Poster Session 1

Unified Slip Line Solution for Seismic Slope Stability in Cohesive-Frictional Soils Considering the Intermediate Principal Stress Effect: Shiponkar Mandi
Investigation of the Effect of Geo-synthetics on Climate-Induced Changes in Unsaturated Soil Behavior Using Non-Parametric Measure: Md Jobair Bin Alam
Climate-Induced Multimodality of Soil Moisture Distribution of Water Balance Cover: Md Jobair Bin Alam
MPM Casiopea Slope Runout Prediction Using the Intergranular Strain Anisotropy Hypothesis Model: Abdulrahman Alkattari
Effect of Jarsite Waste and Red Mud on Strength and Compressibility Behavior of Clayey Soil: Rakshit Bhatt
Non-Assisted Enzyme Induced Calcium Precipitates (EICP) for Acidic Soil Improvement: Enran Alotobi
Random-Field Characterization of Fissuring in Clay: Jiajting Liu
Influence of Stratigraphic Variability and Layering on Liquefiable Soils Near and Away from Structures: Liamne Brio
Evaluation of Dynamic Properties of Sand Treated with Natural Rubber Latex for Seismic Isolation: Vania U
The Thermo-Hydro-Mechanical Analysis of Soil-Pile Interaction in Expansive Unsaturated Clays During Natural Evaporation and Infiltration: Kouroshe Taimazdoust
Experimental Setup for Complex Electrical Resistivity Measurements on Unsaturated Soils: Ballast Fouling Materials: Kyle Parr
Shared Anchoring of Marine Renewable Energy Devices Utilizing Monopiles: Neda Jamaleddin
A Proper Methodology to Characterize the Associated Variability of UCS Data for the Metamorphic Rocks Based on Outlier Detection Methods: Behzad Daneshjoo
Numerical Analysis of Two-Dimensional Tank Experiment of Microbial Induced Desorption (MID) in Layered Silts and Sands: Patrick Kwan
Slope Stability Assessments of Reservoir Embankments Using Uncrewed Aerial Vehicle (UAV) Datasets: Surya Sarat Chandra Congeras
Stability Prediction of Highway Slope on Highly Plastic Clay Using Particle Swarm Optimization (PSO) Based Neural Network: Maznaz Nobahar
Utilization of Quarry Fines as a Sustainable Admixture for Suppressing Erosion-Induced HEAVY: Ajay Mukherjea
Investigating the Potential of the Material Point Method to Model the Run-Out Behavior Observed in Centrifuge Experiments: Mengchen Wang
Delayed Slope Instabilities in Earth Fill Dams Due to Creep: A Proposed Application of the Time-Dependent Model for Structured Soils (TMS): Marvin Renzo Malonzo
Zea Biopolymer for Enhancing Erosion Resistance of Sand: Quadir Babatunde
A Laboratory Examination of the Undrained Cyclic Shear Behavior of Pyroclastic Sands: Kyle Low
Thermo-Hydro-Mechanical Modeling of Opaline Clay in a Hollow Cylinder Triaxial Cell: Amir Mohammadzadeh
The Effects of Liquefaction Criteria on the Results of Cyclic Triaxial Tests: Carmine Polito
Estimating Thaw-Settlement of Highly Organic Permafrost: Irfan Shah
Considerations for Augmented Flood Control Infrastructure Inspection Using Convolutional Neural Networks: Zachary Nick
Near Surface Soil Moisture Estimation through Fusion of UAV-Enabled thermal, Optical, and Multispectral Hyper-spectral Imagery at the Oak Ridge Earthflows: Drew Gomberg
Stress Diffusion in Granular Materials: The Role of Anisotropy: Bianka Pajo
Partial Hydrate Dissociation: Impact of Thermal Stimulation and Depressurization: Derrick Hayabridge
Evaluation of Crushing Resistance and Hydraulic Conductivity of Proppants under High Closure Stress: Hebatolla Ghaneim
Models for Predicting the Maximum and Minimum Index Void Ratios for Sand-Grovel Mixtures: Carmine Polito
Durability of Natural Hemp Fibers Embedded in a Soil Matrix: Mohamad El Ahmad
Atterberg Limits of Two Crushed and Uncrushed Glaucosanitic Soils: Danilo Zappelli
Relationships Between Diffusion Properties and Index Tests for Bentonite-Polymer Composites: Daniel Adelke
Improved Estimation of California Bearing Ratio Value from Dynamic Cone Penetrometer Test Data Using Hierarchical Bayesian Modeling: Laith Sadiq
Investigation of Warning Effects on Creep Behavior of Pile Foundations in a Frozen Sandy Soil Using Laboratory-Scale Tests: Mohammad Abwenny
Undrained Cylindrical Cavity Expansion Analysis in Mohr-Coulomb Soil Based on Graphical Method: Xu Wang
Improving Student Engagement, Achievement, and Motivation Using Game-Design Based Learning in Undergraduate Geotechnical Engineering Classes: Justin Sabrowsky
Impact of Multiple Cyclic Loads on the Cyclic and Post-Cyclic Behavior of Fine-Grained Soils: Veronica Kuna
Evaluating the In-Situ Elastic Modulus of Foamed Glass Aggregate Using Static Plate Load Tests: Michael McGuire
