

GeoShanghai 2010 International Conference

3rd – 5th June, 2010 Shanghai, China

Technical Program

Organized by



Tongji University



Chinese Institution of Soil Mechanics
and Geotechnical Engineering



Shanghai Society of Civil Engineering

Cooperating Organizations



ASCE
Geo-Institute



Deep Foundations
Institute



East China Architectural Design &
Research Institute Co., Ltd.



University of Tennessee



University of Illinois at
Urbana-Champaign



Transportation Research Board of
the National Academies



University of Kansas



Georgia Institute of Technology



University of Newcastle



Vienna University of Natural
Resources and Applied Life Sciences



Alaska University
Transportation Center



Nagoya Institute of Technology

■ Venue

Map of Grand Central Hotel Shanghai & Central Hotel Shanghai



Grand Central Hotel Shanghai

Address: 505 Jiujiang Road
Shanghai 200001, China
Tel: (86)21- 5353 5888
Fax: (86)21- 6351 9999

Central Hotel Shanghai

Address: 555 Jiujiang Road
Shanghai 200001, China
Tel: (86)21- 5396 5000
Fax: (86)21- 5396 5128

Technical Program Overview

2 June 2010 Wednesday		
13:30-21:00	Registration	<i>Lobby in Grand Central Hotel Shanghai (505 Jiujiang Road)</i>
3 June 2010 Thursday		
07:30-17:00	Registration	<i>Lobby in Grand Central Hotel Shanghai</i>
08:45-09:30	Opening Ceremony	<i>Shanghai Grand Ballroom (4th Floor)</i>
09:30-10:15	Terzaghi Lecture	<i>Shanghai Grand Ballroom (4th Floor)</i>
10:15-10:35	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>
10:35-11:55	Keynote Lectures	<i>Shanghai Grand Ballroom (4th Floor)</i>
12:00-13:30	Lunch Break	<i>Grand Central Hotel Shanghai (1st Floor Coffee Shop)</i>
13:30-15:30	Parallel Sessions	
	Session A: Soil Behavior I	<i>Crystal Hall (4th Floor)</i>
	Session B: Unsaturated Soils I	<i>Grosvenor Room (4th Floor)</i>
	Session C: Foundation & Tunneling I	<i>Jade Hall (4th Floor)</i>
	Session D: Pavement I	<i>Shanghai Grand Ballroom (4th Floor)</i>
15:30-15:50	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>
15:50-17:50	Parallel Sessions	
	Session A: Constitutive Modeling I	<i>Crystal Hall (4th Floor)</i>
	Session B: Foundation & Tunneling II	<i>Jade Hall (4th Floor)</i>
	Session C: Pavement II	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session D: Ground Improvement I	<i>Grosvenor Room (4th Floor)</i>
18:30-20:30	Welcome Reception	<i>BaoHe Hall (5th Floor), Central Hotel Shanghai (555 Jiujiang Road, located next to Grand Central Hotel Shanghai)</i>
4 June 2010 Friday		
08:20-10:20	Keynote Lectures	<i>Shanghai Grand Ballroom (4th Floor)</i>
10:20-10:40	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>
10:40-11:20	Keynote Lecture	<i>Shanghai Grand Ballroom (4th Floor)</i>
11:20-12:00	EH Davis Lecture	<i>Shanghai Grand Ballroom (4th Floor)</i>
12:00-13:30	Lunch Break	<i>Grand Central Hotel Shanghai (1st Floor Coffee Shop)</i>
13:30-15:30	Tour to Tongji University	<i>Pick-up: Entrance of Grand Central Hotel Shanghai</i>
13:30-15:30	Parallel Sessions	
	Session A: Soil Behavior II	<i>Crystal Hall (4th Floor)</i>
	Session B: Foundation & Tunneling III	<i>Jade Hall (4th Floor)</i>
	Session C: Pavement III	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session D: Soil Dynamics I	<i>Grosvenor Room (4th Floor)</i>
15:30-15:50	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>

15:50-17:50	Parallel Sessions	
	Session A: Unsaturated Soils II	<i>Grosvenor Room (4th Floor)</i>
	Session B: Foundation & Tunneling IV	<i>Jade Hall (4th Floor)</i>
	Session C: Pavement IV – <i>Special Session Honoring Prof. Zukang Yao</i>	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session D: GeoEnvironmental Eng. I	<i>Crystal Hall (4th Floor)</i>

