Development of a Multiscale Monitoring and Health Assessment Framework for Effective Management of Levee Infrastructure

M. Zeghal, T. Abdoun, M. Exton, V. Mercado, X. Lv, V. Bennett, B. Yazici, and A. Marr

Geotechnical Asset Management with Performance Data from MSE Steel Reinforcements

Kenneth L. Fishman

Risk Based Methods for Management of Geotechnical Features in Transportation Infrastructure

Mark Vessely

Capturing The Impacts of Geotechnical Features on Transportation System Performance

Scott A. Anderson and Benjamin S. Rivers

Management of Unstable Slopes along Washington State Highways – Past, Present, and Future

Thomas C. Badger, Marc Fish, and Tracy Trople
Geotechnical Asset Management of Slopes: Condition Indices and Performance Measures
David A. Stanley and Lawrence A. Pierson

Repair and Remediation

Slope Stabilization

Stabilization of the Bender’s Park Landslide, Lead, South Dakota
Gregory R. Reuter and William C. Kwasny

Landslide Stabilization Using High Strength Aggregate-Cement Slurry
Gregory Silver and Lisa Bates

Performance of Slope Stabilization Works with Drainage and Buttress
Binod Tiwari and Sergio Duarte

High Capacity Reinforced Flexible Systems for Slope Stabilization: An Outstanding Technology, Not Well Known
Luis Miguel Laguna Megal

Cost and Schedule Savings from Directly-Driven Soil Nail and Innovative Fascia Systems
Enayat S. Aziz and Tyler J. Stephens

Full-Scale Shallow Anchor Testing in High Moisture Content Fine-Grained Levee Soils
Amanda C. Bilberry and Isaac L. Howard

Seismic Stability Analysis of Slopes Stabilized with EPS-Block Geofoam
Masood H. Kafash and David Arellano

Performance Evaluation of a Slope Reinforced with Recycled Plastic Pin
M. S. Khan, G. Kibria, M. S. Hossain, J. Hossain, and N. Lozano

Stream Bank Remediation; Not Just a Geotechnical Problem
Todd Swackhamer, James J. Janora, and David Derrick

Horizontal Drains – State of Practice: The Past Seven Decades in the U.S.
Thomas S. Lee

Influence of Grout Rheology and Placement Technique on Integrity of Soil Nails
Priyantha W. Jayawickrama and John B. Turner

Performance of Soil Nail Wall in High Plasticity Expansive Soil
Sazzad Bin-Shafique, Mohammad Sadat, Saidur Rahman, and Jie Huang

Uplift Behavior of Anchor Plates in Slope
S. Bildik, M. Laman, and M. T. Suleiman

Advances in Design Methodology for Landslide Repair Using Launched Soil Nails
Colby Barrett, Runing Zhang, and Alan Rock

Column Supported Embankments

Stability Failure Modes of Rigid Column-Supported Embankments
Gang Zheng, Yu Diao, Shuai Li, and Jie Han
Consolidation of Column-Reinforced Soft Foundations under Embankments 1825
Yan Jiang, Jie Han, and Gang Zheng

Load Distribution on Geosynthetic Reinforcement in Column-Supported Embankments 1829
George M. Filz and Joel A. Sloan

Dutch Research on Basal Reinforced Piled Embankments 1838
Suzanne J. M. van Eekelen and Adam Bezuijen

Erosion and Slope Stability

Reducing Erosion Along the Surface of Sloping Clay-Sand Liners 1848
Muawia A. Dafalla, Mosleh A. Al-Shamrani, and Ali Obaid

Computer Simulation of Levee Erosion and Overtopping 1858
Mehrad Kamalzare, Tianning Steven Han, Matt McMullan, Chris Stuetzle, Thomas F. Zimmie, Barbara Cutler, and W. Randolph Franklin

Concave Slopes for Improved Stability and Erosion Resistance 1868
Isaac A. Jeldes and Eric C. Drumm

Modeling the Internal Erosion Behavior of Lignosulfonate Treated Soil 1872
Rasika Athukorala, Buddhima Indraratna, and Jayan S. Vinod

Slope Stability Analysis of Three Earthen Levee Strengthening Systems under Hurricane Overtopping Flow Conditions 1882
Farshad Amini, Lin Li, and Yingzi Xu

