

## Subcommittee on Geotechnical Asset Management (GAM) – AKG00(1)

<https://trb-gam.weebly.com>

**Monday January 09, 2023  
7:30 to 10:00 PM – Eastern  
Marriott Marquis, Marquis Salon 2 (M2)**

### ***MEETING AGENDA***

#### **BUSINESS and ANNOUNCEMENTS (15 minutes)**

1. Introduction by Co-Chairs and Deputy-Chairs (Scott Anderson, BGC Engineering, Subcommittee Co-Chair)
  - a. Deputy-Chair: Michelle Mann (USACE)
  - b. Looking for nominations for a co-chair and deputy chair role for assignment by 2024
2. Minutes (All)
3. TRB Announcements (Nancy Whiting, TRB)
4. FHWA Update (Silas Nichols/Khalid Mohamed, FHWA)
5. GAM Subcommittee Website: [trb-gam.weebly.com](https://trb-gam.weebly.com) (Darren Beckstrand, Landslide Technology, Subcommittee Co-Chair)

#### 2023 Sponsored Sessions (and others relevant)

1. Sunday, 9:00 AM- 12:00 PM ET: Workshop 1010: Leveraging Machine Learning and GIS for Roadway Data Collection
2. **Sunday, 9:00 AM- 12:00 PM ET: Workshop 1013: Building Consensus on Resilience Metrics**
3. Sunday, 9:00 AM- 12:00 PM ET: Workshop 1021: Extreme Event Impacts: Flooded Roadways
4. Sunday, 9:00 AM- 12:00 PM ET: Workshop 1024: Use of Available Data to Extend the Life of Highway Infrastructure
5. Sunday, 7:00 PM-9:00 PM ET: Rockfall Management Subcommittee, AKG10(1)
6. **Monday, 8:00 AM- 9:45 AM ET: Session 2017: Assessing Variability and Risk in Geotechnical Analyses**
7. Monday, 8:00 AM-12:00 PM ET: Geotechnical Instrumentation and Modeling Committee
8. Monday, 10:15 AM-12:00 PM ET: Session 2077: Performance Evaluation of Transportation Earthworks
9. **Monday, 1:30 PM-3:15 PM ET: Session 2140: Climate Change Influence on Railway Construction, Maintenance, Performance, and Safety**
10. Monday, 1:30 PM-3:15 PM ET: Poster Session 2156: Geology and Geotechnical Engineering Section: Young Member Poster Presentation
11. Monday, 1:30 PM-3:15 PM ET: Poster Session 2157: Recent Progress in Geotechnical Instrumentation and Modeling
12. Monday, 1:30 PM-3:15 PM ET: Advances in Landslides Analysis and Control Subcommittee, AKG10(2)
13. Monday, 3:45 PM-5:30 PM ET: Session 2181: Dialogue with Leaders in Design and Geology and Geotechnical Engineers

Transportation Research Board  
**Joint Section Subcommittee on Geotechnical Asset Management - AKG00(1)**  
2023 Annual Meeting – Washington, D.C.

14. **Monday, 7:30 PM-10:00 PM ET: Geotechnical Asset Management Subcommittee, AKG00(1)**
15. Tuesday, 1:30 PM-5:30 PM ET: Engineering Geology Committee, AKG10
16. **Tuesday, 3:45 PM-5:30 PM ET: Session 3177: Instrumentation for Effective Implementation of Geotechnical Asset Management**
17. Wednesday, 10:15 AM-12:00 PM ET: Session 4046: Site Assessment Using Remote Methods

## Business

1. Plan a rotation of chairs in 2023.
2. GAM Subcommittee Midyear Meeting at 71<sup>st</sup> HGS in Asheville, NC, May 23, 2022. Presentations focused on GAM's relationship to transportation resilience.
3. GAM Peer Exchange immediately following 71<sup>st</sup> HGS. May 26, 2022. Peer exchange report forthcoming.
4. New Pooled Fund [Solicitation](#) - *Resilience Approaches for Pavements and Geotechnical Assets*. Searching for DOT partners and commitments. Lead DOT: VDOT.

