

SEISMIC RESILIENT STRUCTURES

5th – 6th November 2025

HOTEL MYSTAYS Ochanomizu Conference Center
Tokyo, Japan



EVENT OVERVIEW

On March 2025, a 7.7 Magnitude earthquake struck the Sagaing Region in Myanmar, extensively damaging region city with the aftershocks causing significant damage in neighboring Thailand where a 33-storey skyscraper under-construction collapsed and came crumbling to the ground. The city of Yunnan in China and Ho Chi Minh in Vietnam also experienced the effects with hundreds of homes and apartments being affected. This marks the most powerful earthquake to strike Myanmar in over 100 years. In January 2024 Japan also experienced a magnitude 7.6 earthquake which saw the collapse of more than 200 buildings collapsing and the partial collapsing of more than 2000 buildings. This series of events in the past 24 months, serves as a compelling wake-up call for developers and builders to prioritize seismic resistance in their projects.

While every seismic event is unique, comparisons to other global earthquakes, the February 2023 earthquakes that hit Syria & Turkey saw about 240,000 buildings were either damaged or destroyed in the aftermath. Japan, while situated in a highly seismic region, boasts world-leading earthquake-resistant structures due to its stringent building codes, the devastating events that hit Turkey and Syria revealed a starkly different reality. Construction amnesties granted to at least 75,000 buildings contributed to the Urbanization Ministry's estimate of over 84,700 structures collapsing or suffering severe damage, highlighting the critical importance of ethical and robust construction in earthquake-prone zones."

Seismic-proof construction isn't merely compliance; it's a fundamental investment in human safety, financial stability, and community resilience. The **Seismic Resilient Structures** conference grants you exclusive access to groundbreaking case studies and projects, presented by leading industry experts. Join us to build vital connections within the seismic engineering community and position yourself as a pioneer in this critical field, shaping the future of safer, stronger structures.

WHY YOU CANNOT MISS THIS EVENT

- Gain profound insights of building codes and regulatory frameworks, crafted to enforce adherence to the highest seismic engineering standards.
- Navigate the intricate landscape of safety considerations during seismic activity, while contemplating the enduring durability of structures over the long term.
- Grasp the nuanced understanding of the financial landscape, empowering builders to make discerning decisions that safeguard their investments and fortify the economic foundation of their projects.
- Embark on an exploration of cutting-edge technologies and methodologies in seismic engineering, seamlessly integrating them into construction practices to elevate the seismic resistance of structures to unprecedented levels.
- Master the application of advanced simulation and modelling tools to accurately predict structural behaviour under seismic loads, optimizing design and construction for enhanced safety and resilience.

WHO SHOULD ATTEND?

This event is targeted but not limited to:

- C-Suite Officers
- Presidents & Vice Presidents
- Director & Managing Directors
- Heads & Head of Departments
- General Managers

Managers/ Managers of:

- Construction
- City Planning
- Architecture
- Property Management
- Civil/ Seismic/ Structural Engineering
- Geotechnical Engineering
- Geology
- Project Engineering
- Building Safety
- Facilities Management
- Property Development
- Urban Development
- Infrastructure
- Geospatial
- Infrastructure
- Procurement

From the following industries:

- Government Entities
- Construction
- Civil/ Seismic/ Structural Engineering
- Design & Architecture
- Geology
- Earthworks
- Real Estate
- Building Contractors
- Building Service Providers
- Building Materials Suppliers
- Building Authorities

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FEATURING PRESENTATIONS AND CASE STUDIES BY DISTINGUISHED SPEAKERS



Pei-Yang Lin
CEO
P-Waver
Taiwan



Rodolfo "Chao" Chua, Jr.
Business Group Leader for
Structures – Design & Engineering
GHD PTY LTD
Philippines



Chikara "Rickey" Iihoshi
Professor
Kyushu Sangyo University
Japan



Yohanes Suryanto
Structural Design Engineer
CTCI Corporation
Taiwan



Islam Haouas
Researcher/ PhD Student
University of Tsukuba
Japan



Alessandro Marzucchini
Technical Director, MMC Lead
Ramboll
Singapore



Yoshiharu Saito
Chief Engineer
NPO Environment and Disaster Prevention
Japan



Dr. Ryoji Otsu
Visiting Researcher,
Waseda University, Japan
CEO,
Chinougijyutsu Co., Ltd., Japan



