

岩土力學國際學術會議暨第十四次全國岩石力學與工程學術
大會國際分會，2016 年 12 月 14-17 日，香港，中國

**International Geotechnics Symposium cum International
Meeting of CSRME 14th Biennial National Congress
14-17 December 2016, Hong Kong, China**
<http://www.igscsrme.hku.hk/>

Programme and Registration



Organizers

Chinese Society for Rock Mechanics and Engineering (CSRME)

The University of Hong Kong (HKU)

Summary of Scientific Programme

Venue: Graduate House (GH), Main Campus, The University of Hong Kong

Dec. 14, 2016 Wednesday

13:00-18:00 On-site Registration
17:00-18:00 Cocktail Reception

Venue:

Foyer area, GH
Foyer area, GH

Dec. 15, 2016 Thursday

8:15-17:00 On-site Registration
8:45-9:15 Opening Ceremony
9:15-10:15 Plenary Session 1
10:15-10:25 Group Photo
10:25-10:40 Coffee-Tea Break
10:40-12:10 Plenary Session 2

Venue:

Foyer area, GH
Wang Gungwu Theatre, GH
Wang Gungwu Theatre, GH
All Delegates at Staircase Space outside GH
Foyer area, GH
Wang Gungwu Theatre, GH

12:10-13:30 Lunch

Lunch Box at Foyer area, GH

13:30-16:00 Plenary Session 3
16:00-16:20 Coffee-Tea Break
16:20-18:10 Parallel Session 1
Parallel Session 2
Parallel Session 3

Wang Gungwu Theatre, GH
Foyer area, GH
Wang Gungwu Theatre, GH
Seminar Room P5-03, GH
Seminar Room P5-01, GH

19:00-21:30 **Dinner**

Victoria Harbour Restaurant, Westwood Mall

Dec. 16, 2016 Friday

8:30-17:00 On-site Registration
9:00-10:30 Plenary Session 4
10:30-10:45 Coffee-Tea Break
10:45-12:15 Plenary Session 5

Venue:

Foyer area, GH
Wang Gungwu Theatre, GH
Foyer area, GH
Wang Gungwu Theatre, GH

12:15-13:30 Lunch

Lunch Box at Foyer area, GH

13:30-15:00 Plenary Session 6
15:00-16:00 Plenary Session 7
16:00-16:10 Coffee-Tea Break
16:10-17:30 Parallel Session 4
Parallel Session 5
17:30-18:00 Closing Ceremony

Wang Gungwu Theatre, GH
Wang Gungwu Theatre, GH
Foyer area, GH
Seminar Room P5-01, GH
Wang Gungwu Theatre, GH
Wang Gungwu Theatre, GH

19:00-21:30 **Banquet**

Fulum Restaurant, 455-485 Queen's Road West

Dec. 17, 2016 Saturday

9:00-12:00 Technical Site Visit 1
12:00-14:00 Lunch
14:00-17:00 Technical Site Visit 2

Venue:

Hong Kong-Zhuhai-Macao Bridge Project
Tung Chung
Po Lin Monastery and Country Park

