jan., 55

J**Joint dilation**

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Jointed rock

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

L**Laboratory characterization**

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Laboratory short encapsulation pull test

A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts (Jianhang Chen, Paul C. Hagan, and Serkan Saydam), May, 435

Large-scale apparatus

An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces (Jian-Min Zhang, Da-Kuo Feng, and Wen-Jun Hou), May, 459

Large-scale testing

Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate (Patrick J. Fox, Stuart S. Thielmann, Michael J. Sanders, Christopher Latham, Ismaail Ghaaowd, and John S. McCartney), Mar., 340

Lateral behavior

Shallow-Layer $p-y$ Relationships for Micro-piles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test (Xiaowei Wang, Aijun Ye, Abdollah Shafiezadeh, and Jianzhong Li), Jan., 193

Limit plasticity solution

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Liquefaction

Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI (Tarek Abdoun, Panagiota Kokkali, and Mourad Zeghal), Jan., 141

Liquefaction assessment

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice (Silvano Marchetti and Paola Monaco), Sep., 837

Liquefaction mitigation

Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand (Sara Amoroso, Kyle M. Rollins, Paola Monaco, Marco Holtriger, and Alan Thorp), Sep., 946

Load frame

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Load transfer mechanism

A New Laboratory Short Encapsulation Pull Test for Investigating Load Transfer Behavior of Fully Grouted Cable Bolts (Jianhang Chen, Paul C. Hagan, and Serkan Saydam), May, 435

Load versus settlement

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Loading and unloading rates

Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression (Qingbin Meng, Mingwei Zhang, Zhizhen Zhang, Lijun Han, and Hai Pu), Jul., 717

Local strain measurement

Local Displacement Transducer with Miniature Position Encoder (Marcin Witowski), Nov., 1147

Loess

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Mlynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Long-term pavement performance

Incorporating the Strength Provided by Sub-grade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhayyish and Shad M. Sargand), Jan., 117

Long-term performance

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay (Swagata Bisoi and Sumanta Halder), Mar., 307

Long-term strength

Creep Behavior and Long-Term Strength Characteristics of Greenschist Under Different Confining Pressures (Zhen Wang, Minguang Shen, Linlin Gu, and Feng Zhang), Jan., 55

Low confining pressure

A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures (Joseph R. Giampa and Aaron S. Bradshaw), Jul., 639

Low-permeability soils

Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacherjee and B. V. S. Viswanadham), Jan., 72

M**Magnetic encoder**

Local Displacement Transducer with Miniature Position Encoder (Marcin Witowski), Nov., 1147

Marine soil investigation

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Matric suction

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

Mechanical behavior

Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress (Zhikai Wang, Peng Yang, Wensheng Lyu, Genbo Yu, and Chao Yang), Mar., 390

Mechanical interaction

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micro-piles (Tae-Hyung Lee, Jong-Chul Im, Changyoung Kim, and Minsu Seo), Jul., 648

Mechanical properties

Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties (Davood Fereidooni and Reza Khajevand), May, 555

Rapid Estimation of Fouled Railroad Ballast Mechanical Properties (Madan Neupane, Robert L. Parsons, and Jie Han), Jul., 777

Media form

Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells

in Gas Reservoirs (Na Wei, Xiangyang Zhao, Yingfeng Meng, Gao Li, Hua Xiang, Jun He, Wantong Sun, and Zhiguang Tang), Jan., 164

Medusa

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Mercury intrusion porosimetry

The Microstructure and Water Distribution of Partially Saturated Hard Clay (Liufeng Chen, Hua Peng, and Diansen Yang), Jul., 830

Metal 3D printing

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen, Wim Haegeman, and Herman Peiffer), Mar., 247

Metal interference

A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast (Dong Zhou, Zonghui Liu, Robert Y. Liang, Heng Wu, and Yetian Wang), Jan., 17

Metamorphic rock

Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test (Meng-Chia Weng, Jin-Hong Li, Cheng-Han Lin, and Chu-Tsen Liao), Jan., 132

Microbial-induced carbonate precipitation

An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation (Hongyan Li, Chi Li, Tuanjie Zhou, Shihui Liu, and Lin Li), Jul., 805

Microbial-induced carbonate precipitation-treated fine sand

An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation (Hongyan Li, Chi Li, Tuanjie Zhou, Shihui Liu, and Lin Li), Jul., 805

Microcontroller

Permeability Test Device for Soil with Automatic Water Head Control (Sang Inn Woo, Joonyoung Kim, and Choong-Ki Chung), Jan., 218

Micromechanics

Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay (Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikiat-kamjorn, and Ana Heitor), Nov., 1076

Micropile

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micro-piles (Tae-Hyung Lee, Jong-Chul Im, Changyoung Kim, and Minsu Seo), Jul., 648
Axial Monotonic and Cyclic Testing of Micropiles in Loose Sand (R. Matos, P. Pinto, C. Rebelo, M. Veljkovic, and L. Simões da Silva), May, 526

Shallow-Layer *p-y* Relationships for Micro-piles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test (Xiaowei Wang, Aijun Ye, Abdollah Shafieezadeh, and Jianzhong Li), Jan., 193

Microscopic fracture toughness

Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials (Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima), Nov., 1092

