One-day Pre-AGM Lectures

MALAYSIAN GEOTECHNICAL SOCIETY (PERTUBUHAN GEOTEKNIKAL MALAYSIA)

"Geotechnical Design of Foundations, Slopes and Earth Retaining Structures for Earthquake Safety"

Speaker

Ir. Liew Shaw Shong

Speaker

Prof Paulus Rahardjo

Speaker

Dr. Ir. Stefanus Diaz Alvi

9th June 2026 (Tue) | 09:00 AM - 06:00 PM

Atlanta Ballroom, Level 3
Armada Hotel, Petaling Jaya

BEM CPD Hour: **7**
Ref: **IEM26/PP/027/L**
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DETAIL PROGRAMME

TIME	ACTIVITY
8.00 - 9.00	Registration & Light Breakfast
9.00 - 10.30	Lecture 1 (Foundation of Knowledge): Earthquake Engineering Fundamentals and Seismic Hazard in Malaysia *By Ir. Liew Shaw Shong*
10.30 - 10.45	Q&A
10.45 - 11.15	Tea Break & Networking
11.15 - 12.45	Lecture 2 (Earthquake Effects on Ground and Slopes): Seismic Response of Soils, Slopes, and Earth Retaining Systems *By Prof. Ir. Paulus P. Rahardjo*
12.45 - 13.00	Q&A
13.00 - 14.00	LUNCH
14.00 - 15.30	Lecture 3 (Design Applications): Seismic Design of Foundations and Underground Structures *By Dr. Ir. Stefanus Diaz Alvi*
15.30 - 15.45	Q&A
15.45 - 16.15	Tea Break & Networking
16.15 - 17.45	Lecture 4 (Risk Mitigation and Coastal Resilience): Earthquake- and Tsunami-Induced Geotechnical Hazards: Is Malaysia Prepared? *By Prof. Ir. Paulus P. Rahardjo*
17.45 - 18.00	Q&A END OF LECTURE
18.00 - 19.30	MGS AGM

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PROGRAMME SYNOPSIS

Lecture 1 (Foundation of Knowledge): Earthquake Engineering Fundamentals and Seismic Hazard in Malaysia

FOCUS
- Basic Concepts of earthquake engineering relevant to geotechnical practice
- Regional and local seismicity of Malaysia
- Implications of low-to-moderate seismicity for geotechnical design

KEY TOPICS
- Plate techtonics and earthquake mechanisms
- Seismic parameters: PGA, response spectra, return periods
- Historical earthquakes affecting Malaysia and neighbouring regions
- Local soil conditions and site amplification effects
- Current Seismic design provisions (Eurocode 8, local guidelines)

LEARNING OUTCOME
Participants understand why seismic considerations are necessary in Malaysian geotechnical design and how seismic hazard is quantified for engineering applications.

Lecture 2 (Earthquake Effects on Ground and Slopes): Seismic Response of Soils, Slopes, and Earth Retaining Systems

FOCUS
- How earthquakes affect soils, slopes, and retaining structures
- Performance-based view of infrastructure sustainability

KEY TOPICS
- Soil dynamic behavior and ground response
- Liquefaction: mechanisms, triggering, and consequences
- Seismic stability of natural and engineered slopes
- Earthquake-induced landslides and failures in cut-and-fill slopes
- Seismic earth pressures on retaining walls (Mononobe–Okabe concept)
- Damage case histories from regional earthquakes

LEARNING OUTCOME
Participants can identify critical geotechnical vulnerabilities in slopes and retaining structures under seismic loading and understand failure mechanisms.

Lecture 3 (Design Applications): Seismic Design of Foundations and Underground Structures

FOCUS
- Practical design approaches for foundations and underground structures under earthquake loading

KEY TOPICS
- Seismic design philosophy: allowable stress vs. performance-based design
- Shallow and deep foundations under seismic loads
- Foundation–soil–structure interaction
- Liquefaction mitigation measures for foundations
- Design considerations for basements, tunnels, and buried utilities
- Detailing for resilience and post-earthquake serviceability

LEARNING OUTCOME
Participants gain practical knowledge to apply seismic design principles to foundations and underground structures in Malaysian ground conditions.

