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## From the President

I'm pleased to reconnect with you as part of our ongoing commitment to keep you informed about key developments.

The earthquake engineering sector is currently navigating a period of uncertainty. This uncertainty affects many of us, making it harder to make sound decisions. However, amidst this uncertainty lies opportunity. If we rise to the challenge, we can influence change and work towards a more resilient Aotearoa.



### Review of Seismic Risk Management for Existing Buildings

The new government has released terms of reference for reviewing how seismic risk in existing buildings is managed. For over 30 years, our Society has led the push to address earthquake-prone buildings, resulting in the current legislation. We continue to support the profession through guidelines, seminars, and our involvement in the Joint Commission on the Seismic Assessment and Retrofit of Buildings.

This review provides an opportunity to improve the system, especially as issues have emerged during its implementation. Our Society has nominated experts to join MBIE's steering group, which will advise on the review. We've also formed a focus group to proactively offer input to the government. If you have ideas or would like to get involved, [please reach out to us](#).

### National Seismic Hazard Model and Future Design

The National Seismic Hazard Model, released in late 2022, highlighted significantly higher seismic hazards across much of New Zealand. This has raised important questions about how we should design the built environment moving forward. A group, under the guidance of Standards New Zealand, is currently reviewing feedback on the draft specification TS1170 for buildings, with interim specifications expected by the end of this year or early next. Our Society's representatives have been contributing to this process.

Meanwhile, MBIE's Seismic Risk Working Group is conducting a broader review on how we should design buildings for future earthquakes. This is where we, as a Society, can make a significant impact. Our Resilient Buildings research has already identified key issues, and we look forward to contributing to development of new standards. If you have ideas or wish to engage, [please get in touch](#).



## 2024 Conference Proceedings

We are pleased to announce that the proceedings from the NZSEE 2024 Conference are now accessible online.

[www.nzsee.org.nz](http://www.nzsee.org.nz)

## September Bulletin Issue

The September issue of the Bulletin has been published and is available online.

[www.bulletin.nzsee.org.nz](http://www.bulletin.nzsee.org.nz)



## UPCOMING EVENTS

### AEES Annual Meeting

Adelaide, Australia

21 - 23 November 2024

<https://aees.org.au>

### 19 WCSI Conference

Berkeley, California, USA

15 - 19 September 2025

<https://19wcsi.org>

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## Seismic Design for Infrastructure

Beyond buildings, there's a notable gap in how infrastructure should be designed to meet the new knowledge on seismic hazards. We've raised this need through MBIE consultations and the Critical Infrastructure Advisory Group, and we are beginning to liaise with infrastructure owners.

## Emergency Management and Resilience

Emergency management is an area of increasing focus, and we must remember that resilience is about maintaining or quickly restoring functionality, not just structural strength. Our Society recently completed a Learning from Earthquakes mission to Taiwan, which highlighted the importance of integrated and rapid response efforts. Thanks to the team led by Bo-Yao Lee for bringing valuable learnings for us. We are keen to engage with the emergency management sector to discuss these insights further.

## International Collaboration and Learning

International collaboration is crucial for staying at the forefront of earthquake engineering. The government and asset owners recognise the importance of aligning our standards and practices with global peers. With this in mind, we are planning on supporting several key researchers and practitioners to attend the upcoming US-Japan-New Zealand Resilience and Structural Earthquake Engineering workshop in December 2024, organised by the Applied Technology Council (ATC) in San Diego, and supported by NZSEE and other organisations.

Additionally, we encourage you to consider submitting projects for the 2024 ASSISi Global Design and Innovation Awards (see later in this newsletter), which will foster global engagement on seismic resilience.

## Celebrations and Upcoming Events

Congratulations to the Resilient Buildings Project team for their recognition at the recent Risk New Zealand awards! Special thanks to team leader Helen Ferner for leading such impactful work.

