

THE HKIE GEOTECHNICAL DIVISION 42ND ANNUAL SEMINAR 2022

A New Era of Metropolis and Infrastructure Developments in Hong Kong – Challenges and Opportunities to Geotechnical Engineering

WEBINAR

Date: 13 May 2022 (Friday)

Time: 09:00 – 18:00 (Extended)

Registration Fee: HK\$600[#] / HK\$100^{*}

[#] Event Participants can enjoy over 13% discount to join Geotechnical Pioneer Series -
Workshop on Geotechnical Numerical Modelling (e-Class)

^{*} applicable to Full-time Student / Retired / Associate HKIE Member

1 CPD Day

REGISTER NOW



<https://bit.ly/3zXu1af>



► Theme

The 2021 Policy Address highlights a suite of mega development projects including Lantau Tomorrow Vision, Northern Metropolis, five New Railway Projects, Ten-year Public Housing Plan, Twenty-year Hospital Development Plan, etc. This visionary blueprint, together with other ongoing and planned projects in the pipeline, offers huge opportunities to the construction industry in Hong Kong. It calls for concerted efforts and collected wisdom of professionals to meet the challenges, arising from not only the ascending construction volume but also new technical considerations in the face of climate change and carbon neutrality. Geotechnical professionals, being one of the key contributors, play a pivotal role in the delivery of this mega development plan. Stepping into a new era, how can we leverage our geotechnical expertise and the latest advances in the technologies to rise to the challenges? This seminar provides a platform for the practitioners and academia to share their insights and brainstorm ideas with a view to gearing up to seize the forthcoming opportunities and shape the new future of Hong Kong.

► Keynote Speakers



Ir John K S Kwong, JP

Head of Project Strategy
and Governance Office,
Development Bureau



Ir Barry P T Sum

General Manager -
New Territories (Projects)
Capital Works,
MTR Corporation Limited

Other presenters will be selected from the authors of accepted papers from the local and overseas industrial practitioners and academia.

► Topics Relevant to the Theme

- | | |
|---|--|
| 01
New geotechnical design approaches / applications | 06
Latest in-situ and laboratory testing methods / practices |
| 02
Advanced construction methods / technologies | 07
Physical modelling and numerical simulations |
| 03
Use of construction materials for sustainable development | 08
Geotechnical contribution to masterplanning |
| 04
Digitalisation of geotechnical aspects in BIM, AI, IoT, big data analytics, digital twin, etc. | 09
Successful project experience over challenging geotechnical / geological problems |
| 05
Advancements in supervision and monitoring techniques | 10
Other geotechnical / geological advances that have merits in enhancing productivity, buildability, safety, cost-effectiveness and/or efficiency |

► **View Full Event Agenda in next pages**





▶ Programme

Time (HK Time, GMT+8)

Agenda

8:30 – 9:00

Registration

9:00 – 9:05

Welcome Speech

Ir Tony Ho, Chairman, The HKIE Geotechnical Division

9:05 – 9:10

Sponsor Acknowledgement

9:10 – 10:25

Session 1 | Keynote Presentation

9:10 – 9:40

A New Era of Metropolis and Infrastructure Developments in Hong Kong - The Road Ahead

Ir John Kwong, JP, Head of Project Strategy and Governance Office, Development Bureau

9:40 – 10:10

Opportunity of New Railway Projects

Ir Barry Sum, General Manager - New Territories (Projects), Capital Works Business Unit, MTR Corporation Ltd.

10:10 – 10:15

Souvenir Presentation

10:15 – 10:25

Prize Presentation for The HKIE Geotechnical Paper Award 2022

10:25 – 10:35

Break

10:35 – 11:45

Session 2 | Session Chairman: Ir Dr Richard Pang

Theme: Geotechnical Exploration

10:35 – 10:50

A Sustainable Approach to Marine Reclamations Using Local Dredged Marine Soils and Wastes:

Soft Soil Improvement, Physical Modelling Study, and Settlement Prediction-Control

Ir Prof J H Yin, The Hong Kong Polytechnic University

10:50 – 11:05

Advanced Design and Construction Method for Marine Cut & Cover ELS Tunnel Cofferdam

Ir Dr Raymond Cheung, Gammon Construction Ltd.