Microscopic shearing mechanism

Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests (Yuanhui Li, Leibo Song, Quan Jiang, Chengxiang Yang, Chang Liu, and Bing Yang), Mar., 371

Microstructure

The Microstructure and Water Distribution of Partially Saturated Hard Clay (Liufeng Chen, Hua Peng, and Diansen Yang), Jul., 830

Mine tailings

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Mineral grain

Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials (Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima), Nov., 1092

Mineralogy

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

Mini vane shear test

Considerations on the Experimental Calibration of the Fall Cone Test (Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng), Nov., 1131

Mini-Kolsky bar

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

Minimum void ratio

Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test (H. Choo, S. Lim, and W. Lee), Nov., 1040

Model piles

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli,

Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Model test

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micro-piles (Tae-Hyung Lee, Jong-Chul Im, Changyoung Kim, and Minsu Seo), Jul., 648

Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacherjee and B. V. S. Viswanadham), Jan., 72

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay (Swagata Bisoi and Sumanta Haldar), Mar., 307

Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media (Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu), Nov., 1050

Modeling

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Modified segregation index

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabae Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharafi), May, 473

Mohr-Coulomb

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Moisture sensors

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Monitoring

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Morphology

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

Mortar replica

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces:

Effects of Interface Roughness and Mortar Strength (Samuel Bauret and Patrice Rivard), Nov., 1139

Municipal solid waste

Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste (B. P. Naveen, P. V. Sivapullaiah, and T. G. Sitharam), Nov., 1026
Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasiopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

N

Narrow rough fracture

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Natural materials

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

Nonlinear fuzzy functionals

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

Nuclear magnetic resonance relaxometry

The Microstructure and Water Distribution of Partially Saturated Hard Clay (Liufeng Chen, Hua Peng, and Diansen Yang), Jul., 830

Numerical model

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay (Swagata Bisoi and Sumanta Haldar), Mar., 307

Numerical modeling

Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

O

Occupational accident

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Offshore dilatometer

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Offshore in situ testing

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Offshore shear wave velocity

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Offshore wind turbine

Experimental and Numerical Studies on the Dynamic and Long-Term Behavior of Offshore Wind Turbines in Clay (Swagata Bisoi and Sumanta Haldar), Mar., 307

One-dimensional compression

Constant Rate of Strain Consolidation Testing of Saturated Cohesive Soils Without Back Pressure Saturation (Melissa E. Landon, Christopher Marchetti, and Don J. DeGroot), Mar., 425

Ottawa sand

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasiopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Overconsolidated clay

The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications (Herman Peiffer, Benny Malengier, Wim Haegeman, and Hao Shen), Sep., 902

Overconsolidated sand

Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests (Hyunwook Choo, Woojin Lee, and Changho Lee), Sep., 915

Overconsolidation ratio

Overconsolidation and Cementation in Sands: Impacts on Geotechnical Properties and Evaluation Using Dilatometer Tests (Hyunwook Choo, Woojin Lee, and Changho Lee), Sep., 915

P

Partial drainage

Interpretation of the DMT in Silts (Fernando Schnaid, Marcus V. A. Belloli, Edgar Odebrecht, and Diego Marchetti), Sep., 868

Partially saturated hard clay

The Microstructure and Water Distribution of Partially Saturated Hard Clay (Liufeng Chen, Hua Peng, and Diansen Yang), Jul., 830

Particle agglomeration

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Particle breakage

Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test (H. Choo, S. Lim, and W. Lee), Nov., 1040

Particle image velocimetry

Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media (Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu), Nov., 1050

Particle shape

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhadir, and Tom Schanz), May, 619

Particle size analyzer

A Test Method for Measuring Floc Size of Slurry (Silin Wu, Wei Zhu, Fanlu Min, and Xihui Fan), Nov., 998

Pavement design

Incorporating the Strength Provided by Sub-grade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhayyish and Shad M. Sargand), Jan., 117

Peak friction angle

A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures (Joseph R. Giampa and Aaron S. Bradshaw), Jul., 639

Penetration resistance

Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

Permeability

Permeability Test Device for Soil with Automatic Water Head Control (Sang Inn Woo, Joonyoung Kim, and Choong-Ki Chung), Jan., 218

Permeability evaluation

Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs (Na Wei, Xiangyang Zhao, Yingfeng Meng, Gao Li, Hua Xiang, Jun He, Wantong Sun, and Zhiguang Tang), Jan., 164

Petal crack

Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-Embedded Flaws under Uniaxial Compression (Xiao-Ping Zhou, Jian-Zhi Zhang, Lu-Hao Yang, and Yu-Long Cui), Mar., 329

Physical properties

Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties (Davood Fereidooni and Reza Khajevand), May, 555

Pile

Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests (Yang Li, Ga Zhang, and Chunying Liu), Jul., 815

Pile buckling

Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media (Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu), Nov., 1050

Pile installation

Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests (Yang Li, Ga Zhang, and Chunying Liu), Jul., 815

The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications (Herman Peiffer, Benny Malengier, Wim Haegeman, and Hao Shen), Sep., 902

Plate loading test

Rapid Estimation of Fouled Railroad Ballast Mechanical Properties (Madan Neupane, Robert L. Parsons, and Jie Han), Jul., 777