We are also supporting the 19th World Conference on Seismic Isolation, Energy Dissipation, and Active Vibration Control of Structures (19WCSI), to be held at UC Berkeley in September 2025. Two of our members, David Whittaker and Dion Marriott, are involved in organising this significant event, and I encourage you to reach out to them for more information.

On a personal note, during September and October, I am presenting a short course on the Seismic Design of Earthworks and Slopes, together with my colleague Doug Mason, organised by the New Zealand Geotechnical Society and supported by our Society. The focus is on resilience-based design approaches that enhance both resilience and sustainability in a cost-effective manner.



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## NZSEE Technical Conference and Member Survey

The NZSEE Management Committee values your opinion and is seeking your feedback to enhance the quality and value of our annual Technical Conference and other member services.

As our signature event, we are dedicated to keeping the NZSEE Technical Conference relevant and valuable to you. Your insights could lead to short-term improvements for the 2025/26 conference or inform longer-term changes to better serve our community.

If you did not receive the survey via email earlier in the week, we would greatly appreciate it if you could take a few minutes to complete the survey below. The first part focuses on the conference, and the second part covers broader member services. Your input will help us better support the Earthquake Engineering community.

Thank you for helping us shape the future of NZSEE!

[Complete the survey here.](#)

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## Learning from the 3rd April 2024 Mw7.4 Hualien Earthquake, Taiwan

NZSEE recently hosted three insightful seminars in Wellington (28 August), Christchurch (29 August) and Auckland (9 September) focused on the Mw7.4 Hualien Earthquake that struck Taiwan on April 3rd, 2024. The seminar on 9 September was a hybrid event where members were able to join from around New Zealand. These events featured presentations from members of NZSEE's 'Learning from Earthquakes' team, who visited Taiwan in May and June 2024 to study the earthquake's effects firsthand. This was the most significant seismic event in Taiwan since the 1999 Chi-Chi Earthquake.

Thanks to our presenters Alice Chang-Richards, Bo-Yao Lee, Doug Mason, Joe Byrne, Julian Rincon, Julian Benito, Ke Jiang, Patrick Cummiskey, and Richard Mowll.

Special thanks to Natural Hazards Commission for funding the post-earthquake reconnaissance.



LFE member Doug Mason presenting at the Wellington Seminar



LFE member Ke Jiang presenting at the Wellington Seminar



LFE member Bo-Yao Lee presenting at the Wellington Seminar



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## The Resilient Buildings Project Award

NZSEE is delighted that our Society's Resilient Buildings Project was recognised at the Risk and Resilience Summit in Auckland on 23 July 2024.

The Resilient Buildings Project team was acknowledged for its innovative and trans-disciplinary approach to integrating societal expectations into engineering policy and practice.

It won awards for:

1. Networking & Partnerships in Risk Management, and
2. Innovation – Managing risk during times of significant change.



Congratulations to the whole Resilient Buildings Project Team, led by our former president, Helen Ferner.

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## Follow us on LinkedIn

Stay connected with us on LinkedIn for the latest updates, insights, and industry news. Follow us and join the conversation to engage with fellow members and contribute to the growth of our community!

[Follow NZSEE LinkedIn](#)

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## Outcome of bid to host the 19th World Conference on Earthquake Engineering

Following the discussion at the NZSEE AGM in April and subsequent support of members, a bid was prepared for NZSEE to host the 19th World Conference on Earthquake Engineering in 2029. This bid was supported strongly by Tourism New Zealand, Auckland Convention Bureau, Conferences & Events, and many others.



This bid was presented to the International Association of Earthquake Engineering (IAEE) General Assembly at the 18WCEE conference in Milan by the team of Quincy Ma, Jason Ingham, Amy Abel, and Geoff Rodgers. While the bid was seen very favourably by some and the NZSEE exhibition booth at the 18WCEE attracted a lot of attention, the NZSEE bid was ultimately unsuccessful.

The successful bid was made by the Canadian Association for Earthquake Engineering, and the 19th World Conference on Earthquake Engineering will be held in Montréal, Canada from October 1 to 6, 2028. We look forward to offering support to CAEE as they organise the next World Conference.



