

Half Day Talk on “Vibration Mitigation Dampers”

*In conjunction with the IEM (Southern Branch) Annual Dinner and Awards Night 2023 cum
52 Years Anniversary and Golden Jubilee Celebration*

Date : Saturday, 28 October 2023
Time : 9.00 a.m. – 1.00 p.m.
Venue : Holiday Villa Johor Bahru
Speaker : Assoc. Prof. Dr. Mohammadreza Vafaei, UTM

Synopsis

Damping is an inherent characteristic of any structure and plays a significant role in the dynamic response especially when resonance occurs. While the damping ratio of many buildings is around 5%, long-span bridges, slender, and tall buildings exhibit a significantly lower damping ratio making them vulnerable to vibrations induced by wind, earthquakes, or cars and trains. Therefore, during past decades different types of auxiliary damping devices have been invented and installed on structures to reduce their dynamic responses. In this seminar, at first, an in-depth explanation of damping and its types are presented. Then, the methods for measuring the damping ratio of structures are explained, and the effects of material types, structural systems, and height of structures on the damping ratio are discussed. Next, different types of auxiliary damping systems are presented and their advantage and disadvantages are explained. This seminar also discusses the design concept of tuned liquid dampers, metallic yielding dampers, and viscoelastic dampers. In addition, some examples of installed damping systems on real structures are presented.

Time	Tentative Programme
8.30 a.m. – 9.00 a.m.	Registration
9.00 a.m. – 9.10 a.m.	Welcome Speech by IEM (SB) Organising Committee
9.10 a.m. – 10.30 a.m.	Session 1
10.30 a.m. – 10.45 a.m.	Coffee Break
10.45 a.m. – 12.30 p.m.	Session 2
12.30 p.m. – 1.00 p.m.	- Case study and Discussion - Question & Answer Session
1.00 p.m.	Closing & End of Talk

About the Speaker:



Dr. Mohammadreza Vafaei (PhD, P.Eng, Ts., M.ASCE, M.EERI, M.IET) is currently an Associate Professor in School of Civil Engineering, Universiti Teknologi Malaysia (UTM), Johor, Malaysia. Prior to joining UTM, he served several Consultant Companies in Iran and has led the Seismic Design of many structures like Tall Buildings, Air Traffic Control Towers, Airport Terminals, Water Reservoirs, Telecommunication Towers, and Monumental Structures. His expertise includes Seismic Design and retrofitting of structures, Vibration Control through Passive Dampers, and Structural Health Monitoring. He has been invited as the Keynote Speaker for several International Conferences and Workshops. He has also published more than 65 papers in referred Journals and Conferences.

Participant Fees:

Grade	Online
IEM Members	RM 100.00
IEM Student Members	RM 50.00
Non-IEM Member	RM 180.00

Closing Date: 24 October 2023

Registration will be on a first-come-first-serve basis. Kindly return the reply slip to the IEM (SB) office before **24 October 2023** together with a non-refundable cheque for the participant fees made payable to **The Institution of Engineers, Malaysia (Southern Branch)**. Alternatively, you could bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708), and to facsimile both the Bank-in and Reply Slips to the Institution. The Institution requests all members cooperation in ensuring fees are paid in advance to the seminar. Please also be reminded that fees will not be refunded to absent participants who have paid, and to also note that all reservations must be paid despite participant cancellations. Thank you for your continuous support of the Institution.

Chairman, Sub-Committee on Seminar and Technical Talk, IEM (SB)

BEM Approved
CPD Hours: 4.0
Ref No: IEM23/SB/294/T

REPLY SLIP

To: Hon. Secretary, The Institution of Engineers, Malaysia (Southern Branch) **Fax: 07 – 3363406**

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Saturday, 28 October 2023, 9.00 a.m. – 1.00 p.m.
at Holiday Villa Johor Bahru.

I wish to attend the above talk. I enclosed herewith a cheque no. for the amount of RM.....as payment for the participant fee.

Name of Member: Membership No: I/C No:

Address: Tel(O):(Fax).....

..... Tel (H/P):

..... E-mail:

Company's Name:

Signature: Date:

Note : Kindly **email to iemsouthern@gmail.com the Reply Slip together with the payment slip for confirmation.**
: Attendance by representative will not be issued with the Certificate of Attendance.

PERSONAL DATA PROTECTION ACT

I have read and understood IEM's Personal Data Protection Notice published on IEM's website at www.myiem.org.my and I agree to IEM's use and processing of my personal data