Monday, March 25, 2019

1:30 – 3:00 p.m.

Technical Sessions

### Track A | Room 122A
- Deep Foundations: Piles
  - Moderators: Sarah L. Gasman P.E., MASCE, Sam Storlboom, III P.E., D.GE, MASCE
  - Embankments, Dams, and Slopes: Embankment and Slope Stability
    - Moderators: Bernard A. Castellanos M.S.A.C.E., Peter A. Narasavage P.E., MASCE

- Earthquake Engineering and Soil Dynamics: Numerical Modeling
  - Moderators: Ashby Cailahs Ph.D., A.M.S.A.C.E, Zia Zafir G.E., P.E., MASCE

- Soil Improvement: Biosolips: Moderators: Michael C. Gomes A.M.S.C.E, Mariz Chrysocophos P.E., MASCE

- Soil Properties and Modeling
  - Moderators: Michelle L. Bernhardt Ph.D., A.M.S.C.E, Intharun Sasankul P.E., MASCE

- Sustainability In Geotechnical Engineering
  - Moderators: Paula Bandini Ph.D., P.E., MASCE, Eric S. Backlund P.E., MASCE

### Track B | Room 123
- Pile Design for Use in High-Tension Electrical Resistivity Measurements in Mojdeh Monday, March 25, 2019
  - Kwan Ph.D., P.E., M.ASCE, California State University, Los Angeles; Mark Tufenkjian, California State University, Los Angeles; Kenny Khov, California State University, Los Angeles; Freddy Garcia, California State University, Los Angeles

- Use of the Observational Method as the Sole Basis for Design

- Repairs to Whitehouse Lake Dam

- Karst Topography Risks – Investigation, Design, and Construction with Case Studies
  - Moderators: Steven Halcomb P.E., G.E., Investigation, Design, and Construction with Case Studies; Krishna R Reddy Ph.D., P.E., D.GE, F.ASCE, ENV SP, University of Illinois at Chicago; Girish Kumar S.M.A.SCE, University of Illinois at Chicago

### Track C | Room 124
- Primary and Post-Seismic Secondary Settlements of a Highway Embankment Constructed over Highly Organic Soils: A Case History

- Soil-Structure Interaction Analysis of a Large Diameter Tank on Piled Foundations in Liquidargil Soil Frederick F. Tajdan Ph.D., P.E., F.ASCE, Chevron Energy Technology Company

- Filter-Stabilized Xanthan Gum for Soil Improvement
  - Moderators: Jamie Antionne S.M.A.S.C.E, Stony Brook University; Karam Jaradi, Stony Brook University; Dong Chu, Stony Brook University; Zahir Darbari, Stony Brook University; Abiodun Adebayi, Stony Brook University Energy Technology Company

- Influence of Temperature Variation on Complex-Impedance Measuring Instrument Test Results
  - Moderators: Jason S. Hertz P.E., M.ASCE, Skanska, Christoph L. Meiden Ph.D., P.E., F.ASCE, University of Delaware

- Role of Water Absorption on Rainfall Erosion Performance of Natural Fiber RECPs
  - Moderators: Jennifer L Smith Ph.D., John P. Stopen Engineering Partnership; Shobha K. Bhatia Ph.D., Syracuse University

- The Value of Data – The Qatar Geological Mapping Project

### Track D | Room 125
- Coupled Numerical Analysis of Variations in the Capacity of an Energy Pile in Clay Soil
  - Moderators: Frederick F Tajirian Ph.D., P.E., F.ASCE, Chevron Energy Technology Company; Mansour Tabatabaie Ph.D., P.E., M.ASCE, MTR and Associates; Pramod Rao Ph.D., P.E., MASCE, Serna Cuyutun Rodriguez, University of Nebraska-Lincoln; Ronald Faller, University of Nebraska-Lincoln

- Application of Instrumentation Monitoring and Observational Methods in Construction of a Large Embankment on Soft Ground

- Impact of Hysteretic Damping on Nonlinear Dynamic Soil-Superstructure Interaction Analyses
  - Moderators: Seung Ha Kim P.D., G.E., M.ASCE, China Harbour Engineering Company USA Ltd.; Seung Ha Kim P.D., G.E., M.ASCE, University of Nebraska-Lincoln; Ronald Faller, University of Nebraska-Lincoln

