

TAILENG Short Course 4
Static and Cyclic Liquefaction of Mine Tailings
December 6-9, 2021

Day 1 (Monday, December 6; All times are MST)

- 3:00 – 3:45 Introduction, static and cyclic liquefaction of mine tailings (Speaker: Jorge Macedo, *Georgia Tech*)
- 3:45 – 4:00 Break
- 4:00 – 5:00 State concept interpretation of soil behavior in monotonic loading (Speaker: Jonathan Bray, *UC Berkeley*)
- 5:00 – 5:15 Break
- 5:15 – 6:10 Properties of mine tailings for static liquefaction assessment (Speaker: Jorge Macedo)
- 6:10 – 6:30 Discussion of tailings properties and behavior (Moderator: Scott Olson, *University of Illinois*; Panelists: Jonathan Bray; Jorge Macedo)

Day 2 (Tuesday, December 7; All times are MST)

- 3:00 – 4:00 Field and laboratory procedures for static liquefaction assessment (Speaker: Scott Olson)
- 4:00 – 4:15 Break
- 4:15 – 5:15 Cyclic induced liquefaction and its assessment (Speaker: Jonathan Bray)
- 5:15 – 5:30 Break
- 5:30 – 6:30 Panel discussion: Static and cyclic liquefaction assessment in TSFs (Moderator: Jorge Macedo; Panelists: Scott Olson; Jonathan Bray; Colleen Crystal, *SRK consulting*).

Day 3 (Wednesday, December 8; All times are MST)

- 3:00 – 4:00 Assessment of liquefied shear strength (Speaker: Scott Olson)
- 4:00 – 4:15 Break
- 4:15 – 5:15 Stability Analysis Framework for Tailings Dams with Contractive Soils (Speaker: Paul Ridlen, *Knight Piesold Consulting*)
- 5:15 – 5:30 Break
- 5:30 – 6:30 Panel discussion: Liquefied shear strength and TSF stability (Moderator: Jorge Macedo; Speakers: Scott Olson, Paul Ridlen).

Day 4 (Thursday, December 9; All times are MST)

- 3:00 – 4:00 Computational analyses of Dam I failure at the Corrego de Feijao mine in Brumadinho (Speaker: Marcos Arroyo, *Polytec. Univ. of Catalunya*)
- 4:00 – 4:15 Break
- 4:15 – 5:15 Numerical assessment of liquefaction triggering and post-triggering run-out: Cadia case history (Speaker: Alba Yerro, *Virginia Tech/Jorge Macedo*).
- 5:15 – 5:30 Break
- 5:30 – 6:30 Panel discussion on numerical analysis of liquefaction and closure (Moderator: Jonathan Bray; Panelists: Alba Yerro; Jorge Macedo; Ross Boulanger, *UC Davis*).