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Presenters

- **Stefano Pampanin**
Courtesy of The University of Canterbury
- **Alistair Cattanaach**
Courtesy of Dunning Thornton Consultants
- **Gary Haverland**
Courtesy of Structex Metro Limited

Speakers Profiles

Stefano Pampanin — PhD (Milan), MS (San Diego), Laurea (magna cum laude, Pavia)
Stefano Pampanin is Associate Professor in Structural & Earthquake Engineering at the University of Canterbury, Christchurch, New Zealand.

He has received several national and international awards for his research in the field of performance based design, assessment and retrofit of structures, including the PCI Martin Korn award in 2000, the fib international Award for Younger Engineers (under 40-years old) in the Category Research in 2003, the NZCS Sandy Cormack Award in 2004, the inaugural EQC/NZSEE Ivan Skinner Award "for the advancement of Earthquake Engineering in NZ" in 2006

Since his involvement in the final phase of the US-PRESSS program at UC San Diego (under a Fulbright Visiting Scholarship) in the late 1990s, he has played a key role in the research, development and dissemination of PRESSS technology, through undergraduate and graduate courses to students and/or practitioner engineering in Europe and New Zealand, as well as in its onsite applications acting as a consulting engineer and peer reviewer.

Alistair Cattanaach

Alistair Cattanaach is a Director of Dunning Thornton Consultants in Wellington. He has an enthusiasm for bringing together architecture, heritage and structural engineering. Alistair's 15 years in the industry has included several award-winning buildings including the St James Theatre, Shed 13 and the Meridian Building.

Alistair was the recipient of the 2007 residential concrete award for the McCallum House in Martinborough, and the 2008 Sandy Cormack award for his paper "ESD is a structural issue too: The Meridian Building."

He is not shy of innovation, most recently successfully designing NZ's first multistorey PRESSS building at Victoria University in Wellington, which was the recipient of the 2009 Concrete Award.

Gary Haverland

Gary Haverland is a Director of Structex, a network of structural and civil engineering specialists based in Christchurch. Over the past 20 years Gary has been involved in the design and construction of a wide range of building projects, primarily in the South Island, which has included hospitals, apartments, industrial and multi storey buildings.

Gary works directly with a wide range of designers and architects, at the "coal face", providing specialist structural engineering solutions.



PRESSS Design Handbook

Presented by
The New Zealand Concrete Society

Christchurch — Monday 22 March 2010
Auckland — Wednesday 24 March 2010
Wellington — Thursday 25 March 2010

New technologies, with the ability to dramatically change the construction scene, are very rare events. Through the efforts of Associate Professor Stefano Pampanin and late Professor Bob Park, PRESSS-Technology, pioneered by Professor Nigel Priestley in the USA in the 1990s, has been successfully introduced into New Zealand code standards (NZS3101:2006), taught at undergraduate and graduate courses at Universities and recently implemented into construction practice featuring the most advanced solutions developed through comprehensive research. The recent completion of several PRESSS buildings in New Zealand provides an opportunity to learn how design and construction aspects of this technology can be applied to structures in this country.

Why You and Your Employees Should Attend This Seminar

PRESSS Technology is a simple construction technique and design method to develop damage-resisting multi-storey precast concrete buildings with large spans and open space.

Precast elements are jointed together through unbonded post-tensioned strands or bars through 'dry' jointed ductile connections — an alternative to 'wet' or 'strong' connections typical of traditional cast-in-place solutions. The inelastic demand of PRESSS technology is accommodated within the critical connection itself through the opening and closing of an existing gap. This mechanism, referred to as 'controlled rocking' finds its roots in the well proven seismic-resisting techniques implemented in the ancient Greek and Roman temples, where stacked marble blocks rocked on top of each other sustaining the shaking effects of severe earthquakes for centuries.

In the last decade, substantial developments and refinements have occurred, leading to a significant maturity both in terms of constructability and practical implementation as well as simplified design methods. More recently, buildings using this technology have been constructed in New Zealand and this local database of knowledge can now be added to the international experience.