- Shear behavior of hydrotreated biopolymer-treated coarse soils evaluated by laboratory tri-axial test
  - Moderators: Seung Ha Kim P.D., G.E., M.ASCE, China Harbour Engineering Company USA Ltd.; Ronald Faller, University of Nebraska-Lincoln; Ronald Faller, University of Nebraska-Lincoln

- Frequency effects on low-strain shear modulus and damping for natural clays and silts
  - Moderators: Pratik Rautbhathiprachan, University of South Carolina; Intharun Sasankul Ph.D., P.E., M.ASCE, University of South Carolina; Ilhan Huseyin G. Cho Ph.D., Korku University of Science and Technology (KAST); Gye-Chun Cho Ph.D., Korku University of Science and Technology (KAST); Ilhan Huseyin G. Cho Ph.D., Korku University of Science and Technology (KAST); Gye-Chun Cho Ph.D., Korku University of Science and Technology (KAST)

- Application of Triple Bottom Line Sustainability Framework to Select Remediation Method at Industrial Contaminated Site
  - Moderators: Krishna R Reddy Ph.D., P.E., D.GE, F.ASCE, ENV SP, University of Illinois at Chicago; Girish Kumar S.M.A.SCE, University of Illinois at Chicago

- Sinkhole Stability Charts in Central Florida Soils
  - Moderators: John P. Stopen Engineering Partnership; Shobha K. Bhatia Ph.D., Syracuse University; Jennifer L Smith Ph.D., John P. Stopen Engineering Partnership

- GIS-Based Geotechnical Engineering Data Management: A Case Study at the Alabama DOT
  - Moderators: Andrew J Graettinger P.D., M.ASCE, The University of Alabama; Alphonse Kaye Chancellor Davis P.E. M.ASCE, Alabama Department of Transportation; Randy K. Smith Ph.D., The University of Alabama; Abraham Robinson, The University of Alabama
Optimizing the Design of Driven Pile Foundations with Instrumented Static Load Tests

Peter A. Naraswamy P.E., M.ASC; E. L. Robinson Engineering

Case History Summaries of Slope Failures, Missed Predictions and Lessons Learned

Gary H. Gregory P.E., D.GE., M.ASC; Gregory (geotechnical)

Earthquake Engineering and Soil Dynamics: Laboratory Testing Moderators: Majid Ghayoomi Ph.D., P.E., M.ASC; James Kalhorn Ph.D., EIT, M.ASC

Soil Improvement: Microbially Induced Calcium Precipitation Moderators: Brent N. Langwill P.E., M.ASC; Leon A. Van Passen A.M.ASC

Evaluation of Unsaturated Soil Sorptivity and Protection of Basement Slab During Flooding

Ajay Shastri Ph.D., P.E., A.ASCE, Distinct Engineering Solutions Inc; Ram Kantor P.E., District Engineering Solutions Inc; Ram Tirumala P.E., District Engineering Solutions Inc

Design and Performance of a Temporary Concrete Diaphragm Wall Excavation Support System in South Boston

William D. Carrawell P.E., M.ASC; Haley & Aldrich; Jesse D. Siegel P.E., Haley & Aldrich

Validation of pile design methods for gird-end driven pipe piles

Patrick J. Paul P.E., M.ASC; Purdue University; Rodrigo Salgado P.E., D.G.E., M.ASC; Purdue University

Influence of Hydraulic Behavior in Assessing Rigid Media Landslides

Faisal S. Ahmed S.M.ASC, University of Kentucky; Lindsay Subhany Byron P.E., M.ASC, University of New Hampshire

Liquidation Mitigation of Silty Sands Using Microbially Induced Partial Saturation

Sayyad Mossawi M.S., University of New Mexico; Majid Ghayoomi Ph.D., P.E., University of New Hampshire

Microbial Induced Calcite Precipitation of Sand using a Surface Spray Technique

Ralph Crowe Ph.D., P.E., University of North Florida; Matthew Davick M.S., University of North Florida; Terri N. Ellis P.E., University of North Florida; Niki Hylaey P.E., M.ASC, University of North Florida; Paige Ammon, University of North Florida; Charles Christian H.B., University of North Florida

Effect of Lime Stabilization on the Unsaturated Hydraulic Conductivity of Clayey soil in Texas Panek Bhaskar M.S., University of Texas at Arlington; Ranik Bhalok, University of Texas at Arlington; Ankit Banerjee P.E., M.ASC, University of Texas at Arlington; Ali Shafikhani, University of Texas Arlington; Amand Pappula P.E., F.A.SCE, University of North Florida; Ali Shafikhani, University of Texas at Arlington

