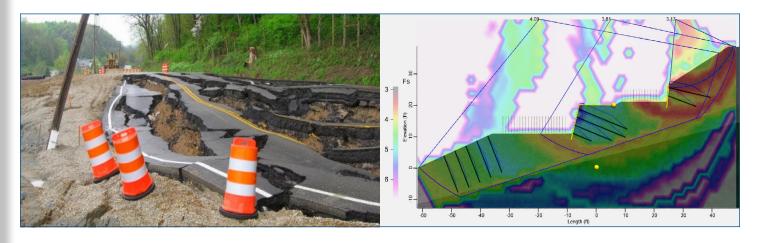
# **Geohazard Mitigation Workshop**

# Advanced Topics in Landslides & Slope Stabilization



# Lexington, KY

University of Kentucky, Kentucky Geological Survey Well Sample and Core Library 2500 Research Park Drive | Lexington, KY 40511

**February 17<sup>th</sup>**Registration starts at 8:30 a.m.

Workshop starts at 9:00 a.m. and ends at 5:00 p.m.

## **Keynote Speaker:**

Matt Crawford Kentucky Geological Survey

Call for registration, hotel & additional information: Frank Amend, frank@gsi.us, 252.904.6986

# **Workshop Topics:**

This workshop will present an advanced overview of landslide identification, mitigation, and soil slope stabilization. Particular attention will be paid to geohazard events affecting critical assets (highways and transportation corridors, pipelines, transmission lines, and other important infrastructure). Participants will learn design methodologies for a variety of innovative mitigation techniques, proper construction for various solutions, and will be guided through several case studies showing the application of various solutions with actual design examples. LSNAP, RUVOLUM, and BIOS software packages will be distributed to course attendees.

## **Continuing Education:**

A PDH Certificate will be issued for the number of hours attended.

#### Who should attend:

This workshop has been developed for experienced geotechnical engineers, civil engineers, and engineering geologists that commonly deal with geohazards in soils, as well as public and private agency personnel that work with geohazard mitigation designers in a supervisory capacity.

#### **Workshop Fee:**

Facilities, lunch, refreshments, and course materials are covered by the course sponsors. Space is limited, so preregistration is required.

### **Presented Material Will Include:**

- Key Factors in Geology and Geomorphology for Recognizing, Preventing and Remediating Geohazards in Soils
- Innovations in Tools and Technologies for Gathering, Recording, and Reporting on Translation and Deformation in Landslide and Rockfall Geohazards, Including Uses for Drones
- History and Evolution of Geosynthetically Confined Soil Technologies Including Case Studies, Applications of SGCS and "V" Walls, and Comparison with MSE Concepts
- Traditional and Innovative Soil Nailing for Landslide Remediation (including FHWA Guidance, Limit Equilibrium Analysis Overview and Commonly used Modeling Software Packages)

- Discussions on Slope Stability Modeling and Comparisons between Programs
- Manufacturer's discussion on Soil Nail Types and their proper application by Williams Form Engineering
- Design Considerations and Case Studies of Various Structural Facings (Shotcrete, Wire Mesh, Geotextile, and Bio-Technical Facings)
- Manufacturer's Presentation on Geobrugg's RUVOLUM Surficial Stability Software Program
- Manufacturer's Presentation on Maccaferri's BIOS Surficial Stability Software Program
- Reticulated Micropile Design Methodology for Slope Stabilization (L-Pile, Limit Equilibrium, and t-z Analysis following the University of Missouri Method)

# **Keynote Speaker Bio:**



**Matt Crawford** 

Matt Crawford is a Geologist with Kentucky Geologic Survey's (KGS) Geologic Hazards Section. A seasoned Geologist and researcher, his work helps KGS quantify landslide hazards and risk in the State of Kentucky by analyzing slope stability issues and the geotechnical engineering properties of landslides

through a variety of research methods. Since joining KGS in January of 2001, Mr. Crawford has taken on a variety

of responsibilities. He conducts landslide hazard research, maintains a landslide inventory database, develops projects related to engineering geology and landslides, assists his section with seismic hazards research, and conducts various geology and GIS research projects. Matt has served as Committee Member for the Appalachian Coalition for Geological Hazards in Transportation and an Environmental and Engineering Geology Division Member for the Geological Society of America. Mr. Crawford holds a Bachelor of Arts in Geology from Hanover College, a Master's of Science in Geology from Eastern Kentucky University, and is currently a PhD candidate in the Earth and Environmental Sciences Department at the University of Kentucky.

# Instructors: Robert Barrett, P.G.

Bob has over 30 years work experience with WVDOT and CDOT as a landslide specialist and as the chief geologist for design and construction of Interstate 70 across the Colorado Rockies. Bob was Manager of Geotechnical Research for the Colorado DOT and for the Colorado Transportation Institute, and was a co-inventor of the Colorado Rockfall Simulation Program (CRSP). Bob has several patents related to rockfall, soil nails. scour, walls and bridge abutments. He has conducted research demonstrations and workshops all over North America and on four other continents.

# Nathan Beard, P.E., M.B.A.

Nathan is responsible for all facets of project creation and completion for stabilization projects within the 34 eastern states, many of which are in some of our nation's most difficult terrain. Nathan is a registered professional engineer in multiple states and has authored numerous papers on stabilization technology, regularly presenting workshops across the United States and Canada. Nathan attended the United States Air Force Academy, graduating with a B.S. in Civil Engineering, and served as the Co-Captain of the Air Force Academy football team.

#### Colby Barrett, J.D., P.E.

Colby has worked on stabilization projects for over 15 years, managing projects throughout the continental United States, Puerto Rico, and Jamaica. Colby regularly presents workshops across the United States and has given invited presentations in Canada, Mexico, New Zealand, and Taiwan. He is an active geotechnical researcher in soil nailing and confined soils, holds several patents in the field, and serves as a member of the Deep Foundations Institute Landslide/Slope Stabilization Committee.

# Sponsored by:



GeoStabilization International® is the leading geohazard mitigation firm operating throughout the United States and Canada. We repair a full spectrum of geotechnical hazards and specialize in emergency landslide repair and rockfall mitigation using design/build and design/build/warranty contracting.



Kentucky Geological Survey's mission is to increase knowledge and understanding of the mineral, energy, and water resources, geologic hazards, and geology of Kentucky for the benefit of the Commonwealth of Kentucky and the nation.