Details of Scientific Programme

Time	Type	Speaker	Subject and Venue
December 14	Wednesday		Venue: Graduate House (GH), HKU Main Campus
13:00-18:00	On-site registration		Venue: Foyer area, GH
17:00-18:00	Cocktail reception		Venue: Foyer area, GH
December 15	Thursday		Venue: Graduate House (GH), HKU Main Campus
8:15– 17:00	On-site registration		Venue: Foyer area, GH
Opening Ceremony	Chairman	Zhong-qi Quentin Yue	Venue: Wang Gungwu Theatre, GH
8:45-8:55	Welcome Speech	Professor Francis Au, Acting Dean of Faculty of Engineering, HKU	
8:55-9:05	Welcome Speech	Professor Qihu Qian, President of Chinese Society for Rock Mechanics and Engineering	
9:05-9:15	Opening Speech	Professor C.F. Lee, Chancellor of the Chu Hai College of Higher Education	
Plenary Session 1	Chairman	C. F. Lee	Rock Cavern and Tunnel Engineering 1
9:15-9:45	Keynote 1	Herbert H. Einstein	Venue: Wang Gungwu Theatre, GH Construction and Operation of Tunnels in the Urban Environment - A Risk Based Approach
9:45-10:15	Keynote 2	Qihu Qian	Lessons Learned from Design of Surrounding Supports in Rock Mass with High In-situ Stresses
10:15-10:25	Group Photo		All Delegates at Staircase Space outside GH
10:25-10:40	Coffee-Tea Break		Venue: Foyer area, GH
Plenary Session 2	Chairman	A. P. S. Selvadurai	Rock Cavern and Tunnel Engineering 2
10:40-11:10	Keynote 3	Xia-ting Feng	Venue: Wang Gungwu Theatre, GH Rock Mass Behaviour during Excavation of China Jinping Underground Laboratories with Overburden of 2400 m
11:10-11:40	Keynote 4	Man-chao He	Geo-disaster Prediction with Double-blocks Mechanics Theory Based on Newton Force Measurement
11:40-12:10	Keynote 5	Nick Barton	Cavern and Tunnel Failures due to Adverse Structural Geology and Inadequate Support Designs
12:10-13:30	Lunch		Lunch Box at Foyer area, GH
Plenary Session 3	Chairman	Maurice B. Dusseault	Geo-Environmental Mechanics and Engineering 1
13:30-14:00	Keynote 6	A. P. S. Selvadurai	Venue: Wang Gungwu Theatre, GH Thermo-Poromechanics of Geologic Media
14:00-14:30	Keynote 7	Maurice B. Dusseault	Deep Energy Geomechanics: Extraction, Storage, Disposal
14:30-14:45	Theme 1	Jun Yang	Static Liquefaction and Flow Failure of Sand: Several New Findings
14:45-15:00	Theme 2	Qin-yong Ma	Blasting Vibration Analyses of Millisecond Blasting Model Experiment with Multicircle Vertical Blastholes

15:00-15:15	Theme 3	Chun-an Tang	Conceptual Model of Enhanced Geothermal System Based on Excavation Technology (EGS-E)
15:15-15:30	Theme 4	Er-nian Pan	An Overview of Pavement Forward and Inverse Analyses
15:30-15:45	Theme 5	Lin-bing Wang	Material Design: Perspectives and Status for MGI
15:45-16:00	Theme 6	Feng Zhang	Explanation of Thermo-Hydraulic-Mechanical Behavior of Geomaterials in So-Called Isothermal Heating Test
16:00-16:20	Coffee-Tea Break		Venue: Foyer area, GH
Parallel Session 1:	Chairman	Ji-dong Zhao	Rock Cavern and Tunnel Engineering 3
16:20-16:30	Paper 01	Z. Q. Yue	Venue: Wang Gungwu Theatre, GH Long-term Performance of Large Longyou Caverns Manually Carved in Argillaceous Siltstone Ground
16:30-16:40	Paper 02	S. J. Li	Characteristics on Rock Fractures Induced by Different Excavation Methods of Deep Tunnels
16:40-16:50	Paper 03	Y. H. Zeng	Impact Analysis of Tunnel Cross Section Shape on Tunnel Temperature Field Calculation
16:50-17:00	Paper 04	G. S. Yang	Research on Deformation Rules of Surrounding Rock of the Shallowly-Buried Water Rich Loess Tunnel Influenced by Freezing-Thawing Circumstance
17:00-17:10	Paper 05	X. P. Dong	Investigation of the Joint Yielding Mode of Segmental Tunnel Lining
17:10-17:20	Paper 06	H. L. Fu	Detection and Analysis of Harmful Gas Emission in Hongyanxi Tunnel
17:20-17:30	Paper 07	H. L. Fu	Geological Structure and Mineralization Mechanism of Shale Gas in the Red Rock Creek Tunnel
17:30-17:40	Paper 08	F. X. Sun	Improved Procedure for Determining Reaction Curve of Anchoring and Shotcreting Support in Circular Tunnel
17:40-17:50	Paper 09	X. Li	Reliability-Based Design for Rock Tunnel Stability Using Inverse-Reliability Approach
17:50-18:00	Paper 10	J. Zhao	Effects of Defect Doping on Kaolinite (001) Surface with H ₂ O Adsorption
18:00-18:10	Paper 11	C. Jing	Three-Dimensional Dynamic Analysis of Quay Walls Based on PZC Mode
Parallel Session 2:	Chairman	Li-min Zhang	Mechanism of Soil and Rock Failures 1
16:20-16:30	Paper 12	W. C. Wang	Venue: Seminar Room P5-03, GH Study on Mechanical Features of Brazilian Splitting Fatigue Tests of Salt Rock
16:30-16:40	Paper 13	W. M. Huang	Method for Describing Mesostructure of Heterogeneous Rock Material Based on Spatial Correlation Character
16:40-16:50	Paper 14	L. Z. Wu	Mode I-II Compression-shear Fracture Criterion for Non-contacting Crack of Rock-like Brittle Materials
16:50-17:00	Paper 15	F. Zhu	Sand Grain Crushing under Multi-axial Loading Conditions
17:00-17:10	Paper 16	F. C. Zhu	Experimental Study on Dynamic Deformation of Unsaturated Granite Residual Soils
17:10-17:20	Paper 17	Y. M. Yang	Soil Responses under the Principal Stress Rotation
17:20-17:30	Paper 18	L. B. Wang	Multiscale Analysis of Asphalt Binder Fatigue Cracking