Design and Performance of a Time-Dependent Continuous Thermomechanical Analysis Method for Geosynthetics

John Yao Ph.D., M.ASC; Haley & Aldrich Engineering Consultants Inc.; Tengfei Wang, Beijing Jiaotong University; William Likos Ph.D., M.ASCE, University of Wisconsin-Madison

Using Mobi-Sand Active Passive Satellite Data to Evaluate the Performance of Transportation Infrastructure Improvements - The Future

Andrew W. Grant, The Pennsylvania State University; Amir Ahmadipur, The Pennsylvania State University; Tong Qiu Ph.D., The Pennsylvania State University

Effects of Particle Size on Impact Force from a Granular Sliding Mass on a Rigid Obstruction

Andrew W. Grant, The Pennsylvania State University; Amit Ahmedpala, The Pennsylvania State University; Tong Qiu Ph.D., The Pennsylvania State University

Cyclic Behavior of a Recompressed Gulf of Mexico Clay with Calcium Sulfate

S.M.ASC, University of Illinois at Urbana-Champaign; Cassandra M. Hattersley P.E., M.ASC; Iowa State University; Scott M. Olson Ph.D., P.E., M.ASC, University of Illinois at Urbana-Champaign

Minimizing Wind Erosion using Microbially Induced Carbonate Precipitation

Pierre Bick, Lehigh University; Hridaya Bastola, Lehigh University; Muhannad T. Suleiman Ph.D., P.E., University of Illinois at Urbana-Champaign

Long-term Monitoring of a Moving Landslide before and after Remediation using Ground-Based Interferometric Synthetic Aperture Radar

Francisco Gomez Carvajal Ph.D., P.E., M.ASCE, DFI, ADSC, Engineers Club of Philadelphia; DVGI Pennoni

Numerical Analysis of a 1DB Retrieval Method Commonly Used for Downhole Seismic Testing

Mohammad H. Halli B.E., M.ASC; Univ. of Texas at Austin; Brady C. Read P.E., P.E., M.ASCE, Univ. of Texas at Austin

Theoretical Evaluation of the Interval Shaft Construction Using Deep Soil Mixing

Omar Kacar Ph.D., P.E., Arup

Testing of Unsaturated Soil Seepage and Protection of Basement Slab During Flooding

Ajay Shastri Ph.D., P.E., A.ASCE, Distinct Engineering Solutions Inc; Ram Kantor P.E., District Engineering Solutions Inc; Ram Tirumala P.E., District Engineering Solutions Inc

Updated Reference Sear Wave Velocity Curves for Near-Surface Site Characterization

Sami Salamah, University of Arkansas at Fayetteville; Clinton M. Wood A.M.ASC, University of Arkansas at Fayetteville; Michelle L. Bernardi A.M.ASC, University of Arkansas at Fayetteville; Ashish Kulkarni, University of Arkansas at Fayetteville; William Vavilov P.D., P.E., M.ASC, Applied Research Associates

Plate Load Testing on Layered Pavement Foundation System to Characterize Mechanistic Parameters


Microbial Induced Calcium Carbonate Precipitation Treated Sand

Pierre Bick, Lehigh University; Hridaya Bastola, Lehigh University; Muhannad T. Suleiman Ph.D., P.E., University of Illinois at Urbana-Champaign; Matthew Davick M.S., University of North Florida; Terri N. Ellis P.E., University of North Florida; Niki Hylaey P.E., M.ASC, University of North Florida; Paige Ammon, University of North Florida; Charles Christian H.B., University of North Florida

Internationals Symposium on Geotextiles and Geomembranes: Coral Roadway Restoration Case Study

John Yao Ph.D., M.ASC; Haley & Aldrich Engineering Consultants Inc.; Tengfei Wang, Beijing Jiaotong University; William Likos Ph.D., M.ASCE, University of Wisconsin-Madison

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Mohammad H. Halli B.E., M.ASC; Univ. of Texas at Austin; Brady C. Read P.E., P.E., M.ASCE, Univ. of Texas at Austin
Impact of Stabilization of Expansive Clay with Corex Slag and Lime

Radha

Observation of Piping Erosion Initiation in a Centrifuge Model

William Ovalle-Villamil, M.Sc., Excessive Deformation of a S.M.ASCE, University of South Carolina; Inthuorn Sasanakul, Ph.D., P.E., A.M.ASCE, University of South Carolina

Stanley R. Boyle, Ph.D., P.E., M.ASCE, Shannon & Wilson, Inc.

