

Technical Program

Monday, October 18

1:00-2:30 p.m. Technical Session 1			
Room 1	Room 2	Room 3	Room 4
<p>Track E: Erosion and Structures Moderator: Jennifer Nicks, Stacey Kulesza</p>	<p>Track G: Numerical Modelling of Scour and Erosion Moderator: Yong Lai, Xiaofeng Liu</p>	<p>Track A: Mechanics of Internal Erosion Moderator: John Rice</p>	<p>Track I: Erosion Monitoring and Measurement Moderator: Hande Gerkus-Harris</p>
<p>Bridge Scour and Geomorphic Analysis for the Replacement of South El Dorado Bridge over Los Gatos (Arroyo Pasajero) Creek in Coalinga, CA, Holly Callahan & Jeff Peters</p> <p>Instituting a Geotechnical Focus for FHWA's Scour Program, Khalid Mohamed</p> <p>Two-Phase Modelling of Scour Around Bridge Piers During the Flood Event, Bing Chen</p> <p>Investigating Failures of Flood Barriers Caused by Hurricane Storm Surge Using Joint Coastal and Geotechnical Modeling, Dylan Wood</p> <p>Influence of Sea Water and Wetting-Drying Cycles on the Erosion of a Lime Treated Soil: Perspectives to Marine Dike Improvement, Chevalier Christophe</p> <p>Investigation of Karakoram Highway Water Damage and Evaluation of Remediation Effect, Zhisheng Peng</p>	<p>Numerical Modeling of Scour around Mobile Objects with Prescribed Motion, Yalan Song and Xiaofeng Liu</p> <p>Hydraulic Decay Functions for Contraction and Abutment Scour in Fine-Grained Soils and Erodible Rocks, Haoyin Shan</p> <p>Comparison of Shear Stress Magnitudes in Some Erosion Tests by Numerical Simulation, Mostafa Bahmani</p> <p>High-Fidelity Modeling of Coupled Flow and Bed Morphodynamics to Investigate Scour Damaged Structures in California, Kevin S. Flora</p> <p>A Methodology for Rapid Computation of Scour with Sediment Transport and Cyclic Remeshing, Steven A. Lottes</p>	<p>On the Mechanics of Internal Erosion in Cohesionless Soil, Maoxin Li</p> <p>Numerical Simulation of a Large-Scale Backward Erosion Piping Experiment in 2D and in 3D, Esther Rosenbrand</p> <p>On the Mechanism of Backward Erosion Piping in a CSB, Adam Bezuijen</p> <p>Parallel Flow Contact Erosion Test Between Coarse Sand and Silty Clay Layer, Pradeep Pokhrel</p> <p>Experimental Investigation of Progression Rate in Backward Erosion Piping, Joost Pol</p>	<p>A Quasi-Continuous Bathymetry Measurement Method for Dynamic Evolution of Bed Levels Around Foundation Scale Models, Antonios Emmanouil</p> <p>Theoretical Investigation Behind the Development of Geoacoustic Models in Scour Applications, Reem Jaber</p> <p>Interaction Between Seepage and Heat Transport to Detect Permeability Defects in Earthen Structures, Chiara Cesali</p> <p>Can Fiber-Optic Distributed Temperature Sensing Improve Bridge Scour Monitoring?, Celso Castro-Bolinaga</p> <p>The ARC-Boat: a Remote Controlled Rapid Response Scour Monitoring Platform, Peter Watchorn</p>