Stuart Marshall
Director Global Sales
Stack Modular
United Kingdom



Emmanuel M. Bustamante
Senior Design Architect
University of the Philippines
Philippines



Peerapat Khaimook
Civil Engineering Consultant
DNV
Japan



Dr. Sukanta Das
Researcher
Port and Airport Research Institute (PARI) in Yokosuka
Japan



Dr. Hafiz Ahmed Waqas
Assistant Professor | Structural Design Engineer
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI)
Pakistan



Dr. Benyoucef Abdelkader
Engineer
GERB Vibration Control Systems Japan
Japan



Dr. Irawan Tani
Deputy Managing Director / Technical Director
Mott MacDonald
Indonesia

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Day One: Wednesday, 5th November 2025

0800 Registration & Coffee

0850 Chairperson Welcome Address

Chikara "Rickey" Iihoshi, Professor
Kyushu Sangyo University, Japan

0900 Session One

Design and Detailing Requirements for Resilient Steel Moment Frame Connections

- Seismic design concepts for Special Moment Frames (SMF)
- Seismic-resistant SMF connections
- Seismic-resilient SMF connections

Rodolfo "Chao" Chua, Jr., Business Group Leader for Structures – Design & Engineering
GHD PTY LTD, Philippines

0940 Session Two

Application and Performance of on-site AI Earthquake Early Warning System

- On-site AI EEW
- Private EEW for semi-conductor plant
- Success EEW in many countries

Pei-Yang Lin, CEO
P-Waver, Taiwan

1020 The Speed Networking - The Mad Minutes!

Fun and fast, this networking activity is a great opportunity to grow your connections.

1050 Morning refreshment

1120 Session Three

Improving Seismic Resilience of Midrise Buildings with Damped-Outrigger Systems

- Demonstrates how damped-outrigger systems (using viscous dampers or BRBs) enhance seismic performance in midrise buildings
- A study of 48 models showed a significant reduction in roof drift and acceleration responses
- Provides a practical reference for engineers on selecting optimal outrigger systems for 15- to 30-story buildings

Yohanes Suryanto, Structural Design Engineer
CTCI Corporation, Taiwan

1200 Session Four

Probabilistic Seismic Hazard for Risk-Targeted Design

- Seismic Risk Assessment
- Site-Specific Ground Motion
- Site Amplification due to Shallow-soil Response

Chikara "Rickey" Iihoshi, Professor
Kyushu Sangyo University, Japan

1240 Networking luncheon

1340 Session Five

Huge Earthquake Time-Series Prediction has with Simultaneous Observation with Four Different Methods

- 1-month, long term prediction; Crustal movement
- 1-week, short term prediction; Simultaneous observation by Ionosphere perturbations utilizing AM broadcasting wave and dual-frequency monitoring across multi-frequency bands
- 10-hours, short term prediction; Tree Bio – electric potential

Yoshiharu Saito, Chief Engineer
NPO Environment and Disaster Prevention, Japan

1420 Session Six

Automation Approach for Structural Assessment of earthquake-damaged buildings

- Enhance the field of structural health monitoring and disaster response by developing a reliable tool for post-earthquake building assessment
- Validation of an AI-based methodology for automated detection and evaluation of structural damage in earthquake-affected buildings
- Investigate the deployment of AI in post-earthquake scenarios, highlighting its capabilities, practical applications, and associated challenges

Islam Haouas, Researcher/ PhD Student
University of Tsukuba, Japan

1500 Afternoon refreshment

1530 Session Seven

Seismic Resilience for Modular and Prefab Construction

- Structural Risk in Seismicity zone
- Modular Structure Performance due to Seismic
- Quantification of Seismic Resilience related to Modular Construction

Dr. Irawan Tani, Deputy Managing Director / Technical Director
Mott MacDonald, Indonesia

1610 Session Eight

Retrofitting Existing Infrastructures; a Path to Seismic Resilience Future

- Seismic design principles for Japanese bridge's pier structure: How are we prepared for the catastrophe?
- Seismic retrofitting existing structure: How do we upgrade an obsoleted infrastructure?
- Requirement update for seismic performance for structures in non-seismically active region: How Thailand is redefining their seismic resilient requirements?