Coupled Analysis of Wave, Structure, and Sloping Seabed Interaction: Response and Instability of Seabed

Amin Rafiei, North Carolina State E.M.E., Nitte Meenakshi Institute of Technology; Prathap Kumar M. T. Ph.D., R N S Institute of Technology

Effect of Moulding Water Content and Dry Density on Performance of Treated Coir Fiber Reinforced BC Soil

Jai Raj

Soil Freezing and Its Effects on Pavement Engineering by Random Finite Element Simulation

Shaoyang Dong, Ph.D., S.M.ASCE, Case Western Reserve University; Xiong Yu, Ph.D., P.E., F.ASCE, Case Western Reserve University

An Analysis of Liquefaction-Induced Free-Field Ground Settlement Using L00+ Case-Histories: Observations vs. State-of-Predictions

Column-Supported Embankment: Failure and Remedy

Daniela Bastos Zellers P.E., WSP; Mattio Ferrucci P.E., WSP; Robert Adams P.E., New York State Department of Transportation; Jeffrey Moey P.E., New York State Department of Transportation

Lessons Learned from Embankments, Dams, and Slopes Case Histories

Moderators: Timothy B. Stark Ph.D., P.E., D.GE, F.ASCE, University of Illinois; Scott M. Olson, Ph.D., P.E., F.ASCE, University of California, Davis

Earthquake Engineering and Soil Dynamics: Seismic Hazard Analysis, Site Response, and Liquefaction

Moderators: Meenu Pehlivan Ph.D., P.E., MASCE, Ramzi Motamed Ph.D., P.E., MASCE

Soil Improving: Fiber Reinforcement and Soil Stabilization

Moderators: Pradip Kumar Koley Ph.D., P.E., MASCE, Jonathan F. Hendersen A.M.ASCE

Computational Geotechnics

Moderators: Marta Miletić, Victor N. Kalaskhan Ph.D., P.E., MASCE

Earth Retaining Structures: Bottom-Up Construction

Moderators: James A. McKelvey, P.E., D.GE, F.ASCE, Miguel A. Pando P.E., M.ASCE

Geotechnics of Soil Erosion

Moderators: Stacey E. Tucker-Kalvouzian P.E., MASCE; Jaelung Tao A.M.ASCE

Pavement: Part II

Moderators: Reza S. Ashiani Ph.D., P.E., Bora Cetin P.E.

Lateral Load Test for Large Diameter Drilled Shafts for the Kosciusko Bridge Replacement

Diana E. Xijin Zhang, S.M.ASCE, Case Western Reserve University; Xiong Yu Ph.D., P.E., F.ASCE, Case Western Reserve University; Yuan Guo Ph.D., Case Western Reserve University; Xudong Fan, Case Western Reserve University

Influence of Gaps in Capping Clay Layer on Liquefaction-Induced Settlement

Sara Khoshnevissian, Ph.D., MASCE, Clarkson University; Lei Wang, Ph.D., P.E., MASCE, University of District of Columbia; Wei Wang, Ph.D., Institute of Disaster Prevention; Chong Huan Jiang Ph.D., P.E., MASCE, Clemson University

The Effects of Stress Redistribution on Measure Lateral Pressures at the Face of Geosynthetic Reinforced Soil Excavations

Jennifer E. Nicks, Ph.D., P.E., M.ASCE, Federal Highway Administration; Michael T. Adams, M.ASCE, Federal Highway Administration; Jan Li, ESCINC

Field Performance of Reinforced Dunes for Improving Coastal Resilience

Brian Maggi, P.E., MASCE, U.S. Coast Guard Academy; Christopher Baxter, Ph.D., P.E., MASCE, University of Rhode Island; Annette Grilli, Ph.D., University of Rhode Island; Stephen Laki, Ph.D., University of Rhode Island; Paolo Stegenga, Ph.D., University of Rhode Island

Foundation Design Case Study - 1800 Arch Street High Rise Tower Daniel P. Marano Jr. MS, P.E., MASCE, Pennoni

An Analysis of Liquefaction-Induced Free-Field Ground Settlement Using L00+ Case-Histories: Observations vs. State-of-Predictions

Mercan Feyzi M.S., BMASCE, University of Washington; Brett W. Mauro Ph.D., A.MASCE, University of Washington

Effect of Modelling Water Content and Dry Density on Performance of Treated Coir Fiber Reinforced BC Soil at Raj M.E., NITTE Meenakshi Institute of Technology; Purshap Kumar M. T. Ph.D., P.N S Institute of Technology