Lecture 4 (Risk Mitigation and Coastal Resilience): Earthquake- and Tsunami-Induced Geotechnical Hazards: Is Malaysia Prepared?

FOCUS
- Broader geotechnical risk mitigation strategies, with emphasis on coastal and nearshore infrastructure

KEY TOPICS
- Earthquake-generated tsunamis: geotechnical implications
- Coastal soil behavior under tsunami loading and scour
- Performance of slopes, embankments, and retaining structures during tsunamis
- Lessons learned from past tsunamis (regional case studies)
- Early warning systems and land-use planning
- Engineering and geotechnical mitigation measures for Malaysian coastlines

LEARNING OUTCOME
Participants understand the role of geotechnical engineering in earthquake–tsunami risk reduction and can critically assess Malaysia’s preparedness.

SPEAKER BIODATA

Ir. Liew Shaw Shong, Senior Director/Founder of G&P Geotechnics Sdn Bhd, holds a B.Sc. in Civil Engineering from National Taiwan University (1991) and an M.Eng.Sc. from the University of New South Wales (1993). With 33 years of experience, he has worked on major projects like Lebuhraya Damansara Puchong, Tanjung Pelepas Port, Kuala Lumpur International Airport, etc. He has led forensic landslide investigations and contributed to the National Slope Master Plan Study.

He is a past President of the Malaysian Geotechnical Society and past Chairman of the Geotechnical Engineering Technical Division of The Institution of Engineers, Malaysia (IEM). He has published over 100 papers and won the Ir. Tan Sri Hj. Yusoff Prize twice for the best IEM Technical Paper Award.

Paulus P. Rahardjo is Professor of Geotechnical Engineering at Universitas Katolik Parahyangan (Unpar), Bandung Indonesia and director of PT Geotechnical Engineering Consultant (GEC). After completion of his Bachelor Degree at Unpar in 1976, he started work as freelance consultant while completing Sarjana Degree in 1980 at the same university. His post graduate degree in Highway Engineering was completed at Institut Teknologi Bandung {ITB) in 1982 and MSCE majoring in Geotechnical Engineering at Virginia Tech (USA) in 1983. After 2 years of professional practice in Indonesia, he continued his study back at Vitginia Tech with PhD completed in 1989 with dissertation on the Use of CPT for assessment of Liquefaction of Silty Sands.

His appointments at the University include Head of Geotechnical Laboratory, Director of Post Graduate Program and Vice Rector for Academic Affairs.

While working at Parahyangan Catholic University, he continues professional works in the geotechnical engineering with extensive experience including deep foundations, urban excavations, tunnels and highways, airports, bridges, wharfs, coal minings and many of geotechnical forensic consultations. His specific expertise are in the area of insitu testings, landslides and seismic hazard study. He has become resource persons for government at the Ministry of Public Works for highways, buildings, and bridges, receives awards including Best Research Professor at Unpar, Anugerah Semarak Nusantara from UTM (Malaysia) and some others. He has published more than 300 papers in Journals, articles, proceedings etc . He is affiliates witn the Indonesian Society for Geotechnical Engineering (HATTI), American Society of Civil Engineering (ASCE), Indonesian Society for Natural Disasters (IABI).

Stefanus Diaz Alvi is Head of the Research Department at PT Geotechnical Engineering Consultant (GEC), Indonesia, and Adjunct Faculty in Geotechnical Engineering at Universitas Katolik Parahyangan (UNPAR), Bandung. He completed his Civil Engineering degree at UNPAR in 2017, followed by a Master’s degree and Professional Engineering Program in Geotechnical Engineering, and earned his PhD in Geotechnical Engineering from UNPAR in 2025.

His professional and research interests include pile foundations, geotechnical earthquake engineering, soil behaviour, numerical analysis, site characterization, underground spaces, and the application of fiber optic sensing instrumentation for geotechnical monitoring and performance assessment. He has been actively involved in academic activities as lecturer, researcher, and thesis advisor, while maintaining extensive professional consulting practice. He has produced several publications in geotechnical engineering, including journal papers, conference proceedings, technical articles, and research reports.

