# TOPICS AND SUBTOPICS

## Call for Abstracts and Session Proposals

### Codes and Standards
- IBC/ASCE 7 Foundations/Soil

### Collaboration for Design of Specialized Structures and Their Foundations
- Buried Structures
- Solar Towers
- Tanks / Vessels
- Vibrating Equipment
- Waterfront Structures
- Wind Turbine Towers

### Curricula and Continuing Education
- ABET Accreditation
- Capstone projects
- Geotechnical Engineering Curriculum
- How Does Higher Education Teach Design?
- Structural Engineering Curriculum
- Learning and Education Reform
- Role of Industry in Mentoring New Graduates
- Specialty Degree
- What Industry Needs from Graduates

### Earth Retaining Structures
- Actual vs. Predicted Performance
- Anchored and Tie-back Walls
- Bulkhead and Quay Wall Design and Performance
- Deep Excavation Support
- Design / Analysis
- Interaction of Geotechnical and Structural Engineers
- Mechanically Stabilized Embankment Walls
- Seismic Forces
- Testing / Inspection

### Extreme Loads
- Fault Crossing
- Flooding
- Landslides
- Lateral Spreading
- Liquefaction
- Natural and Man-made Hazards (Tsunami and Blast)
- Seismic
- Wind

### Geotechnical & Structural Elements of Foundation Design
- Concrete Pile Ties - Hooks, Spiral, Welding, Detailing
- Deep Foundations in Karstic Environments
- Deep Foundations in Rock (Discontinuous, Variable Depths)
- Deep Foundations in Expansive Soils
- Design / Analysis
- Design for Liquefaction / Lateral Spreading
- Geotextiles / Geogrids - Designs, Types
- Installation / Backfilling Issues / Flowable Fill
- Interaction of Geotechnical and Structural Engineers
- Load Transfer Pad Design
- Piled Rafts
- Retrofit/Strengthening Practices for Existing Foundations
- Slab on Grade
- Testing / Inspection
- 7 Infrastructure Health Monitoring
- Monitoring Bridges
- Monitoring Waterways, Tunnels
- Smart Systems

### Performance-Based Design
- Foundation
- Seismic
- Underground

### Mega Projects
- Case Studies
- Project Delivery

### Performance of Constructed Facilities
- Case Histories
- Code Provisions
- Design / Analysis of Structures on Liquefiable Soils
- Design / Detailing to Minimize Impact on Structure
- Design of Structures for Landslides
- Effect of Pile Length or Site Variation
- Effect of Settlement on Performance of Structures
- Field Monitoring Results
- Load Testing
- Modeling / Prediction
- Prediction / Identification / Analysis Methods and Tools / Confidence Level of Results
- Soil Improvement Options - Including Feasibility/Best Solution
## TOPICS AND SUBTOPICS

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### Professional Practice Issues
- Best Practices for Interaction Between Structural and Geotechnical Engineers
- Commoditization of Professional Services
- Communication Among The Professions
- Definition of STR & GEO Needs to Each Other
- Determining a Sufficient Subsurface Investigation (Geotechnical Baseline Reports)
- Errors and Omissions Insurance, history, availability, limits, limitations and other issues
- Evaluation of Economic Alternatives
- Liability and Risk
- Liability - The Line Between the SE and GEO
- P.E. Responsibilities After Signing Documents
- Project Delivery Methods
- Risk Reduction and Claims Management
- Specialized Licensing / Certification

### Reliability/Risk Assessment
- Managing Risk
- In Geotechnical Assessment, Characterization and Design
- In Structural Assessment and Design
- Uncertainty

### Resiliency and Sustainability
- Metrics and Assessment for Sustainable Design
- Reuse of Existing Foundations
- Reuse of Waste and Recycled Materials
- Rehabilitation

### Seismic Hazard Analysis-Geotechnical & Structural Implications
- Code Provisions
- Ground-motion Detection
- Instrumentation and Monitoring
- Modeling
- Site Specific Response Analysis
- State of the Art and Practice
- USGS Models / Upcoming Changes

### Sizing of Foundations (LRFD vs ASD)
- Effect on Different Foundation Types
- Geotechnical Engineer’s View
- LRFD Guidance for Subsurface Investigation - How Does It Differ
- Proposed Code Provisions
- Pros vs. Cons
- Structural Engineer’s View
- Why Use LRFD in Geotechnical Arena?

### Soil Structure Interaction
- Benchmarking of Numerical Codes
- Code Provisions / Limitations
- Effects on Seismic Loads
- Modeling
- Soil Approximations in Structural Modeling
- Soil Influence on Structural Behavior

### Blast and Impact Loading and Response of Structures
- Blast Impact and Fire
- Bridge, Tunnels and Transportation Structures
- Innovative Materials/Construction
- Protective Structures

### Bridge and Transportation Structures
- Structural Bridge Analysis
- Structural Bridge Design Practice
- Structural Bridge Research
- Structural Bridge Other

### Buildings
- Damping, Isolation and Smart Structures
- Retrofitting, Restoration and Repair of existing Structures
- Seismic and Wind Engineering and Design
- Structural Innovations-Materials, Analysis and Design
- Tall or Longspan Structures

### Embankments/Dams/Slopes
- Assessment and Management
- Design
- Stabilization Techniques

### Geoenvironmental
- Energy
- Hazards
- Life-Cycle Assessment
- Systems
- Waste Management and Remediation

### Grouting
- Analysis and Design
- Case Histories
- Performance Testing
- Soil and Ground Improvement
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