Erosion Resistance of Earthen Levee Strengthened by HPRTRM System under Combined Wave and Surge Overtopping Conditions 1892
Lin Li, Farshad Amini, and Yi Pan

Influence of Slope Morphology on the Stability of Earthen Slopes 1902
D. H. Gray

Comparison of Erosion Susceptibility and Slope Stability of Repaired Highway Embankment 1912
Auckpath Sawangsuriya, Apiniti Jotisankasa, Jiraroth Sukolrat, Montri Dechasakulsom, Vichian Mahatumrongchai, Pakorn Milindalekha, and Sekchai Anuvechsririkiat

Case Study of Rapid Levee Armoring During 2011 Mississippi River Flood and Potential Future Applications 1922
Amanda C. Bilberry, C. Fred Pinkard Jr., and Isaac L. Howard

Fundamental Study on Surface Erosion in Levee Systems 1932
Y. Abdelhamid and U. El Shamy

Deep Foundations for Slope Stabilization

Long-Term Performance of Landslide Shear Piles 1936
Kenji Yamasaki, Ralph W. Strom, Richard A. Gunsolus, and D. Andrew Vessely

Application of the Strain Wedge Model in Soil-Pile Interaction Analysis of Pile-Stabilized Slopes 1951
Hamed Ardalan and Mohamed Ashour

Analysis of Alternative Landslides Remediation Measures Using Sliding Force Concept 1963
<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Method for Slide-Stabilizing Micropile Walls</td>
<td>1971</td>
</tr>
<tr>
<td>John P. Turner and Martin Halvorson</td>
<td></td>
</tr>
<tr>
<td>A Study of Effects of Pile Depth and Stiffness on a Homogeneous Soil</td>
<td>1984</td>
</tr>
<tr>
<td>Slope Stabilized with Pile</td>
<td></td>
</tr>
<tr>
<td>Hong Yang</td>
<td></td>
</tr>
<tr>
<td>Yield Acceleration of a Slope Reinforced with a Row of Drilled Shafts</td>
<td>1994</td>
</tr>
<tr>
<td>Arash Erfani Joorabchi, Robert Y. Liang, and Lin Li</td>
<td></td>
</tr>
<tr>
<td>Reliability Based Design for Drilled Shafts for Slope Stabilization</td>
<td>2004</td>
</tr>
<tr>
<td>Robert Y. Liang and Lin Li</td>
<td></td>
</tr>
<tr>
<td>Numerical Analysis of Pile-Reinforced Slopes</td>
<td>2014</td>
</tr>
<tr>
<td>Andrew Daggett and Sunil Sharma</td>
<td></td>
</tr>
<tr>
<td>Design Method for Drilled Shaft Stabilization of Unstable Slopes</td>
<td>2024</td>
</tr>
<tr>
<td>Robert Y. Liang, Arash Erfani Joorabchi, and Lin Li</td>
<td></td>
</tr>
<tr>
<td>A Procedure for Predicting Micropile Resistance for Earth Slope</td>
<td>2034</td>
</tr>
<tr>
<td>Stabilization</td>
<td></td>
</tr>
<tr>
<td>Andrew Boeckmann and J. Erik Loehr</td>
<td></td>
</tr>
<tr>
<td>Ground Improvement</td>
<td></td>
</tr>
<tr>
<td>Modeling Mechanical Response of Cemented EPS-Backfill</td>
<td>2038</td>
</tr>
<tr>
<td>An Deng and Jinrong Feng</td>
<td></td>
</tr>
<tr>
<td>Mechanical Behavior of Cement- and Cement-Fiber-Improved Soft Soils</td>
<td>2048</td>
</tr>
<tr>
<td>Ryan D. Starcher and Chunyang Liu</td>
<td></td>
</tr>
<tr>
<td>Pervious Concrete Pile: An Innovation Ground Improvement Alternative</td>
<td>2058</td>
</tr>
<tr>
<td>Lusu Ni, Muhammed T. Suleiman, and Anne Raich</td>
<td></td>
</tr>
<tr>
<td>Mixtures of Clay/EPS Particulates and Undrained Shear Strength</td>
<td>2066</td>
</tr>
<tr>
<td>Nicholas T. Rocco and Ronaldo Luna</td>
<td></td>
</tr>
<tr>
<td>Soil Improvement for Seismic Retrofit of Tuttle Creek Dam</td>
<td>2076</td>
</tr>
<tr>
<td>Timothy D. Stark, Francke C. Walberg, Peter M. Byrne, Gonzalo Castro,</td>
<td></td>
</tr>
<tr>
<td>Peter J. Nicholson, Paul J. Axtell, Michael H. Beaty, John C. Dillon,</td>
<td></td>
</tr>
<tr>
<td>William B. Empson, Joseph E. Topi, David L. Mathews, and Glen. M.</td>
<td></td>
</tr>
<tr>
<td>Bellew</td>
<td></td>
</tr>
<tr>
<td>Monitoring the Embankment Stabilization of Cantagalo Park, Brazil</td>
<td>2087</td>
</tr>
<tr>
<td>Márcio S. S. Almeida, Maria Esther S. Marques, and Marcelo A. Mello</td>
<td></td>
</tr>
<tr>
<td>Physicochemical Characterization of Cement Stabilized Highly</td>
<td>2091</td>
</tr>
<tr>
<td>Expansive Soil</td>
<td></td>
</tr>
<tr>
<td>Honghua Zhao, Zhao Chun-Ji, Zheng Xiao, and Liu Chan</td>
<td></td>
</tr>
<tr>
<td>Centrifuge Model Tests on Influence of Slope Height on Stability of</td>
<td>2101</td>
</tr>
<tr>
<td>Soft Clay Slope</td>
<td></td>
</tr>
<tr>
<td>Masaki Kitazume and Tomohide Takeyama</td>
<td></td>
</tr>
<tr>
<td>Stiffness Nonlinearities of SCP-Inserted Clay Specimens with Various</td>
<td>2105</td>
</tr>
<tr>
<td>Replacement Ratios in Triaxial Compression Tests</td>
<td></td>
</tr>
<tr>
<td>Yoon-Sik Choo, Sung-Ha Baek, Wanjuei Cho, and Choong-Ki Chung</td>
<td></td>
</tr>
<tr>
<td>Analytical and Numerical Model of Electro-Osmotic Consolidation for</td>
<td>2114</td>
</tr>
<tr>
<td>Soft Soil</td>
<td></td>
</tr>
</tbody>
</table>
Improvement
Hui Wu and Liming Hu

