



Bytes & Bites: Data-Driven Engineering Geology

Date: Friday 5 December 2025

Time: 6:30pm - 8:30pm (1-CPD hour - digital e-certs will be emailed to attendees)

Location: Leighton Room, Craigengower Cricket Club, 188 Wong Nai Chung Gap Road, Wanchai

Quota: 30 (first come first serve with priority given to Fellows of GSL)

Fee: Free of Charge

Light snacks and drinks will be provided. [REGISTER HERE](#) by 28 Nov 2025.

About the event

To promote digital innovation within Hong Kong engineering geology community, [GSL HKRG Focus Group 2](#) is organising a Digital Burst as a platform to communicate, exchange ideas, and initiate digital momentum. Three experienced industry speakers will deliver a short, precise 10-minute burst talk demonstrating how digital methods are reshaping our work. Topics include Applied GIS and System Development, Python applications, and automated real-time site monitoring. A moderated panel discussion and networking time will follow to deepen dialogue, encourage interaction, and synthesize key takeaways.

Synopsis

“Applied GIS and Systems Development for Engineering Geological Practices: Hong Kong case studies” by Caleb SANG

Caleb will showcase few digital transformation works, including SmartLog for ground investigation works, GIS-based boulder surveys, system monitoring dashboards, and automated reporting. In addition, he will share his insight and participant experience of the GSL Digital Geoscience Conference held in October.

“An Integrated Automatic Monitoring Approach for the Hydro-mechanical Evolution of Unstable Soil Masses” by Claire LAM

Claire will present a multi-sensor strategy combining in-situ instrumentation, 4D ERT, and time-lapse seismic to track hydro-mechanical evolution in soil masses. Web-based integration enables real-time insight, scalable long-term deployment, and proactive, risk-informed decisions for geohazards and construction monitoring.



“Learning with Python: Boulder Detection and Everyday Tools” by *Regine TSUI*

Regine will introduce her Machine Learning workflow using YOLO and SAM for detecting boulders in 1963 aerial imagery. She will also demonstrate Python tools for AGS data analysis, blasting assessment automation, and 3D point-cloud rock mapping to streamline daily geologist practice.

About the Speakers

Caleb SANG

Caleb is an Engineering Geologist in Hong Kong with GIS and geotechnical experience across APAC, graduated from University of Tasmania, Australia and the University of Portsmouth, UK. He joined Arup in 2024, working on infrastructure, natural terrain hazards, ground investigation, and digital projects, with commercial awareness and data-driven practice.

Claire LAM

Claire is a geophysicist graduated from Imperial College London in 2014. She led marine geophysics surveys for major Hong Kong projects such as Tung Chung New Town, HKIA Third Runway, and LNG terminal. Now in business development at Sixense, advancing monitoring and survey technologies while remaining hands-on in fieldwork and data reporting across the New Territories.

Regine TSUI

Regine is a Chartered Geologist at Aurecon, with BSc and MPhil in Geology at the University of Hong Kong. She has eight years’ experience in natural terrain hazard studies, ground modelling, and tunnel design. She is also known as a Python practitioner who applies digital methods to deliver robust geological interpretations and practical engineering solutions.

Enquiry

For enquiries, please contact Taurus Yong at taurus.yong@arup.com or Jesse Tam at j.tam@fugro.com.

