

PROGRAMME AT A GLANCE

Time	Pre conference Tuesday 24 Nov 2009
16:30-17:30	Pre Conference Registration
18:00-21:00	Reception NEC/NTU

PROGRAMME AT A GLANCE

DAY 1 Wednesday 25 Nov 2009	
8:00-8:30	Registration
8:30-8:50	Opening Ceremony
8:50-9:30	KEYNOTE 1 @ Auditorium Genhua SHI Rock Stability Analysis and Three Convergences of Discontinuous Deformation Analysis (DDA) Chair: Guowei MA
9:30-09:50	Tea Break @ Venue
9:50-10:30	KEYNOTE 2 @ Auditorium Yossef H.Hatzor Modelling dynamic deformation in natural rock slopes and underground openings with DDA Chair: Chee Hiong LIM
10:30-11:10	KEYNOTE 3 @ Auditorium Guoxin ZHANG Toppling failure simulation of rock slope by numerical manifold method Chair: Chee Hiong LIM
11:10-11:50	KEYNOTE 4 @ Auditorium Aiqing WU Study on the Formation Mechanism of Tanjiashan Landslide Triggered by Wenchuan Earthquake Using DDA Chair: Chee Hiong LIM
11:50-12:30	KEYNOTE 5 @ Auditorium Guirong LIU title: TBC Chair: Chee Hiong LIM
12:30-14:00	Lunch @ Venue
Parallel Sessions - Afternoon Session	
14:00-15:30	DDA @ Lecture Room 1 Chair: Yossef H.Hatzor
14:00-14:15	S.A.R. BEYABANAKI Contact Theory for Deformable Blocks in Three-Dimensional Discontinuous Deformation Analysis (3-D DDA) 2
14:15-14:30	Youjun NING Contact Algorithm Modification of DDA and Its Verification 9
14:30-14:45	Jun YANG DDA for Dynamic Failure Problems and Its Application in Rock Blasting Simulation 10
14:45-15:00	Jun YANG Study on Roof Caving Problem with DDA Method 12
15:00-15:15	Zhiye ZHAO Indeterminacy of the Vertex-vertex Contact in the 2D Discontinuous Deformation Analysis 24
15:15-15:30	Hong ZHENG Complementary Formulation of Discontinuous Deformation Analysis 27
15:30-16:00	Tea Break @ Venue
Parallel Sessions - Afternoon Session	
16:00-17:30	DEM @ Lecture Room 2 Chair: Gang CHEN
16:00-16:15	N. TAKEUCHI Development of Modified RBSM for Rock Mechanics using Principle of Hybrid-type Virtual Work 37
16:15-16:30	H. MOHAMMADI Investigation of Effect of Joint Parameters on Deformations of Tunnels in Anisotropy Media Using UDEC 39
16:30-16:45	Caichu XIA High Rock Slope Stability Analysis Using The Meshless Shepard And Least Squares Method 44
16:45-17:00	W. L. CHONG Numerical Modelling of Laboratory Behaviour of Single Laterally Loaded Piles Socketed into Jointed Rocks 46
17:00-17:15	Tiantang YU Simulation of crack growth with Discrete Element Method 53
17:15-17:30	S. JEON Distinct Element Analysis on the Stability of a Stone Pagoda at Mireuk Temple Site in Korea 61
17:30	End of Day One