11:05 – 11:20

Developing Hong Kong's First Materials Testing Laboratory and Archives Centre in Caverns - Technical Challenges and Solutions

Ir Ivan Chan, Geotechnical Engineering Office, Civil Engineering and Development Department

11:20 – 11:35

A Critical Review of the Current Practice of Design and Construction of Offshore Foundations in Hong Kong

Ir Dr Daman Lee, CLP Power Hong Kong Ltd.

11:35 – 11:45

Q&A Session & Souvenir Presentation

11:45 – 13:00

Lunch

13:00 – 13:55

Session 3 | Session Chairman: Ir Dr Johnny Cheuk

Theme: Digital Technologies for Geotechnical Applications

13:00 – 13:15

3-D Hong Kong Geological Modelling and Management System

Mr Matthew Liu, The Hong Kong University of Science and Technology

13:15 – 13:30

A New Digital-based Approach to Automate and Optimize Geotechnical Design

Ir Alvin Lam, Arup

13:30 – 13:45

Machine Learning-based Natural Terrain Landslide Susceptibility Analysis – A Pilot Study

Ir Helen Li, Geotechnical Engineering Office, Civil Engineering and Development Department

13:45 – 13:55

Q&A Session & Souvenir Presentation

13:55 – 14:50

Session 4 | Session Chairman: Ir Tony Ho

Theme: Advances in Underground Development

13:55 – 14:10

Underground Development - Adoption of Systematic Pipe Curtain with Jack-in Place Rectangular Tunnel Boring Machine Methodology

Ir K M Chiang, Shanghai Tunnel Engineering Co. Ltd.

14:10 – 14:25

Active Site Supervision to Enhance Drilling & Blasting

Ir Simon Leung, AECOM Asia Co. Ltd.

14:25 – 14:40

Two Major Technical Solutions on the Lung Shan Road Tunnel -

Pilot TBM Tunnel Enlargement and TBM U-turn in Cavern

Mr Xavier Monin, Dragages Hong Kong Ltd.

14:40 – 14:50

Q&A Session & Souvenir Presentation



Programme

Time (HK Time, GMT+8) Agenda

14:50 – 15:50	Session 5 Session Chairman: Ir Chris Lee Theme: New Materials and Testing Standards
14:50 – 15:05	Novel Cementitious Materials for Geotechnical Applications – Vibration Resistant Sprayed Concrete for Rock Tunnel Lining and Self-compacting Backfill for Slope Upgrading Works <i>Ir Martin Kwong & Mr Eric Chen, Nano and Advanced Materials Institute</i>
15:05 – 15:20	Technical Developments Related to Deep Cement Mixing Method in Hong Kong <i>Ir Prof Philip Chung, Geotechnical Engineering Office, Civil Engineering and Development Department</i>
15:20 – 15:35	Pilot Use of Alternative Compliance Criterion for Cement-soil in a Slope Upgrading Works Project <i>Ir Dr Dominic Lo, Geotechnical Engineering Office, Civil Engineering and Development Department</i>
15:35 – 15:45	Q&A Session & Souvenir Presentation
15:45 – 15:55	Break
15:55 – 16:30	Session 6 Session Chairman: Ir Lawrence Shum GED Talk: Design and Construction Technologies
15:55 – 16:15	1. Digital Classification of Anthropogenic Features for Natural Terrain Hazard Assessment in the Quasi-natural Heritage Landscape of the Lin Ma Hang Lead Mine <i>Ms Petra Lee, Meinhardt Infrastructure and Environment Ltd.</i> 2. Deep Cement Mixing - The Experience in Tung Chung East Reclamation and Challenges Ahead <i>Ir C H Yan, Sustainable Lantau Office, Civil Engineering and Development Department</i> 3. Marine Deep Cement Mixing (Cutter Soil Mixing Technique) <i>Mr Ricky Pang, Bachy Soletanche Group Ltd., Hong Kong</i>
16:15 – 16:30	Panel Discussion, Q&A Session & Souvenir Presentation
16:30 – 17:15	Session 7 Session Chairman: Ir Clifford Phung GED Talk: Smart and Digital Technologies
16:30 – 16:55	1. Use of Smart Devices in Civil and Geotechnical Works for Vibration, Noise and Temperature Measurement <i>Ir Dr Thomas Lam, Construction Industry Council</i> 2. GIS-BIM Adoption for Construction Digitalisation <i>Mr Simon Leung, Ersi China (Hong Kong) Ltd.</i> 3. Monitoring of a Peanut-shaped TBM Launching Shaft Excavation Using Fibre Optics and Remote Sensing Techniques <i>Ir Ivan Li, Geotechnical Engineering Office, Civil Engineering and Development Department</i> 4. Are We Ready to Use AI Technologies for the Prediction of Soil Properties? <i>Ir Dr Ryan Yan, AECOM Asia Co. Ltd.</i>
16:55 – 17:15	Panel Discussion, Q&A Session & Souvenir Presentation
17:15 – 17:50	Session 8 Session Chairman: Ir Y C Lam GED Talk: Advances in Underground Development
17:15 – 17:35	1. An Unprecedented Land Supply Means in Hong Kong: Underground Quarrying-cum-Cavern Development <i>Ir Leslie Tsang, Geotechnical Engineering Office, Civil Engineering and Development Department</i> 2. Rock Breaking Using Supercritical Carbon Dioxide (SC-CO ₂) Technology – a Safe, Efficient, and Sustainable Approach <i>Dr Garfield Guan, G & K Consultancy Ltd.</i> 3. Evaluation of Digital Rock Mass Discontinuity Mapping Techniques for Applications in Tunnels <i>Mr Philip Wu, Aurecon Hong Kong Ltd.</i>
17:35 – 17:50	Panel Discussion, Q&A Session & Souvenir Presentation
17:50 – 17:55	Closing Remarks <i>Ir Clifford Phung, Organising Committee Chairman, The HKIE Geotechnical Division 42nd Annual Seminar, 2022</i>