Polymer-bonded sands

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Pore water

Influence of Temperature on the Volume Change Behavior of Saturated Sand (Hong Liu, Hanlong Liu, Yang Xiao, and John S. McCartney), Jul., 747

Portland-limestone cement

Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils (Mohammed O. A. Bazne, Farshid Vahedifard, and Isaac L. Howard), Mar., 280

Positive group effect

An Experimental Study for Reinforcing the Ground Underneath a Footing Using Micro-piles (Tae-Hyung Lee, Jong-Chul Im, Chan-gyoung Kim, and Minsu Seo), Jul., 648

Preconsolidation

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Mlynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Preconsolidation pressure

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Pressure grout

Axial Monotonic and Cyclic Testing of Micro-piles in Loose Sand (R. Matos, P. Pinto, C. Rebelo, M. Veljkovic, and L. Simões da Silva), May, 526

Pressure sensor

Implementation of Soil Pressure Sensors in Large-Scale Soil-Structure Interaction Studies (Lohrasb Keykhosropour, Anne Lemnitzer, Lisa Star, Antonio Marinucci, and Steve Keowen), Jul., 730

Pressure-tension

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength (Samuel Bauret and Patrice Rivard), Nov., 1139

Proppant

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Pullout

Small-Scale Pullout Test of a Geogrid-Reinforced Unsaturated Soil with Suction Monitoring (Fernando H. M. Portelinha, Vinicius R. G. Pereira, and Natalia S. Correia), Jul., 787

P-wave

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

P-wave rise time

A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time (Yuzhu Zhang, Wenbo Lu, Peng Yan, Ming Chen, and Jianhua Yang), Jan., 31

P-wave velocity

A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time (Yuzhu Zhang, Wenbo Lu, Peng Yan, Ming Chen, and Jianhua Yang), Jan., 31

Q**Quasi-static test**

Shallow-Layer $p-y$ Relationships for Micro-piles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test (Xiaowei Wang, Aijun Ye, Abdollah Shafieezadeh, and Jianzhong Li), Jan., 193

R**Rainfall**

Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacharjee and B. V. S. Viswanadham), Jan., 72

Rate effects

Interpretation of the DMT in Silts (Fernando Schnaid, Marcus V. A. Belloli, Edgar Odebrecht, and Diego Marchetti), Sep., 868

Recompression index

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Rectangular hyperbola

Appropriate Method of Determination of Coefficient of Consolidation for Municipal Solid Waste (B. P. Naveen, P. V. Sivapulalaiah, and T. G. Sitharam), Nov., 1026

Reduced-scale model

Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment (Yewei Zheng, Andrew C. Sander, Wenyong Rong, Patrick J. Fox, P. Benson Shing, and John S. McCartney), Jan., 171

Regression-aided analytical framework

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Regular and irregular joints

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Reinforced mixture

Stress-Strain Response and Dilation of Geogrid-Reinforced Coarse-Grained Soils in Large-Scale Direct Shear Tests (Xiaobin Chen, Yu Jia, and Jiasheng Zhang), May, 601

Relative breakage

Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test (H. Choo, S. Lim, and W. Lee), Nov., 1040

Repeatability

Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI (Tarek Abdoun, Panagiota Kokkali, and Mourad Zeghal), Jan., 141

Resistive limit

A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast (Dong Zhou, Zonghui Liu, Robert Y. Liang, Heng Wu, and Yetian Wang), Jan., 17

Rigid piston

Design, Use, and Interpretation of an Instrumented Flat Dilatometer Test (Hao Shen, Wim Haegeman, and Herman Peiffer), Mar., 247

Ring shear

Discussion of "Correlations for Fully Softened Shear Strength Parameters" by B. A. Castellanos, T. L. Brandon, and D. R. Van-DenBerge, This Article Was Published in *Geotechnical Testing Journal*, Vol. 39, No. 4, 2016. [DOI: 10.1520/GTJ20150184] (Thomas J. O'Meara), May, 634

Rock energy evolution

Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression (Qingbin Meng, Mingwei Zhang, Zhizhen Zhang, Lijun Han, and Hai Pu), Jul., 717

Rock joint

Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests (Yuanhui Li, Leibo Song, Quan Jiang, Chengxiang Yang, Chang Liu, and Bing Yang), Mar., 371

Rock mechanics

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821
Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials (Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima), Nov., 1092

Rock testing

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Rock thermodynamics

Experimental Research on Rock Energy Evolution under Uniaxial Cyclic Loading and Unloading Compression (Qingbin Meng, Mingwei Zhang, Zhizhen Zhang, Lijun Han, and Hai Pu), Jul., 717

S**Sand**

A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures (Joseph R. Giampa and Aaron S. Bradshaw), Jul., 639

Saturated sand

Shallow-Layer $p-y$ Relationships for Micro-piles Embedded in Saturated Medium Dense Sand Using Quasi-Static Test (Xiaowei Wang, Aijun Ye, Abdollah Shafieezadeh, and Jianzhong Li), Jan., 193

Scaling laws

A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands (Morteza Mirshekari, Majid Ghayoomi, and Amin Borghei), Nov., 979
Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacherjee and B. V. S. Viswanadham), Jan., 72