5 June 2010 Saturday

08:00-10:00	Parallel Sessions	
	Session A: Constitutive Modeling II	<i>Crystal Hall (4th Floor)</i>
	Session B: Foundation & Tunneling V	<i>Jade Hall (4th Floor)</i>
	Session C: Pavement V	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session D: Ground Improvement II	<i>Grosvenor Room (4th Floor)</i>
	Session E: Soil Dynamics II	<i>Iris Room (2nd Floor)</i>
10:00-10:20	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>
10:20-12:20	Parallel Sessions	
	Session A: Foundation & Tunneling VI	<i>Jade Hall (4th Floor)</i>
	Session B: Pavement VI	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session C: Ground Improvement III	<i>Grosvenor Room (4th Floor)</i>
	Session D: Soil Dynamics III	<i>Crystal Hall (4th Floor)</i>
	Session E: GeoEnvironmental Eng. II	<i>Iris Room (2nd Floor)</i>
12:20-13:30	Lunch Break	<i>Grand Central Hotel Shanghai (1st Floor Coffee Shop)</i>
13:30-15:30	Parallel Sessions	
	Session A: Geo-Micromech. & DEM	<i>Grosvenor Room (4th Floor)</i>
	Session B: Unsaturated Soils III	<i>Crystal Hall (4th Floor)</i>
	Session C: Foundation & Tunneling VII	<i>Jade Hall (4th Floor)</i>
	Session D: Pavement VII	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session E: GeoEnvironmental Eng. III	<i>Iris Room (2nd Floor)</i>
15:30-15:50	Coffee Break	<i>Grand Ballroom Corridor (4th Floor)</i>
15:50-17:50	Parallel Sessions	
	Session A: Foundation & Tunneling VIII	<i>Jade Hall (4th Floor)</i>
	Session B: Foundation & Tunneling IX	<i>Grosvenor Room (4th Floor)</i>
	Session C: Pavement VIII	<i>Shanghai Grand Ballroom (4th Floor)</i>
	Session D: Geosynthetics	<i>Crystal Hall (4th Floor)</i>
	Session E: Soil Dynamics IV	<i>Iris Room (2nd Floor)</i>
19:30-21:30	Closing Ceremony & Banquet	<i>Shanghai Grand Ballroom (4th Floor)</i>

6 June 2010 Sunday

8:30	Tour to Shanghai World Expo Park	<i>Pick-up: Entrance of Grand Central Hotel Shanghai</i>
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**Note:*

Please copy your presentation file into the computer onsite 10 minutes before the session in which you are going to present.

Technical Program June 3, 2010 (Thursday)

07:30-17:00	Registration		
08:45-09:30	Opening Ceremony		
09:30-10:15	Terzaghi Lecture Geosynthetic reinforced soil: from experiment to the familiar <i>Prof. Robert Holtz, University of Washington, USA</i>	<i>Chaired by Prof. Mehmet Tumay</i>	
10:15-10:35	Coffee Break		
10:35-11:15	Keynote Lecture Engineering properties of unsaturated soil <i>Prof. Robert Lytton, Texas A& M University USA</i>	<i>Chaired by Prof. Yun Bai</i>	
11:15-11:55	Keynote Lecture Lessons from damages to high embankment dams in the May 12, 2008 Wenchuan earthquake <i>Prof. Jian-Min Zhang, Tsinghua University, China</i>		
12:00-13:30	Lunch Break		
13:30-15:30	Parallel Sessions		
A (Crystal Hall)	Soil Behavior I <i>Chair: Roger Meier</i>		
	201	Correlation between Different Physical and Engineering Properties of Tropical Peat Soils from Sarawak	PK Kolay
	385	Compressibility Behavior of Soft Clay Sediments	M Hattab
	406	Critical State Parameters of Kentucky Clay	L Bryson
	620	The Ultimate Uplift Capacity of Multi-Plate Anchors in Undrained Clay	R Merifield
	394	A Calculation Method of Secondary Compression Index for Natural Sedimentary Clays Using Void Index	L Zeng
	407	Role of Microstructure in the Mechanical Behaviour of Clay	N Kochmanova
B (Grosvenor Room)	Unsaturated Soils I: General characterization <i>Chair: Laureano Hoyos & Anand Puppala</i>		
	568	Simple Modeling of Stress-strain Relation for Unsaturated Soil	H Kyokawa et al.
	569	A Novel Suction-Controlled Ring Shear Testing Apparatus for Unsaturated Soils	LR Hoyos et al.
	571	Modeling Unsaturated Soil Behavior under Multiaxial Stress Paths Using a Refined Suction-Controlled Cubical Test Cell	LR Hoyos et al.
	573	Effect of Saturation on Cyclic Volumetric Change of Compacted Silty Sands	E Yee et al.
	401	Influence of Initial Water Content on the Collapsibility of Loess	M Wang et al.
	549	Treatment of Collapsible Soils by Salts Using the Double Consolidation Method	K Abbeche et al.
C (Jade Hall)	Foundation & Tunneling I <i>Chair: Robert Y. Liang</i>		
	84	Influence of Pile Geometry on Internal Sand Displacement around a Laterally Loaded Pile Using Transparent Soil	J Liu et al.
	56	Soil-Water Coupling Analysis of Real-Scale Field Test for 9-Pile Foundation Subjected to Cyclic Horizontal Loading	F Zhang
	574	Pile Diameter Effect on Bending Behaviour of Piles in Clay Under Earthquake Loads	R Ayothiraman & G Chandraprakash
	72	Predictions of Pile Setup and its Resistance Factors for the South Louisiana	X Wang & E Steward