Peerapat Khaimook, Civil Engineering Consultant
DNV, Japan

1650 Session Nine

Seismic Resilience and Damage Detection in Aging Railway and Highway Bridges

- Modal strain energy-based methods for improved seismic damage detection in steel and concrete bridges.
- Bridge Information Modeling (BIM) applications for condition assessment and resilience planning.
- AI-driven predictive maintenance frameworks for extending the service life of seismic-prone bridges

Dr. Hafiz Ahmed Waqas

Assistant Professor | Structural Design Engineer

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI), Pakistan

1730 End of Day One

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Day Two: Thursday, 6th November 2025

0800 Registration & Coffee

0850 Chairperson Welcome Address

Chikara "Rickey" Iihoshi, Professor
Kyushu Sangyo University, Japan

0900 Session One

The Global Development of Mid-High Rise Modular Buildings in Seismic Regions

- Explore global progress in modular mid- to high-rise construction across earthquake-prone regions
- Discover engineering innovations enhancing resilience, safety, and speed in seismic design
- Gain insights from international case studies driving adoption and best practices

Stuart Marshall, Director Global Sales
Stack Modular, United Kingdom

0945 Session Two

Scientific Inspection of Seismic Isolation Systems Using AI

- Continuous Remote Monitoring Without Human Presence
- Detection and Prediction of Age-Related Degradation Beyond Visual Inspection
- Quantitative Evaluation of Post-Earthquake Displacement

Dr. Ryoji Otsu, Visiting Researcher, Waseda University, Japan
CEO, Chinougijyutsu Co., Ltd., Japan

1030 Morning refreshment

1100 Session Three

Future-Proofing Universities: Integrating Seismic Safety in Smart Campus Design

- Examining the seismic vulnerabilities of academic and institutional buildings in high-risk regions
- Strategies for integrating seismic resilience with modern campus planning and smart infrastructure
- Case insights from Philippine university projects focused on safety, sustainability, and adaptive design

Emmanuel M. Bustamante, Senior Design Architect
University of the Philippines, Philippines

1145 Session Four

Modular Construction in Seismic Regions – Pushing the Limits of Prefabrication in Tall Buildings

- Tailoring prefabrication technologies for diverse building typologies
- Enabling ambitious architectural design through adaptive modular systems
- Innovating modular systems for seismic-resilient high-rise buildings

Alessandro Marzucchini, Technical Director, MMC Lead
Ramboll, Singapore

1230 Networking luncheon

1330 Session Five (Panel Session)

Modular Construction as a Key Enabler to Achieve Project

Efficiency & Sustainability

Stuart Marshall, Director Global Sales

Stack Modular, United Kingdom

Alessandro Marzucchini, Technical Director, MMC Lead

Ramboll, Singapore

1415 Session Six

Post-Earthquake Damage Assessment of Deep Foundations

Using Large-Scale Testing and Finite Element Analysis:

Advancing Foundation Health Monitoring

- Why buildings need to be assessed shortly after an earthquake
- Getting people back into their homes and businesses, if it's safe to do so and getting people out of dangerous buildings
- Consistency is key to earning the public's trust for post-earthquake building assessments

Dr. Sukanta Das, Researcher

Port and Airport Research Institute (PARI) in Yokosuka, Japan

1500 Afternoon refreshment

1530 Session Seven

Retrofitting and Designing Buildings with Modular Tuned Mass Control System: Applications of Coil Springs and Dampers

- Modular Tuned Mass Control System (TMCS)
- Numerical Optimization
- Seismic Resilient Structures

Dr. Benyoucef Abdelkader, Engineer

GERB Vibration Control Systems Japan, Japan

1615 End of Conference