Programme, Topics and Speakers are subject to changes without any prior notice.
The seminar will be conducted in English unless noted otherwise.



► About “GED Talk”

This year, we will introduce a new and interesting session called “GED Talk”, as part of the Annual Seminar. The format is similar to the “TED Talk” concept. Part of the accepted papers will be selected for presentation at the GED Talk Session, where feature videos of the selected papers will be played first, followed by panel discussion among the authors.

► Event Mode: Online Seminar

The event will be conducted in live streaming mode. Webinar link will be sent to the registered participants in event due course.

► Registration Fee

(1-day online seminar with e-proceeding)

#Event Participants can enjoy over 13% discount to join Geotechnical Pioneer Series - Workshop on Geotechnical Numerical Modelling (e-Class)

Category	Fee
Standard	HK\$600 [#]
Full-time Student / Retired / Associate HKIE Member	HK\$100

1 CPD Day

► Payment Method

Registration fee shall be paid by following methods:

1) Bank Deposit (applicable to local participants only)

Bank Account Name: HKIE - Geotechnical Division
Bank Code: 004

Bank: HSBC
Bank Account No: 025-344888-016

2) Cheque Payment (applicable to local participants only)

- Crossed cheque payable to “**The HKIE - Geotechnical Division**” and mail to:
Attn: HKIE GDAS 2022 Event Secretariat (Minerals Creations & Communications Ltd.)
3G, Wah Hing Industrial Mansions, 36 Tai Yau Street, San Po Kong, Kowloon, Hong Kong

3) Credit Card Payment (applicable to local & overseas participants)

- Apply in the event page with “Payment-link” as payment method
- Settle payment through the link sent to your registered email address
- Upload the payment acknowledgement record to your app account

► Registration

Registration should be made at the event page: <https://bit.ly/3zXu1af>

Please login and click “Ticket” on the page. If you haven’t registered, please go to the home page: <https://hkieged.org/> and click the “Register” button on the top right corner for free registration. You can get the latest event details and subsequently access the CPD certificate with this account.

Reserve your seat now

<https://bit.ly/3zXu1af>



► Enquiries

Mr. Sampson SIU / Ms. Yan CHAN

Event Secretariat (Minerals Creations & Communications Ltd)

Tel: +852 3502 4983 / +852 3500 9470

Email: hkie.gdas2022@minerals.hk

* Registration fee will not be refunded upon cancellation.
Replacement of seat is allowed.



THE HKIE GEOTECHNICAL DIVISION
42ND ANNUAL SEMINAR 2022



▶ Diamond Sponsor



▶ Platinum Sponsors



Member of the SNC-Lavalin Group

▶ Gold Sponsors



▶ Silver Sponsors



迪時建築運輸有限公司
Dix Construction & Transportation Ltd.



▶ Supporting Organizations

