



3rd North American Symposium on Landslides
 June 4-8, 2017
 Schedule of Events

Locations and times are subject to change.

guidebook



Download the NASL app and create your own schedule!

Sunday, June 4

Registration	7:00 am – 5:00 pm	North Entry Foyer
Exhibitor Set-Up	7:00 am – 4:00 pm	Roanoke Ballroom C-H
SC 3 – <i>Debris Flow and Shallow Landslide Mitigation</i>	8:00 am – 12:00 pm	Crystal Ballroom C
SC 5 – <i>Anchored Mesh Slope Stabilization Systems</i>	1:00 pm – 5:00 pm	Crystal Ballroom C
SC 6 – <i>Analysis of Landslides: Shear Strengths, Testing and Analyses</i>	1:00 pm – 5:00 pm	Crystal Ballroom B
Ice Breaker Reception	6:00 pm – 9:00 pm	Roanoke Ballroom C-H

Monday, June 5

Registration	7:00 am – 5:00 pm	North Entry Foyer
Morning Break Begins	7:30 am	Roanoke Ballroom C-H
Exhibit Hall Open/Poster	8:00 am – 5:00 pm	Roanoke Ballroom C-H
Opening Session - Welcome	8:30 am	Roanoke Ballroom A-B

EXPERIENCE

David Spears, *Geologic Hazards and Public Policy – A Virginia Perspective*

9:00 am

Kenneth Taylor, *Landslides and Other Geologic Hazards: A Perspective from an Emergency Management Professional who is also a Geoscientist*

9:30 am

Coffee Break

10:00 am

Roanoke Ballroom C-H

Keynote: John Clague, *Applications of Emerging Technologies in the Geomorphic Evaluation of Hazards and Risk*

10:30 am

Keynote: John Duffy, *The Modern Approach to Rockfall: Experience, Knowledge and Emerging Technologies*

11:15 am

Lunch

12:00 pm – 1:00 pm

Roanoke Ballroom C-H

Technical Sessions

1:00 pm – 4:35 pm

Constraints on Landslide-Climate Research Imposed by the Reality of Fieldwork in Central Africa

1:00 pm – 1:25 pm

Washington Hall

Drought Exacerbated Susceptibility for Slope Movement under Unfavorable Geologic Conditions

1:25 pm – 1:50 pm

Washington Hall

Evaluation of a Landslide Developed Within Landslide Deposits of Northern Puerto Rico

1:50 pm – 2:15 pm

Washington Hall

Long-term Gravitational Deformation and Reactivation of a Gigantic Paleolandslide

3:20 pm – 3:45 pm

Washington Hall

Racing Against the Clock: Stopping A Landslide in the Pierre Shale with Tied-Back Drilled Shafts

3:45 pm – 4:10 pm

Washington Hall

Ten Mile Slide, British Columbia: Development of a Retrogressive Translational Earth Slide in a Post-glacial Earthflow Deposit

4:10 pm – 4:35 pm

Washington Hall

2016 West Virginia Floods: Stream Bank Failure, Erosion, Assessments and Response to Protect Critically Essential Public Facilities

4:35 pm – 5:00 pm

Washington Hall

Emergency Response to Rockfall Events

1:00 pm – 1:25 pm

Crystal Ballroom D-E

Monitoring and Management of a Landslide on the Main Motorway Between Sydney and Wollongong, NSW Australia

1:25 pm – 1:50 pm

Crystal Ballroom D-E

Nanos Cattle Pen Embankment Instability Investigation SH 99 in Osage County, Oklahoma

1:50 pm – 2:15 pm

Crystal Ballroom D-E

Physical Vulnerability of Residential Dwellings to Rock Impacts The 2013 Fatal Rockfall in Rockville, Utah: A Case Study

2:15 pm – 2:40 pm

Crystal Ballroom D-E

The Geology and Geotechnical Mitigation for the US Highway 89 Landslide, Bitter Springs, Arizona

