Webinar

MALAYSIAN GEOTECHNICAL SOCIETY (PERTUBUHAN GEOTEKNIKAL MALAYSIA)

Performance of Energy Diaphragm Walls in Cooling-Dominated Regions: Centrifuge and Numerical Investigations

Date & Time:

10 December '26
Thursday
3 PM

MGS Webinar by Prof Anthony Leung

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Speaker



Prof Anthony Leung
Hong Kong University of Science and Technology

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Webinar on “Performance of Energy Diaphragm Walls in Cooling-Dominated Regions: Centrifuge and Numerical Investigations“

SYNOPSIS

Energy geostructures are a green construction technology that can effectively reduce energy consumption and carbon emissions from space heating and cooling. While the performance of energy geostructures–especially piles–has been extensively studied in the literature, energy diaphragm walls have received limited scientific attention. Although energy geostructures have been adopted in Europe, the UK and North America, their energy and engineering performance in subtropical climate regions such as Hong Kong, Malaysia with high cooling demand remains unclear. This webinar will present the latest findings on the heat exchange efficiency and thermomechanical behaviour of energy reinforced concrete (RC) diaphragm walls under ultimate and serviceability limit states. New observations made from novel geotechnical centrifuge modelling will be provided. Drawing on parametric finite-element analyses, the webinar will also discuss practical engineering concerns arising from the added thermal function, such as changes in the factor of safety of energy diaphragm walls.

SPEAKER BIODATA

Professor Leung is a Full Professor in the Civil and Environmental Engineering and the Director of the Geotechnical Centrifuge Facility at the Hong Kong University of Science and Technology (HKUST). His research expertise is vegetation-based solutions to geotechnical infrastructure and energy geostructure technology. Professor Leung has published more than 180 journal articles in these subject areas. He is the awardee of many major international awards, including the 2025 Scott Sloan Best Paper Award (best paper in Computers and Geotechnics), 2022 Geotechnical Research Medal (best paper in Geotechnique), 2022 Outstanding Young Geotechnical Engineer Award of the ISSMGE, 2021 R. M. Quigley Award (best paper in Canadian Geotechnical Journal), 2019 Excellent Youth Scholar of the NSFC and 2019 Bright Spark Lecture Award of the ISSMGE. He is currently the Founding Editor-in-Chief of the ISSMGE Journal of Geotechnical Research, the Immediate Past President of the Hong Kong Geotechnical Society (HKGES) and General Secretary of TC106 (Unsaturated Soils) and TC107 (Tropical & Residual Soils).

Starting April 2025, webinar presentation slides will ONLY be made available in the MGS Website Members Area upon speaker's consent.

For more information, check out our website at

www.mygeosociety.com

Or email us at

mgs@mygeosociety.com

Registration Fee

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✓ A minimum attendance of 75% is required in order to obtain a certificate of attendance.