Final program

Sunday, November 10, 2024	
7:00 - 18:00	Registration Hours
8:00 - 17:00	Short Courses: *Preregistration and an additional fee required*
8:00 - 17:00	Tailings Geotechnics: Advances and Perspectives
8:00 - 17:00	How to Create Emergency Preparedness and Response Capability for a TSF Failure
8:00 - 17:00	Lessons Learned from Brazil Technical, Environmental and Social Auditing
8:00 - 12:00	Satellite InSAR Monitoring of Tailings Dams: Practical Perspectives from Case Study Applications
13:00 - 17:00	Developing Mine Waste Professionals Symposium
17:00 - 19:30	Icebreaker Reception

TAILINGS AND MINE WASTE 2024

November 10-13, 2024 | Colorado, USA

CIVIL AND ENVIRONMENTAL ENGINEERING
COLORADO STATE UNIVERSITY

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Monday, November 11, 2024			
7:00 - 18:00	Registration Hours		
8:30 - 17:00	Tradeshow Hours & Poster Hours		
8:30 - 8:45	Welcome & Introductions		
8:45 - 10:00	**Plenary Session 1: A Corporate Look at Tailings Management – Lessons Learned**. *Tamara Johndrow, Jon Lapwood, Scott Martens, Jaime Awmack. Moderators-Jason Andrews & Michael Henderson*		
10:00 - 10:30	Refreshment Break		
10:30 - 12:00	**Technical Session 1**		
	1.1A - Analysis Chair: Jean Kugel	**1.1B - Application of GISTM Chair: Mitch Prince**	**1.1C - Closure Issues Chair: Jason Cumbers**
	A Critical Review of the Residual Pore Pressure Generation During Cyclic Loading - David Espinoza	A Screening Approach for Preliminary ALARP Assessments of Societal Risks of Existing Tailings Dams - Wade Ludlow	Modeling Cover Systems for Tailings Facilities: Integrating Hydrus-1D and Python for Enhanced Seepage Prediction - Ariel Terlisky
	The Evaluation of Nonlinear Dynamic Numerical Simulations of TSF - Michael James	Practical Remedies to Improve the Defenses of Tailings Structures - Jeremy Boswell	Design, Construction, Monitoring, and Numerical Modeling of Large-Scale Field Trials: Assessing Cover Performance for Reclamation Method Selection - Karine Sylvain, Marie-Lin Breard Lanoix
	Selection of the Seismic Coefficient in Pseudostatic Slope Stability Analyses of Tailings Dams - Jonathan Bray	Update on GISTM Implementation at BHP – Lessons Learned on the Journey – Justin Willis	Enhanced Conceptualization of Reactive Filtered Tailings Oxidation Using a Reactive Transport Model - Katherine Raymond
	Fabric effects on the onset of static liquefaction under drained conditions – Implications on mine tailings - Srinivas Vivek Bokkisa	Surveying the Landscape: Understanding Engineer of Record Challenges and Perceptions in the Brazilian Tailings Industry - Luciana Praça	Boodarie Tailings Storage Facility – Our Journey to Closure - Nathalia Revelo Mendez
12:00 - 13:30	Lunch		
13:30 - 15:00	**Technical Session 1.2**		
	1.2A - Geotechnical Issues Chair: Zygi Zurakowski	**1.2B - Design Chair: Todd Wisdom**	**1.2C - Case Histories Chair: Tanya Walkenbach**
	Predicting Tailings Properties Using Hyperspectral Sensing and Machine Learning - Joseph Bindner	Design of a Co-Disposal Facility for Thickened Tailings and Potentially Acid Generating Waste Rock - Patrick Williamson	Geotechnical Failure of a Waste Rock and Heap Leach Facility at the Bellavista Gold Project - Terry Braun
	Enhancing Soil and Tailings Characterization: Integration of Photonics Technology with Cone Penetration Testing - Iman Entezari	A Study on the Possibilities, Constraints, and Motivation for Transitioning a Conventionally Designed TSF into a Full Scale Hydraulically Dewatered Stack (HDS) Facility for Fine Residue Disposal in South Africa - Winston Nxumalo	Tailings Risk Mitigations at Hudbay Flin Flon: Prioritization Approach and Implementation of Multiple Mitigation Measures - Brad Russell
	Development of Tailings-Specific Correlations for Estimating Fines Content from CPT Data Using Artificial Intelligence Method for the Holden Mine - Mohammad Rashidi	Transportable Moisture Limit vs. Conveyability Testing - Christopher Olsen	Case Study of Optimizing Design by Performing Field Trials of a Filter Selection for a Rockfill Embankment - Jason Hilgers
	Tailings Characterization for Flow Liquefaction Evaluation at a Large Tailings Storage Facility by Advanced Laboratory Testing - Juan Carlos Ayes-Zamudio	Southeast Rock Disposal Site Tailings Co-Disposal Facility - Ben Wickland	InSAR Study into Pre and Post Failure Deformations of the Jagersfontein Tailings Dam - Skevi Perdikou
15:00 - 15:30	Refreshment Break		