17:30-17:40	Paper 19	P. Z. Pan	Numerical Study on THM Processes of EBS Experiment
17:40-17:50	Paper 20	C. K. Liu	Mechanism and Control Technology of Panel Roadway Floor Heave
17:50-18:00	Paper 21	X. D. Meng	Cushion Pad of Reducing Blasting Vibration – Starting New Era of Decreasing Disaster in Civil Engineering
18:00-18:10	Paper 22	D. X. Yue	Spatial-temporal Pattern of Socio-economic Vulnerability to Geohazards in Bailong River Basin, China

Parallel Session 3 **Chairman** **Louis Wong & Andy Leung**

16:20-16:30	Paper 23	P. Yuan	Best Paper Award Competition for Young Researchers Venue: Seminar Room P5-01, GH Experimental Study on Zonal Disintegration Phenomenon in Deep Rock Mass under Blasting Excavation
16:30-16:40	Paper 24	Z.Q. Yu	Study on the Block-Water Capability of Main Roof Structures of Steep Coal Seams with Fully-Mechanized Caving
16:40-16:50	Paper 25	H.Q. Yang	Vulnerability Assessment Model for Hazard Bearing Body Closed to Landslides Considering Run-out Process of Sliding Body
16:50-17:00	Paper 26	S. Zheng	Synthetic Water Repellent Soils and Slope Engineering
17:00-17:10	Paper 27	Y.L. Ding	Effect of Micro-gas Inclusions on Abnormally Delayed Mechanical Behaviour of Intact Rocks after Excavation
17:10-17:20	Paper 28	L. Jing	Experimental and Numerical Study of Depositional Mechanism of Mudflows
17:20-17:30	Paper 29	J. Wang	Shakedown Analysis of Lined Rock Cavern for Compressed Air Energy Storage
17:30-17:40	Paper 30	Z. Li	Dynamic Loading of Carrara Marble in a Heated State
17:40-17:50	Paper 31	A. Farina	Inverse Reliability-Based Analysis and Design in Slope Engineering

19:00-21:30 Dinner

Victoria Harbour Restaurant, Westwood Mall, near HKU Main Campus and at MTR HKU Station C2

December 16

Friday

Venue: Graduate House (GH), HKU Main Campus

8:30 – 17:00 On-site registration

Venue: Foyer area, GH

Plenary Session 4 **Chairman** **Xia-ting Feng**

9:00-9:30	Keynote 8	H. N. Wong
9:30-10:00	Keynote 9	Jian-lin Li
10:00-10:30	Keynote 10	Theodoros Triantafyllidis