3:20 pm – 3:45 pm

Crystal Ballroom D-E

Landslide Distribution and Material Properties, in the Drift Creek Watersheds, Lincoln County, Oregon

4:10 pm – 4:35 pm

Crystal Ballroom D-E

Cayuse Mountain Landslide, Roosevelt Reservoir, WA, USA

1:00 pm – 1:25 pm

Shenandoah B

Movement of Landslides with Slip Surface at Residual Condition Stability Evaluation of Mount Rushmore National Memorial, Keystone, South Dakota

1:25 pm – 1:50 pm

Shenandoah B

Stabilization of Failing Crib Walls Supporting George Washington

1:50 pm – 2:15 pm

Shenandoah B

2:15 pm – 2:40 pm

Shenandoah B

<i>Memorial Parkway: A Challenging Case History Using LiDAR to Analyze Mass Movement of Frozen Debris Lobes, Brooks Range, Alaska</i>	3:20 pm – 3:45 pm	Shenandoah B
<i>Landslide Application of the Geotechnical Observational Approach A Legal Process Gone Right... Effective Mediation and Geotechnical Collaboration Fosters a Complex Landslide Repair in Malibu, California</i>	3:45 pm – 4:10 pm 4:10 pm – 4:35 pm	Shenandoah B Shenandoah B
<i>A Look Back at the Peeks Creek, North Carolina, Debris Flow of 17 September 2004 and the Application of Lessons Learned to the Excessive Rainfall Events in 2013</i>	1:00 pm – 1:25 pm	Pocahontas A-B
<i>Slope Failure Assessment and Remediation in West Virginia and Ohio The North Carolina Geological Survey's Response to Landslide Events: Methods, Findings, Lessons Learned, and Challenges</i>	1:25 pm – 1:50 pm 1:50 pm – 2:15 pm	Pocahontas A-B Pocahontas A-B
<i>The Scales Landslide Complex: A History of Successes and Failures Using LAHARZ to Determine Potential Inundation Associated with a Surface Mining-Related Debris Flow in the Appalachian Coalfields of Southwestern Virginia, USA</i>	2:15 pm – 2:40 pm 3:20 pm – 3:45 pm	Pocahontas A-B Pocahontas A-B
<i>Washington State Landslide Hazards Program: Protecting the Public and Reducing Losses from Landslides</i>	3:45 pm – 4:10 pm	Pocahontas A-B
Afternoon Break	4:10 pm – 4:35 pm	Pocahontas A-B
AGHP Geohazard Monitoring & Instrumentation Committee Meeting	2:40 pm – 3:20 pm 7:00 pm	Roanoke Ballroom C-H Crystal Ballroom D-E
Tuesday, June 6		
Registration	7:00 am – 5:00 pm	North Entry Foyer
Morning Break Begins	7:30 am	Roanoke Ballroom C-H
Exhibit Hall/Posters	8:00 am – 5:00 pm	Roanoke Ballroom C-H
Plenary Session	8:30 am – 12:00 pm	Roanoke Ballroom A-B
KNOWLEDGE		
Keynote: David Stanley and Scott Anderson, <i>Managing Landslides and Slopes as Transportation Infrastructure Assets</i>	8:30 am	
Keynote: Richard Roth, <i>Landslides Remain Uninsured: What Landslide Professionals Can Do to Change That</i>	9:15 am	
Coffee Break	10:00 am	Roanoke Ballroom C-H
Jaques Locat, <i>Subaqueous Mass Movements in North America: Diversity and Issues</i>	10:30 am	
Tom Badger, <i>Managing for Landslide Risk: A Perspective from Western North America</i>	11:00 am	
Pete Ingraham, <i>Landslide Risk and Management in the Eastern US</i>	11:30 am	
Lunch	12:00 pm – 1:00 pm	Roanoke Ballroom C-H
Technical Sessions	1:00 pm – 4:35 pm	
<i>Hydrological Modelling to Estimate Runoff and Infiltration in Southeastern Appalachian Debris Flow Complex</i>	1:00 pm – 1:25 pm	Washington Hall
<i>Offshore Seismic Data to Analyze Submarine Landslides Along the Cagliari Slope, South of Sardinia, Italy</i>	1:25 pm – 1:50 pm	Washington Hall
<i>Preserving America's Parks – A Review of the Design Process Surrounding Rock Fall Intervention and Rock Mass Stabilization</i>	1:50 pm – 2:15 pm	Washington Hall
<i>Rock Avalanches in Glacier Bay National Park, Alaska, 1984-2016: A Preliminary Assessment of 33 Years of Landsat Data on Avalanche Magnitude, Mobility, and Frequency</i>	2:15 pm – 2:40 pm	Washington Hall
<i>Slippery Clay Mineral Accumulation in Shear Zones and along Failure Surfaces of Appalachian Landslides</i>	3:20 pm – 3:45 pm	Washington Hall
<i>Storm-Induced Groundwater Spikes in Landslides of the Tyee Formation, Central Coast Range, Lincoln County, Oregon, USA</i>	3:45 pm – 4:10 pm	Washington Hall
<i>Use of Softcopy Technology For Investigation, Classification, Monitoring, and Analysis of Landslides</i>	4:10 pm – 4:35 pm	Washington Hall
<i>Application of Non-Newtonian Rheology in Simulating 2014 Oso Landslide, Washington, USA</i>	1:00 pm – 1:25 pm	Crystal Ballroom D-E
<i>Assessing Shallow Landslide Potential of Coastal Bluffs along Puget Sound Using a Physics-Based Hydromechanical Model</i>	1:25 pm – 1:50 pm	Crystal Ballroom D-E
<i>Estimating Losses from Landslides in Oregon</i>	1:50 pm – 2:15 pm	Crystal Ballroom D-E
<i>Estimating the Rock Fall Reach Potential from Natural Cliffs Along</i>		

