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

Contact: David SEIN, E-mail: David.Sein@leightonasia.com
Website: www.ags-hk.org

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ANNOUNCEMENT

AGS (HK) Technical Seminar

PreLogging: A Pioneering Web-based AI Application for Enhanced Geotechnical Engineering

by

Prof. Louis Wong
(Associate Head, Department of Earth Sciences, The University of Hong Kong)

Date : Thursday, 12 September 2024

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/prelogging-a-pioneering-web-based-ai-application-for-enhanced-geotechnical-engineering

Please register by 11 September 2024. 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:

Uncover the potential of PreLogging, a web-based AI application tailored for geotechnical engineering practitioners. This innovative tool, with a recently launched trial version, is designed to classify common rocks and decomposition grades in Hong Kong, detect fractures, and compute essential fracture state indices, such as Total Core Recovery (TCR), Solid Core Recovery (SCR), Rock Quality Designation (RQD), and Fracture Index (FI). PreLogging utilizes advanced computer vision-based deep learning technology, enhancing accuracy, objectivity, and efficiency in the corebox logging processes, which are integral to geotechnical engineering. The development of PreLogging was a collaborative effort between a multidisciplinary team of researchers, engineers, and industry stakeholders, aiming to create a valuable tool for the geotechnical engineering community. The first part of the presentation will discuss the logic and methodology behind PreLogging. The second part will highlight its capabilities through a selection of real-life corebox application examples.

About the Speaker:

Prof. Wong serves as the Associate Head (Research) of the Department of Earth Sciences at the University of Hong Kong (HKU). He holds a PhD in geotechnical engineering from MIT and a BSc in Earth Sciences from HKU. His experience spans various slope engineering and underground construction projects in Hong Kong, Mainland, Singapore, and the United States. Prof. Wong ranks among the top 1% of researchers globally in the Geological Engineering field based on citations. He has received multiple awards, delivered keynote lectures at international conferences, and was honored with the prestigious Richard Wolters' Prize in 2014 by the International Association of Engineering Geology and the Environment. Since 2018, Prof. Wong has served as the Editor-in-Chief of the Bulletin of Engineering Geology and the Environment, which is a key journal in the field. He serves as a Technical Assessor on geotechnical testing under the Hong Kong Laboratory Accreditation Scheme (HOKLAS), and contributes as an external member to the Assessment Committee for Logging Geologists. His current research focuses on developing predictive models for thermo-hydro-mechanical (THM) coupling processes in underground fire engineering, and utilizing AI technologies to enhance engineering geological practices.

Supporting Organizations:

The Geological Society of Hong Kong

The Geological Society of Hong Kong (Professional Branch)

The Geological Society of London – Hong Kong Regional Group

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