Following the successful NZCS PRESSS-Technology Introductory Seminar Series in 2005, this second seminar series will be run as a condensed short course and will present a comprehensive PRESSS Design Handbook which includes:

- Background introduction to the behaviour and design of these systems, including updates on recent development and on-site implementations
- Comprehensive step-by-step conceptual design example of a five storey building including frames and walls connections, following a displacement-based design approach (interactive and hands-on tutorial style design class)
- Design analysis software for the section analysis of HYBRID connections (e.g. re-centering & dissipative)

Please note that the design analysis software tool has been developed to accompany the detailed design handbook but designers may wish to utilise their existing software packages. The software is being provided free as an accompanying tool and users will need to be competent in the design analysis and satisfy themselves that the software presents outputs that are consistent with the design analysis. NZCS is not responsible for providing software troubleshooting or updates.

Other Benefits:

- Comprehensive resource through the seminar notes, Design Handbook and software
- Knowledgeable and experienced speakers
- Networking with industry professionals

Who Should Attend?

Consulting Engineers, Architects, Architectural Designers, Precasters, Specifiers, Building Consent Authorities and Building Contractors

Presentation Content

10.00 a.m. — 10.30 a.m.	Registration
10.30 a.m. — 11.30 a.m.	New developments in PRESSS Technology - Stefano Pampanin
11.30 a.m. — 12.30 p.m.	On Site Applications: Overseas and New Zealand examples - Stefano Pampanin, Gary Haverland (Christchurch), Alistair Cattanach (Auckland/Wellington)
12.30 p.m. — 1.15 p.m.	Lunch
1.15 p.m. — 2.00 p.m.	Design Principles, Criteria and Tools - Stefano Pampanin
2.00 p.m. — 3.30 p.m.	Full Design Example of a multi-storey building according to NZS3101:2006. Part I - Frames - Stefano Pampanin
3.30 p.m. — 4.00 p.m.	Coffee Break
4.00 p.m. — 5.30 p.m.	Full Design Example of a multi-storey building according to NZS3101:2006. Part II - Walls - Stefano Pampanin
5.30 p.m. — 6.30 p.m.	Discussion, Networking and Refreshments

PRESSS Design Handbook:

Christchurch	Monday 22 March 2010 Crowne Plaza Christchurch Cnr Kilmore and Durham Streets, Christchurch
Auckland	Wednesday 24 March 2010 Ellerslie Events Centre Ellerslie Racecourse, 80-100 Ascot Avenue, Greenlane East
Wellington	Thursday 25 March 2010 Wellington Convention Centre 111 Wakefield Street, Wellington

Investment details;

NZCS Members \$250.00 (GST exclusive) per person
Non Members \$350.00 (GST exclusive) per person*

*includes one year complimentary membership.

Bound copy of the PRESSS Design Handbook \$250.00 (GST exclusive) per copy

Seminar fees include;

- Tea and Coffee on arrival
- Lunch and afternoon tea
- Comprehensive seminar notes
- Post seminar refreshments

Registration Form Tax Invoice - GST Registration Number 48-931-944

PRESSS Design Handbook Seminar

Name(s):

Company:

Postal Address:

Phone:

Mobile:

Email:

Please indicate which venue:

☐ Christchurch, 22 March 2010

☐ Auckland, 24 March 2010

☐ Wellington, 25 March 2010

Payment Details:

No. of member registrants [] at \$281.25 GST inclusive = \$

No. of non-member registrants [] at \$393.75 GST inclusive = \$

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Please complete this form, take a copy for your records and forward it to: NZCS PRESSS Design Handbook Seminars, PO Box 12, Beachlands, Auckland 2147, fax: (09) 536 5442

If paying by cheque or bank draft please make payable to NZ Concrete Society. For all enquiries phone (09) 536 5410 or email concrete@bluepacificevents.com

NOTE: All payments must be received prior to each seminar.