Scanning electron microscopy

Study of the Backfill Confined Consolidation Law and Creep Constitutive Model under High Stress (Zhikai Wang, Peng Yang, Wensheng Lyu, Genbo Yu, and Chao Yang), Mar., 390

Schist

Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test (Meng-Chia Weng, Jin-Hong Li, Cheng-Han Lin, and Chu-Tsen Liao), Jan., 132

Seafloor dilatometer

Dilatometer and Seismic Dilatometer Testing Offshore: Available Experience and New Developments (Diego Marchetti), Sep., 967

Sediment

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Sedimentary rock

Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties (Davood Fereidooni and Reza Khajevand), May, 555

Seepage

A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions (C. Chen, L. M. Zhang, and Hong Zhu), Jan., 43

Segregation

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabae Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharafi), May, 473

Seismic dilatometer

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice (Silvano Marchetti and Paola Monaco), Sep., 837

Seismic dilatometer test

Monitoring Ground Improvement Using the Seismic Dilatometer in Christchurch, New Zealand (Sara Amoroso, Kyle M. Rollins, Paola Monaco, Marco Holtrigter, and Alan Thorp), Sep., 946

Seismic response

Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis (Sayantan Chakraborty, Tejo V. Bheemasetti, Anand J. Puppala, and Louie Verreault), Nov., 1102

Self-weight consolidation

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543

Sensitive clay

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Sensor

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for

Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Sequential cracking

Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions (M. R. Lakshmikantha, Pere C. Prat, and Alberto Ledesma), Jul., 675

Settlement prediction

An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area (Yan-ning Wang, Qiang Zhang, and Bin-song Jiang), Nov., 1008

Shaft-bearing capacity

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

Shaking table test

Shaking Table Test of a Half-Scale Geosynthetic-Reinforced Soil Bridge Abutment (Yewei Zheng, Andrew C. Sander, Wenyong Rong, Patrick J. Fox, P. Benson Shing, and John S. McCartney), Jan., 171

Shear apparatus

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Shear behavior

Automatic Static and Cyclic Shear Testing Machine under Constant Normal Stiffness Boundary Conditions (S. M. Mahdi Niktabar, K. Seshagiri Rao, and Amit Kumar Shrivastava), May, 508

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhatir, and Tom Schanz), May, 619

Shear strain

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Shear strength

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength (Chieng-Ting Tang, Roy H. Borden, and Mohammed A. Gabr), Mar., 223

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Shear strength formula

Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests (Yuanhui Li, Leibo Song, Quan Jiang, Chengxiang Yang, Chang Liu, and Bing Yang), Mar., 371

Shear wave velocity

Development of a Large-Size Cyclic Direct Simple Shear Device for Characterization of Ground Materials with Oversized Particles (Dimitrios Zekkos, Adda Athanasopoulos-Zekkos, Jonathan Hubler, Xunchang Fei, Kaveh H. Zehtab, and W. Allen Marr), Mar., 263

Shearing performance

Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests (Yuanhui Li, Leibo Song, Quan Jiang, Chengxiang Yang, Chang Liu, and Bing Yang), Mar., 371

Silica sand

An Apparatus for Testing Static Fatigue at Sand Grain Contacts (Zhijie Wang and Radoslaw L. Michalowski), May, 448

Silty sand

Experimental Investigation into the Influence of Roundness and Sphericity on the Undrained Shear Response of Silty Sand Soils (Abdellah Cherif Taiba, Youcef Mahmoudi, Mostefa Belkhatir, and Tom Schanz), May, 619

Simple shear

Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate (Patrick J. Fox, Stuart S. Thielmann, Michael J. Sanders, Christopher Latham, Ismaail Ghaaowd, and John S. McCartney), Mar., 340

Size effect

Testing Method for Determination of Microscopic Fracture Toughness for Rock Materials (Minami Kataoka, Sang-Sun Jeong, Yuzo Obara, Toru Yoshinaga, Yoji Mine, and Kazuki Takashima), Nov., 1092

Slate

Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test (Meng-Chia Weng, Jin-Hong Li, Cheng-Han Lin, and Chu-Tsen Liao), Jan., 132

Slope failure

Monitoring Shear Strain in Shallow Subsurface Using Mini Pipe Strain Meter for Detecting Potential Threat of Slope Failure (Satoshi Tamate and Tomohito Hori), Mar., 413

Slope stability

Design and Performance of an In-Flight Rainfall Simulator in a Geotechnical Centrifuge (Dipankana Bhattacherjee and B. V. S. Viswanadham), Jan., 72

The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated

Clay in Geotechnical Applications (Herman Peiffer, Benny Malengier, Wim Haegeman, and Hao Shen), Sep., 902

Slurry

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Slurry settling

Particle Image Velocimetry (PIV) Analysis of Particle Settling in Narrow Fracture Experiments (Lan Luo and Ingrid Tomac), Mar., 354

Small strain stiffness

Local Displacement Transducer with Miniature Position Encoder (Marcin Witowski), Nov., 1147

Soft soils

Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay (Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikiat-kamjorn, and Ana Heitor), Nov., 1076

