



At a Glance Schedule of Events

**71st Highway Geology Symposium
Asheville, North Carolina
May 23-25, 2022**

Sunday, May 22

12:00 PM – 7:00 PM

Highway Geology Symposium Registration Open in Grand Ballroom Prefunction Area

12:00 PM – 7:00 PM

Exhibitor Set up in the Grand Ballroom

Monday, May 23

7:00 AM – 5:30 PM

Highway Geology Symposium Registration Open in Grand Ballroom Prefunction Area

7:00 AM – 12:00 PM

Exhibitor Set up in the Grand Ballroom

8:00 AM – 12:00 PM

**Transportation Research Board Technical Session:
*Improving Resiliency through Geotechnical Asset and Performance
Management Approaches***

Location: Windsor Ballroom

12:00 PM – 8:30 PM

**Highway Geology Symposium Exhibitor Area Open
Location: Grand Ballroom**

Highway Geology Symposium

Welcome and Opening Remarks 1:00 PM -1:45 PM

Location: Grand Ballroom

John Pilipchuk, HGS Organizing Committee

Dedication of Proceedings

Dr. Kenneth Taylor, North Carolina State Geologist - *The Geology and Mineral Resources of the Old North State.*

Monday, May 23 (Continued)

Technical Session 1 1:45 PM -3:05 PM

Location: Grand Ballroom

Chris Ruppen, GeoStabilization International, Moderator

1:45 PM – 2:05 PM

Young Author Presentation: Using Geophysics to Evaluate the Results of a Grouting Program in Karstic Geology

Authors: Christopher Michael Mayer, Jacob Sheehan, Mia Ann Painter, Jeremy J. Brown, and Sarah McInnes

2:05 PM – 2:25 PM

Young Author Presentation: Efficient Rock Slope Design during Construction of a State Highway Safety Enhancement Project State Highway 55, Idaho

Authors: Luke Ferguson and Ethan Guzek

2:25 PM – 2:45 PM

Young Author Presentation: Evolution of Midslope Rockfall Attenuator on Federal Lands Transportation Projects

Author: Nicholas J. Farny

2:45 PM – 3:05 PM

Young Author Presentation: Utilizing Cellular Concrete for Geohazard Mitigation Solutions

Author: José LuQuin

3:05 PM – 3:35 PM

Afternoon Coffee Break

Location: Grand Ballroom and Prefunction Area

Technical Session 2 3:35 PM -4:45 PM

Location: Grand Ballroom

Kyle Halverson, Kansas DOT, Moderator

3:35 PM – 3:55 PM

Young Author Presentation: Use of Smart Rocks to Improve Rock Slope Design

Authors: Bruma Souza and Jean Benoît

3:55 PM – 4:15 PM

Young Author Presentation: Geosynthetic-Reinforced Soil (GRS) vs. Mechanically-Stabilized Earth (MSE); An Overview of Practical Applications of GRS

Author: Jeffrey A. Stallings

4:15 PM – 4:35 PM

Flood Repairs Along the SR 187 Corridor

Author: Jason M. Gardner

4:35 PM – 4:45 PM

Field Trip Overview – Jody Kuhne

Monday, May 23 (Continued)

5:00 PM – 6:00 PM

HGS National Steering Committee Meeting

Location: Swannanoa Room

6:30 PM – 8:30 PM

Ice Breaker Social

Location: Grand Ballroom

Tuesday, May 24

Highway Geology Symposium Field Trip

7:00 AM – 8:00 AM

To-Go Continental Breakfast

Location: Highway Geology Symposium Registration Area

7:30 AM – 8:00 AM

Load buses for Field Trip

Pick-up Location: In front of hotel

8:00 AM – 5:00 PM **Field Trip**

Lunch—Sponsored by Geobrugg

Beverages and snacks - Sponsored by GeoStabilization International

Transportation – Sponsored by Ameritech Slope Constructors, Inc.