## PRESENTATIONS (7:50PM)

- William Johnson, Colorado DOT, How the Geohazards Program is incorporated into the CDOT TAMP and Resiliency Program (15 mins)
- Dave Staab, Wisconsin DOT, Geotechnical Asset Management – Initial Efforts (15 mins)
- Robert Jowers, Tennessee DOT Fitting Unstable Slopes into Tennessee's Asset Management Plan (15 mins)
- Aine Mines, Landslide Technology, GAM Program Initialization for Missouri DOT (10 mins)
- Kristen Tappenden, Alberta Transportation, Alberta Transportation: Geotechnical Asset Management Framework Development and Pilot Study (15 mins)

## BREAK (10 MINS) (9:00 TO 9:10)

## UPDATE ON RESEARCH IN PROGRESS (9:10 TO 9:20)

- Colorado School of Mines undertaking deterioration research for CDOT – Gabe Walton, CSM
- Queen's University asset management related research – Jean Hutchinson, Queens University
- TPF-5(459) Pooled fund project "Developing and Calibrating Fragmental Rockfall Models using Physics Engines", WashDOT Lead state. Univ. of Washington and Queens Univ. proceeding with work.

## RESEARCH NEEDS STATEMENT GENERATION 9:20 TO 9:50 PM

This section is built around three starting points for RNS. We likely won't advance all three in parallel and they may evolve quite a bit during our committee discussion, but we'd like to have at least one going forward, and others shelf-ready. Format of discussion will be brief presentation(s) followed by discussion, followed by assignment of volunteers and a champion to lead development.

***RNS 1: Estimating nationwide geotechnical asset performance degradation rates. (Research).***

***OUTLINE A STRUCTURE FOR EACH ONE FOR POINTS OF DISCUSSION, THEN CHAMPION***

*Incorporate information on degradation rates of mitigation measures and the conditions that lead to failure. Prepare a template for tracking of performance deterioration for other asset types?*

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***RNS 2: Building system resilience to impacts of extreme weather and a changing climate through GAM tools and approaches. (Research)***

*How GAM can be incorporated into a Statewide Resiliency Plan/Program*

***RNS 3: Using LiDAR datasets and Earth Observation satellites for hazard mapping for GAM and resilience & incorporation in project planning, selection and development (Geotech-focused Synthesis – Due February 17, 2023) Aine Mines will be writing up a Synthesis RNS.***

Discussion and assignment of Champion and volunteers (20 mins)

#### Announcements & Publications

- WisDOT Research Published – [Geotechnical Asset Management for Slopes](#) (10/2022)
- NCHRP Syntheses completed and published: Design Practices for Rock Slopes and Rockfall Management, Topic 52-18/[Synthesis 588](#).
- NCHRP Synthesis 20-05/Topic 53-18 Synthesis Moisture Measurement for Foundations and Slopes ([Link](#)) – Dr. Claudia Zapata (ASU) has the draft into the panel and is working on the final report.
- New Synthesis: [Topic 54-15](#): Prevention and Mitigation of Surficial Slope Failures on Fill Highway Embankment Slopes – Questionnaires going out late January.
- NASEM Committee on Geological and Geotechnical Engineering study “Corrosion of Buried Steel at New and In-Service Infrastructure” completed this year. [Information here](#).

#### Future Meetings

- Geo-Congress 2023, Los Angeles, CA March 26-29, 2023. Abstracts for Geo-Congress 2024, Vancouver BC due February 3, 2023.
- Geo-Risk 2023, Arlington, VA. July 23-26, 2023. Abstract submission closed.
- Highway Geology Symposium in Tacoma, WA, August 13-19, 2023 – Abstract submission date forthcoming. Post cards?
- AEG 66<sup>th</sup> Annual Meeting, Portland, OR. September 19-24, 2023. Abstract submission May 1, 2023.

**CLOSURE AND ADJOURNMENT**