Jason Ingham, Amy Abel, Quincy Ma, and Geoff Rodgers preparing to present the bid to the IAEE General Assembly.



The NZSEE Exhibition Booth at the 18<sup>th</sup> World Conference on Earthquake Engineering in Milan. The booth provided many positive interactions with conference delegates and the opportunity to represent NZSEE and New Zealand on the international stage.

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## 2024 ASSISi Global Design and Innovation Awards

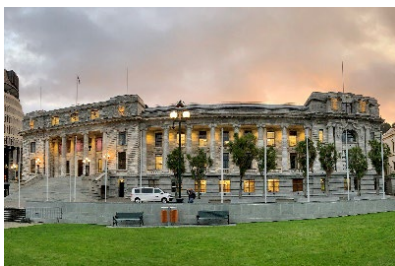
ASSISi, the Anti-Seismic Systems International Society, Inc., has just opened it's 2024 Global Design and Innovation Awards program for submissions.

The Awards will recognise excellence in design and research for seismic isolation and energy dissipation technologies around the world. Submissions are sought that demonstrate innovative and creative uses of seismic isolation and energy dissipation technologies, and particularly that respect and enhance regional and vernacular construction methods and materials. Submissions may be new or retrofit construction, and may be a building, non-building structure or component, or a bridge.

More information about the program, including detailed submission requirements, may be found on ASSISi's [website](#).

The deadline for entries is October 31, 2024, and winners will be announced in November-December 2024.

[Find out more and submit your projects.](#)



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## Advice released: Earthquake Ratings and Retrofit of Existing Buildings, following the release of TS 1170.5

In August members were notified in anticipation of the release of Technical Specification 1170.5, NZSEE, in conjunction with MBIE, SESOC, NZGS and NHC (as members of the Joint Committee for Seismic Assessment and Retrofit), have developed further specific advice regarding:

- The assessment of existing buildings following the final publication of TS 1170.5 (publication date to be confirmed).
- The design of seismic retrofit work in this context.

This advice has been developed to help clarify the earthquake rating system for existing buildings, and the design of seismic retrofit work, following the release of TS 1170.5.

If you would like to find out more and view the documents, please visit our [website](#).

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## National Liquefaction Model - End User Group

NZSEE members are invited to participate in an End User Group (EUG) to help shape the future of New Zealand's first National Liquefaction Model (NLM).

### What is the National Liquefaction Model?

The Natural Hazards Commission (NHC) Toka Tū Ake has commissioned Tonkin + Taylor to develop New Zealand's first National Liquefaction Model (the NLM). This project aims to improve the current state of knowledge about liquefaction hazards in Aotearoa, New Zealand, allowing for a consistent approach for hazard identification and loss modelling.

The model is intended to be openly accessible allowing the user to access data on groundwater, ground conditions, and liquefaction vulnerability.

### Who are the End Users?

This is an opportunity to provide feedback on the NLM as it's being developed, to ensure the tool is as valuable as possible to your field/practice.

Potential End Users include local and central government (and their agents), insurers, and researchers.

To seek feedback on the NLM we are forming an End User Group, hosting two online seminars, and distributing an online survey for EUG participants.

### Key Dates:

- **Seminar One:** 4:00pm - 5:30pm, 25 September 2024
- **Online Survey:** Open from late September until Mid-October
- **Seminar Two:** 4:00pm - 5:30pm, 13 November 2024

### The Objectives of the National Liquefaction Model

The primary objective of the NLM is to support the NHC's earthquake hazard loss modelling, to enable modelling of consequential damage to one- and two-story residential homes, and additional benefits include the following:

- **Data storage:** Storage and quality of input data in a consistent format
- **Readily updatable:** Updatable as new data becomes available, or methodologies evolve
- **Model outputs:** Generates outputs in a variety of formats
- **Documentation:** Development will be well documented and open access

[Find out more and register here.](#)