(NO GLASS ALLOWED INSIDE BUSES)

Free evening to explore and dine in Asheville

Wednesday, May 25

6:30 AM – 8:00 AM

Continental Breakfast

Location: Top of the Plaza

Guest Field Trip to Biltmore Estate

9:30 AM – 3:30 PM

Meet in hotel lobby, transportation will load at the front of hotel.

Lunch—Sponsored by CATLIN Engineers and Scientists

Transportation – Sponsored by Boulderscape, Inc.

Highway Geology Symposium

Technical Session 3 8:00 AM -9:40 AM

Location: Grand Ballroom

John Szturo, HNTB, Moderator

8:00 AM – 8:20 AM

Evaluation of Mine Subsidence Conditions using Borings and Downhole Investigation Techniques

Authors: David L. Knott, Richard E. Gray, John Lea and Hayden Streater

8:20 AM – 8:40 AM

Unstable Slope Inventory along the Blue Ridge Parkway, NC

Authors: Brian K. Banks, Jennifer Bauer, Majed Abdelhadi and Timothy Ramey

8:40 AM – 9:00 AM

Rock Slope Rockfall Risk Reduction – Little River Road (Forest Highway #69) Douglas County, Oregon

Authors: Brent Black, Evan Garich, and Adam Koslofsky

9:00 AM – 9:20 AM

Potential Applications of Steel Fin Piles in Highway Transportation Infrastructure

Authors: Sarah McInnes, Jonathan Hubler, Anthony LaRegina and Hannah M. Iezzoni

9:20 AM – 9:40 AM

Experience in the Face of Unknowns Bridge Foundation Alternatives for the Leesport Bridge, Pennsylvania

Authors: Bruce Shelly, Sarah McInnes and Jeff Rai

9:40 AM – 10:10 AM

Morning Break

Location: Grand Ballroom

Wednesday, May 25 (Continued)

Technical Session 4 10:10 AM – 11:50 AM

Location: Grand Ballroom

Ken Ashton, West Virginia Geological Survey, Moderator

10:10 AM – 10:30 AM

Geological assessment of the Westbound I-40 Slope Failure, Rockwood, Tennessee

Authors: David A. Hannam and Randy L. Kath

10:30 AM – 10:50 AM

Accelerated Geotechnical Investigation of the Sterling Highway Realignment – Cooper Landing, Alaska

Authors: Adam Koslofsky, Logan Allender, Darren Beckstrand, and Keri Nutter

10:50 AM – 11:10 AM

Potential Liability Associated with Unstable Slope Management Programs

Author: Timothy R. Wyatt

11:10 AM – 11:30 AM

Advancements in Investigating, Testing, and Treatment of Acid Producing Rock – SR 15 Section 088, Central Susquehanna Valley Thruway, Snyder County Pennsylvania

Authors: Andrew J. Smithmyer and Jason M. Gardner

11:30 AM – 11:50 AM

Investigation, Design, and Construction of a Debris Flow Barrier System for a Repetitively Failing Slope Along I-40 Near the Buncombe/McDowell County Line in North Carolina

Authors: Melissa E. Landon, Jay R. Smerekanicz, Peter C. Ingraham, D. Matthew Mullen, Jody Kuhne, and Roger Moore

11:50 AM – 1:00 PM

Lunch — Sponsored by Nector Natural Hazard Protection Systems

Location: Grand Ballroom and Prefunction Area

Lunchtime Keynote Speaker: AEG Jahns Lecturer Rick Wooten

***2018-2020: Two Years, Eight Storms, 320+ landslides, and an Earthquake
(What does it mean, and what do we do now?)***

Technical Session 5 1:00 PM – 2:40 PM

Location: Grand Ballroom

Peter Ingraham, Scarptec, Moderator

1:00 PM – 1:20 PM

Geographic Information System (GIS) and Interpretation of Relative Geologic Risk Susceptibility For Proposed Roadway Alignments through Gates of the Arctic National Park, Alaska

Authors: Orion George and Douglas A. Anderson

Wednesday, May 25 (Continued)

Technical Session 5 (continued)

1:20 PM – 1:40 PM

Shallow Foundation Load-Settlement Behavior Assessed from Surface Geophysical Data