3:00-4:30 p.m. Technical Session 2			
<p>Track E: Erosion and Structures Moderator: Jennifer Nicks, Stacey Kulesza</p>	<p>Track G: Numerical Modelling of Scour and Erosion Moderator: Yong Lai, Xiaofeng Liu</p>	<p>Track A: Mechanics of Internal Erosion Moderator: Adnan Suffian</p>	<p>Track M: Erosion Risk Assessment Moderator: Rodney Bridle and John Rice</p>
<p>A review of Soils, Structures and Hydraulics: Expertise and Applied Research (SSHEAR) project, Chevalier Christophe</p> <p>Three-Dimensional Scour Hole Development Under a Plane Horizontal Jet Downstream of a Bed Protection, Yorick Broekema</p> <p>Abutment Scouring and Erosion Mitigation Measures for a Bridge on an Active Lahar-Draining River Channel: A Case Study of the Pasig-Potrero Bridge , Ronalie F. Pangyarihan</p> <p>Estimating Scour from Tsunami at Bridges, Jia-Dzwan (Jerry) Shen</p> <p>Screening Methodology for Avulsion and Pipeline Exposure Estimation at Pipeline Watercourse Crossings, Gerry Ferris</p>	<p>Numerical Calculation Method for the Scouring Phenomenon, Taro Arikawa</p> <p>A Coupled MPM-LBM Method for Soil-Water Interactions, Gengshuo Zhang</p> <p>Numerical Simulation of Incipient Sediment Motion Driven by Fluid Flow, Zhao Tianxiang</p> <p>Cherry Creek Pressure Flushing: A 3D Modeling Approach, Yong Lai</p> <p>Numerical Modeling of Bank Erosion with SRH-2D for Middle Rio Grande, New Mexico, Yong G. Lai</p>	<p>Influence of Rate of Hydraulic Gradient on Washed-out Soil Mass Due to Perpendicular Contact Erosion or Poor Filter Design, Peter To</p> <p>Experimental Study on Internal Instability of Dike Foundation Soil and Its Impact on Mechanical Response, Jitakon Prasomsri</p> <p>Onset and Progression of Suffusion in Non-Cohesive Soils Using a Large Co-Axial Erosion Cell, Ramakrishna Annapareddy</p> <p>Suffusion Assessment Methods: A Critical Review, Peter To</p> <p>Observation of Progressive Internal Erosion in Soils Using X-ray CT scanner, Shintaro Nohara</p>	<p>Risk-Informed Levee Erosion Countermeasure Site Selection and Design in The Sacramento Area Part 1: Soil Sampling, Testing, And Data Processing, Todd Rivas</p> <p>Risk-Informed Levee Erosion Countermeasure Site Selection and Design in The Sacramento Area Part 2: Probabilistic Numerical Simulation of Bank Erosion, Todd Rivas</p> <p>A Probabilistic Approach and Case Study to Evaluate the Reliability of Scour Countermeasure: Riprap for Pier Scour, Nasi Zhang</p> <p>Applying Internal Erosion Mechanics to Improve Internal Erosion Risk Assessments, Rodney Bridle</p> <p>Incorporating Monitoring Information from Satellite Radar Imaging in Levee Internal Erosion Risk Analysis, Mehrzad Rahimi</p>