Soil

Characterization of Self-Weight Consolidation of Fine-Grained Mine Tailings Using Moisture Sensors (Faustin Saleh-Mbemba and Michel Aubertin), May, 543
Effects of Pile Installation Simulation on Behavior of Pile Groups in Centrifuge Model Tests (Yang Li, Ga Zhang, and Chunying Liu), Jul., 815

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Sushe Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Permeability Test Device for Soil with Automatic Water Head Control (Sang Inn Woo, Joonyoung Kim, and Choong-Ki Chung), Jan., 218

Soil bin

Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads (Amaneh E. Kenarsari, Stanley J. Vitton, and John E. Beard), Nov., 1166

Soil deformation

Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media (Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu), Nov., 1050

Soil placement

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabaei Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharafi), May, 473

Soil skeleton

Influence of Temperature on the Volume Change Behavior of Saturated Sand (Hong

Liu, Hanlong Liu, Yang Xiao, and John S. McCartney), Jul., 747

Soil stresses

The Use of the DMT for the Evaluation of Changes in Stress State in Overconsolidated Clay in Geotechnical Applications (Herman Peiffer, Benny Malengier, Wim Haegeman, and Hao Shen), Sep., 902

Soil-structure interaction

Implementation of Soil Pressure Sensors in Large-Scale Soil-Structure Interaction Studies (Lohrash Keykhosropour, Anne Lemmitzer, Lisa Star, Antonio Marinucci, and Steve Keowen), Jul., 730

Soil-structure interface

An Automated Large-Scale Apparatus for 3-D Cyclic Testing of Soil-Structure Interfaces (Jian-Min Zhang, Da-Kuo Feng, and Wen-Jun Hou), May, 459

Soil-water characteristic curve

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

Soil-water retention

A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands (Morteza Mirshekari, Majid Ghayoomi, and Amin Borghei), Nov., 979

Source energy

Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis (Sayantan Chakraborty, Tejo V. Bheemasetti, Anand J. Puppala, and Louie Verreault), Nov., 1102

Specimen preparation

An Improved Rotating Soak Method for MICP-Treated Fine Sand in Specimen Preparation (Hongyan Li, Chi Li, Tuanjie Zhou, Shihui Liu, and Lin Li), Jul., 805

Spectral analysis of surface waves

Use of Constant Energy Source in SASW Test and Its Influence on Seismic Response Analysis (Sayantan Chakraborty, Tejo V. Bheemasetti, Anand J. Puppala, and Louie Verreault), Nov., 1102

Spherical cavity expansion

Effective Stress Strength Parameters of Clays from DMT (Zhongkun Ouyang and Paul W. Mayne), Sep., 851

Stabilization

Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils (Mohammed O. A. Bazne, Farshid Vahedi-fard, and Isaac L. Howard), Mar., 280

Stabilized subgrade

Incorporating the Strength Provided by Sub-grade Stabilization in the Flexible Pavement Design Procedures (Anwer K. Al-Jhyyish and Shad M. Sargand), Jan., 117

Static

Experimental Investigation and Assessment of Internal Stability of Granular Filters under One-Dimensional Static and Cyclic Loading (Jahanzaib Israr and Jehangir Israr), Jan., 103

Static and dynamic soil pressures

Implementation of Soil Pressure Sensors in Large-Scale Soil-Structure Interaction Studies (Lohrasb Keykhosropour, Anne Lemnitzer, Lisa Star, Antonio Marinucci, and Steve Keowen), Jul., 730

Static fatigue

An Apparatus for Testing Static Fatigue at Sand Grain Contacts (Zhijie Wang and Radoslaw L. Michalowski), May, 448

Stiffness

Marchetti Flat Dilatometer Tests in a Virtual Calibration Chamber (Joanna Butlanska, Marcos Arroyo, Sara Amoroso, and Antonio Gens), Sep., 930

Stochastic distribution

Mixed Uncertain Damage Models: Creation and Application for One Typical Rock Slope in Northern China (Yajun Wang and Xing Zhu), Jul., 759

Stone columns

Influence of Particle Gradation and Shape on the Performance of Stone Columns in Soft Clay (Firman Siahaan, Buddhima Indraratna, Ngoc Trung Ngo, Cholachat Rujikiatkamjorn, and Ana Heitor), Nov., 1076

Strain rate

Experimental Study on Mechanical and Energy Properties of Granite under Dynamic Triaxial Condition (Z. L. Wang, H. R. Li, J. G. Wang, and H. Shi), Nov., 1063

Strength

Determining the Geotechnical Characteristics of Some Sedimentary Rocks from Iran with an Emphasis on the Correlations between Physical, Index, and Mechanical Properties (Davood Fereidooni and Reza Khajevand), May, 555

Strength and compressibility of soils

The New Scope of Frictionless Triaxial Apparatus - Disturbed Sand Testing (Tomas Sabaliauskas and Lars Bo Ibsen), Nov., 1117

Stress concentration ratio

An Underwater Plate Load Testing for the Sand Compaction Pile Ground at Island-Tunnel Conversion Area (Yan-ning Wang, Qiang Zhang, and Bin-song Jiang), Nov., 1008

Stress history

Recent Improvements in the Use, Interpretation, and Applications of DMT and SDMT in Practice (Silvano Marchetti and Paola Monaco), Sep., 837