	669	Experimental Study of Model Piles Socketed into Rock with a Hanging Base	N Xi et al
	601	Deformation of Anchor-sheet Pile Wall Retaining System at Deep Excavations in Soft Soils Overlying Bedrock	J Ma
	21	Deformation Regularity and Simplified Calculation Method for Foundation Pit with Confined Water During Excavation and Dewatering	C Ding
D (Shanghai Grand Ballroom)	Pavement I: Paving materials characterization and modeling I		
	<i>Chair: Zhongyin Guo & Zhanping You</i>		
	237	Linear Viscoelastic Behaviour and Anisotropy of Bituminous Mixture Compacted with a French Wheel Compactor	P Clec'h et al.
	PP-024	Evaluation of Rheology and Engineering Properties of a Bridge Deck Thermo-plastic Waterproofing Material	GM Rowe et al.
	337	Laboratory Evaluation of Effects of Joint Heater on Longitudinal Joint	J Chen et al.
	PP-022	Influence of Anti-Oxidants on Bitumen Rheology	S Dessouky
	321	Determining Compaction Temperatures Based on Asphalt Mixtures Test	G Qian et al.
	263	Resilient Modulus Characteristics of Varying Percent of Reclaimed Asphalt Pavement	Y Song & PSK Ooi
275	Utilization of Waste Plastic for Improving Subgrades in Flexible Pavements	A Choudhary	
15:30-15:50	Coffee Break		
15:50-17:50	Parallel Sessions		
A (Crystal Hall)	Constitutive Modeling I		
	<i>Chair: Yangping Yao</i>		
	Invited Lecture		
	Unified Method for Describing Various Features of Stress-Strain Behavior of Geomaterials <i>Prof. T Nakai, Nagoya Institute of Technology, Japan</i>		
	399	A Two Yielding Surface Elasto-Plastic Model with Consideration of Grain Breakage	W Hu
	409	A Three-Dimensional Unified Hardening Model for Anisotropic Soils	Y Yao
	436	A Microstructural Approach for Modeling the Mechanical Behavior of Structured Clays	Z-Y Yin
380	A Coupled Micro-Macro Method for Pile Penetration Analysis	W Jin & J Zhou	
397	Method to Evaluate the Mechanical Behavior of Granular Material with Large Particles	W Hu	
B (Jade Hall)	Foundation & Tunneling II		
	<i>Chair: Fulvio Tonnon & Hong Yang</i>		
	24	Design and Research of Circular Diaphragm Wall for Deep Excavation of Shanghai Tower	J Jia
	39	Deep Excavation Induced Pile Movement in Bangkok Subsoil – A Numerical Investigation	P Jongpradist
	41	A Preliminary Study on the Behavior of Axially Loaded Single Pile Subjected to Lateral Soil Movement	F Yu et al.
	672	Centrifuge Model Study of Impact on Existing Undercrossing Induced by Deep Excavation	X Xie
	46	Interaction Effect of Retaining Wall and Existing Foundations in Braced Excavation	S Hossain
9	Design and Construction of Reinforced Steel Chain Wall	K Abongo	
40	A Case Study of Soil-cement Mixing Retaining Wall for Korean Urban Site	YS Kim	

C (Shanghai Grand Ballroom)	Pavement II: Paving materials characterization and modeling II		
	<i>Chair: Xiang Shu & Rong Luo</i>		
	236	Accelerated Laboratory Polishing Device for Hot Mix Asphalt	RY Liang et al.
	642	Effect of Aggregate and Asphalt on Pavement Skid Resistance Evolution	D Zhao et al.
	259	Test Method and Performance of Fire-retardant Modified Asphalt Used in Road Tunnel	Q Yang & Z Guo
	239	Development of a New Moisture Conditioning Procedure for Bitumen Stabilized Materials	EM Twagira & KJ Jenkins
D (Grosvenor Room)	444	Formulization of Asphalt Concrete Stiffness for Specific Microstructures Based on Discrete Element Method	Y Liu & Z You
	289	Deformation Characteristics of Asphaltic Concrete in Uniaxial Compression	W Kongkitkul et al.
	Ground Improvement I: Chemical stabilization		
	<i>Chair: G. Jayaprakash</i>		
	684	Durability of Cement Treated Clay with Air Foam Used in Water Front Structures	Y Kikuchi & T Nagatome
	184	Utilization of Shredded Rubber Tires for Cement-Stabilized Soft Clay	MA Shahin & LS Hong
D (Grosvenor Room)	221	Mechanical Properties of Used Tire Granulates, Sand and Cement Mixtures	B Teymur & BA Atapek
	194	Fly Ash as a Dispersing Material in Cement Stabilization	S Horpibulsuk & Y Raksachon
	577	Heavy Structures Supported by Soil-Cement Columns	L Shao & K Ivanetich
	229	Application of Gypsum Waste Plasterboard and Waste Plastic Trays to Enhance the Performance of Fine Grained Soil	A Ahmed et al.
18:30-20:30		Welcome Reception	

Technical Program June 4, 2010 (Friday)