Authors: Gary Norris, Sherif Elfass, and Horng-Jyh (Tigra) Yang

1:40 PM – 2:00 PM

Back Calculation from a Plate Load Test on Cohesionless Soil

Authors: Horng-Jyh (Tigra) Yang, Gary Norris, Sherif Elfass

2:00 PM – 2:20 PM

Reliability Models for Roads Crossing Slow-Moving Landslides

Authors: Michael Porter, Scott Anderson, Mark Vessely, and Martin Devonald

2:20 PM – 2:40 PM

Challenges in Rock Slope Stabilization – SR 209, Section RSM, Rock Slope Stabilization Project, Jim Thorpe, Pennsylvania

Authors: Joseph T. Krupansky, Andrew J. Smithmyer, and Scott M. Cressman

2:40 PM – 3:10 PM

Afternoon Break — Sponsored by HDR, Inc.

Location: Grand Ballroom

Technical Session 6 3:10 PM – 4:50 PM

Location: Grand Ballroom

Cheryl Youngblood, NCDOT, Moderator

3:10 PM – 3:30 PM

Geophysical Applications for Highway Wall Design

Author: Edward D. (Ned) Billington and C. Ryan Pastrana

3:30 PM – 3:50 PM

GUARD - making flexible geohazard protection systems SMART

Authors: Tim Shevlin, and Helene Lanter

3:50 PM – 4:10 PM

S.R. 0081 Rock Slope Stabilization, Lackawanna County, Pennsylvania

Author: Daniel F. Martt and Sebastian Lobo-Guerrero

4:10 PM – 4:30 PM

Advancements and Unknowns in the Design of Flexible Facings for Slope Improvement

Authors: Jonathan D. Blanchard, John D. Duffy, and Michael S. Finegan

4:30 PM – 4:50 PM

Migrating Mud Pot - Emergency Responses to Protect Critical Transportation Infrastructure

Authors: Jim Bailey and R. Travis Deane

Wednesday, May 25 (Continued)

Highway Geology Symposium Banquet Dinner

6:00 PM – 7:00 PM

Highway Geology Symposium Social Hour – Sponsored by: Landslide Technology

Location: Grand Ballroom Prefunction Area

Everyone Welcome!

7:00 PM – 9:00 PM

Highway Geology Symposium Banquet – Sponsored by: Maccaferri Inc.

Location: Grand Ballroom

Ticketed Event

8:30 PM – 9:30 PM

Banquet Keynote Speaker - Sponsored by Access Limited Construction

Jennifer Bauer, Appalachian Landslide Consultants - *We're All on the Same Team – How Inter-agency Collaboration Can Lead to Greater Landslide Resilience*

Everyone Welcome!

Young Author Awards – Chris Ruppen

Next Year's Highway Geology Symposium – Marc Fish

Closing Remarks and Adjournment of the Symposium

Thursday, May 26

Geotechnical Asset Management Peer Exchange

8:00 AM – 4:00 PM

Location: Windsor Ballroom

Obstacles and Opportunities Recognized Through Geotechnical Asset Management Implementation

This meeting takes advantage of the participation by state DOTs and others that will be at the Highway Geology Symposium and the TRB midyear committee meeting to bring together people interested in the deployment of Geotechnical Asset Management (GAM) to improve safety and mobility on the nation's transportation corridors. The goal of this peer exchange is to increase awareness and knowledge of current GAM practices of participants through real-world examples and lessons learned.

The meeting will be held on Thursday May 26, 2022, from 8:00 am to 4:00 pm with a 1-hour lunch break (lunch included). We plan to hold a combination of breakout sessions and panel discussions of a handful of general topics including:

- Deployment of GAM and incorporation into TAM Plans.
- Evaluating life Cycle costs, deterioration rates, and models.
- Funding of GAM program – Moving from pilot or research into broader deployment.
- Overlapping efforts with other assets such as culverts, bridges, pavements, retaining walls.
- Climate change impact on geotechnical assets and examples incorporating resiliency in design.
- Risk analysis – Management of resources, prioritizing interventions, assessment of interventions.