PROGRAMME AT A GLANCE

DAY 2 Thursday 26 Nov 2009	
Parallel Sessions - Morning Session	
9:00-10:30	DDA @ Lecture Room 1 Chair: Ying WANG
9:00-9:15	Zhiye ZHAO Discontinuous Deformation Analysis for Parallel Hole Cut Blasting in Rock Mass 77
9:15-9:30	Guoxin ZHANG THE ANALYSIS OF STRUCTURE DEFORMATION USING DDA WITH THIRD ORDER DISPLACEMENT FUNCTION 89
9:30-9:45	Guichen MA Application Of DDA To Evaluate The Dynamic Behaviour Of Submarine Landslides Which Generated 90
9:45-10:00	D.BAKUN-MAZOR 3D DDA vs. Analytical Solutions for Dynamic Sliding Of a Tetrahedral Wedge 93
10:00-10:15	Caichu XIA Application of Strength Reduction DDA Method in Stability Analysis of Road Tunnel 98
10:15-10:30	Yuliang LIN The Application of Discontinuous Deformation Analysis in the Slope Stability of the Expansive Soil 124
10:30-11:00 Tea Break @ Venue	
Parallel Sessions - Morning Session	
11:00-12:30	NMM @ Lecture Room 1 Chair: Zhiye ZHAO
11:00-11:15	Y.L. HOU Extension of Distinct Element Method and Its Application in Fracture Analysis of Quasi-brittle Materials 127
11:15-11:30	Xinmei AN A Comparison between the NMM and the XFEM in Discontinuity Modelling 128
11:30-11:45	Haidong SU Initial stress formulae for high-order numerical manifold method and high-order DDA 13
11:45-12:00	S. MIKI Development of Coupled Discontinuous Deformation Analysis and Numerical Manifold Method (NMM-DDA) and its Application to Dynamic Problems 17
12:00-12:15	T. SASAKI Stability Analysis Of Ancient Block Structures By Using DDA And Manifold Method 21
12:15-12:30	Qinghai MIAO Parallel computing of Numerical Manifold Method with OpenMP 23
12:30-14:00 LUNCH @ Venue	
Parallel Sessions - Afternoon Session	
14:00-15:30	NMM @ Lecture Room 1 Chair: Shigeru MIKI
14:00-14:15	T. KOYAMA Application of Manifold Method (MM) to the Stability Problems for Cut Slopes along the National Roads 47
14:15-14:30	D. KOUREPINIS Boundary Deformability and Convergence in the Higher-Order Numerical Manifold Method 55
14:30-14:45	D. KOUREPINIS The Numerical Manifold Method and Extended Finite Element Method – A Comparison from the Perspective of Discontinuous Deformation Analysis 75
14:00-15:30	Slope/Underground @ Lecture Room 2 Chair: L.N.Y. WONG
14:00-14:15	Hongqing CUI Fault Studies and Coal-gas-outburst Forecast in Coal Mines 15
14:15-14:30	CHULWHAN PARK Suggestion Of Equations To Determine The Elastic Constants Of A Transversely Isotropic Rock Specimen 60
14:30-14:45	K. WEIGLOVÁ Mutual Effect of Tectonic Dislocations and Tunnel Linings during Tunnelling 91

PROGRAMME AT A GLANCE

Time	DAY 2 Thursday 26 Nov 2009	
14:45-15:00	Luxian LI Accuracy Comparison of Rectangular and Triangular Mathematical Elements in the Numerical Manifold Method 130	L. MIČA Mutual Effect of Tectonic Dislocations and Tunnel Linings during Tunneling 95
15:00-15:15	Lei HE Development of 3-D Numerical Manifold Method 137	Shougen CHEN A Numerical Study of Goaf Stability under a Desert Expressway 99
15:15-15:30	Wenjun YANG Application of the Optimization for Rock Tunnel's Axis Trend by Block Theory 32	Shougen CHEN A Study On Hole-cutting In Deep Tunneling 105
15:30-16:00	Tea Break @ Venue	
	Parallel Sessions - Afternoon Session	
16:00-17:30	Slope/Underground @ Lecture Room 1 Chair: P.P. PROCHAZKA	Slope/Underground @ Lecture Room 2 Chair: Shougen CHEN
16:00-16:15	M.J. PFITZNER 3D Simulation of Heavy Ground Support System Performance in Discontinuous Rock Masses 111	Chenliang JI Determination Method Of Rock Mass Hydraulic Conductivity Tensor Based On Back-Analysis Of Fracture Transmissivity And Fracture Network Model 83
16:15-16:30	ABBAS MAJDI Stability analysis of transformer cavern and the corresponding bus duct system at Siyah Bishe ... 117	Jianguo NING The Study On Zonal Disintegration Of Surrounding Rock In Deep Cross Roadway Under High Stress 85
16:30-16:45	Chunhui ZHANG Model Of Coupled Gas Flow And Deformation Process In Random Fractured Coal Seams 120	Zhengzhao LIANG Numerical Simulation of Scale Effect of Jointed Rock Masses 107
16:45-17:00	Yongjian YU Model of Coupled Gas Flow and Deformation Process in Heterogeneous Coal Seams and its Application 122	M.Z. GAO Influence of Cobblestone Geometrical Property on Equivalent Elastic Modulus of Cobblestone-Soil Matrix 113
17:00-17:15	Moubin LIU Simulation of Multiphase Fluid Motion in Pore-scale Fractures 126	ABBAS MAJDI Comparative studies of physical and numerical modeling on regular discontinuities based on Bandis Eq 115
17:15-17:30	Shanyong WANG 2-D FEM analysis of the rock fragmentation by two drill bits 30	Kaida DAI Micromechanical Simulation of the Damage and Fracture Behavior of a Highly Particle-filled Composite Material Using Manifold Method 121
17:45	Gather @ Lobby - Transfer to Singapore Flyer followed by Gala Dinner	
18:15	Arrival at Singapore Flyer	
18:15-19:00	Singapore Flyer Ride	
19:00	Dinner Commences	
22:00	Dinner Ends - Transfer back to NTU	