08:20-09:00	Keynote Lecture Long lasting flexible pavements and the myth of bottom-up fatigue cracking <i>Prof. Imad Al-Qadi, University of Illinois at Urbana-Champaign, USA</i>	Chaired by <i>Prof. Terhi Pellinen</i>	
09:00-09:40	Keynote Lecture Viscous effects and anisotropy for unbound granular materials <i>Prof. Herve Di Benedetto, University of Lyon, France</i>		
09:40-10:20	Keynote Lecture Bearing capacity and deformation characteristics of uplift piles in soft ground <i>Prof. Maosong Huang, Tongji University, China</i>		
10:20-10:40	Coffee Break		
10:40-11:20	Keynote Lecture Durability of cement treated clay with air foam used in water front structures <i>Dr. Yoshiaki Kikuchi, Port and Airport Research Institute, Ministry of Transport, Japan</i>	Chaired by <i>Prof. Feng Zhang</i>	
11:20-12:00	EH Davis Lecture Recent advances in the application of vertical drains and vacuum preloading in soft soil stabilisation <i>Prof. Buddhima Indraratna, University of Wollongong, Australia</i>		
12:00-13:30	Lunch Break		
13:30-15:30	Parallel Sessions		
A (Crystal Hall)	Soil Behavior II <i>Chair: Andrew Abbo</i>		
	633	Applications of Adaptive Time Stepping in Analysis of Biot Consolidation	A Abbo et al.
	369	One-Dimensional Consolidation of Saturated Clays Under Time-Dependent Loadings Considering Non-Darcy Flow	Z Liu et al.
	398	Experiments on a Calcareous Rockfill Using a Large Triaxial Cell	W Hu
	441	Local Deformation of Compacted Sand in Triaxial Compression Tests Using PIV Analysis	N Yuya
	478	On the Modeling of Anisotropy and Destructuration of Shanghai Soft Clay	Y Liu
B (Jade Hall)	Foundation & Tunneling III <i>Chair: Songyu Liu</i>		
	62	Axial pile resistance of different pile systems based on empirical	H-G Kempfert
	77	Optical model test on work mechanism of single pile with cap	Y Chen et al.
	86	Nonlinear Buckling Analysis of Piles with High-rise Pile Cap values	X-J Zou et al. & P Becker
	58	Observations on Viscosity Reduction of PHPA Polymer Support Fluids	C Lam et al.
	49	Coupled Seepage and Stress Analysis of Diaphragm Wall-Soil Interaction during Deep Foundation Pit Excavation	H Yuan
	538	The Studies on Intelligent Construction Pre-Control of a Foundation Pit in Shanghai	M Wang
678	Effects of PCC Pile Spacing on Expressway Embankment Settlement Control	T Zhang	

C (Shanghai Grand Ballroom)	Pavement III: Concrete pavement technology		
	<i>Chair: Samer Dessouky & Zhixiang Zhang</i>		
	663	Research and Application of Recycled Aggregate Concrete	J Yin et al.
	334	Comparison of Portland Cement Concrete CTE Calculation Protocols	S Jahangirnejad & N Buch
	665	Study on the Performance and Application of High Performance Pavement Portland Cement Concrete	J Yin et al.
	266	Dynamic Pavement-Vehicle Interaction of Rigid Pavement Resting on Two-Parameter Soil Medium	VA Sawant et al.
	336	Estimation of Cement Concrete Pavement Slab Void Ratio Based on FAHP Method	S Zeng & J Xu
256	Sublayer Strength Evaluation with FWD in Semi-rigid Base Asphalt Pavement Rehabilitation Project	L Cong et al.	
D (Grosvenor Room)	Soil Dynamics I		
	<i>Chair: Guoping Zhang</i>		
	454	Application of the H/V Spectral Ratio Technique to Estimate the Site Characterization in the South of Iran	M Mokhberi et al.
	448	Dynamic Property of Mucky Soil of Subgrade under Cyclic Load	G Liu & Q Kai
	447	Dynamic Response of Railway Track Rested on Transversely Isotropic Poroelastic Media	Y Zhou et al.
	677	Ground Vibration Caused by Dynamic Excitation on Pile Foundation	X Bian et al.
	461	Influence of Water Saturation on the Free Field Response of Liquefiable Soils	H Bian
462	Earthquake Response Analysis of Soil Layers Using HFTD approach	A Asgari & MH Bagheripour	
15:30-15:50	Coffee Break		
15:50-17:50	Parallel Sessions		
A (Grosvenor Room)	Unsaturated Soils II: Applied modeling I		
	<i>Chair: Laureano Hoyos & Anand Puppala</i>		
	PP-25	Effect of Weathering Cycles on Strength and Swell Potential of Fly Ash Stabilized Expansive Soil Subbases	S. Bin-Shafique et al.
	547	Fundamentals of Unsaturated Soil Modelling: Have we got it right?	D Sheng & A Zhou
	560	Effect of Slope Terrain on Distribution of Matric Suction in Unsaturated Slopes Subjected to Rainfall	C Fan & C Hsiao
	545	Three-dimensional Slope Stability Analysis of Unsaturated Soil Slopes Subject to Reservoir Water Level Fluctuations	C Yong et al.
	248	Effect of Environmental Conditions on Stability of an Unsaturated Soil Slope	Z Zhang et al.
	561	Failure Mechanism of Unsaturated Volcanic Slopes due to Rainfall and Freeze-thaw Actions	S Kawamura et al.
543	Elastoplastic Modelling of Hydraulic and Mechanical Behaviour of Unsaturated Expansive Soils	W Sun et al.	
B (Jade Hall)	Foundation & Tunneling IV		
	<i>Chair: Haiying Huang</i>		
	667	Axial Capacity of Drilled Shafts in Clay over Gravel Formation	S-S Lin et al.
	673	Evaluation of Axial Capacity of Post Grouted Drilled Shafts	E Farouz et al.
	PP-021	Case Studies of Risk Assessment concerning Karst and consequential Foundation Design of High-rise Buildings and Large-scale Projects in the Middle East	H Quick et al.
	81	Analysis of Stability of Super-Long Bored Pile Considering Resistance of Layered Soils on the Side of Pile	J-P Li et al.
83	Numerical Analysis on Ground Behavior for Construction of Displacement Pile	M Suzuki	