Long-term Viscoplastic Behaviour of Embankments Built on Improved Soft Soil Using Vertical Drains
Babak Azari, Behzad Fatahi, and Hadi Khabbaz

Investigation and Liquefaction Mitigation of Landfill Perimeter Levee
Robbie M. Warner, Gary L. Lass, Anthony M. Pelletier, and Frank J. Turk

Quality Control and Quality Assurance Methods for Cutoff Walls in Dams and Levees
Donald Bruce and George Filz

Design and Construction of Deep Mixing at Orleans Avenue Canal, New Orleans

Partial Stabilization of an Active Slide Area Utilizing Soil Mixed Shear Keys installed Using Cutter Soil Mixing: Results of a Test Section
Brian Wilson and Emilie Lapointe

Keynotes

Keynote Session 1
Slope Stability Then and Now
J. Michael Duncan

Keynote Session 2
Remote Sensing Applications for Landslides, Slopes, and Embankments
Scott A. Anderson
Instrumentation and Monitoring of Slope Stability
W. Allen Marr

Keynote Session 3
Issues of Reliability in Stability of Slopes
John T. Christian
Seismic Slope Stability
W. D. Liam Finn

Keynote Session 4
Lessons Learned from Troubleshooting Dams
Francisco Silva-Tulla and Steve J. Poulos
Advances in Shear Strength Measurement, Assessment, and Use for Slope Stability Analysis
Thomas L. Brandon

Keynote Session 5
Toppling—A Fundamental Failure Mode in Discontinuous Materials—Description and Analysis
Richard E. Goodman

Case Studies of Offshore Slope Stability
Suzanne Lacasse, Farrokh Nadim, Maarten Vanneste, Jean-Sébastien L'Heureux, Carl Fredrik Forsberg, and Tore J. Kvalstad