PROGRAMME AT A GLANCE

DAY 3 Wednesday 27 Nov 2009			
9:00-9:40	KEYNOTE 6 @ Auditorium Yuzo Ohnishi Concerning the influenced of velocity ratio and topography model on the result of rockfall simulation Chair: Jian ZHAO		
9:40-10:20	KEYNOTE 7 @ Auditorium Guowei MA Development of Numerical Manifold Method Chair: Jian ZHAO		
10:20-11:00	KEYNOTE 8 @ Auditorium Haibo LI title Chair: Jian ZHAO		
11:00-11:30	Tea Break @ Venue		
Parallel Sessions			
11:30-12:45	Dynamic/Crack @ Auditorium Chair: Chunan TANG	Dynamic/Crack @ Lecture Room 1 Chair: Masato SHINJI	Dynamic/Crack @ Lecture Room 2 Chair: Shaozhong LIN
11:30-11:45	M. KURUMATANI An analysis of dynamic tensile fracture in concrete under high strain rate 41	T.SHIMAUCHI Concerning the Influenced Of Velocity Ratio and Topography Model On the Result of Rockfall Simulation 97	Jian ZHAO Microscopic Numerical Modelling of the Dynamic Strength of Brittle Rock 135
11:45-12:00	Lifeng FAN A New Equivalent Medium Model for P-wave Propagation Through Rock Mass with Parallel Joints 42	Lianchong LI Modeling of Three-dimensional Hydrofracture in Permeable Rocks Subjected to Differential Far-field Stresses 104	P.P. PROCHAZKA Hereditary Problems in Long-Wall Mining by Free Hexagons 86
12:00-12:15	Junhai ZHAO The Finite Element Analysis for Concrete Filled Steel Tubular Columns under Blast Load 70	S. Tanaka Crack Propagation Analysis using Wavelet Galerkin Method 108	Shougen CHEN Analysis Of Large Rock Deformation Under High In Situ Stress 101
12:15-12:30	L.N.Y. WONG Process Zone Development Associated with Cracking Processes in Carrara Marble 76	Chenqing WU Numerical Simulation of Performance of Concrete-Filled FRP Tubes under Impact Loading 125	B. CULEK Probabilistic Assessment of a Railway Steel Bridge 136
12:30-12:45	N. NOURBAKHSNIA A Novel Singular ES-FEM Method for Simulating Singular Stress Fields near the Crack Tips for Linear Fracture Problems 92	Xingui ZHANG An Analysis of Model Tests on Rock Cavern Damage Induced by Underground Explosion 133	Hongyun GUO Numerical Simulation of Frictional Contact Problems in Large deformation of Deep Soft Rock Engineering 4
12:45-13:30	LUNCH @ Venue		
13:30-14:30	Technical and Leisure Tours - Optional (Please register before 10 November 09) Details: TBC		