	528	Upper Bound Solutions for the Face Stability of Shallow Circular Tunnels Subjected to Nonlinear Failure Criterion	H Fu
	507	Study on Mechanism of Simultaneous Backfilling Grouting for Shield Tunneling in Soft Soils	Z Dai
C (Shanghai Grand Ballroom)	Pavement IV – Special Session Honoring Prof. Zukang Yao <i>Chair: Jianming Ling & Baoshan Huang</i>		
	650	A Method to Build a Practical Dynamic Modulus Testing Protocol	S Li
	260	Study on Pavement Superposition Effects under Multiple Aircraft Tires	H Zhao et al.
	659	Evaluation of Micromechanical Models for Predicting Dynamic Modulus of Asphalt Mixtures	X Shu & B Huang
	593	Evaluation of Subgrade Modulus for Semi-Rigid Asphalt Pavement Using Deflection Basin Parameter	Z Xie et al.
	258	Determination of Subgrade Resilient Modulus for Existing Pavements Based on Moisture Condition Coupled with Stress	J Ling et al.
	265	Evaluation of Gradation of RAP Based on Fractal Theory	X Jia & F Ye
	261	Analysis of Loading Stresses in Asphalt Overlay on Existing Concrete Pavements Based upon a Simplified Three-dimensional Model	Y Zhou & Z Tan
D (Crystal Hall)	GeoEnvironmental Engineering I <i>Chair: Qiang He</i>		
	689	Simulation of Groundwater Composition Change due to Deposition of Uranium Minerals in Dolomite Gravel Fill	F Zhang et al.
	123	Bioremediation of Heavy Metals in Soil and Groundwater: Impact of Nitrate as an Inhibitor	Q He
	116	Some Recent Developments in Modeling THCM Behaviour in Geoenvironmental Problems.	P Vardon & H Thomas
	104	Beneficial Reuse of Corrugated Board in Slurry Applications	J Hanson et al.
	120	Simultaneous Modeling of Internal Erosion and Deformation of Soil Structures	K Fujisawa et al.
	353	Rapid Drawdown of Water Table in Layered Soil Column	H Yang & H Rahardjo
	351	Seepage Failure and Erosion of Ground with Air Bubble Dynamics	K Maeda

Technical Program June 5, 2010 (Saturday)

08:00-10:00		Parallel Sessions	
A (Crystal Hall)	Constitutive Modeling II <i>Chair: Zhenyu Yin</i>		
	656	Hypoplastic Model for Simulation of Deformation Characteristics of Bangkok Soft Clay with Different Stress Paths	S Youwai
	435	Modeling Anisotropic, Debonding and Viscous Behaviors of Natural Soft Clays	ZY Yin
	424	Clay Subjected to Cyclic Loading: Constitutive Model and Time Homogenization Technique	P-Y Hicher
	425	Improvement of Thermomechanical Model for Soil and Its FEM Analysis	L Kong et al.
	429 373	Modification of Subloading t_{ij} Model for Soft Rock A Double Modified Plastic Work-Hardening Constitutive Model for Sand under Plane-Strain Conditions	M Iwata X Bai et al.
B (Jade Hall)	Foundation & Tunneling V <i>Chair: Ke Yang</i>		
	63	Model Test Research on the Compaction Effect of Jacked Pile in Layered Soil	Y Li et al.
	67	Effects Of Cyclic Frequency and Pre-Loading on Behaviour of Plate Anchors	S Prasad et al.
	442	Displacement Field of an Uplifting Anchor in Sand	M Liu et al.
	668	Centrifuge Study on Ultra-deep Foundation Pit Excavation in Soft Ground	Q Xu et al.
	51	Investigation on the Requirements regarding the Minimum Embedded Length of Monopiles	Y-S Kuo
	622	Analysis on Ground Deformation Caused by Tunneling of Large-Diameter Tunnel Boring Machine	Z Yang
535	Study on evaluation method of fire safety of tunnel lining structure	Liang Li	
C (Shanghai Grand Ballroom)	Pavement V: Pavement base materials I <i>Chair: Shihui Shen & Guoping Qian</i>		
	177	Air-Soil Relationships for Lime and Cement Stabilized Subgrades	JL Daniels et al.
	676	Particle Shape, Type and Amount of Fines, and Moisture Affecting Resilient Modulus Behavior of Unbound Aggregates	D Mishra et al.
	682	Assessing the Polishing Characteristics of Coarse Aggregates Using Micro-Deval and Imaging System	W Xue et al.
	281	Investigation of Aggregate Packing Using Discrete Element Modeling	H Yu & S Shen
	675	Laboratory Validation of Coal Dust Fouled Ballast Discrete Element Model	H Huang et al.
280	In-situ Testing and Evaluation of Moisture Content in Existing Subgrade	J Qian et al.	
D (Grosvenor Room)	Ground Improvement II: Special soil modification/new modification methods <i>Chair: Anand Puppala</i>		
	206	Safety Problems of Freezing Projects in Saline Soils	X Hu et al.
	228	Effects of Organics on Stabilized Expansive Subgrade Soils	S Saride et al.
	1	An Economical, Practical and Environmental Friendly Surcharge Preloading Method to Improve Soft Ground of Municipal Road	H Yang
	227	Bridge Approach Settlements: Lessons Learned from Available Case Studies and Present Site Investigations	A Puppala et al.
	190	Implementation of Optimized Ground Improvement Techniques for a	B Hamidi et al.