Stress-strain behavior

A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions (C. Chen, L. M. Zhang, and Hong Zhu), Jan., 43

Structured soil

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

Subgrade reaction modulus

Rapid Estimation of Fouled Railroad Ballast Mechanical Properties (Madan Neupane, Robert L. Parsons, and Jie Han), Jul., 777

Substantial wrapping

Internal Morphology of Cracking of Two 3-D Pre-Existing Cross-Embedded Flaws under Uniaxial Compression (Xiao-Ping Zhou, Jian-Zhi Zhang, Lu-Hao Yang, and Yu-Long Cui), Mar., 329

Suction

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

Surface roughness

Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength (Samuel Bauret and Patrice Rivard), Nov., 1139

Sustainable development

Effects of Light Cement Stabilization on Properties of Fine-Grained Dredged Soils (Mohammed O. A. Bazne, Farshid Vahedi-fard, and Isaac L. Howard), Mar., 280

Synchrotron microcomputed tomography imaging

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

T**Tactile pressure sensors preparation**

Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads (Amaneh E. Kenarsari, Stanley J. Vitton, and John E. Beard), Nov., 1166

Tensile failure

Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test (Z. L. Wang, G. Y. Shi, J. G. Wang, and Z. H. Zhang), Mar., 235

Tensile failure micro-mechanism

Direct Tensile Test on Brittle Rocks with the Newly Developed Centering Apparatus (Qiangyong Zhang, Kang Duan, Wen Xiang, Shengbo Yuan, and Yu-Yong Jiao), Jan., 92

Tensile Poisson's ratio

Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock (Shantanu Patel and C. Derek Martin), Jul., 664

Tensile strength

Measuring Foliation Tensile Strength of Metamorphic Rock by Using Pull-Off Test (Meng-Chia Weng, Jin-Hong Li, Cheng-Han Lin, and Chu-Tsen Liao), Jan., 132

Tensile Young's modulus

Application of Digital Image Correlation Technique for Measurement of Tensile Elastic Constants in Brazilian Tests on a Bi-Modular Crystalline Rock (Shantanu Patel and C. Derek Martin), Jul., 664

Tensiometer

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength (Chien-Ting Tang, Roy H. Borden, and Mohammed A. Gabr), Mar., 223

Texture

The New Scope of Frictionless Triaxial Apparatus - Disturbed Sand Testing (Tomas Sabaliauskas and Lars Bo Ibsen), Nov., 1117

Thermal conductivity

Validation of a Thermo-Time Domain Reflectometry Probe for Sand Thermal Conductivity Measurement in Drainage and Drying Processes (Nan Zhang, Xinbao Yu, and Xuelin Wang), Mar., 403

Thermal treatment

Analysis of Energy Properties and Failure Modes of Heat-Treated Granite in Dynamic Splitting Test (Z. L. Wang, G. Y. Shi, J. G. Wang, and Z. H. Zhang), Mar., 235

Thermo-time domain reflectometry

Validation of a Thermo-Time Domain Reflectometry Probe for Sand Thermal Conductivity Measurement in Drainage and Drying Processes (Nan Zhang, Xinbao Yu, and Xuelin Wang), Mar., 403

Thermomechanical properties

A Thermal Direct Shear Device for Testing Polymer-Bonded Sands (Louis Romero, Lenny Mendoza, Ali Nasirian, Douglas D. Cortes, and Julio R. Valdes), May, 611

Three-dimensional fracture

Experimental Fracture Analysis of Individual Sand Particles at High Loading Rates (Andrew M. Druckrey, Khalid Alshibli, Daniel T. Casem, and Emily Huskins), May, 574

Three-parameter rectangular hyperbola

A Framework for Interpretation of the Compressibility Behavior of Soils (Amin Soltani, An Deng, Abbas Taheri, Asuri Sridharan, and A. R. Estabragh), Jan., 1

Till

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Młynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Tilt test

A Simple Method for Assessing the Peak Friction Angle of Sand at Very Low Confining Pressures (Joseph R. Giampa and Aaron S. Bradshaw), Jul., 639

Time dependence

An Apparatus for Testing Static Fatigue at Sand Grain Contacts (Zhijie Wang and Radoslaw L. Michalowski), May, 448

Time domain reflectometry

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Susha Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Tire-derived aggregate

Large-Scale Combination Direct Shear/Simple Shear Device for Tire-Derived Aggregate (Patrick J. Fox, Stuart S. Thielmann, Michael J. Sanders, Christopher Latham, Ismaail Ghaaowd, and John S. McCartney), Mar., 340

Transient electromagnetic

A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast (Dong Zhou, Zonghui Liu, Robert Y. Liang, Heng Wu, and Yetian Wang), Jan., 17

Transition

An Experimental Parametric Study of Segregation in Cohesionless Soils of Embankment Dams (Sajad Asmaei, Piltan Tabatabaei Shourijeh, Seyed Mohammad Binesh, and Mohammad-Hassan Ghaedsharafi), May, 473

Transparent media

Experimental Investigation on Soil Deformation Caused by Pile Buckling in Transparent Media (Chang-Guang Qi, Jin-Hui Zheng, Dian-Jun Zuo, and Gan-Bin Liu), Nov., 1050

