



ANNOUNCEMENT

AGS (HK) Technical Seminar

Biotechnical Riverbank Rehabilitation

by

Leong Kwok Wing (Citizen Equatorial Rainforest | PE(Calif), BSc(Civil Eng), M.ASCE, MY-CISEC(Instructor), DofEAward)

Date : 28th July 2022

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 : Haydn Chan (email: haydn.chan@arup.com)

Fee : Free of charge

Registration : <https://forms.gle/oHCLFnFNv5b1C3DNA>

Please register by 25th July 2022. Successful applicants will receive webinar details on 26th July 2022. CPD certificate will be sent to the attendees after the webinar.

Book Prize : The youth professionals under 35 years old are encouraged to submit their reports (max. 500 words) in quality on this event. Please refer to the AGS HK's website "The AGS Book Prize Reports–Assessment Framework" for details before the submission. The successful candidate will be awarded with the Book Prize that comprises of a book "Geology of Site Investigation Boreholes in Hong Kong" that written by Chris Fletcher, and a book coupon with value of HK\$500 from Eslite Bookstore (誠品書店). The awarded report will further be uploaded to the website of AGSHK. Please send your report to Mr. Haydn Chan through the email: haydn.chan@arup.com.



Synopsis:

The webinar will describe 2 actual case studies at Malaysia and Hong Kong, for Biotechnical Riverbank Rehabilitation - the use of plants to stabilize and restore riverbanks.

Biotechnical & Bioengineering Techniques offers a viable and sustainable alternative to traditional “hard surface” drainage channel engineering solutions under certain conditions. It is a major paradigm shift from the traditional “rapid discharge” concept where rainwater is quickly intercepted and efficiently conveyed by smooth concrete-lined drainage systems to rivers and discharged to the ocean. It has been established that this “rapid discharge” process has accounted for much downstream scouring and a history of eroded riverbanks with devastating results and “unnatural” aesthetics.

The primary advantage is to stabilize riverbanks, restore habitat and resist bank scouring will be discussed. The follow projects on river channel restoration and “green” revegetation of concrete-lined river channel section will be presented, challenges discussed, solutions learnt and shared:

- a) Urban Drainage Restoration of eroded section of River Jenderam, Malaysia, (Introduction of plants, erosion control mattress & turf reinforcement mattress)
- b) Beautification works at Tuen Mun River Channel (trial panel), Hong Kong SAR (Introduction of plants, geocell cellular confinement systems & mechanical anchors)

About the Speaker:

Leong Kwok Wing gained his BSc in Civil Engineer CSUS (1979), California licensed PE(1981) and worked as Engineer >15 years in California Department of Highway DOT & Department of Parks & Recreation DPR.

His work experiences include civil engineering design & construction supervision of highway and super structures, heavy load bearing design on “soft-soil” with Geosystems load support base & subbase stabilization (Hong Kong Stone Cutter’s Island Dockyard), sustainable & flexible drainage channels on “landfill-caps” (Hong Kong TKO Landfill) Baffle Drainage system, Californian park infrastructure systems, Malaysian Department of Irrigation & Drainage (DID) “Green” & Sustainable Slope Erosion Protection and River Channel Repairs & Restorations.

Whilst in Malaysia, integrated the application of natural fibers with geosynthetics for “green” biotechnical slope erosion protection and vegetated riverbank, a sustainable alternative to hardcore civil works.

He has worked on natural streambank protection using “Re-directive techniques for Thalweg Management” meeting the river’s morphologic needs.

He was the speaker/trainer of Construction Site Best Practices, Erosion & Sediment Control Mitigation Measures since 2008 and US Certification program CISEC. In 2019, he co-developed with Dr. J. Fifield/Hydrodynamics (USA) the Malaysian DOE’s Designer & Reviewer Training Course “Land Disturbing, Pollution Prevention & Mitigation Measures (LDP2M2)” for sustainable development practices. He is a member of ASCE, founding member of Malaysian Stormwater Organization (MSO).