		Giga Project	
	144	Development of Reinforced Soil Structure with Pile Foundation	T Hara et al.
E (Iris Room)	Soil Dynamics II		
	<i>Chair: Ming Xiao</i>		
	481	Numerical Analysis of Wave Propagation in Two-Phase Soil Medium	A Borowiec
	446	Seismic Performances of Pile Groups in Inclined Soil Layers Subjected to Strong Motions	M Wang et al.
	465	3D Finite Element Analysis of Ship Grounding Problem	G Qiu & J Grabe
	457	Analysis of Soil and Metro-Tunnels' Interaction in Earthquake Activities	N Liu et al.
	477	Cyclic Shear Strength of Clay under Simple Shear Condition	T Kodaka et al.
	489	Soil-Water Coupled Finite Deformation Analysis of Seismic Deformation and Failure of Embankment on Horizontal and Dip Ground	M Nakano
10:00-10:20		Coffee Break	
10:20-12:20		Parallel Sessions	
A (Jade Hall)	Foundation & Tunneling VI		
	<i>Chair: Renpeng Chen</i>		
	157	Strength and Deformation Characteristics of Lagoonal Clay Deposits in Lixia River Area by Seismic Piezocone Tests	G Cai et al.
	175	Estimation of In-Situ Strength for Sandy Soils Using CPT Cone Resistance	J Lee et al.
	180	Identification of Soil Stratigraphy in Soft Deposit of Shanghai Using CPTU Test	S Shen et al.
	167	Monitoring in situ Soil Moisture Variations of Expansive Clay Using Neutron Probes	J Li
	179	Cylindrical Cavity Expansion from a Finite Radius	H Huang & E Detournay
	16	Effectiveness of Ground Improvement for a Cut-and-Cover Tunnel with a Backfill Slope based on Finite Element Analysis	H Yang
	532	Study on Maintenance Technology of Shield Tunnel in Soft Soil	R Yi
B (Shanghai Grand Ballroom)	Pavement VI: Pavement performance and analysis I		
	<i>Chair: DingXin Cheng</i>		
	643	Improving Pavement Management System by Adding Pavement Preservation Component	DX Cheng et al.
	666	Cost-Effectiveness Evaluation of Pavement Maintenance Treatments by OPTime	Q Dong & B Huang
	614	Variable Slip Skid Resistance Testing for Road Safety Investigation and Pavement Management	W Liu & B Tinkler
	292	Long-Term Field Monitoring of Moisture Variations under Asphalt Pavement with Different Drainable Base Materials	M Taamneh & RY Liang
	655	Comparison of FWD and Benkelman Beam in Evaluation of Pavement Structure Capacity	L Zhou et al.
	299	Performance of Pavements with Blast Furnace Base Courses	LJM Houben et al.
	317	Predicted Pavement Life-Cycle Costing of Surface Maintenance Treatments	T Martin
(Grosvenor Room)	Ground Improvement III: Behavior of modified soil		
	<i>Chair: Laureano Hoyos</i>		
	219	Settlement Behavior of Highway Transition Sections on Soft clay foundation	Y Deng et al.
	131	Bearing Capacities of Geogrid-reinforced Sand Bases under Static Loading	Y-L Dong et al.