Excessive Deformation of a Mechanically Stabilized Earth Wall Embankment Constructed on Soft Ground

Speaker: Izzat M. Idriss, Ph.D., P.E., NAE, D.B.E., MASCE, University of California, Davis

The Effects of Stress Propagation on the Formation of Stress Waves beneath the Bottom of Drilled Shaft Excavations

Azizena Kordjazi, Temple University; Joseph Thomas Coe, Ph.D., Temple University

Use of Pacific Pressure Sensors to Measure Lateral Pressures at the Face of Geosynthetic Reinforced Soil Excavations

Eman F. Naja, Ph.D., University of South Carolina; Daniela Bastos Zellers P.E., WSP; Sherif Hanna P.E., WSP; Matteo Ferrucci P.E., WSP; Robert Adams P.E., New York State Department of Transportation; Jeffrey Moey P.E., New York State Department of Transportation

Lessons Learned from Embankments, Dams, and Slopes Case Histories

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Pavement: Part II

Moderators: Reza S. Ashiani Ph.D., P.E., Bora Cetin P.E.
### Technical Sessions

**Track A | Room 122A**

#### 8:00 – 9:30 a.m.

**Verification Load Testing of Micropiles Under Combined Axial and Lateral Forces**
- Siamak Jafrovadi, Ph.D., P.E., G.E., D.GE; FASCE, Petra Geosciences Inc.;
- Thang Van Nguyen, P.E., M.ASCE, Hayward Baker Inc.

**Emergency Brake: Abutment Repair with Pressed-in Pipe Piles**
- Takafumi Nakamura, A.M.ASCE, Giken America Corp.
- Hiroyuki Nakamura, Japan Press-in Association;
- Masashi Nagano, Giken America Corp.

**Jet Grouting for Excavation Support, Underpinning, and Groundwater Control for the Construction of Sewage Treatment Plant Tanks**
- Russell W. Preuss, P.E., M.ASCE, Gannett Fleming, Inc.;
- Daniel V. Cacciola, P.E., M.ASCE, Gannett Fleming, Inc.;
- Carlos Medina, Hayward Baker Inc.

**Zeo-Hydrate Forensic Investigation of an Earthquake Dam Failure**
- Christopher J. Brown, Ph.D., P.E.; University of North Florida; Nick Hadyana Ph.D., P.E., M.ASCE, University of North Florida

**Quantifying the Influence of Construction Methods on Hollow-Bar Micropiles’ Performance in Sand**
- Md Ahunnamzaman, Ph.D., Third Year Student, North Carolina State University; Alex Smith, P.E., Sutcliffe Construction Co., LLC; Mohammed (Mo) Gabe, Ph.D., P.E., FASCE, D.GE, North Carolina State University; Ray Bondy, P.E., FASCE, North Carolina State University

**Factors Affecting the Kinetics of Urea Hydrolysis via Sporoscarcina Pasteurii**
- Shahin Safavizadeh, Ph.D., North Carolina State University;
- Mohammed A. Gabr, Ph.D., P.E., North Carolina State University;
- Detlef R. U. Knappe, Ph.D., P.E., North Carolina State University

**Shallow Tunnel Not Aligned to the Geostatic Principal Stress Directions**
- Oskar G. Vinald, Master of Science, Civil Engineer, Purdue University;
- Antonio Bobet, Ph.D, Purdue University

**Photogrammetry for the Characterization of Rock Masses Two Case Histories for Slopes and Caverns**
- Fulvio Tonon, Ph.D., P.E., M.ASCE, Tonon USA: Engineering, Measurements, and Testing, LLC

**Geo-PIT: Powerful, Informative Talks on Geo-Topics**
- Michelle Lee Barry, Ph.D., P.E., M.ASCE, University of Arkansas; Interacting Emerging Technologies to Geotechnical Engineering
- Kevin Franke, P.E., M.ASCE, Brigham Young University; Drones: An Engineering Reconnaissance Tool of Tomorrow - Here Today!
- Jason Dulong, P.E., M.ASCE, University of California at Davis; Mike Money, Colorado School of Mines

**Lessons Learned: An Adventure in 4 Decades of Geosynthetics Engineering**
- Barry R. Christopher, Ph.D., P.E., Geotechnical Engineering Consultant, Christopher Consultants