<i>a Transportation Corridor</i>	2:15 pm – 2:40 pm	Crystal Ballroom D-E
<i>Flexible Barriers Composed of High-strength Steel Nets, as a Solution to the Near Surface Landslides</i>	3:20 pm – 3:45 pm	Crystal Ballroom D-E
<i>The California Landslide Inventory Database</i>	4:10 pm – 4:35 pm	Crystal Ballroom D-E
<i>Using LiDAR Data to Map Landslides Contributing to Water Quality Impairment – A Case Study of the Drift Creek Watershed, Lincoln County, OR</i>	4:35 pm – 5:00 pm	Crystal Ballroom D-E
<i>Landslide Inventory Maps of Highway Corridors in California</i>	1:00 pm – 1:25 pm	Shenandoah B
<i>Landslide Remediation Using Lightweight Aggregate Reinforced Soil Slopes for Mountainous Roads in Western North Carolina</i>	1:25 pm – 1:50 pm	Shenandoah B
<i>Rapid Drawdown Stability Analysis of San Luis Dam</i>	1:50 pm – 2:15 pm	Shenandoah B
<i>Utilizing Innovative Technologies and Approaches for Emergency Landslide Repair on Interstate 75 in Campbell County, TN, USA</i>	2:15 pm – 2:40 pm	Shenandoah B
<i>Spatial and Temporal Patterns of Rockfalls in Hard Rock Coastal Cliffs, North Yorkshire, UK</i>	3:20 pm – 3:45 pm	Shenandoah B
<i>Rock Falls – A Deterministic Process with Nonlinear Behaviour? Investigation of Two Co-seismic Rockfalls During the 2015 Lefkada and 2014 Cephalonia Earthquakes, Greece</i>	4:10 pm – 4:35 pm	Shenandoah B
<i>A Slope Stability Success Story, the Georgetown Incline, Interstate 70, West of Denver, Colorado</i>	4:35 pm – 5:00 pm	Shenandoah B
<i>Small-Scale Landslide Risk Management in Guatemala City</i>	1:25 pm – 1:50 pm	Pocahontas A-B
<i>Risk-based Landslide Safety Assessments In Canada</i>	1:50 pm – 2:15 pm	Pocahontas A-B
<i>Sitka Debris Flow, August 2015</i>	2:15 pm – 2:40 pm	Pocahontas A-B
<i>Innovative Solutions for Slope Instability and Rockfall Hazards</i>	3:20 pm – 3:45 pm	Pocahontas A-B
<i>The Science and Stories of Landslide Inventory and Susceptibility Mapping in Haywood and Jackson County, North Carolina, USA</i>	3:45 pm – 4:10 pm	Pocahontas A-B
Afternoon Break	4:10 pm – 4:35 pm	Pocahontas A-B
Exhibitor Move-Out	2:40 pm – 3:20 pm	Roanoke Ballroom C-H
	5:00 pm – 9:00 pm	Roanoke Ballroom C-H