C	224	Mechanical Behavior of Compacted Geomaterial Changed from The Dredged Soil in Nagoya Port by Mixing with some Stabilizers	K Sun et al.
	204	Experimental Study on Shear Strength Behavior of Shredded Tyre-Reinforced Sand	V Valliappan & B Singh
	124	Analysis on Load Transfer for Single Pile Composite Foundation under Embankments Based on Elastic Theory	XM Lou & GB Jiang
	392	Triaxial Compression and Extension Tests for Fiber-Reinforced Silty Sand	C-W Chen
D (Crystal Hall)	Soil Dynamics III <i>Chair: Xiong (Bill) Yu</i>		
	490	Deformation Analyses of River Dike on Liquefiable Ground Affected by Different Earthquake Motions	H Yokawa et al.
	482	Different Failure Modes of A Clay Foundation-Embankment System corresponding to Different Incident Seismic Waves	K Nakai et al.
	452	Dynamic Analysis for Foundation of Vibrating Equipments Considering Soil-Structure Interaction	Y Han
	499	Laboratory Flume Static and Dynamic Experiment for Rock Avalanches	K Ugai et al.
	486	Modeling and Seismic Response Analysis of a Reclaimed Artificial Ground	T Noda
	PP-026	Topographic Effects on the Seismic Responses of Single Face Slopes	S-W Qi
E (Iris Room)	GeoEnvironmental Engineering II <i>Chair: Shui-Long Shen</i>		
	118	Study on the New Deformation Characteristics of the Pumped Aquifers in Su-Xi-Chang Area, China	F Wang et al.
	172	An Aquifer Analogue Study of High Resolution Aquifer Characterization based on Hydraulic Tomography	R Hu et al.
	96	Parametric Studies of Ground Deformation Induced by Pneumatic Caisson Construction in Soft Soils	H Wang et al.
	105	Closed-form Solutions of the Homogeneous Isotropic Elastic Half Space Subjected to a Circular Plane Heat Source	J Lu
	99	Strength Comparison of Cement Solidified/Stabilized Soils Contaminated by Lead or Copper	L Chen et al.
	127	Wells Simulator	E Holzbecher & M Sauter
	106	Golden Ratio in the Point Heat Source Induced Horizontal and Vertical Displacements of an Isotropic Elastic Half Space	J Lu
12:20-13:30		Lunch Break	
13:30-15:30		Parallel Sessions	
A (Grosvenor Room)	Geo-Micromechanics and DEM <i>Chair: Linbing Wang</i>		
	652	3D Modeling of Piping Mechanism Using Distinct Element Method	J Zhou & K Zhou
	437	Three-Dimensional DEM Modeling of Triaxial Compression of Sands	Y Lu
	440	Investigation of Mechanical Response Induced in Dynamic Compaction of Sandy Soils with PFC ^{2D}	M Jia et al.
	604	Study on the Deformation of Loose Sand Under Cyclic Loading by DEM Simulation	M Hu et al.
	PP-23	3D DEM Simulation of Crushable Granular Soils under Plane Strain Compression Condition	J Wang
	350	Spherical Discrete Element Simulation of Seepage Flow with Particle-Fluid Interaction Using Coupled Open Source Software	F Chen et al.
	Unsaturated Soils III: Applied modeling II <i>Chair: Laureano Hoyos & Anand Puppala</i>		
	554	Development of Shrinkage Model for Clays Based on Moisture Variation	A Sabnis et al.

B (Crystal Hall)	12	Stabilization of Embankment on Expansive Soil – A Case Study	R Katti et al.
	565	Effect of Water Sources on Water Migration in the Vadose Zone	K Chao et al.
	566	An Empirical Method for Predicting Foundation Heave Rate in Expansive Soil	JD Nelson et al.
	572	Unified Solutions for Unsaturated Soil Shear Strength and Active Earth Pressure	C Zhang et al.
	417	Centrifuge Model Tests of Slopes with Weak Layer under Rainfall	R Wang et al.
C (Jade Hall)	Foundation & Tunneling VII <i>Chair: Wenqi Ding & Hualao Wang</i>		
	7	Settlement and Load Sharing of Piled Raft of a 162 m High Residential Tower	K Yamashita et al.
	55	Effect of Pile Configuration and Loading Type on Piled Raft Foundations Performance	M Rabiei
	61	Coupled Foundation-Superstructure Analysis and Influence of Building Stiffness on Foundation Response	YF Leung et al.
	68	Analysis of Bridge Response Considering Water-Soil-Pile-Structure Interaction under a Scoured Condition	C Lin
	54	Numerical Simulations on a Displacement Pile in Sand Using Stress-Controlled Method	Y Chuang
	626	The Technological Issues of Health Monitoring in Wuhan Yangtze River Tunnel Operations	H Dou
	22	Model Tests and Numerical Simulations on Pile-Soil Interaction of Passive Piles	X Chen
D (Shanghai Grand Ballroom)	Pavement VII: Pavement performance and analysis II <i>Chair: Louay N. Mohammad</i>		
	341	Predicting Rutting of Unbound Aggregate layers Using Total Void calculation under Full-Scale Testing at the FAA National Airport Pavement Test Facility	J Gagnon & N Garg
	340	Subgrade Stress Measurements under Heavy Aircraft Gear Loading at FAA National Airport Pavement Test Facility	N Garg et al.
	582	The Performance and Economic Benefits of Thick Granular Base for Flexible Pavement Design in Frost Susceptible Regions	R Beck et al.
	271	Shanghai Experience with Warm Mix Asphalt	J Yan et al.
	592	Performance Prediction and Moisture Susceptibility of Anisotropic Pavement Foundations	R Salehi et al.
	333	Effect of Traffic Data Coverage on the M-E PDG Traffic Characterization	JT Brown et al.
E (Iris Room)	GeoEnvironmental Engineering III <i>Chair: Linchang Miao</i>		
	342	A Mathematical Model for Determination the Critical Hydraulic Gradient in Soil Piping	J Zhou et al
	583	Effect of Piping on Shear Strength of Levees	M Xiao & G Jose
	19	Coupled Stability Analysis of Rainfall-induced Landslide: A Case Study in Taiwan Piedmont Area	H-C Lo et al.
	101	Influence of Heavy Metal Contaminants on the Compressibility of Reconstituted Kaolinite	X Liu
	100	Field Test of a Geothermal System in Hafencity Hamburg	X Ma & J Grabe
	90	Application of Microgravity Survey to Detect Underground Cavities in a Desert Karst Terrain	H Kamal et al.
346	Application of Natural Element Method in Solving Seepage Problem	S Shahrokhbabadi	
15:30-15:50		Coffee Break	
15:50-17:50		Parallel Sessions	