Slope Stability and Landslides 1

Venue: Wang Gungwu Theatre, GH

Urban Landslide Risk Management amid the Challenge of Climate Change
Unloading Rock Mass Mechanics
Stability Analysis on Natural or Artificial Slopes under Earthquake Loading Based on Non-Linear Material Models

10:30-10:45 Coffee-Tea Break

Venue: Foyer area, GH

Plenary Session 5 **Chairman** **Jun Yang**

10:45-11:15	Keynote 11	Gen-hua Shi
-------------	------------	-------------

Slope Stability and Landslides 2

Venue: Wang Gungwu Theatre, GH

Contact Theory – The Foundation of Discontinuous Computations

11:15-11:30	Theme 7	Zhong-qi Quentin Yue	Cause and Mechanism of Fatal Zhenxiong Landslide of January 11, 2013
11:30-11:45	Theme 8	Jian Deng	A Critical Analysis and Stabilization of Nipigon River Landslide in Ontario, Canada
11:45-12:00	Theme 9	Xing-min Meng	Effectiveness of Debris Flow Mitigation Strategies in Mountainous Region
12:00-12:15	Theme 23	Wenge Qiu	The New Thinking About Stability and Support Theory for Tunnel Surrounding Rock
12:15-13:30	Lunch		Lunch Box at Foyer area, GH
Plenary Session 6	Chairman	Feng Zhang	Mechanism of Rock and Soil Failures 2
13:30-13:45	Theme 11	Yang Ju	Venue: Wang Gungwu Theatre, GH Numerical Analysis of Failure Processes in Soil-Rock Mixtures Using Computed Tomography and 3D Particle Flow Code Models
13:45-14:00	Theme 12	A. Patrick S. Selvadurai	Fluid Transport in Extensively Fractured Rocks
14:00-14:15	Theme 13	Jian-bo Zhu	Replicating Brittle and Hard Rocks Using 3D Printing with Applications to Rock Dynamics and Crack Propagation
14:15-14:30	Theme 14	Hong-tian Xiao	Analysis of Crack Problems in Graded Halfspace Subject to Complex Loading
14:30-14:45	Theme 15	K. Winn	Stability Analysis of Geology Structures Controlled Tunnel Profiles
14:45-15:00	Theme 16	Jian-xi Ren	Failure Law of Surrounding Rock of Rectangular Crossheading at Fully-Mechanized Caving Face in Deep Thick Coal Seams and Its Repair Support Technology
Plenary Session 7	Chairman	Shen-de Yin	Geo-Environmental Mechanics and Engineering 2 – In Celebration of the 70th Birthday of Professor Maurice B. Dusseault
15:00-15:15	Theme 17	Wei-guo Liang	Venue: Wang Gungwu Theatre, GH Experimental Study of Glauberite Salt Rock Creep under Compression and Dissolution Coupling Effect
15:15-15:30	Theme 18	Jian-jun Liu	Mechanism of Casing Damage and Control Method in Daqing Oil field
15:30-15:40	Paper 32	H. Jiang	Finite Element Solution of Elastoplastic Consolidation in Strain-softening Porous Media
15:40-15:50	Paper 33	S. K. Zhang	Geomechanics Parameter Characterization Using Numerical Modeling and Hydraulic Fracturing Test
15:50-16:00	Paper 34	Y.X. Zheng	Deformation Response of Oil Reservoir Induced by Water Injection
16:00-16:10	Coffee-Tea Break		Venue: Foyer area, GH
Parallel Session 4	Chairman	Sergio Lourenco	Slope Stability and Landslides 3
16:10-16:20	Paper 35	L. N. Wang	Venue: Seminar Room P05-01, GH Shearing Rate Effect on Residual Strength of Slip Soils and Its Impact on the Deformation Characteristics of Landslides
16:20-16:30	Paper 36	Z. J. Wu	Completely Weathered Sandstone Slope Failure During Highway Construction and Its Remedy
16:30-16:40	Paper 37	M.Q. Xiong	Mitigation Measures after “8.8” Zhouqu Debris Flow Disaster in Sanyanyu Valley, China