Triaxial test

A Photographic Method for Measuring Soil Deformations during Internal Erosion under Triaxial Stress Conditions (C. Chen, L. M. Zhang, and Hong Zhu), Jan., 43

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength (Chien-Ting Tang, Roy H. Borden, and Mohammed A. Gabr), Mar., 223

Local Displacement Transducer with Miniature Position Encoder (Marcin Witowski), Nov., 1147

Strength Behavior of Sedimented Gypsum Slurry (Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan), Nov., 1155

True triaxial

Large-Scale True Triaxial Apparatus for Geophysical Studies in Fractured Rock (A. V. Garcia, R. M. Rached, and J. C. Santamarina), Jul., 821

Tunnel geological forecast

A Method to Extract and Eliminate TEM Interference by Metallic Bodies in Tunnel Geological Anomaly Forecast (Dong Zhou, Zonghui Liu, Robert Y. Liang, Heng Wu, and Yetian Wang), Jan., 17

U**Ultrasonic detection**

A Method to Identify Blasting-Induced Damage Zones in Rock Masses Based on the P-Wave Rise Time (Yuzhu Zhang, Wenbo Lu, Peng Yan, Ming Chen, and Jianhua Yang), Jan., 31

Underbalanced drilling

Reservoir Evaluation Technology During Underbalanced Drilling of Horizontal Wells in Gas Reservoirs (Na Wei, Xiangyang Zhao, Yingfeng Meng, Gao Li, Hua Xiang, Jun He, Wantong Sun, and Zhiguang Tang), Jan., 164

Undrained clay

Theoretical DMT Interpretation in Sensitive Clays (Vincenzo Silvestri), Sep., 877

Undrained shear strength

Considerations on the Experimental Calibration of the Fall Cone Test (Marcelo A. Llano-Serna, Márcio M. Farias, Dorival M. Pedroso, David J. Williams, and Daichao Sheng), Nov., 1131

Interrelationship between Undrained Shear Strength from DMT and CPTU Tests for Soils of Different Origin (Zbigniew Młynarek, Jędrzej Wierzbicki, and Katarzyna Stefaniak), Sep., 890

Undrained triaxial test

An Experimental Study on Mechanical Behavior of a Calcite Cemented Gravelly Sand (Mohammad Reza Shakeri, S. Mohsen Haeri, M. Mahdi Shahrobi, Ali Khosravi, and Ali Akbar Sajadi), May, 494

Unsaturated sand

A Review on Soil-Water Retention Scaling in Centrifuge Modeling of Unsaturated Sands

(Morteza Mirshekari, Majid Ghayoomi, and Amin Borghei), Nov., 979

Unsaturated soil

A Simplified Direct Shear Testing Procedure to Evaluate Unsaturated Shear Strength (Chien-Ting Tang, Roy H. Borden, and Mohammed A. Gabr), Mar., 223

Boundary Effects in the Desiccation of Soil Layers with Controlled Environmental Conditions (M. R. Lakshmikantha, Pere C. Prat, and Alberto Ledesma), Jul., 675

Expedited Soil-Water Characteristic Curve Tests Using Combined Centrifuge and Chilled Mirror Techniques (H. Rahardjo, X. F. Nong, D. T. T. Lee, E. C. Leong, and Y. K. Fong), Jan., 207

Experimental and Simple Semiempirical Methods for Interpreting the Axial Load Versus Settlement Behaviors of Single Model Piles in Unsaturated Sands (Sai K. Vanapalli, Mohamadjavad Sheikhtaheri, and Won Taek Oh), Jul., 698

V**Validation**

Physical Modeling of Soil Liquefaction: Repeatability of Centrifuge Experimentation at RPI (Tarek Abdoun, Panagiota Kokkali, and Mourad Zeghal), Jan., 141

Vibrating table test

Determination of Minimum Void Ratio of Crushed Rock Sand Using a Vibrating Table Test (H. Choo, S. Lim, and W. Lee), Nov., 1040

Volumetric moisture content

Evaluation of the Performance of TDR and Capacitance Techniques for Soil Moisture Measurement (S. U. Susha Lekshmi, D. N. Singh, Alessandro Tarantino, and M. S. Baghini), Mar., 292

Volumetric strain

Influence of Temperature on the Volume Change Behavior of Saturated Sand (Hong Liu, Hanlong Liu, Yang Xiao, and John S. McCartney), Jul., 747

W**Wall strength**

Shearing Performance of Natural Matched Joints with Different Wall Strengths under Direct Shearing Tests (Yuanhui Li, Leibo Song, Quan Jiang, Chengxiang Yang, Chang Liu, and Bing Yang), Mar., 371

Water distribution

The Microstructure and Water Distribution of Partially Saturated Hard Clay (Liufeng Chen, Hua Peng, and Diansen Yang), Jul., 830

EXECUTIVE COMMITTEE

Dale F. Bohn, Chairman
Taco van der Maten, Vice Chairman
Andrew G. Kireta, Jr., Vice Chairman
John R. Logar, Chairman of Finance and Audit Committee
Ralph M. Paroli, Past Chairman
D. Thomas Marsh, Past Chairman
Katharine E. Morgan, President