Monday, November 11, 2024 continued			
	Technical Session 1.3		
	1.3A - Design Chair: Zach Fox	**1.3B - Application of GISTM Chair: Kurt Schimpke**	**1.3C - Site Investigation Chair: Mark Walden**
15:30 - 17:00	Lessons Learned in Applying the Observational Method to a Tailings Facility Constructed on a Soft Clay Foundation - Bryce Marcotte	GISTM – Effective Implementation - Lis Boczek	Enhancing Safety and Reducing Environmental Impact Through Development of a Robotic Hybrid CPT Rig - David Slack
	An Often-Overlooked Approach for Slope Stability of Tailings Dams Built Using Centerline and Downstream Construction - Jed Greenwood	The Role of Engineer of Record – A Reflection of the Current State of Practice From An Australian Perspective - Laura Fidel	Tailings Facility Surveying Leveraging Complementary Technologies - Veronique Nell
	Learning From Experiences – Let's Get Real - Malcolm Barker	Risk Based Planning of Monitoring Programs for Tarps - Richard Sisson	Influence of Density on Predicting Saturation in Filtered Tailings Using an Electromagnetic Sensor - Garret Martin
	A New Implicit Kinetics Method to Estimate Shear Strength Mobilized in Liquefaction Flow Failures - Scott Olson	Reducing Mine Closure Cost Risks by Employing Effective Construction Management Strategies - Michael Nahir	Analysis of Video Images obtained during Cone Penetration Testing - Gerald Verbeek
17:00 - 19:00	Tradeshow Reception		

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Tuesday, November 12, 2024			
8:00 - 18:00	Registration Hours		
8:30 - 17:00	Tradeshow Hours & Poster Hours		
8:30 - 8:45	Welcome		
8:45 - 10:00	**Plenary Session 2: 2030 and Beyond – Perspectives on Evolving Tailings Management.** *Andrew Witte, Chris Sonntag, David Slack, Antonia Mihaylova. Moderators-Amanda Adams, Martin Rust*		
10:00 - 10:30	Refreshment Break		
10:30 - 12:00	**Technical Session 2.1**		
	2.1A - Analysis Chair: Shawn Steiner	**2.1B - Environment & Water Issues Chair: Andie Gehlhausen**	**2.1C - Application of GISTM Chair: Jason Hilgers**
	CPT Calibration Chamber Testing of Tailings Sand at High Confining Pressures - Matthew Haynes	Evaluation of Biogeochemical Processes for Weak Acid Dissociable Cyanide - Larissa Smith	A Risk-Based Approach for Management of Change of Tailings Storage Facilities - Bryan Bale
	Interpretation of Pore Pressure Dissipation Test Results in Tailings - Eben Rust	Water Balance and Water Quality Predictions for the Cariboo Gold Project Filtered Tailings Facility - Adrian Moreau	Meteorological Inputs to Tailings Storage Facility Assessments and Risk Assessments-Experience and Lessons Learned - Bill Kappel
	Silty Sand Tailings Saturation and its Influence on Interpreted Cptu Soil Behaviour Type - Andrew Burgin	Geochemical Investigations Toward a Groundwater Compliance Action Plan at the Moab UMTRA Project Site - Lisa Burgess	Importance of Environmental Components in Assessing Risks Under GISTM - Karen Bechard
	Comparative Analysis of Vane Shear and Fall Cone Tests for Characterizing Oil Sands Tailings in Sandy-Fine Category - Peter Kaheshi	Standardizing Sediment Porewater Passive Samplers to Measure Metal Availability at Mine Sites - Florent Risacher	Maintaining Continuity: Lessons from a TSF Incident Linked to Engineer Transitions - George Afriyie
12:00 - 13:30	Lunch		
13:30 - 15:00	**Technical Session 2.2**		
	2.2A - Geotechnical Issues Chair: Robyn Gaebel	**2.2B - Environment & Water Issues Chair: Andy Jung**	**2.2C - Design Chair: Lucy Philip**
	Hydraulic Dewatered Stacking Demonstration – Approaching Operational Completion - Phil Newman, Mark Bruton	Freeze-Thaw Durability of Cemented Paste Backfill Containing Arsenic Trioxide Roaster Waste Dust - Caroline Alexon	Lessons Learnt by Applying a Risk-Based Approach to Existing and Future Tailings Storage Facilities - Peter Chapman
	In-Pond Mixing of Fine and Coarse Tailings - Results from a Commercial-Scale Pilot In Canada's Oil Sands - Evan Davison, Lucas Hu	Rapid Water Table Response to Transient Pressure Wave Generation in the Unsaturated Zone of Tailings Dams - Simon Lorentz	Evaluating the Stability of Upstream and Brittle Facilities – Case History Validation of the "Rules" - Michael Davies
	Solar-Powered Electrokinetic Tailings Dewatering - John Vandersleen	The Internal and Interface Shear Strength of Geosynthetic Clay Liners for Mining Application - Reza Gorakhki	How to Design a Tailing's Dam Full Removal? Lessons Learned from a Case Study In Brazil - Cláudio Rodrigues, Benicio Junior
	Effect of In-Situ Dewatering and Compaction of Copper Tailings Using Accelerated Mechanical Consolidation – William McAdams	Deportment of Magnesium and Silicon in a Two-Part HCl-NaOH Leaching of Asbestos Tailings - Terry Cheng	Stay and Fight, Or Flee? Assessing the Risks of Intervention Leading Up to a Catastrophic Failure - Justin Willis
15:00 - 15:30	Refreshment Break		

