

Agenda

Presented by Dante Fratta, P.E., Ph.D.

Soil Investigation and Classification

- Formation of soils
- Types of soils in Wisconsin
- Fundamental soil properties
- Soil investigation on Wisconsin construction sites
 - Site reconnaissance
 - Geology and visual observations
 - Drilling, boring, and test pits
 - Establishing appropriate investigational methods
 - Obtaining and reviewing geotechnical reports

Reviewing Hydraulic and Mechanical Properties of Soils

- Water, total and effective stresses
- Soil hydraulics: saturation, hydraulic gradient, and conductivity
- Compressibility of soils
- Drained and undrained shear strength
- Vertical and lateral earth pressure

Bearing Capacity of Soils

- The bearing capacity concept
- Bearing capacity of shallow foundations
- Bearing capacity of piers and piles
- Increasing bearing capacity
 - Draining and compaction
 - Soil improvement

Retaining Structures: Slopes and Retaining Walls

- Natural and engineered slopes
- Reviewing basic concepts of slope stability
- Impact of surface water and groundwater
- Examining retaining structures
 - Preloading
 - Draining
 - Reinforcement

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Wisconsin Soil Mechanics, Bearing Capacity and Slope Stabilization

Live, Interactive Webinar - Tuesday, March 29, 2022

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Learning Objectives

You'll be able to:

Identify common types of soils in Wisconsin.

Investigate soils on Wisconsin construction sites using geology, visual observations, drilling, boring and test pits.

Explore the hydraulic properties of soils, and discuss drained and undrained shear strength.

Evaluate the bearing capacity of shallow foundations, piers and piles.

Learn how to increase bearing capacity of soils.

Increase the stability of natural and engineered slopes.

Evaluate the effectiveness of retaining walls for holding soils in place.



HalfMoon Education Live Webinars

Wisconsin Soil Mechanics, Bearing Capacity and Slope Stabilization

Live, Interactive Webinar - Tuesday, March 29, 2022



Identify common types of Wisconsin soils

Discuss fundamental soil properties,

Get tips on conducting soil investigations

Explore the hydraulic and mechanical properties of soils

Determine the bearing capacity of soils

Stabilize slopes and use retaining walls to keep soil in place

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6.5 PDHs

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Landscape Architects

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6.5 LA CES HSW PDHs

International Code Council

.65 CEUs (Sitework)



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Faculty

Dante Fratta, P.E., Ph.D.
Associate Professor at the University of Wisconsin-Madison

Dante Fratta is an associate professor in Geological Engineering and Civil Engineering at the University of Wisconsin-Madison. He holds Civil Engineering degrees from three different universities: a diploma from U.N. Corboda (Argentina), an M.A.Sc. from U. of Waterloo (Canada), and a Ph.D. from Georgia Tech (USA). He has over 20 years of teaching experience courses in soil mechanics, foundation engineering, and applied geophysics, and he is the author of three books. Professor Fratta also supports a research group that pursues studies in near-surface geophysics, wave propagation in soils and groups, and experimental geotechnical engineering.

Webinar Information

Log into Webinar 8:00 - 8:30 am CDT	Break 12:15 - 1:15 pm CDT
Morning Session 8:30 am - 12:15 pm CDT	Afternoon Session 1:15 - 4:30 pm CDT

Tuition
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Additional Learning

Roadway Design
- Mon, Feb 28, 2022 | 8:30 am - 4:30 pm CST

AIA Contract Document Workshop
- Tues, March 1, 2022 | 8:30 am - 5:00 pm CST

Deep Dive: Native Groundcovers and Turf Alternatives for the Northeast
- Wed, March 2, 2022 | 9:30 am - 12:40 pm CST

Shallow Foundation Design
- Thurs, March 3, 2022 | 11:00 am - 2:15 pm CST
- Fri, March 4, 2022 | 11:00 am - 2:15 pm CST

Engineered Lumber Design and Construction
- Tues, March 8, 2022 | 8:30 am - 12:10 pm CST
- Wed, March 9, 2022 | 8:30 am - 12:10 pm CST

Complying with Commercial Provisions of the 2021 International Energy Conservation Code
- Wed, March 9, 2022 | 8:00 am - 4:00 pm CST

Geothermal Heating and Cooling: Technology, Applications, and Economics
- Wed, March 9, 2022 | 8:30 am - 4:00 pm CST

HEC-RAS Unsteady/2D Modeling
- Fri, March 11, 2022 | 8:30 am - 5:00 pm CST

Keys for Success in Tree Preservation
- Tues, March 22, 2022 | 1:00 - 3:00 pm CDT

A Roadmap to Ethical Issues in Construction: A Primer for Design Professionals
- Wed, March 23, 2022 | 11:00 am - 1:00 pm CDT

Focus on Water Infiltration in Soil
- Thurs, March 24, 2022 | 11:00 am - 1:00 pm CDT

Stormwater Best Management Practices
- Fri, March 25, 2022 | 8:30 am - 5:00 pm CDT

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Continuing Education Credit Information

This webinar is open to the public and offers 6.5 PDHs to professional engineers, and 6.5 HSW continuing education hours to architects and landscape architects in Wisconsin. Educators and courses are not subject to preapproval in Wisconsin.

Engineers, architects and landscape architects seeking continuing education credit in other states will be able to claim the hours earned at this webinar, in most cases. Refer to specific state rules to determine eligibility.

The American Institute of Architects Continuing Education System has approved this course for 6.5 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

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The International Code Council has approved this event for .65 CEUs in the specialty area of Sitework (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to prompts and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Registration

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