Tuesday, October 19

1:00-2:30 p.m. Technical Session 3			
Room 1	Room 2	Room 3	Room 4
<p>Track E: Erosion and Structures Moderator: Jennifer Nicks, Min Liew</p>	<p>Track G: Numerical Modelling of Scour and Erosion Moderator: Yong Lai, Xiaofeng Liu</p>	<p>Track A: Mechanics of Internal Erosion Moderator: Esther Rosenbrand</p>	<p>Track H: Physical Modelling of Scour and Erosion Moderator: Joe Tom</p>
<p>Survey and Analysis of Design Parameters of Waterway-Crossing GRS-IBS Bridges: The State of U.S. Practice, Ming Xiao</p> <p>Scour and scour-induced settlement of cuboid structures, Scott Draper</p> <p>Effects of River Dredging as Mitigation for Lahar Accumulation Downstream of the Santo Tomas River, Maria Deandra Andal</p> <p>Assessment of Bridge Protection Schemes Against Scouring and Bed Degradation at the Pasig-Potrero Rivee, Maria Cristelle A. San Antonio</p> <p>Detecting Dominant Turbulent Flow Structures in the Vicinity of a Longitudinal Wall-Inclined Bank Junction with a Volumetric Particle Image Velocimetry System, Nasser Heydari</p> <p>Evaluating Sediment Dynamics in Waterways, Parmeshwar L. Shrestha</p>	<p>Probabilistic Bank Erosion Numerical Simulation for Risk-Informed Erosion Protection of the Sacramento Area, Todd Rivas,</p> <p>Numerical Analysis of Backward Erosion Piping for Two Geological Environments in the Netherlands, Esther Rosenbrand</p> <p>Modeling Rock Scour Using Coupled 3D Discrete Element and Lattice Boltzmann Methods, Michael Gardner</p> <p>Numerical Simulation of Erosion Lens Formation in 3D Geohydrological Environments, Vera van Beek</p>	<p>Modelling Internal Erosion in Gap-Graded Soils using Pore Network Models, Adnan Sufian</p> <p>Effect of Gap-Grading Ratio on Suffusion Susceptibility of Fine Grained Soil, Mohamad Oueidat</p> <p>Particle Shape Effect on Internal Instability of Cohesionless Soils, M. Ali Maroof</p> <p>Granulometric Compatibility Between Different Materials. Interpretation of Empirical Criteria Through Micro-Mechanical Modeling, Francesco Federico</p> <p>An Experimental Study on Internal Instability of Bar Dam Alluvial Soils, M.Ali Maroof</p>	<p>Wave-Induced Liquefaction and the Stability of Suction Bucket Foundation, Junji Miyamoto</p> <p>Hydraulic Experiment on Time Varying Scour by Tsunami Overflowing, Kojiro Suzuki</p> <p>Estimating Seabed Shear Stress Amplification Around Circular Cylinders: An Observational Method Based on Laboratory Experiments, Joe Tom</p> <p>Offshore Scour Development in Non-Homogeneous Soil with a Subsurface Non-Erodible Layer, Natalia Aleksandrova</p> <p>Dynamic Behaviour of a Rock Scour Protection Around Offshore Wind Monopile Foundations, Leen Baelus</p>
3:00-4:30 p.m. Technical Session 4			
<p>Track E: Erosion and Structures Moderator: Jennifer Nicks, Min Liew</p>	<p>Track G: Numerical Modelling of Scour and Erosion Moderator: Yong Lai, Xiaofeng Liu</p>	<p>Track F: River, Coastal, Estuarine and Marine Scour and Erosion Moderator: Nina Stark</p>	<p>Track H: Physical Modelling of Scour and Erosion Moderator: Bret Lingwall</p>
<p>Coupled hydraulic and Geotechnical Analyses to Assess The Vulnerability of River-Crossing Bridge Piers Foundations, Chiara Cesali</p> <p>Hydraulic Considerations for Shallow Abutment Foundations, Paul Sharp</p> <p>Scour Development Around Truncated Cylinders: A Modified Approach, John M. Harris</p> <p>Bonner Bridge Replacement: Scour Analysis in a Littoral System, Mark Gosselin</p> <p>Scour and Extreme Events: Focusing on the Issues., Joe Krolak</p>	<p>Development of Short Fiber Reinforced Soil as River Bank Erosion Control Material, Ramrav Hem</p> <p>Scaling and Performance of a Flexible Mesh Bag Scour Protection, Hendrik Jan Riezebos</p> <p>Particle Image Velocimetry (PIV) Measurements of Local Scour Equilibrium with Flow-Altering Countermeasures, Priscilla Williams</p> <p>Effect of Gap Width and Pile Diameter on Efficacy of Sacrificial Piles for Scour Mitigation, Priscilla Williams</p> <p>Designing Scour-Resistant Bridge Structures for Extreme Events, Roger L. Simpson</p> <p>Resisting Dune Erosion with Bio-cementation, Brina M. Montoya</p>	<p>Wave Flume Experiment on the Scour Around Cylindrical Structure Considered to Influence Effective Stress Change in the Seabed, Tatsuya Matsuda</p> <p>Prediction of Erosion Rate Based on Soil Properties at Different Flow Velocities Using EFA, Abdolreza Osouli</p> <p>Scour at Cofferdam Structures on River Walls, Richard Whitehouse</p> <p>Do Oyster Colonies Influence Sediment Erodibility? A Hydro-morphodynamic Characterization of Intertidal Estuarine Reefs by Way of Jet Erosion Test and Acoustic Doppler Current Profiler, Celso Castro-Bolinaga</p> <p>Preliminary Evaluation of Existing Breaching Erosion Models, Said Alhaddad</p>	<p>Experimental Study of Infill Mobility through an Engineered Synthetic Turf Bed, Hassan Ismail</p> <p>Influence of Compaction Conditions on Erodibility of Clayey Sand, Yoichi Watabe</p> <p>Post-Fire Erosion Potential of Clayey Sand Soils and Slopes, A Laboratory Study, Bret Lingwall</p> <p>Geologic Controls on Post-wildfire Erosion and Debris Flows, Philip J. Shaller</p> <p>Experimental Investigation on the Erosion of Vegetated Soils by Flume Tests, Carmine Gerardo Gragnano</p>