Assessment of Seismic Ground Response Analysis Modelling Uncertainty At Christchurch Hospital, New Zealand: James Damuuk
Engineering Characterization and Cyclic Failure of a Diamonaceous Earth: Carter Willson
Large-Deformation Simulation of the 1977 Lower San Fernando Dam Flow Slide Using the Material Point Method: Lawrence Tabbott
A Comparison of In-Situ Unit Weight and Moisture Content Measurements Made Using a Traditional Nuclear Density Gauge and a Hybrid Nuclear-Electric Density Gauge: Christopher Meenah
Pile Length Estimation Based on Guided Waves and Periodic Analysis: Shihao Cui
Infiltration Testing, Design, and Mounding Analysis for Effective Stormwater Management for a New Link Light Rail Extension Project in Washington State.: Ray Jensen
An Automated Image-Based Approach to Derive Beach Grain Size Characteristics: Julie Paprocki
Simulation of the Seismic Response of a Man-Made Well-Graded Gravel as Recorded by a Vertical Instrumented Array: Anna Chiaradonna
Effect of Temperature on the Shear Strength of Fine-Grained Permafrost Soils: Hassine Emami Amani
Stability Vs Complexity in Machine Learning Models – Focusing on Soil Resilient Models Prediction: Laith Sadiq
The Volumetric Response of Remolded Expansive Soils Due to the Simultaneous Application of Suction and Wet Normal Stresses: Mohammad Mozawi
Consistent Framework for PGA Estimation At Liquefaction Case History Sites: Application to the 1989 M6.9 Losa Prieto Earthquake: Remmin Pretell
Response of Sandy Bluffs to Random Wave Actions: Tao Xiang
An Analytical Approach to Determine Point-of-Frailty of Deep Foundation Utilizing Nonlinear Response from P-Y Analysis: Fahim Bhuiyan
Vertical Load Capacity of Recycled Plastic Pin in Clay Subjected to Field Load Test: Saimahda Sara Aurna
Analysis of the Load-Sharing Behavior of Disconnected Piled Raft Foundation Using Non-Linear Soil-Structure Interaction: Vincent Zanjani
Laboratory Measurements of Hydraulic Fracturing and Compressibility Characteristics of Fractured Treated Sandy Soils: Hoya Quito
Estimating Shear Strength of Residual Soil and Saprile in South Carolina for Evaluation of Shear Modulus Reduction Models: Ali Sedaghat
Soft-Structure Interface Resistance Changes Due to Rigid Awns: Ryan Beumer
Rockfall in Himalayan Region: Trajectory Simulation, Design, and Analysis of Protective Embankment: Shreyas Maheshwari
Experimental Evaluation of Additional Shear Strength for Vetiver Root-Reinforced Sand: Faris Fahim Batihon
Laboratory Assessment for Utilizing Eggshell Waste on Iowa Soil Stabilization: Bo Yang
A Study of Laterally Loaded Piles After Failure: Rubie Forrag
Application of Ensemble-Based Methods for Prediction of Undrained Shear Strength of Soft Sensitive Clays: Vahrami Hberde
Investigating the Impact of Particle Migration Phenomena on Drilling Mud Filters During Injection Through Porous Media: Jithin S Kumar
Potential of Mitigating Pavement Frost-Heave with Fungi: Xijin Zhang
In Situ-Based Assessment of Seasonal Ground Heave and Settlement: Yunhong Jiang
Evaluation of Biochar as a Soil Improvement Additive to Mid-Atlantic Expansive Clay: Kalehowsi Manahiid
Gnocchi-Reinforced Capping Layer in Rail Tracks Subjected to Cyclic Loading: Laboratory and Numerical Modelling Study: Trung Ngo
Case Study: Correlation Between Becker and SPT Blow Counts: Ali Johanfar
Disaster Response in Port Areas Based on the Measured Data from Seismic Accelerometers: Aijie Sui
Mechanical and Deformation Behaviors of Wyoming Shales: Kam Ng
High Strain Rate Effects on a Clayey Sand Mixture: Abdaleaza Ads
Numerical Simulation of High-Speed Penetration of Munitions in Clay: Boules Markos
Efficacy of Dual Barrier Systems in Mitigating Ground-Borne Vibrations Induced by Impact Loading: Nitish Jauhari
A Discrete Element Method-Based Simulation of a Block Toppling Failure on an Inclined Surface: Hooman Dabirmanesh
Importance of Product Specific Testing in Determining Durability Reduction Factor for Polyester Geogrid in High pH Conditions: Laura Spencer
Effects of Jointed Plain Concrete Pavement’s Design Inputs on Performance Indicators: Megan McIntosh
Mass Loss Measurement in Triaxial Permeameter Testing: Sara Attai
A Semi-Analytical Framework to Simulate the Motion of Creeping Landslides: Xiang Li
Comparison of Dem Software with Polyhedral Particle Shapes: Travis Shoemaker
Phosphate Containment by Bentonite-Amended Flyash Liner: Ratiboja Kims
Pseudo-Static Stability Analysis of Ring Foundation: Pratik Goel

