

Purdue Geotechnical Society Workshop Program, Friday April 11, 2025
Burton D. Morgan Center, 1201 Mitch Daniels Blvd, Purdue University, West Lafayette, IN

Engineering the Ground: from fundamentals to applications

7:30 a.m. Breakfast: coffee, juice, rolls, and fruits

8:00 a.m. Opening of Workshop and Welcome

MORNING SESSION

Moderator & Coordinators: TBA

8:05 a.m. Keynote Lecture

PROJECT EXPERIENCES: WERE THE FUNDAMENTALS AND APPLICATIONS ALIGNED?

Raymond Franz, Keller North America

8:50 a.m. **US 421 SLOPE STABILIZATION ON PINE MOUNTAIN USING A PERMANENT ROCK ANCHORED TIEBACK RETAINING WALL**

Darrin Beckett, Terracon Consultants

9:10 a.m. **REDEVELOPING TORONTO'S WATERFRONT: A MULTI-DISCIPLINARY CASE STUDY**

Jim Hansen, Geosyntec Consultants

9:30 a.m. **USE OF WICKING GEOTEXTILE TO DEHYDRATE ROAD EMBANKMENT UNDER UNSATURATED CONDITIONS**

Xiong Zhang, Missouri University of Science and Technology

9:50 a.m. **BREAK**

10:20 a.m. **COASTAL GROUND IMPROVEMENT VIA ELECTRODEPOSITION**

Alessandro Rotta Loria, Northwestern University

10:40 a.m. **LOCKED AND LOADED: AB INITIO EXPERIMENTS ON COHESIVE INCLUSIONS IN GRANULAR MEDIA**

Tejas Murthy, Indian Institute of Science, Bangalore

11:00 a.m. **BIO-CEMENTATION OF SANDS: A GRANULAR PERSPECTIVE**

Matt Evans, Oregon State University

11:20 a.m. **GROUP PHOTO**

11:40 a.m. **LUNCH – Burton Morgan Center Café (MRGN 102)**

AFTERNOON SESSION

Moderator & Coordinators: TBA

1:00 p.m. Keynote Lecture

EXPLORING GROUT TESTING LIMITATIONS AND OPPORTUNITIES FOR ENHANCING GROUND IMPROVEMENT IMPLEMENTATIONS

Chadi El Mohtar, University of Texas, Austin

1:45 p.m. **DYNAMIC COMPACTION: A PROVEN GROUND IMPROVEMENT ALTERNATIVE FOR LANDFILL MATERIALS**

Chris Woods, Densification Inc.

2:05 p.m. **INDIGENOUS BACTERIA-DRIVEN SOIL STABILIZATION: A BIOINSPIRED MICROBIALLY INDUCED CALCITE PRECIPITATION APPROACH FOR EXPANSIVE SUBGRADES**

Nitin Tiwari, Southern Illinois University

2:25 p.m. **BREAK**

3:00 p.m. **MITIGATION OF EMBANKMENT FILL SLOPE MOVEMENT ON THAW-SENSITIVE PERMAFROST AT LOST CREEK ALONG THE TRANS-ALASKA PIPELINE SYSTEM**

Oliver Hoopes, Shannon & Wilson

3:20 p.m. **TWO- AND THREE-DIMENSIONAL FINITE ELEMENT FREEZING BEHAVIOR OF COMPLEX FROZEN SOIL GEOMETRIES**

Mattias Lindenbauer, HDR Engineering

3:40 p.m. **THE UNINTEDED CONSEQUENCES OF SOIL FREEZING: DEATH, DESTRUCTION AND IMPACTS OF EXPLOSIONS CAUSED BY LEAKING GAS PIPELINES**

John Mundell, Mundell & Associates

4:00 p.m. **WORKSHOP CLOSURE**