

# SESO C



**NEW ZEALAND  
GEOTECHNICAL  
SOCIETY INC**

**Seminar Series**

**2023**

## **SEISMIC SOIL-STRUCTURE INTERACTION:**

### **Part 1 – Shallow Foundations**

QUEENSTOWN 9TH OCTOBER	WELLINGTON 10TH OCTOBER	CHRISTCHURCH 11TH OCTOBER	HAMILTON 16TH OCTOBER	AUCKLAND 17TH OCTOBER	NAPIER 18TH OCTOBER	WHANGAREI 31ST OCTOBER
---------------------------	----------------------------	------------------------------	--------------------------	--------------------------	------------------------	---------------------------

### **Why you and your employees attend this seminar?**

#### **Overview of the seminar**

Soil-foundation-structure interaction (SFSI) is present on all soil sites and can play a significant role in the seismic performance of a building. While there can be significant benefits from SFSI, there can also be major consequences from ignoring it.

This seminar will cover the design and assessment of buildings on shallow foundations considering the effects of SFSI. A particular focus will be rocking foundations that can significantly modify seismic behaviour compared to fixed based conditions, and how to take advantage of the beneficial effects and mitigate the negative consequences. Foundation design considering liquefiable soils will not be covered.

#### **Seminar coverage**

The seminar will cover the benefits and drawbacks of nonlinear SFSI mechanisms. A particular focus will be the inclusion of SFSI within the NZ Seismic Assessment Guidelines procedures.

### **Other benefits**

- Coverage of the proposed changes for NZS1170.5 for rocking foundations
- Overview of benefits and limitations of available simulation techniques for SFSI

### **Who should attend**

- Structural engineers designing low, mid and high rise buildings
- Geotechnical engineers involved in the design of shallow foundations

This seminar series is suitable for engineers at all experience levels.

### **What's next**

Soil-structure interaction: Part 2  
This seminar will be run by Professor Gazetas in November 2023.

**REGISTER NOW**

If you are registering a group, please use **this link**.

## SPEAKER PROFILES



**Stuart Oliver**  
*Holmes*  
*Technical Development Lead*

Stuart is a Technical Development Lead at Holmes in Christchurch. He has over 25 years of structural engineering experience working in New Zealand, Europe and California. Recent projects include the Christchurch Justice and Emergency Services Precinct, Christchurch Anglican Cathedral, Spark Christchurch and the Wellington Town Hall Strengthening. Stuart’s professional interests include performance-based seismic design, sustainable design and promoting community resilience and functional recovery. Stuart was a lead author of the MBIE Technical Guidelines on Seismic Assessment of Existing Buildings and has assisted with the development of similar documents in North America and Europe.



**Maxim Millen**  
*University of Canterbury*

Maxim has 10 years of research experience in soil-foundation-structure interaction, with post-doctoral research positions at the University of Porto and University of Canterbury. His research focuses on performance-based design and assessment of building-foundation systems, as well as simulation techniques from simple soil springs to high fidelity 3D finite element modelling. He has recently been involved with proposed updates to NZS1170.5 on rocking foundations. His new role at Tonkin + Taylor focuses on innovation in geotechnical engineering, capitalising on his six years of experience as a cofounder of the engineering software company, Pensolve.

## VENUES

**Queenstown**  
**9th October 2023**  
Cophorne Hotel & Resort Lakefront  
Corner Frankton Rd & Adelaide St  
Queenstown

**Wellington**  
**10th October 2023**  
Area Events, Boulcott Suites  
1 O'Reily Ave  
Wellington 6011

**Christchurch**  
**11th October 2023**  
Novotel  
Christchurch Cathedral Square,  
Christchurch

**Hamilton**  
**16th October 2023**  
The Verandah  
Hamilton Lakes Domain  
Rotoroa Drive, Hamilton

**Auckland**  
**17th October 2023**  
Ellerslie Event Centre  
100 Ascot Avenue  
Ellerslie, Auckland

**Napier**  
**18th October 2023**  
Napier War Memorial Centre  
48 Marine Parade  
Napier

**Whangarei**  
**31st October 2023**  
Comfort Hotel Flames  
8 Waverly St, Onerahi  
Whangarei

## SCHEDULE OF ACTIVITIES

Time	Details
12:30 pm	Registration Networking
12:45 pm	Overview of SSI
1:15 pm	Fixed base structural assessment
2:15 pm	Afternoon tea
2:45 pm	Structural assessment with SFSI
3:45 pm	Numerical simulation of SFSI
4:15 pm	Designing rocking foundations
5:15 pm	End of seminar

## SCHEDULE OF SEMINAR WHANGAREI

Time	Details
8:30am - 1:30pm	Please note that this is a half day morning seminar, morning tea will be provided

## INVESTMENT DETAILS

SESOC & NZGS members: \$400 (GST exclusive) per person  
Non-members: \$480 (GST exclusive) per person  
Afternoon tea will be provided

**REGISTER NOW**

If you are registering a group, please use [this link](#).