Wednesday, June 7

Registration	7:00 am – 5:00 pm	North Entry Foyer
To Go Breakfast Break	7:00 am – 8:00 am	North Entry Foyer
To Go Lunch	7:00 am – 8:00 am	North Entry Foyer
FT 1 – <i>Mountain Lake Landslides & “Dirty Dancing”</i>	7:45 am – 5:00 pm	
FT 2 – <i>The Narrows Landslide & I-81 Rock Slope Stability</i>	7:45 am – 5:00 pm	
FT 4 – <i>Fortune’s Cove and the 1969 Hurricane Camille Debris Flows</i>	7:45 am – 5:00 pm	
FT 5 – <i>Blue Ridge Debris Deposits & Alluvial Fans</i>	7:45 am – 5:00 pm	
FT 6 – <i>Boulders & Beer of the Brew Ridge Trail</i>	7:45 am – 5:00 pm	

Thursday, June 8

Morning Break	7:30 am	Roanoke Ballroom C-H
Registration	8:00 am – 5:00 pm	Roanoke Ballroom C-H
Plenary Session	8:30 am – 12:00 pm	Roanoke Ballroom A-B

EMERGING TECHNOLOGIES

Keynote: Bill Haneberg , <i>Emerging Trends and Technologies in Spatially Distributed Landslide Hazard Assessment</i>	8:30 am	
Keynote: Matt Lato , <i>Mapping Change with 3D Data: Advancing Applications through Research and Development Collaboration</i>	9:15 am	
Coffee Break	10:00 am	Roanoke Ballroom C-H
Scott McDougall , <i>Probabilistic Forecasting of Landslide Runout</i>	10:30 am	
Susan Shaw , <i>Automated, Object-Based Image Analysis (GEOBIA) Model For Landform Detection and Mapping, with Applications to Pacific Northwest USA Landslide Assessments</i>	11:00 am	
Chester “Skip” Watts and Jeff Keaton , <i>Planning and Executing Autonomous UAS Missions for Capturing and Extracting Geologic Data</i>	11:30 am	
Lunch	12:00 pm – 1:00 pm	Roanoke Ballroom C-H
Technical Sessions	1:00 pm – 5:00 pm	
<i>Applications of Remote Sensing for Characterizing Debris Channel Processes</i>	1:00 pm – 1:25 pm	Washington Hall
<i>Geophysical and Geotechnical Field Correlations for Active Landslides in Kentucky</i>	1:25 pm – 1:50 pm	Washington Hall