Geo-Congress 2024: Bridging Government, Industry, and Academia for Resilient Mega-Communities
Predicting Frost Action Susceptibility in Soils with Grading Entropy Coordinates: the P3D Problem Revisited: James Lock

Site Investigation Database for Geophysical and Geotechnical Data Collected on a Specific Soil Type: Katrina Burch

Investigating the Influence of Water Salinity Concentrations on thermal Conductivity of Soils for Burial Infrastructure Systems Reliant on Heat Transfer: Sadah Rahmatullah

An Investigation of Sources of Asymmetric Thermal Expansion Behavior in Semi-Integral Bridges: Behdad Mofrad

Three-Dimensional Coupled Stress and Fluid Flow Analysis and Design Provisions for Lake Mud Intake No. 3 Low Level Pumping Station in Fractured Rock Mass: Mohammad Moridzadeh

Primary and Secondary Consolidation Characteristics of Chitosan-Treated Low Organic Clay: Romana Mariyam Rashid

Numerical Modelling of NATM Tunnels Pre-Supported with Umbrella Arch Method: Comparison with Field Measurements: Erman Ergincan

Field Trial of EICP Reinforced Beach Slope Against Coastal Erosion: Shifan Wu

A Review of the Norsand Constitutive Model’s Capabilities in Representing Common Loading Modes in Soil Mechanics: Wyatt Handsaker

Assessment of Soil Classification from Synthetic Aperture Radar: Tessa Priest

Indirect Assessment of Mechanical Behaviour of Varved Clays under Freezing-Thawing Cycles Using SWCC and SFCC of Constituent Laminates: Deepali Anand

Comparison of Soil-Water Mechanisms in Hydraulic of Kaolinite and Montmorillonite through Molecular Dynamics Simulation: Jackson Stewart

Evaluating Slope Stability of an Embankment Dam Using Three-Dimensional Limit Equilibrium Analysis: Tyler Quick

Investigating Student Perceptions of Engineering Judgment through Experiential Learning: Ryan Carkin

Application of Deep Reinforcement Learning to Control Drainage in a Lab-Scale Geosystem: Ayraz Beniyaz