16:40-16:50	Paper 38	G. Chen	Response of Loess Landslide to Rainfall: Observation From Field Artificial Rainfall Experiment
16:50-17:00	Paper 39	R. Q. Zeng	Integrated Physical-based Method for Analysis of Regional Heterogeneous Terrace Slope Stability
17:00-17:10	Paper 40	Q. Deng	Analysis of Potential Surfaces of Multi-stage Slope Based on Local Strength Reduction Method
17:10-17:20	Paper 41	L. S. Zhou	3D Hydraulic Fracturing Stress Measurement at Qirehataer Hydropower Project
17:20-17:30	Paper 42	G.Q. Chen	Search for Sliding Surface of Slope Based on Dynamic Strength Reduction Method

Parallel Session 5	Chairman	Hong Zheng	Mechanism of Rock and Soil Failures 3
16:10-16:25	Theme 19	Chang-fu Wei	Venue: Wang Gungwu Theatre, GH Constitutive Model of Chalk with Considering Effect of Intergranular Physicochemical Forces
16:25-16:40	Theme 20	Jian-fu Shao	A Micro-mechanics Based Elastic-plastic Model for Saturated Porous Rocks
16:40-16:55	Theme 21	Xiao-ping Zhou	Numerical Simulation of Crack Growth and Coalescence in Rock-like Materials Containing Multiple Pre-existing Flaws Using General Particle Dynamics
16:55-17:10	Theme 22	Lan-sheng Wang	The Diexi Paleo-Dammed Lake at Upstream of Mingjing River, Sichuan, China
16:10-17:20	Paper 51	Q. S. Liu	Principle, Technology and Instrument of Rheological Stress Recovery Method for Geostress Measurement in Deep Soft Rock
17:20-17:30	Paper 44	Y. L. Zheng	Mechanism and Theoretical Model of Intermediate Principal Stress Effect on Rock Strength

Closing Ceremony	Chairman	Zhong-qi Quentin Yue	Venue: Wang Gungwu Theatre, GH
17:30-17:35	Closing Address		Xia-ting Feng
17:35-17:40	Closing Address		A. P. S. Selvadurai
17:40-17:45	Closing Address		Qihu Qian
17:45-17:50	Closing Address		Nick Barton
17:50-18:00	Summary & Thanks		Zhong-qi Quentin Yue

19:00-21:30 Banquet **Fulum Restaurant, 455-485 Queen's Road West, near HKU Main Campus and at MTR HKU Station B2 (see map on next page)**

December 17 **Saturday** **Venue: Lantau Island, Hong Kong**

Field trip	Leaders	Zhong-qi Quentin Yue, Chao Li, Jian Chen	Technical Site Visit in Hong Kong
9:00-12:00	Hong Kong-Zhuhai-Macao Bridge Project nearby Hong Kong International Airport and Tung Chung Town on Lantau Island (take coach at Upper Platform of Graduate House)		
12:00-14:00	Lunch		
14:00-17:00	Po Lin Monastery and Giant Buddha for Visiting Country Park in Hong Kong		

HONG KONG – ZHUHAI – MACAO BRIDGE (HZMB)

HONG KONG BOUNDARY CROSSING FACILITIES – RECLAMATION WORKS

CONTRACT NO. HY/2010/02



Project Background:

Client: Highways Department (HyD)
Engineer: Ove Arup & Partners HK Ltd.
Contractor: China Harbour Engineering Co. Ltd.

Reclamation works have been commissioned by the HyD of the Government of Hong Kong SAR for the construction of an artificial island in the open waters off the northeast of the Hong Kong International Airport (HKIA). The proposed HKBCF is located on the artificial island and linked by the Hong Kong Link Road (HKLR) of the HZMB, the proposed Tuen Mun- Chek Lap Kok Link (TM-CLKL) and the roads leading to HKIA

Major Items of Works:

- 6140m long seawall;
- Reclamation of about 150 hectares of land for development of HKBCF with proposed final formation level at +5.5mPD;
- Ground improvement works shall be carried out to control the residual settlement to less than 500mm over a design life of 50 years from handover of the site.

