



## Two-Day Workshop

on

# SLOPE STABILITY

Tackling an Old Problem

Organized by:

Canadian Geotechnical  
Society

Southern Ontario Section



## Schedule and Registration Fees

### Day One

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Tuesday - March 28, 2017

*Slope Stability Analysis,  
from Basics to the State of Art*

by: [Dr. Andy Take](#),

Queen's University, Kingston, ON

and [Dr. Greg Siemens](#),

Royal Military College, Kingston, ON

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*In Situ and Laboratory Testing  
Methods for Slope Stability  
Assessment*

by: [Andrew Drevininkas](#),

Toronto Transit Commission (TTC)

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*Case Studies, from Regulatory  
Point of View*

by: [Moranne McDonnell, Ali  
Shirazi](#)

Toronto and Region Conservation  
Authority (TRCA)

### Day Two

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Wednesday - March 29, 2017

*Reinforced Slopes and Walls,  
Stabilization Methods:*

*Soil Nail Walls*

by: [Dr. Jim Collin](#)

The Collin Group Ltd

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*Rock Slope Stability,  
Rock-fall Hazard*

by: [David Wood](#)

David F. Wood Consulting Ltd

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*When, Where & Why Steep  
Slopes*

by: [Phil Perzia](#)

Perzia GeoSolutions

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*Panel Discussion:*

*Roles and Responsibilities in  
Design and Construction of  
MSE walls/slopes & Shoring Systems*

CGS-SOS is pleased to present a two-day workshop, designed for Geotechnical Consultants, Geo-structural Designers, Specialty Geotechnical Contractors, Government Agencies, University Students and other contractors and designers who desire continual improvement to their geotechnical engineering skills. This workshop is an excellent source of information and professional development for engineers in Ontario. The objective of the panel discussion (2<sup>nd</sup> day) is to discuss liabilities faced by geotechnical engineers and designer/suppliers of reinforced soil structures such as MSE walls/slopes and shoring systems. A certificate for proof of Professional Development Hours (PDH) will be available upon request.

**Registration Fee**

| Each Day | Both Days |
|----------|-----------|
| \$250    | \$475     |

Registration fee covers your spot at the seminar, an access to workshop materials, continental breakfast, lunch and coffee.

Register by March 26: [Eventbrite Link](#).

Venue: **Pearson Convention Centre**  
 2638 Steeles Ave. E, Brampton, ON L6T 4L7  
[Google Map Link](#)

**Day One: March 28, 2017**

7:30 to 8:00 Registration and Breakfast  
 08:00 to 12:00 Lectures with Coffee Break  
 12:00 to 13:00 Lunch  
 13:00 to 17:00 Lectures with Coffee Break  
 17:00 to 18:00 Networking

**1.1 Landslide basics**

- Theory of slope stability & methods of analysis
- visual inspection
- site investigation
- Evaluation of triggering mechanisms,
- Slope Stability Computations [2D / 3D]
- Instrumentation and monitoring

**1.2 Slope deformation**

- Deformation/creep assessment,
- Instrumentation and monitoring
- New monitoring techniques e.g. imaging techniques

**1.3 Strength Parameters**

- Peak, critical state, residual, what strength parameters should I use?

**1.4 Geotechnical In-situ & Lab Testing Methods for Slope Stability Assessment**

- Ontario Quarternary Geology
- Soil Parameters: Published Source and Correction
- In-situ Testing and Laboratory Testing

**1.5 Case Studies, from Regulatory Point of View**

**Day Two: March 29, 2017**

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**2.1 Reinforced Slopes and Walls**

- Review LRFD Strength and Service Limit State Failure Mechanisms
- Define reinforced and retained soil properties required for design
- Soil-Reinforcement Interaction
- Reinforcement Structural Properties
- Steel corrosion, geosynthetic degradation
- Long-term design strength
- Design Responsibilities

**2.2 Stabilization Methods – Soil Nail Wall Design**

- Basic Aspects of Soil Nail Walls
- Soil Nail Wall Design Input and Overview
- External Stability of Soil Nail Walls
- Internal Stability of Soil Nail Walls

**2.3 Rock Slope Stability - Rockfall Hazard**

- Basic principles of rock slope
- Rock slope construction
- Rock slope monitoring
- Case History: Niagara Escarpment

**2.4 When, Where & Why Steep Slopes**

- What to consider for the potential use of steep slopes on your projects.

**2.5 Panel Discussion:” Roles and Responsibilities in Design and Construction of MSE walls/slopes & Shoring Systems**