

Geo-Frontiers 2011 Paper Sessions and Panel Discussion

Track No. 1: Soil/Rock Mechanics and Modeling	
No	Session Title
a	Characterizing and predicting expansive soil behavior
b	Multi-scale characterization and modeling of soils
c	A hysteresis curve of SWCC for unsaturated soils
d	Computational methods in geotechnical engineering
e	Unsaturated characteristics and behavior of solid waste fills
f	Micro-mechanics of granular soils: experimentation, modeling and computational analyses
g	Soil-structure-geosynthetics interaction
h	Bio soils
Track No. 2: Geotechnical Testing and Site Characterization	
a	Characterizing, testing, modeling and case studies on expansive clays and compacted soils in the active zone
b	Redefining the role of geology in site geo-characterization for LRFD projects
c	Advances in site characterization by incorporating simultaneous measurement techniques
d	Geophysical technologies to characterize variability and uncertainty for engineering design
e	Use of geophysical methods for transportation infrastructure inspection
Track No. 3: Foundations and Ground Improvement	
a	Foundation reuse -- a Lynch Pin to sustainable building recycling
b	Energy foundations
c	Wind turbine foundations - geotechnical explorations, analysis and design
d	Design of shallow foundations under non-uniform loading and subsurface conditions
e	Ground improvement
f	Erosion of Soils and Scour of Foundations
Track No. 4: Slopes, Embankments, and Earth Retaining Structures	
a	Green engineering: walls and slopes with cellular confinement systems
b	Retaining walls for transportation projects
c	Slope stability issues and stabilization methods
d	Dynamic soil-structure interaction
Track No. 5: Geosynthetics	
a	Index testing to enable comparison of different geogrids
b	Advances in materials, design methods, and performance evaluation of drainage geocompositess in landfills
c	Interaction of geosynthetics with unsaturated soils
d	Geosynthetic clay liners - new research
e	Concrete protection liners
f	Floating Cover Systems for Potable Water
g	Geotextile Tubes

Track No. 6: Geoenvironmental Engineering	
a	Advances in sustainable barrier materials
b	Sustainable use of waste
c	Advances in site remediation technologies
d	Recent advances in the use of geosynthetics for containment systems
e	Geosynthetic liners for containing contaminants of emerging concern
f	Elevated temperatures in landfills
h	Characterization and Re-use of waste materials such as; coal combustion products, shredded tire, foundry sand, and other emerging waste materials.
i	Unsaturated characteristics and behavior of solid waste fills
j	Landfills as Host Sites for Renewable Energy Applications
Track 7: Geo-Hazards (Earthquake engineering, Landslides, Erosion, Others)	
a	Blast Hazards to Geotechnical Structures – Characterization and Mitigation
b	Landslides - analysis and design
c	Monitoring and Health Assessment of Earth Structures and Other Geotechnical Systems
d	Geological site characterization for geohazards management
e	Lessons learned from failures
f	Fundamentals of Erosion
Track 8: Transportation Materials and Pavements	
a	The use of lightweight fill, example projects and design requirements
b	Best practices for the structural evaluation of existing highway pavements
c	Geogrid reinforcement mechanisms in pavement stabilization applications
d	Mechanistic-Based Evaluation of Pavement Layer and Foundation Properties
e	Behavior and Design of Stabilized Pavement Layers and Foundations
Track 9: Other Geotechnical Related Issues	
a	Geotechnical engineering for design-build projects and other innovative project delivery methods
b	Geo-legislative
c	Geo-professional issues
d	Geo-management
e	Geo Education
f	Others (please specify a possible session)
Track 10: Student Papers	
a	Student Papers on Geosynthetics (Competition)
Panel Discussion	
a	Installing and welding HDPE geomembranes - How we do it and why
b	Evaluations of Existing Foundations
c	Installation of large diameter steel caissons
d	The development of national standards for leak detection technologies