

## The New Zealand Concrete Society supported by

The New Zealand Society for Earthquake Engineering, Structural Engineering Society NZ and NZ Timber Design Society present

# Building Performance in the February 2011 Christchurch Earthquake Seminar

This seminar will be of interest to all who are involved in earthquake engineering or the process of recovery in Christchurch. The focus is on the performance of buildings in the Christchurch earthquakes, and most notably the earthquake of 22 Feb 2011, with special focus on the performance of residential timber framed construction, of unreinforced clay and reinforced concrete masonry, and on all forms of concrete buildings. The performance of steel buildings will also be discussed. The presentation will begin with details of the seismology and ground effects associated with the earthquake. Presentations will cover observations of building damage and insights into the features that caused this damage. Where appropriate, information from recent experimental research studies and recommendations for improved detailing and methods for remediation will be included.

### Other Benefits

- The opportunity to network with industry peers
- The seminar take home notes will become a reference for the office
- This is the most cost effective way of acquiring this knowledge
- Knowledgeable, experienced speakers with good platform skills

### Who Should Attend?

Designers, Specifiers, Site Engineers, Contractors, Building Certifiers, Local Authorities.

### Speaker's Profiles

#### Professor Andy Buchanan

Professor Buchanan is past-president of the New Zealand Timber Design Society, a Fellow of IPENZ and the New Zealand Society for Earthquake Engineering (NZSEE), a member of the Structural Engineering Society (SESOC), Society of Fire Protection Engineers (SFPE), Canterbury Structural Group committee, and is on the editorial board of Fire and Materials journal and Journal of Wood Science. Recently Professor Buchanan has been awarded a Queens Service Medal for Public Services and shared best research paper at the 2008 New Zealand Earthquake Engineering Conference.

#### Associate Professor Jason Ingham

Jason completed his BE and ME at The University of Auckland, followed by a PhD at the University of California at San Diego. Jason joined The University of Auckland as a staff member in 1995 and undertook an MBA in 2004. In that same year Jason was awarded a \$3.75m research grant funded by the NZ Foundation for Research Science and Technology, investigating and developing guidelines for seismic assessment and retrofit of earthquake prone buildings. The Retrofit Solutions research project was undertaken in collaboration with the University of Canterbury and collectively involved 27 PhD studies. Jason is currently Vice President of the NZ Concrete Society and fib Head of Delegation for New Zealand.

#### Senior Lecturer Hugh Morris

Hugh Morris is a senior lecturer at the University of Auckland and was one of the co-authors of the 1998 New Zealand earth building standards. In recent years he has been involved with teaching timber design and research into structural timber. He was involved in establishing the Chair in Timber Design and establishment of the Structural Timber Innovation Company research consortium. He was President of the NZ Timber Design Society for two years and is Chair of the World Conference on Timber Engineering scheduled for Auckland in 2012.

#### Associate Professor Stefano Pampanin

Stefano Pampanin is the Chair of the Structures/Geotechnical Cluster at the Department of Civil and Natural Resources Engineering at UoC. He has completed his Laurea (cum laude) at the University of Pavia, Italy, a Masters in Structural Engineering at the University of California at San Diego and a PhD in Earthquake Engineering at the Technical University of Milan.

Following the Feb 22 earthquake in Christchurch, he has been coordinating a recovery project on "Seismic performance of multistorey RC buildings: recommendation for repair, retrofit and reconstruction".

### Programme

12.30pm – 1.00pm	Registration
1.00pm - 2.00pm	<b>Andy Buchanan / Hugh Morris</b> <ul style="list-style-type: none"> <li>• Details of earthquake and ground effects on buildings</li> <li>• Performance of residential timber buildings</li> <li>• Performance of steel buildings</li> </ul>
2.00pm - 3.00pm	<b>Jason Ingham</b> <ul style="list-style-type: none"> <li>• Performance of unreinforced clay brick and natural stone masonry buildings</li> <li>• Performance of reinforced concrete masonry buildings</li> </ul>
3.00pm - 3.30pm	Coffee break
3.30pm - 5.30pm	<b>Stefano Pampanin</b> <ul style="list-style-type: none"> <li>• Performance of multi-storey reinforced concrete buildings (1930s-today)</li> <li>• Non-ductile concrete buildings</li> <li>• Post-1976 RC buildings</li> <li>• Precast concrete buildings</li> <li>• Concrete frames with masonry infill</li> </ul>

### Investment Details

Seminar fees include bound seminar notes, tea & coffee on arrival and afternoon tea.

Members	\$160.00 GST exclusive
Non-Members	\$260.00 GST exclusive*

\*(includes complimentary NZCS membership for the balance of the financial year).

### Venues

<b>North Harbour</b>	Tuesday 19 April 2011 North Harbour Function Centre Gate A, North Harbour Stadium, Stadium Drive, Albany
<b>Auckland</b>	Wednesday 20 April 2011 Ellerslie Event Centre, 80 – 100 Ascot Avenue Greenlane East, Auckland
<b>Wellington</b>	Tuesday 3 May 2011 Wellington Convention Centre, 111 Wakefield Street Wellington
<b>Queenstown</b>	Wednesday 4 May 2011 Millennium Hotel, Cnr Frankton Rd & Stanley St, Queenstown
<b>Taupo</b>	Friday 6 May 2011 Bayview Wairakei Resort, State Highway 1 Wairakei
<b>Nelson</b>	Tuesday 10 May 2011 Rutherford Hotel, Cnr Trafalgar Square & Nile St West Nelson
<b>Christchurch</b>	Wednesday 11 May 2011 Sudima Hotel Christchurch Airport, 550 Memorial Avenue Christchurch

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# Building Performance in the February 2011 Christchurch Earthquake Seminar

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

Name(s):

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Company:

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Postal Address:

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Postcode:

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Phone:

Mobile:

Email:

### Please indicate which seminar and venue:

- ☐ North Harbour, 19 April 2011    ☐ Auckland, 20 April 2011    ☐ Wellington, 3 May 2011    ☐ Queenstown, 4 May 2011  
☐ Taupo, 6 May 2011    ☐ Nelson, 10 May 2011    ☐ Christchurch, 11 May 2011

### Payment Details:

#### ■ Building Performance in the February 2011 Christchurch Earthquake Seminar:

No. of member registrants [ ] at \$184.00 GST inclusive = \$

No. of non-member registrants [ ] at \$299.00 GST inclusive = \$

**Total = \$**      I have enclosed our cheque of \$

Or prefer to pay by credit card: ☐ Visa ☐ MasterCard ☐ Amex

Card No:

Expiry Date:

Cardholders Name:

Signature:

Please complete this form, take a copy for your records and forward it to: Seminars, PO Box 12, Beachlands, Auckland 2147. Fax: (09) 536 5442.  
If paying by cheque or bank draft please make payable to NZCS. For all enquiries phone (09) 536 5410 or email [concrete@bluepacificevents.com](mailto:concrete@bluepacificevents.com)  
NOTE: All payments must be received prior to each seminar.