In professional practice, he has contributed to numerous geotechnical engineering projects involving high-rise buildings, bridges, tunnels, stadiums, highways, airports, mining facilities, underground structures, and landslide mitigation works. His experience includes seismic hazard assessment and liquefaction studies for major infrastructure projects, integrating advanced analytical methods with practical foundation engineering design, particularly under earthquake loading conditions.

He has served as an invited speaker at GEOSTRUCTURE 2025 and has delivered multiple professional workshops on foundation engineering and the application of finite element methods in geotechnical engineering. He is a Certified Professional Engineer accredited by Indonesian Society for Geotechnical Engineering (HATTI) and continues to contribute to the advancement of geotechnical engineering practice, particularly in seismic design of foundations and underground structures.

REGISTRATION FORM

CATEGORY	Registration Fee (RM)
Members (MGS/IEM/GeoSS/CTGS/MyIGS/HATTI)	RM400.00
Non-Member	RM800.00
Group Registration (5 and more) Members	RM350.00
Group Registration (5 and more) Non-members	RM700.00

Full payment of the registration fee is required before participants are permitted to enter the lecture hall

PAYMENT METHOD

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TERMS AND CONDITIONS

- FULL PAYMENT must be settled before commencement of the Seminar, otherwiseparticipants will not be allowed to enter the hall. If a place is reserved and the intendedparticipants fail to attend the Seminar, the fee is to be settled in full.
- The fee paid is not refundable.
- The Organizing Committee reserves the right to cancel, alter, or change the program due tounforeseen circumstances. Every effort will be made to inform the registered participants ofany changes. In view of the limited places available, intended participants are advised tosend their registrations as early as possible to avoid disappointment.

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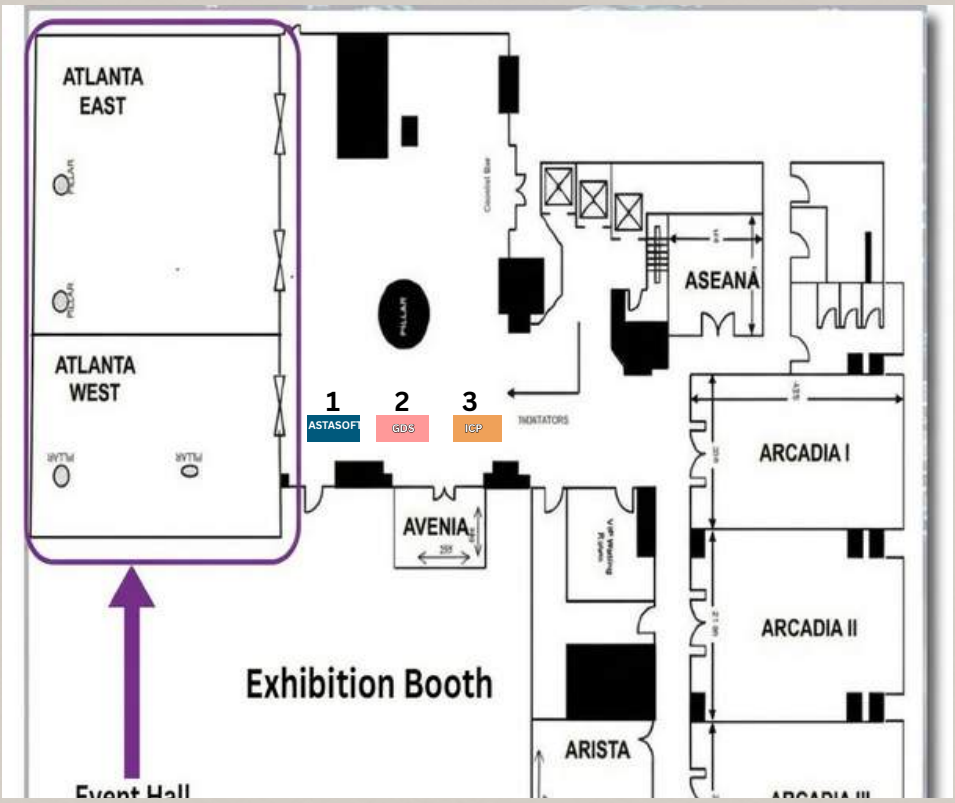

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