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

How Open Standards Connect All Stages of Geotechnical Practice

by

Joost Gevaert
(CEO, Bedrock.engineer)

Date : Thursday, 28 May 2026

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/how-open-standards-connect-all-stages-of-geotechnical-practice

Please register by 18:30 on 28 May 2026. 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_b9449603473248468744 1cf4ed4d0bf9.pdf

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Synopsis:

The geotechnical engineering value chain generates rich data at every stage, from ground investigation through ground modelling, geotechnical analysis and design, to instrumentation and monitoring, yet this data is hard to access without specialist software, and is therefore almost never visualised in context with the BIM and GIS information that surrounds it.

This talk introduces a unifying insight: all geotechnical data, regardless of its origin in the value chain, can be expressed as geometry combined with properties. This simple concept makes geotechnical data compatible with 3D GIS tools and open BIM platforms such as Speckle, enabling interactive visualisation in context with topography, surrounding buildings, infrastructure models, and any other spatially referenced datasets.

The presentation walks through the data structures that map to each stage of geotechnical practice:

- 3D geospatial vector data for boreholes, CPTs and instrumentation & monitoring data;
- surface meshes and voxel models for ground models;
- voxel models and tetrahedral meshes for finite element analysis results,

and illustrates each with concrete examples drawn from real projects.

Structuring data this way is not merely a visualisation exercise: it is the necessary first step toward computational design workflows, efficient application of the observational method, construction of geotechnical digital twins, and deployment of AI on subsurface data.

The talk challenges the assumption that specialised proprietary platforms are the only path to integrated geotechnical visualisation, and demonstrates that open standards and open-source tools can deliver richer, more accessible, and more interoperable results across the full geotechnical value chain.

About the Speaker:

Joost Gevaert studied geotechnical engineering and applied geophysics (imaging the subsurface using similar techniques to those we use in hospital to do non-invasive tests on the body), and then worked for Arup for 4 years as a geotechnical engineer and computational designer.

During his time at Arup he worked on applying computational design to geotechnical engineering, and on communicating subsurface data (ground investigation data, ground models and geotechnical analysis results).

With Bedrock.engineer, he is building the Free and Open Source Software (FOSS), tools and apps that he wishes existed when he was still working at Arup.