**Monitoring of Full Scale Tieback Wall and How It Can Improve Student’s Learning – Case History Paper**
- Scott Anderson, P.E., M.ASCE, BGC Engineering; We all saw it the Same Way

**Conclusions**

**8:00 – 9:30 a.m. Morning Networking Break in Hall E**

**Track B | Room 123**

**Landslide Susceptibility: Updating Considering Real-Time Observations**
- Haujie Wang, BSc, The Hong Kong University of Science and Technology;
- Leon Zhang, Ph.D., P.E., M.ASCE, The Hong Kong University of Science and Technology

**Developing An Engineering Geology Field Trip To Enhance Student Learning: A Case Study**
- Osvaldo P M Vitali, Master of Science, Civil Engineer, Purdue University; Tarcisio B. Celestino, Ph.D, University of Sao Paulo; Antonio Bobet, Ph.D, Purdue University

**Emergency Bridge: Abutment Repair with Pressed-in Pipe Piles**
- Takefumi Takami, A.M.ASCE, Giken America Corp.
- Hiroyuki Nakamura, Japan Press-in Association;
- Masashi Nagano, Giken America Corp.

**Geohydro Forensic Investigation of an Earthquake Dam Failure**
- Christopher J. Brown, Ph.D., P.E.; University of North Florida; Nick Hadyana Ph.D., P.E., M.ASCE, University of North Florida

**Hydraulic Conductivity and Soil Water Retention of Waste Rock and Tailings Mixtures**
- Mohammad H. Gorakhki, Colorado State University; Christoher A. Bareither, Colorado State University; Joseph Scalda, Colorado State University; Michael Jacobs, Goldcorp Inc.

**Case History of an Exhumed Landfill**
- Peter D. Scott, BSc, MSc, F.ASCE, FICE, CEng, FGS, Buro Happold Limited

**Deep Foundations: Special Topics**
- Moderators: Joseph Thomas Cox, Jr., P.E., Matties Moutet, P.E., M.ASCE
- Undergraduate Engineering and Construction
  - Moderator: John S. McCartney, Ph.D., P.E., FASCE, Settoris Varzakos, Ph.D., CEng, M.ASCE
- Risk Assessment and Management
  - Moderators: Nathaniel M. Dawson, P.E., M.ASCE; Kalliff Sett, Ph.D., EIT, A.M.ASCE
- Education for Geotechnical Engineering
  - Moderators: Andrea L. Welker, P.E., M.ASCE; Patricia M. Gallaghers, P.E., FASCE, Drexel University

**Fundamentals of Geotechnical Engineering**
- Moderators: Kristin Sample-Lord, P.E., M.ASCE; Ehsan Ghazanfari; Ph.D., P.E. M.ASCE

**Deformation, Stress, and Displacement Measurements**
- Moderators: Haitham M. Dawood, Ph.D., P.E., M.ASCE; Kalliff Sett, Ph.D., EIT, A.M.ASCE

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**Deformation, Stress, and Displacement Measurements**
- Moderators: Haitham M. Dawood, Ph.D., P.E., M.ASCE; Kalliff Sett, Ph.D., EIT, A.M.ASCE
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<tr>
<td>10:00 – 11:30 a.m.</td>
<td>Track A: Underground Engineering and Construction</td>
<td>Track B: Risk Assessment and Management</td>
<td>Track C: Education for Geotechnical Engineering</td>
<td>Track D: Geoenvironmental Engineering</td>
<td>Track F: Geologic Risk Assessment and Back Analysis of Ground Movements Induced by Tunnel and Open-Cut Excavations</td>
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<td>11:30 a.m. – 12:30 p.m.</td>
<td>Lunch in Exhibit Hall</td>
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<td>1:00 – 1:30 p.m.</td>
<td>hacker's, Extreme Events and Climate Conditions – the Development of FHWA Guidance</td>
<td>Rauh Rekawek, M.ASCE, WSP USA, Brian H. Zelenko, P.E., M.ASCE, WSP USA</td>
<td>Stresses in Soil-Contaminated Shelly Trench Cutoff Wall</td>
<td>Daniel G. Rufing, P.E., Geo-Solutions, Inc., Jeffrey C. Evans, Ph.D., P.E., D.GE, F.ASCE, Bucknell University</td>
<td>Speaker: Misko Cubrinovsky Ph.D.</td>
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<td>2:00 – 2:30 p.m.</td>
<td>Stress in Soil-Contaminated Shelly Trench Cutoff Wall</td>
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Wednesday, March 27, 2019