



香港岩土及岩土環境工程專業協會
ASSOCIATION OF GEOTECHNICAL &
GEOENVIRONMENTAL SPECIALISTS (HONG KONG)

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ANNOUNCEMENT

AGS (HK) Technical Seminar

Application and Limitation on Geological and Geotechnical 3D Modelling

by

**Ms. Jacqueline Siu (Project Geologist, AECOM) &
Ms. Sabrina Cheah (Assistant Resident Engineer, AECOM)**

Date : Wednesday, 27 August 2025

Time : 18:30 – 19:30 (Hong Kong Time)

Venue : The webinar will be conducted through Zoom.

Successful applicants will be informed by emails with a Zoom's link to the webinar. Participants should arrange for their own device with a stable network environment to join the webinar.

Enquiry : agshk.org@gmail.com

Fee : Free of charge

Registration : <https://www.ags-hk.org/event-details/application-and-limitation-on-geological-and-geotechnical-3d-modelling>

Please register by 18:30 on 27 August 2025. Successful applicants will receive webinar details after registration. CPD certificate will be sent to the attendees, who attended more than 80% of the webinar time, within 2 weeks after the webinar.

Book Prize : Professionals under 35 years of age are encouraged to submit a Book Prize Report (max. 500 words) on webinars and site visits arranged by AGS (HK).

Contributors to successful Book Prize Reports will be awarded a Book Prize that comprises of a book "Geology of Site Investigation Boreholes in Hong Kong" written by Chris Fletcher, and a coupon of HK\$500 for Eslite Spectrum (誠品生活) or equivalent. The successful Book Prize Report will also be published on the AGS (HK) website to showcase your accomplishment.

Prior to report submission, please refer to the "The AGS Book Prize Reports – Assessment Framework"* on the AGS (HK) website. You may submit your Book Prize Report to our assessors by uploading the report file through the AGS (HK) website at <https://www.ags-hk.org/book-prize>. Should you have any questions, please contact us at agshk@meinhardt.com.hk.

*Link to the AGS Book Prize Reports – Assessment Framework:

https://www.ags-hk.org/files/ugd/521a4c_b94496034732484687441cf4ed4d0bf9.pdf



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Synopsis:

The use of geological and geotechnical 3D modelling has become increasingly essential in the planning and design of geotechnical engineering works, particularly for major development or complex infrastructure projects, due to its ability to enhance visualisation, integrate diverse data sources, and improve analysis of subsurface conditions. This webinar provides an overview of the software tools available such as Leapfrog Works, ArcGIS, Civil 3D and Surfer, and delves into their advantages and limitations. Common modelling errors will also be discussed, along with possible strategies to mitigate these issues. Another key focus will be on how to select the most suitable modelling tools based on the project requirements, geological complexity and data availability, and highlight the importance of model validation so as to equip professionals with a clear understanding of how to effectively apply 3D modelling in geological and geotechnical contexts.

About the Speaker:

Jacqueline Siu is a Chartered Geologist at AECOM with over nine years of experience in geological and geotechnical engineering. Jacqueline has been involved in various infrastructure and building projects in Hong Kong, including the Relocation of Sha Tin Sewage Treatment Works to Caverns Project, Northern Link Phase 2, Trunk Road T2, Tung Chung New Town Extension (East) etc. She is well-versed in planning and supervision of GI works, as well as geological and geotechnical assessment. She also solid background in developing geological and ground models using various software such as Leapfrog Works, Surfer etc., and plays an active role in delivering subsurface interpretations that support design decisions. Recently, she has been focusing on the work on the development of the New Territories North.

Sabrina Cheah is an engineering geologist currently serving as an Assistant Resident Engineer at AECOM. She has contributed to the development of both project-specific and territory-wide 3D geological models using ArcGIS, CIVIL 3D etc for various development, infrastructure and tunnelling projects in Hong Kong. Using tools such as ArcGIS and Civil 3D, she has supported projects including Regional Geological Study of Northern New Territories, Yuen Long Barrage and Third Runway Concourse. She has also played active role in delivering geological models with Leapfrog Works for both Hong Kong and Singapore's tunnel projects. Her application of modern 3D modelling techniques provides practical insights into both the strengths and limitations of these tools in geotechnical engineering.



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