Tuesday, November 12, 2024 continued			
	Technical Session 2.3		
	2.3A - Analysis Chair: Jason Andrews	**2.3B - Environment & Water Issues Chair: Esther Clement**	**2.3C - Case Histories Chair: Oliver Whatnall**
15:30 - 17:00	A Comparison of State Parameter Estimated Using Different Methods to Assess the Static Liquefaction of Tailings - Mathan Manmatharajan	Development of a Calibrated Seepage Model to Predict Pore Pressure Reduction to Inform Tailings Storage Facility Closure Planning - Wesley Rouncivell	Agnico Eagle Laronde Filtered Tailings Project Concept to Commissioning - Ajit Baruah
	Drained Laboratory Vane Shear Testing to Characterise Nonplastic Tailings - Luis Alberto Torres Cruz	Critical Seepage Analyses for Stability of Tailings Dams - Dobroslav Znidarcic	Key Parameters That Influence the Operation of Tailings Dry Stack Disposal Considering Various International Practices - Fernando Sgavioli
	Spatial Variability Assessment of Mine Tailings - Luis Vergaray-Astupina	Evaluation of Best Available Technologies and Practices for Tailings Seepage Detection and Monitoring at Cobre Panamá – Carlos Hubner	Proposal for Guidelines on Filtered Tailings Disposal: Detailing the Hypothetical Rupture Studies - Elaine Soares
	Some Considerations in the Stability of Tailings Dams Subjected to Blasting Vibration - Ezra Coyle	Implementation of Saturated and Unsaturated Seepage Analysis in a Polymetallic Tailings Storage Facility: A Case Study - Jose Alfredo Promotor	The Barriers to Widespread Adoption of Tailings Dewatering Technologies - Ljiljana Josic
17:00 - 19:00	Tradeshow Reception		