A (Jade Hall)	Foundation & Tunneling VIII		
	<i>Chair: Wei Wu</i>		
	522	The Determination of Geometric Characteristics of Nonregular Underground Structures	M Zamani
	37	Isolation of DDC Impact to the Movements of Retaining Walls by Wave Barriers	Y Tan
	523	Stability Analysis of the Front Slope of Small-Distance Highway Tunnel with very Large Section based on 3d Monitoring	W Ding
	519	Experimental Test on Communication Cable Tunnel Constructed by Shield Tunneling Method for Tunnel Maintenance	L Guan
	539	Analytical Study on the Control of Ground Subsidence Arising from the Phenomenon of Accompanied Settlement Using Foot Reinforcement Side Pile	Y Cui
	27	Back Analysis of Case Histories on Deep Excavations in Marine Clay	SY Lam
48	Deformation Prediction of Deep Excavation Based on Unequal interval Grey Model GM(1,1)	Y Li	
B (Grosvenor Room)	Foundation & Tunneling IX		
	<i>Chair: Shilong Mei & Xiongyao Xie</i>		
	651	Numerical Simulation of EPB Tunnel Face Instability in Dry Sand by Discrete Element Method	L Tang
	405	Determination of Stress Release Coefficient and Analysis of Influence Factors in Granular Soil Tunnel	L Zhuang
	621	The Application of F&EI Method in Risk Assessment of Tunnel Gas Explosion	J Wang
	524	Research on 3D Numerical Model of Segment Lining for Large-section River-crossing Shield Tunnel	A Jiang
	514	Numerical Analysis of the Thermo-Hydronechanical Behaviour of Underground Storages in Hard Rock	J Yun
	508	Study on Shiziyang Tunnel Engineering Geology and Shield Tunneling	X Yang
247	Reconstruction of the Temperature Distribution on the vertical Direction of Tunnel in Fire Accidents	Y Fang	
505	Numerical Analyses and Elastoplastic Behavior Study on Surrounding Rock Mass of the Underground Caverns in Shuangjiangkou Hydropower Station during Deep Excavations	Y Li	
C (Shanghai Grand Ballroom)	Pavement VIII: Pavement base materials II		
	<i>Chair: Erol Tutumluer & Hai Huang</i>		
	661	Laboratory Evaluation of Physical and Mechanical Properties of Recycled Asphalt Pavement	SC Thakur et al.
	330	Evaluation of a New Generation of Asphalt Treated Mixtures	LN Mohammad et al.
	616	Field Evaluation of Recycled Materials at MnROAD	H Wen et al.
	240	Study on Cement-treated Yangtze Hydraulic Sand Mixed with Expanded Polystyrenes (EPS) Beads as Backfill Material in Highway Embankments	L Miao et al.
	297	Influence of lime on Alluvial Soil Strengthened with Pond Ash and Rice Husk Ash for Construction of Subgrade of Road	TK Roy
235	Characterization of Unbound Granular Materials Using Repeated Load CBR and Triaxial Testing	A Araya et al	
Geosynthetics: Retaining wall			
<i>Chair: Jie Han</i>			
149	Field Test and Numerical Analysis on Performance Upgrade of Existing Rockfall Protection Fence by Using High Energy Absorption Net	S Tsuji	
150	Mechanical Behaviour of Geosynthetic-Reinforced Soil Retaining Wall	M Kikumoto et al.	

	133	Numerical Study on the Deformation and Failure of Reinforced Sand Retaining Walls Subjected to the Vertical Load	Y Cao et al.
	136	Performance Study of Geosynthetic Reinforced Soil Retaining Structures	S-J Chao
	153	2D And 3D Coupled Hydraulic And Mechanical Modeling of A Constructed Geosynthetic-Reinforced Column-Supported Embankment	J Huang et al.
	155	Prediction of Settlements of Geocell Reinforced Sand Foundations	S Saride et al.
E (Iris Room)	Soil Dynamics IV		
	<i>Chair: Zhaohui Yang</i>		
	498	Seasonal Freezing Effects on the Behavior of Highway Bridges	Z Yang et al.
	589	Seismic CPTu To Assist the Design on Existing Foundations	X YU
	488	Study of the Effects of Fines Content on Liquefaction Properties of Sand	Y Wang & Y-L Wang
	491	Vertical Vibration of Partially Embedded Pile Groups	R Qing & M-S Huang
	487	Undrained Long-term Cyclic Degradation Characteristics of Offshore Soft Clay	S Li & M-S Huang
	458	Efficient Algorithm proposed to generate non-uniform ground motion on canyon sites	R Tarinejad & MT Ahmadi
	384	Modeling of Cyclic Plane Strain Response of Toyoura Sand	R Hossain et al.
19:30-21:30		Closing Ceremony & Banquet	

Exhibitors

Shanghai GeoHarbour Group
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Measurand Inc.
Chase Construction Products
Metropolitan Transportation Commission
NanJing TOP Instrument Co. Ltd.
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