Wednesday, October 20

1:00-2:30 p.m. Technical Session 5			
Room 1	Room 2	Room 3	Room 4
<p>Track N: Case Histories, Lessons Learned, and General Practice Moderator: Andreas Kamereck</p>	<p>Track K: Scour and Erosion Countermeasures and Mitigation Moderator: Andrew Keffer and Julian Tao</p>	<p>Track F: River, Coastal, Estuarine and Marine Scour and Erosion</p>	<p>Track H: Physical Modelling of Scour and Erosion Moderator: Inthuorn Sasanakul</p>
<p>A Case History of Highwater Shore Erosion and Bank Stabilization via Tree Roots, Bret Lingwall Buoyancy Compensated Erosion Control Module (BCECM) Successfully Tested For Louisiana Shoreline Protection, Austin X. Huang Case Studies Of Erosion Protection Pilots In Bangladesh: Embankments, Bioengineering And Using Jute Where It "mattress", Hiba Khan Case Study: River Bank Protection Measures on the River Banoori, India, Saswati Datta It's a Mud Mud Mud World: The Impact on Infrastructure of Flooding Following Fires in Montecito in 2018, Cathy Avila</p>	<p>Evaluating Erosion Potential of Stabilized Fine-Grained Soils, Tanzila Tabassum Partial Penetration Relief Well Design Nomograms, Andrew Keffer Design Method for a Finite Line of Fully Penetrating Relief Wells, Andrew Keffer Wave Attenuation from Living Shorelines: A Parameter Study, Kristine Mosuela Discussion of Failure in Scour Protections, Tiago Fazerese-Ferradosa Tufted Reinforced Geosynthetics as Erosion Protection in Demanding Environments, Bryan Scholl</p>	<p>Developing a Convergent Research Coordination Network to Identify Challenges of and Solutions to Permafrost Coastal Erosion and Its Socioecological Impacts in the Arctic, Ming Xiao Combined Acoustic and Geotechnical Scour Measurements at Bridge Piles in the New River, Virginia, Nina Stark Geotechnical Investigation of Spatiotemporal Variations of Moisture Contents in Intertidal Beach Sands and Effects on Coastal Erosion Processes, Nina Stark Scour Development Around Monopile and Jacket Foundations in Silty Sands, John M. Harris Numerical Modeling of Channel Shoaling and Scour in Corpus Christi Ship Channel, Texas, Lihwa Lin Evaluation of the Potential for Wetland Vegetation to Reduce Coastal Erosion Caused by Receding Water After a Storm Surge, Mera Shabti</p>	<p>Centrifuge Modeling of the Backward Erosion Piping Process, Inthuorn Sasanakul Measurement Techniques for Capturing Piping-Induced Deformation of Levees in Centrifuge Mode, Kazuki Horikoshi Influence of Suffusion on Shear Strength and Dilatancy Characteristics of Pumice Sand, Rupali Sarmah Pore Flow Velocity Measurement in Filtration Erosion Enhanced with Piv Technique, Yingyi Zhang Modeling Backwards Erosion Piping Development Under Converging Flow Conditions, Ibrahim Ahmed</p>