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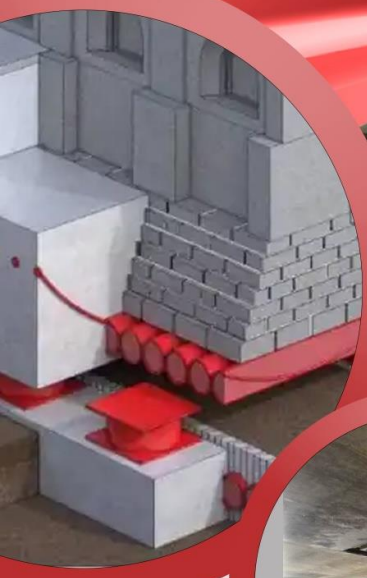

WORKSHOP ON

DYNAMIC TESTING AND ANALYSIS OF BASE ISOLATION SYSTEM

Scan to Register

MARCH 15TH, 2024

REGISTRATION LINK

https://t.ly/_IMas

WORKSHOP LINK

https://t.ly/Pdiqj

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DYNAMIC TESTING AND ANALYSIS OF BASE ISOLATION SYSTEM

ABOUT WORKSHOP

Base isolation is a seismic engineering strategy designed to mitigate the destructive impact of earthquakes on structures. The fundamental concept involves decoupling a building or structure from the ground motion caused by seismic waves. This is achieved by inserting flexible or damping devices between the building's superstructure and its foundation. The primary objective of base isolation is to absorb and dissipate seismic energy, preventing it from being transmitted to the structure above. The effectiveness of base isolation lies in its ability to allow a building to move independently of the ground motion during an earthquake, reducing the forces and displacements transferred to the structure. This innovative seismic design technique has found application in a variety of structures, ranging from critical infrastructure such as hospitals and emergency response centers to historical buildings and residential structures. By implementing base isolation, engineers can enhance the resilience of structures, minimize damage, and safeguard human life during seismic events.

This workshop entails a comprehensive agenda that involves designing an isolator, conducting experimental tests on it, and utilizing the obtained results to model and analyze a reinforced concrete (RC) building. This integrated approach aims to provide participants with hands-on experience in both the theoretical and practical aspects of seismic engineering, offering valuable insights into the design and performance of isolators in real-world scenarios.

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DYNAMIC TESTING AND ANALYSIS OF BASE ISOLATION SYSTEM

SPEAKERS

MANISH KUMAR
ASSOCIATE PROFESSOR
IIT BOMBAY
B.E. – IIT KANPUR
M.E. & PH.D. – SUNY, BUFFALO
P.E. – CALIFORNIA, USA

Recognized globally, Prof. Manish Kumar has received international fellowships. He led the organization of a US-Indo international workshop on seismic safety for nuclear structures, showcasing his leadership in the field. Currently, he actively participates in Bureau of Indian Standards (BIS) working groups, contributing to the development of codes and guidelines for the safety of structures against extreme loads, specifically in seismic isolation and blast-resistant design. His research focus on seismic response control using isolation and energy dissipation devices. He has conducted extensive large-scale experiments to characterize the static and dynamic behavior of structures, contributing to numerous technical papers and reports. He is renowned for developing software modules to model seismic isolators in various platforms, including OpenSees, ABAQUS, and LS-DYNA.

MOHAN S C
ASSOCIATE PROFESSOR
BITS-PILANI, HYDERABAD
B.E. – VTU, MCE HASSAN
M.E. & PH.D. – IIT KHARAGPUR

Inspired by the need of cost-effective earthquake resistant technologies followed by the Gorkha earthquake 2015, Prof. Mohan started working on low-cost seismic isolation system. His work has been sponsored by the DST ECR and DST CRG. He is currently working on the innovative low-cost elastomeric isolation system which can be applicable to rural regions of the developing countries. His proficiency in investigating the dynamic behavior of structures through the implementation of structural health monitoring, low-cost isolation, and computational cost reduction methodologies has significantly contributed to technical papers and the conferences.

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PROGRAM SCHEDULE

Time Slot	Topic/ Session	Venue	Session by
09:30 AM - 09:45 AM	Inauguration	F 206	Prof. P Yogeeswari (Dean Admin)
09.45 AM - 11.00 AM	Background on Base Isolation of Structures	F 206	Prof. Mohan S. C.
	TEA BREAK		
11:15 AM - 01.00 PM	Design objectives and codal guidelines for seismic isolation systems	F 206	Prof. Manish Kumar
	GROUP PHOTO FOLLOWED BY LUNCH		
02.00 PM - 03.30 PM	Dynamic Testing of Isolator in Laboratory	Advanced Structural Engineering Lab	Ms. Ambili P / Mr. Manish Shrivastava / Mr. Zoheb Nawaz Md
	TEA BREAK		
03.45 PM - 05.15 PM	Hand-on session on the Analysis of RC building with tested isolation system	CAD Lab (D 208)	Ms. Ambili P / Mr. Manish Shrivastava / Mr. Zoheb Nawaz Md
05.15 PM - 05.45 PM	Question & Answers, Feedback	CAD Lab (D 208)	All

For outstation participants, campus hostel accommodation is available at a very nominal fee.

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