Design of Drilled Shaft with Environmental Impact Considerations: a Parametric Study: Miniz Lee

Estimating In-Situ Shear Wave Velocity Using Machine Learning Techniques: Longde Jin

Effect of Pre-Weathering History on Liquefaction Resistance of Soils Using Shaking Table Tests: Roohollah Farzadkhah

Bayesian Model Updating for Soil-Structure System Identification Using forced-Vibration Test Measurements: Abdullahrahman Taba

Improved Predictions of Liquefaction-Induced Lateral Spreading with Siaonand-MSF Incorporating Effects of Static Soil Stress: Andrés Reyes

Evaluation of Time-History-Based Metrics for Validating Nonlinear Deformation Analyses of Liquefiable Geosystems: Maziar Miresbchi

Reinforced Concrete Pile Response During Liquefaction Induced Lateral Spreading: Experimental Insights: Ahmed Eldeel

Exploring the Use of Geothermal Piles as an Environmental Sustainable Reinforced Concrete Pile Response During Liquefaction Induced Lateral Spreading: Amin Mohammadzadeh

Drilled Shaft Load Tests to investigate Side Friction Development Along Drilled Shafts in Very Weak Porous Limestone: Miguel Pandol

Renovating Amsterdam’s Historic Canal Bulkheads with Pressed-In Pipe Piles: Tetsutani Takuma

Poster Session 2

Using Machine Learning to Predict Consolidation Parameters from Index Testing: Patrick Thurmond

Investigating Moisture Distribution Characteristics of Different Landfill Cover Soil At Shallow Depths Using Gaussian Distribution Analysis: Md Jobair Bin Alam

Probabilistic Analysis of In-Site Soil Water Characteristic Curve Using Kernel Density Estimation: Md Jobair Bin Alam

Four-Point Bending Tests on Microsite Threaded Connections: Sebastian Montoya-Vargas

Static Liquefaction Triggering and Post-Liquefaction Strengths of a Coarse Oil Sand Tailings: Abouzar Sadrakani

Numerical Modeling the thermal Effect on the Wilford-Burt Quasi-Brittle Rocks: Yifei Ma

Use of Bio Reduced L3Smpl E Surface Moisture Estimates in Slope Stability Analyses: Daniel Francis

Some Rehabilitation Schemes for Geosynthetically Reinforced Abutments on Soft Soil Foundations: Paya Shaghay Elifani

Seepage Control in Sand Using Bio-Celetion Method: Kangdao Wang

Enhanced Analysis of Porous Oyster Shells Habitats (Pusil) Units Performance for Reducing Bed Stress and Mitigating Shoreline Erosion: Lauren Cape

Further Examination of a New Empirical Model for Predicting Underwater Noise Due toPILE Drifting: Raphoul Crowley

Effect of Initial Osmotic Suction on the Volume Change Behavior of Saturated Soil: Siamak Yousefi

Permeability, Compaction, and Corrosion Characteristics of Volumetrically-Stable BOF Steel Slug-Fly Ash Mixtures: Burak Öztürek

Deep Excavation in Clayey Soils for a Sanitary Sewer Pump Station in Maple Ridge, British Columbia: Adam McIntyre


Environmental and Financial Benefits of Foamed Bitumen Stabilisation as a Sustainable and Resilient Airport Pavement Rehabilitation Technology: Greg White

CPT-Based Liquefaction Probabilistic Triggering Using a New Adaptive Kernel Density Estimation Method: Javad Sadighi Yazdi

Element and System Level Impact of Strength Loss on Cyclic Performance of Sensitive Clays: Tyler Oathes

Engineering Buddies: Bringing Geotechnics to Sixth Graders in an Out-of-School Time Stem Program: Jean Larson

Influence of Bidirectional Horizontal Shaking on Seismic Response of Structures on Liquefiable Soils: Yuwei Huang

Investigations on Fully-Softened Strength of Lined-Treated Slopes Built with Explosive Soils Under Future Extreme Precipitation: Ayush Kumar

Effect of Specimen Size and Boundaries on the Results of Direct Simple Shear Tests: Mohammad Zerfall Shamsabadi

Rehabilitation Design of Railway Tracks Using High-Strength Polymeric Geocell: Archana Chatterjee