Registrations and Payments

1) Full Registration for Speaker and Delegate

Coverage: cocktail reception, coffee breaks, two lunches, two dinners, one hardcopy of the Proceedings book in a bag, and soft copy of the Proceedings book via emailing and/or downloading from the website, and scientific oral presentations on Dec. 15 and 16, 2016

Registration Fee: HK\$2,500 per person

2) Full Registration for Student

Coverage: cocktail reception, coffee breaks, two lunches, two dinners, one hardcopy of the Proceedings book in a bag, and soft copy of the Proceedings book via emailing and/or downloading from the website, and scientific oral presentations on Dec. 15 and 16, 2016

Registration Fee: HK\$1,500 per person

3) Partial Registration for Accompanying Person

Coverage: cocktail reception, coffee breaks, two lunches, and two dinners

Registration Fee: HK\$1,500 per person

4) Daily Registration

Coverage: coffee breaks, soft copy of the Proceedings book via emailing and/or downloading from the website, and scientific oral presentations on Dec. 15 or 16, 2016

Registration Fee: HK\$700 per person per day

Maximum quota: 100 persons per day

5) Registration for Technical Site Visit

Coverage: coach from HKU (Departure at 9:00 am, Upper Platform of Graduate House) to the site at Tung Chung, Lantau Island, technical visit and boating, lunch on Dec. 17, 2016, and public bus or cable car to Ngong Ping from Tung Chung Town (tickets of public bus or cable car will be provided on site after lunch).

Return transportation after visiting from Ngong Ping or Tung Chung Town is not covered.

Registration Fee: HK\$400 per person

Maximum quota: 50 persons

6) CPD Day and Certificate

One full day attendance is designed for one CPD day on Dec. 15 or 16, 2016. An attendance certificate will be provided to each registered person after participation of the scientific oral presentations on each day.

7) Payment Methods

Online Payment with Credit Card: (1) Open the symposium and meeting official website at <http://www.igscrm.hku.hk/>; (2) Click “Register” for Registration and Payment Web Page; (3) Following the instruction for registration and payment.

On-site Payment: (1) Cash in Hong Kong Dollar; (2) Venue at Foyer area, Graduate House, HKU main campus; (3) Time: Dec. 14, 15 and 16, 2016.



Location Map for Graduate House, RBC, Fulum & Victoria Harbour Restaurants at Exits A2, B2 and C2 of MTR HKU Station, respectively



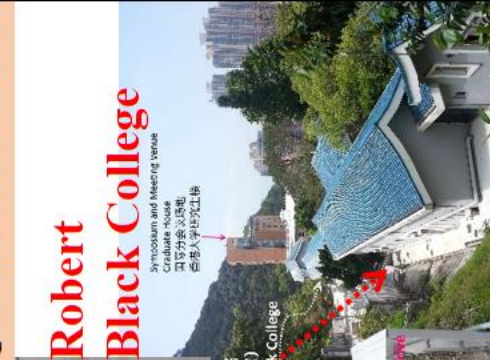
Dinner Dec. 15, 2016
Victoria Harbour Restaurant
Second Floor, Westwood Mall



Symposium
Venue:
Graduate
House



Banquet Dec. 16, 2016
Fulum Restaurant 富临酒家
455-485 Queen's Road West



Robert
Black College



Upper Platform of
Graduate House
Coach Departure here at 9:00
am for the site visit



Secretariat

Ms. Bridget Lam

Ms. Ruby Kwok

Tel No.: (852) 28592666

Fax No.: (852) 25595337

E-mail: igscsr@hku.hk

Post-graduate Research Student Helpers

Name	Area Code	Phone Number
JIAO Yujie	852	6935 7906
DING Yanlu	852	6578 8706
MA Ruiqiu	852	5301 0158
CHEN Xingwei	852	5224 9369
XIAO Sha	852	9790 0672
GUO Yi	852	6768 0054
TANG Xiao	852	5623 0100
CHEN Yuan	852	5222 1502