<i>Motion Tracking “Smart Rock” Device for the Study of Landslide and Debris Flow Mechanisms</i>	3:20 pm – 3:45 pm	Washington Hall
<i>The 10-mile Slide North of Lillooet, British Columbia – History, Characteristics and Monitoring</i>	3:45 pm – 4:10 pm	Washington Hall
<i>The Storm of 19 March 2014 near Oso Landslide, Washington, USA: Gauge and Radar Rainfall Data</i>	4:10 pm – 4:35 pm	Washington Hall
<i>Use of Lidar, Laser Scanning, UAV Technology and 3D Geologic Modeling for Landslide and Rockfall Assessments At Boundary Dam, Metline, Washington</i>	1:00 pm – 1:25 pm	Crystal Ballroom D-E
<i>Automatic Classification and Location of Seismic Events Triggered by a Clayey-Rich Landslide</i>	1:25 pm – 1:50 pm	Crystal Ballroom D-E
<i>Network-scale Rockfall Forecasting: Pilot Studies and Framework Development in Colorado and Canada</i>	1:50 pm – 2:15 pm	Crystal Ballroom D-E
<i>Monitoring Slow-moving Landslides with Optical Satellite Image Time-series: A Service Based on a HPC Platform</i>	2:15 pm – 2:40 pm	Crystal Ballroom D-E
<i>Effects of Inventory Bias on Landslide Susceptibility Calculations</i>	3:20 pm – 3:45 pm	Crystal Ballroom D-E
<i>The Role of Survey Design in Developing Rock Fall Frequency-Magnitude Relationships using Terrestrial Laser Scanning: A Case Study from the CN Railway at White Canyon, BC</i>	3:45 pm – 4:10 pm	Crystal Ballroom D-E
<i>Application of a Risk-Based Rock Slope Standard</i>	4:10 pm – 4:35 pm	Crystal Ballroom D-E
<i>An Overview of the FHWA Geohazards, Extreme Events and Climate Change Program</i>	1:00 pm – 1:25 pm	Shenandoah B
<i>Effects of Topographic Data Quality on Estimates of Shallow Slope Stability Using Different Regolith Depth Models</i>	1:25 pm – 1:50 pm	Shenandoah B
<i>Limit State Landslide Hazard Assessment</i>	1:50 pm – 2:15 pm	Shenandoah B
<i>Predicting Debris Flow Initiation Zone using Statistical and Rock Kinematic Analyses, A Case Study from West Prong Little Pigeon River, TN</i>	2:15 pm – 2:40 pm	Shenandoah B
<i>Rockfall Assessment and Mitigation Strategies using a 3D Model</i>	3:20 pm – 3:45 pm	Shenandoah B
<i>Forensic Rockfall Scar Analysis: Development of a Mechanically Correct Model of Rockfall Failure</i>	3:45 pm – 4:10 pm	Shenandoah B
<i>Slope Stability Analysis – A Case Study</i>	4:10 pm – 4:35 pm	Shenandoah B
<i>Alaska’s Geotechnical Asset Management Program</i>	1:00 pm – 1:25 pm	Pocahontas A-B
<i>Avoiding the Slide - Planning for Transportation Modernization in Challenging Terrain</i>	1:25 pm – 1:50 pm	Pocahontas A-B
<i>Building a Statewide Inventory of Landslides in Arizona</i>	1:50 pm – 2:15 pm	Pocahontas A-B
<i>Geohazards Risk Assessment of the Denali National Park Road</i>	2:15 pm – 2:40 pm	Pocahontas A-B
<i>Emerging Technologies at National Weather Service Field Offices to Assess and Communicate Flash Flood/Debris Flow Threats and Preparedness Measures</i>	3:20 pm – 3:45 pm	Pocahontas A-B
<i>Landslide Assessment for Emergency Management</i>	3:45 pm – 4:10 pm	Pocahontas A-B
<i>Assessing Landslide Hazards in Post-Glacial Landscapes in The Great Lakes Region</i>	4:10 pm – 4:35 pm	Pocahontas A-B
<i>Managing Landslide Hazards and Risks on the George Washington and Jefferson National Forests in Virginia and West Virginia</i>	4:35 pm – 5:00 pm	Pocahontas A-B
<i>Afternoon Break</i>	2:40 pm – 3:20 pm	Roanoke Ballroom C-H