DIRECTORS

Ferdinando E. Aspesi
Dale F. Bohn
Joannie W. Chin
Cesar A. Constantino
Oliver S. Delery, Jr.
William Ells
John Fletcher
R. James Galipeau
John Germaine
William C. Gries
Alan Kaufman
Andrew G. Kireta, Jr.
John R. Logar
D. Thomas Marsh
R. Christopher Mathis
Katharine E. Morgan
Deryck M.S. Omar
Ralph M. Paroli
Irving S. Scher
Arman Shakalkaliyev
James A. Tann
Vicky Taylor
Taco van der Maten
Jeff Weiss
Terry O. Woods

COMMITTEE ON PUBLICATIONS

Dee Magnoni, Chairman
William J. Likos, Vice Chairman
Dale F. Bohn, ex officio
Jay Bhatt
K. Russell DePriest
Nikhil Gupta
John E. Haddock
Jason H. Ideker
Michael R. Mitchell
Richard W. Neu
Majdi A. Othman
Suzanne Pecore
Sudarsan Rachuri
George E. Totten
W. Jason Weiss

INFORMATION FOR AUTHORS

For details regarding paper submission go to <http://mc04.manuscriptcentral.com/astm-gtj>. The subject matter must not be of a speculative nature and the contents must not include materials of an advertising nature. The paper must not be seriously defective as to literary form and structure, continuity of thought, and clarity of expression. The substance of the paper should not have been published previously in the open literature.

Authors preparing papers for submittal should observe the conventions of style explained in the ASTM Style Manual. Since the journal does not request page charges, the author is expected to conform to these standard conventions for style and the inclusion of complete references and high-quality figures. SI units are to be used throughout; if data were not measured in SI units, a note should appear to that effect and the original units should be included in parentheses after the SI units.

IN APPRECIATION OF THE REVIEWERS

The high quality of the papers that appear in this publication is a tribute not only to the obvious efforts of the authors represented but to the unheralded, though essential, efforts of their reviewers. It is to the reviewers' dedication to upholding the high standards of their profession that this note pays tribute. On behalf of ASTM International and the authors as well, we acknowledge with appreciation their important contribution to the success of this journal.

AWARDS FOR PAPERS

Papers are eligible for the following ASTM International awards:
The C.A. Hogentogler Award — papers on soils for engineering purposes.
The Sanford E. Thompson Award — papers on concrete and concrete aggregates.
The Richard L. Templin Award — papers on new and useful testing procedures and apparatus.
The Geotechnical Testing Journal Award — papers on the practice of geotechnical testing.

PAST TECHNICAL EDITORS

Dr. Ernest T. Selig
(March 1978 to September 1985)
Dr. Vincent P. Drnevich
(December 1985 to December 1989)
Mr. Paul Knodel
(March 1990 to December 1992)
Dr. Howard J. Pincus
(March 1993 to December 1995)
Dr. Ronald C. Chaney and Dr. Kenneth R. Demars
(March 1996 to June 2002)
Dr. Thomas C. Sheahan
(July 2002 to December 2008)
Mr. L. David Suits
(September 2002 to December 2017)

Geotechnical Testing Journal (ISSN 0149-6115) is published in six issues per year by ASTM International. Some issues, in whole or in part, may be Special Issues focused on a topic of interest to our readers. The views expressed in this journal are not those of ASTM International. The data and opinions appearing in the published material were prepared by and are the responsibility of the contributors, not of ASTM International.

Copyright © 2018 ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. All rights reserved. This material may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic, film, or other distribution and storage media without the written consent of the publisher.

Subscriptions include two formats-online access only or online access plus printed volumes. Individual subscriptions: \$252.00 for 1 year online access and \$366.00 for 1 year online access plus printed volumes. Institutional subscriptions (one geographic site via IP access): \$473.00 for 1 year online access and \$693.00 for 1 year online access plus printed volumes. Single copies are \$55.00. For Multi-site subscription and pricing, please contact Sales or call 1-877-909-ASTM. To subscribe, please send prepaid order to ASTM International, Customer Service, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 or visit www.astm.org.

Photocopy Rights: Authorization to photocopy items for internal, personal, or educational classroom use, or the internal, personal, or educational classroom use of specific clients, is granted by ASTM International provided that the appropriate fee is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, Tel: (978) 646-2600; <http://www.copyright.com/>

1139 Experimental Assessment of the Tensile Bond Strength of Mortar-Mortar Interfaces: Effects of Interface Roughness and Mortar Strength

Samuel Bauret and Patrice Rivard

1147 Local Displacement Transducer with Miniature Position Encoder

Marcin Witowski

1155 Strength Behavior of Sedimented Gypsum Slurry

Alsidqi Hasan, Fauzan Sahdi, Norsuzailina Mohamed Sutan, Nurul Asikin Mijan, and Sinin Hamdan

1166 Tactile Pressure Sensors to Measure Ground Pressure from Tractor Tire Loads

Amaneh E. Kenarsari, Stanley J. Vitton, and John E. Beard

1175 Table of Contents to Volume 41

1179 Index to Volume 41

The Geotechnical Testing Journal is online.

TAKE ADVANTAGE OF THESE BENEFITS:

Search Papers and Authors

View Abstracts

View Table of Contents

Download Individual Papers

IP access is available

For information, visit: www.astm.org