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Wednesday, November 13, 2024			
8:00 - 13:00	Registration Hours		
8:30 - 15:00	Poster Hours		
8:30 - 16:40	Tradeshow Hours		
8:30 - 10:00	**Technical Session 3.1**		
	3.1A - Analysis Chair: Maggie Smith	**3.1B - Application of GISTM Chair: Dean Durkee**	**3.1C - Monitoring Chair: Aaron Tomkins**
	Seismic Deformation Analyses of Germano Main Dam – Pu Yang	ALARP: Where are we going and how do we get there? - Malcolm Barker	Passive Seismic and Interferometry Techniques in Dam Decharacterization Monitoring - Marc Lambert
	Next-Gen Tailings Waste Management: Transforming Life-Cycle Strategies - Lakshmin Bachu	Credible Failure Modes: Considerations for Assessment and Application - Scott Martens, Angela Kupper	New Wireless Technology for Tailings Monitoring - Leonnardo Probst Simoes
	Modelling of Embankment Scour Caused by a Tailings Pipeline Break and Potential Risk of Dam Breach - Angus Rose	Preventing Potential Consequences of a TSF Failure: Addressing the 'Other Side' of the Risk Equation - Susan Joyce	Vale Base Metals Modernization of Instrumentation Monitoring System for Dam Safety at Canada Tailings Storage Facilities - Wing-Keat (Wayne) Wong
	Optimization of Operations Based on Monitoring and Construction Quality Assurance at Minera Peñasquito – Ken Rood, Eduardo Garcia	A Case Study on ALARP for Safety Management of Tailings Storage Facilities – Josh Rogers	Improving Tailings Deposition: A Drone and Satellite Survey Validation Framework for Enhanced Facility Management - Joe Piccolo-Lawrance
10:00 - 10:30	Refreshment Break		
10:30 - 12:00	**Technical Session 3.2**		
	3.2A - Geotechnical Issues Chair: Daniel Overton	**3.2B - Design Chair: Wes Herweynen**	**3.2C - Breach & Inundation Estimates Chair: Ljiljana Josic**
	Influence of In Situ Soil Fabric on the Critical State of a Glaciolacustrine Silty Soil - Morteza Mohamadi	Iron Ore Tailings Dam De-Characterization: Evaluation of Key Parameters for Future Dry Stacking - Gino Omar Calderon Vizcarra	Application of USACE Lifesim to the Feijão Dam B-1 Tailings Storage Facility Failure of January 25, 2019 - William Johnstone
	How Many Triaxial Tests Do You Actually Need to Get a Critical State Line? - Marcos Arroyo	Compaction Sensitivity in Tailings Stack Infiltration Modeling: Unsaturated Properties Uncertainty Analysis - Letícia Garcia	The Importance of Considering from Dilute to Dry Tailings Rheology Formulations in Practical Tailings Dam Break Modeling - Reinaldo Garcia
	Measurement of Bingham Yield Stress and Plastic Viscosity of Tailings Slimes Using an In-Situ Viscometer - Dallas McGowan	Operational Processes for Stacking Filtered Tailings. Itabira Case Study - Rodney Silva, Danilo Manata Eloi	Dam Breach Analysis: A Methodology for Non-Newtonian Hazard Mapping and Fatality Rate Estimates - Mark Walden
	Cyclic Response of Mine Tailings at Field and Laboratory Scales – Example Using a Novel Database - Cody Arnold	Performance Assessment of a Filtered Tailings Storage Facility Partially Built with Uncompacted Tailings - Edwin Sanchez	Multi-Model Analyses of Tailings Impoundment Failure and Runout: Part III - Armin Saeedi
12:00 - 13:00	Lunch		

Wednesday, November 13, 2024 continued			
	Technical Session 3.3		
	3.3A - Analysis Chair: Sam Rivet	**3.3B - Breach & Innundation Estimates Char: Ian McKechnie**	**3.3C - Case Histories Chair: Daryl Longwell**
13:00 - 14:30	Estimation of Undrained Shear Strength Parameters from Laboratory Testing for Geotechnical Analysis: t_{ff} vs q_f - Masood Kafash	"Failing Forward" to Secure Oil Sands Tailings Impoundments Against Catastrophic Failures: Preliminary Results - Paul Simms	Towards Closure of Germano Pit Tailings Storage Facility - Mauricio Pinheiro
	Enhancing Pseudo 3D Seepage Modelling with Topographic Integration for Heap Leach Facilities - Imanol Vega	Probability Distributions of Tailings Dam Breach Volumes by Failure Mode as Part of a Risk Screening-Level Tool – Brad Russell	Long-Term Performance of a Coarse-Grained Monolayer Cover on a Pre-Oxidized Mine Site - Karine Sylvain
	2D and 3D Numerical Analyses of a Trial Embankment Construction Over a Tailings Storage Facility (TSF) - Alfonso Cerna-Diaz	Volumes of Dam Material Mobilized by Erosion During Tailings Dam Failure Events - Daniel Adria	Characterization of Flocculated Fluid Fine Tailings Using On-line Microscopy - Paul Mikula
	The Use of Programming Language in GISTM Compliance for the Holden Mine - Phillip Crouse	Estimation of Outflow Runout Distance in Tailings Dam Using Artificial Intelligence Technique - Mohammad Rashidi	Tailings Pond Sedimentation Capacity: A Practical Approach - Michael Louws
14:30 - 15:00	Refreshment Break		
15:00 - 16:45	**Plentary Session 3: Are we getting distracted? How can we best use the GISTM as an effective path to risk reduction rather than it becoming a path to box-check auditing?** *Mike Davies, Susan Joyce, Daniel Landers, Louise McNab. Moderator-Ryan Shedivy*		
16:45 - 17:00	Conference closes		