Use of Orbital Synthetic Aperture Radar Data in Monitoring Geotechnical and Transportation Infrastructure Assets: Amit Gajurel

Effects of Creep and Pure Pressure Dilation on Surface Displacement of Saturated Clays: Tyler Oathes

Development of Ground Motion Input in 2-D Finite Difference Analysis of the Case History of Centreport, Wellington, in the Kaikoura 2016 Mw7.8 Earthquake: Bofei Xu

Depositional Response of Calcinated Kaolin Clay in Ring Shear Apparatus: Ankit Srivastava

Spring-Based Trampoor Tests Investigating the Performance of Lightweight Aggregate Load Transfer Platform: Yuxiao Ye

Charactrerization of Vetiver Root Cohesion for Improvement in Stability of Tropical Hill Slopes: Ujwal Kumar Patil

Quantification of Swelling Pressure of Expansive Soils: a Critical Review: Abhita Babu

Application of Machine Learning Within an Asset Management Framework for Realizing the Impact of Trending in Urban Environments: Aryan Hajjari


Evolution of Seismic Fragility Curves (SFC): Configuration and Application for Underground Infrastructure Projects Subjected to Earthquake Hazard: Abdullah Ansari

Effect of EICP Treatment on the Unconfined Compressive Strength and Soil Water Characteristics Curve of a Clayey Sand Material: Shivangi Jain

Investigating the Influence of Sand Particle Morphology on Post-Liquefaction Volumetric Strain of Two Uniform Sands: Mohamad El Ahmad

Co-Seismic Landslide Mobility Assessment Using Machine Learning Models: Jin-Rou Huang

3D Slope Stability Analysis by Finite Element Methods: Edwad Wai Hua Gu

Modelling of Strip Footing Problems Using Consistent Particle Method: Shi-Tong Li

Vertical Settlement of Spread Footings on Top of Geosynthetic-Reinforced Retaining Abutment Walls: S. Mustapha Rahmatmahzadeh

Thermal Response Test of Geothermal Boreholes Using Distributed Fiber Optic Sensing: Samnian Sinha

Axial Analysis of Some Capacity Helical Piles in Soamangum Based on the Load Transfer Method: Hyeong-Joo Kim

Reconsidering Bias in Moderate Magnitude Earthquake Ground Motions Predicted by Numerical Simulations: Song K C

Centrifuge Modelling of Cone Penetration Testing and Dewatering of Coal Production Deposits: Jianrui Chen

Analysis of Abrasive Reusability Performed with Different Energy Parameters in Rock Drilling Using Waterjet: Hyou-Jong Cho


In situ Measurements for Landslide-Induced Damage Assessment on Part of North Alabama Highway (Morgan County): Zahrah Ghorbani

Long-Term Behavior of Pile Groups Resting on Multi-Layered Deposits Subjected to Combined Compressive and Lateral Loads: Venkata Balaish Kami

Assessment of the Relationship Between Undrained Shear Strength and Geotechnical Parameters for Sensitive Clays of Eastern Canada: Sarah Jacob

An Agent-Based Modelling Perspective of Bio-Mediated Ureolysis: Marlee Reed

Resilient Modules Prediction from Regression and Machine Learning Algorithms: Kanika Gupta

Geo-Polymerization of Kaolin Amended Black Cotton Soil: Sohil Kumar

Implementation of a New Strain Softening Constitutive Model in the Material Point Method for the Simulation of Retrogressive Failure in Sensitive Clays: Zinan Urmu

Optimum Fly Ash Content to improve the Geotechnical Properties of Expansive Soil: M. Mahkoom Ali

Prediction for Lateral Response of Monopiles: Adam McIntyre

Numerical Modeling the thermal Effect on the Wildfire-Burnt Quasi-Static Friction of a Clayey Sand Material: Sheng Zeng

Full-Flow Penetrometer Rate Effects on the Strength Measurement of Peat: Akekem Amuda

Influence of Fly-Ash Leachate on the Hydraulic and Mechanical Behaviour of Bentonites: Saswati Ray

Pile Setup in Glacial Soils of Northern Missouri: Brent Rosenblad