

NZSEE 2013 Technical Conference

Michael Fowler Centre, Wellington

Conference Programme

Friday 26 April 2013		
Time	Venue	
9:00 – 10:00	MFC Fletcher Challenge Foyer	Registration
10:00 – 10:30	MFC Auditorium	NZSEE 2013 Conference Opening Official Welcome and Opening Assoc Prof Stefano Pampanin, President, NZSEE Celia Wade-Brown, Mayor of Wellington City
10:30 – 11:20	MFC Auditorium Session 1	Keynote Address: the EERI Distinguished Lecture Resilience: An Engineering Challenge Session Chair: Peter Wood, NZSEE 2013 Conference Convenor Presenter: Professor Mary C. Comerio , UC Berkeley, California
11:20 – 11:40	Renouf Foyer	Morning Tea
11:40 – 12:05	MFC Auditorium Session 2	Invited Presentation: The State of Earthquake Engineering in New Zealand - One Engineer's View Session Chair: Assoc Prof Stefano Pampanin, President NZSEE Presenter: John Hare , Holmes Group, President SESOC, Christchurch

NOTE Presentation times, including questions: Keynotes 50 min; Invited 25 min; Orals 15 min.

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12:05 – 12:30	MFC Auditorium Session 3	<p>Invited Presentation: Earthquake Assessment of School Buildings: Expectation, Issues, and Challenges Session Chair: Assoc Prof Stefano Pampanin, President NZSEE Presenters: Jerome Sheppard (Manager, Policy, Planning & Standards) and Dave Brunson (Chair of MoE’s Engineering Strategy Group)</p>		
12:30 – 13:30	Renouf Foyer	Lunch		
13:30 – 13:55	MFC Auditorium Session 4	<p>Invited Presentation: the SSA/EERI William B Joyner Memorial Lecture The context and impacts of the Canterbury earthquake sequence of 2010-2011 Session Chair: David Wood, Beca Presenter: Dr Kelvin Berryman, Director, Natural Hazards Research Platform</p>		
13:55 – 15:00	MFC Auditorium Session 5	<p>Forum: Satisfying New Zealand’s Appetite for Earthquake Risk Session Chair: Neville Brown, WCC Forum Panellists: Kelvin Berryman, John Hare, Rob Jury, Helen Anderson, David Johnston, Ian Cassels, Kit Miyamoto, John Gardiner & David Hopkins</p>		
15:00 – 15:30	Renouf Foyer	Afternoon Tea		
15:30 – 16:45	Michael Fowler Centre Session 6	<p>6A :Seismic design case studies MFC Auditorium Session Chair: Peter Smith</p>	<p>6B: Seismic hazard modelling Renouf Foyer 1 Session Chair: Richard Smith, EQC</p>	<p>6C: Geotechnical matters Lionharbour View Room Session Chair: Michael Pender</p>
15:30 – 15:45		<p>Paper No. 1: ONE MARKET LANE - SEISMIC DESIGN POST CANTERBURY <i>Thornton A, Cattanach A</i></p>	<p>Paper No. 6: EARTHQUAKE HAZARD MODEL FOR LOSS ESTIMATION IN AUSTRALIA USING THE 2012 GA HAZARD MODEL <i>Campbell K, Thenhaus P, Gupta N, Smith D, Khater M</i></p>	<p>Paper No. 11: CYCLIC STRENGTH TESTING OF CHRISTCHURCH SANDS WITH UNDISTURBED SAMPLES <i>Taylor M, Cubrinovski M, Bradley B,</i></p>

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<p>15:45 – 16:00</p>		<p>Paper No. 2: A LOW DAMAGE DESIGN SOLUTION FOR A 15 STOREY STEEL FRAMED BUILDING <i>Tait J, Finnegan J, Sidwell G</i></p>	<p>Paper No. 7: GROUND MOTION MODELLING OF A LARGE SUBDUCTION INTERFACE EARTHQUAKE IN WELLINGTON, NEW ZEALAND <i>Holden C, Zhao J, Stirling M</i></p>	<p>Paper No. 12: SEISMIC PERFORMANCE OF GROUND ANCHORS IN WELLINGTON ALLUVIUM <i>Hope A, Palmer S</i></p>
<p>16:00 – 16:15</p>		<p>Paper No. 3: KILMORE STREET MEDICAL CENTRE: APPLICATION OF AN ADVANCED FLAG-SHAPE STEEL ROCKING SYSTEM <i>Latham D, Reay A, Pampanin S</i></p>	<p>Paper No. 8: SENSITIVITY STUDY OF AFTERSHOCK OCCURRENCE FOR A WELLINGTON FAULT EARTHQUAKE <i>Christophersen A, Rhoades D, Hainzl S</i></p>	<p>Paper No. 15: COMPARISON OF LIQUEFACTION MITIGATION OPTIONS: A CHRISTCHURCH CASE <i>Mahoney D, Kupec J</i></p>
<p>16:15 – 16:30</p>		<p>Paper No. 4: SEISMIC UPGRADE OF WELLINGTON CITY COUNCIL'S NEWTOWN PARK FLATS <i>Cattanach A, Palmer S</i></p>	<p>Paper No. 9: PROBABILISTIC SEISMIC INDOOR INJURY ESTIMATION <i>Yeow T, MacRae G, Dhakal R, Bradley B</i></p>	<p>Paper No. 13: SOIL PROFILE CHARACTERISATION OF CHRISTCHURCH STRONG MOTION STATIONS <i>Wotherspoon L, Orense R, Bradley B, Cox B, Wood C, Green R</i></p>
<p>16:30 – 16:45</p>		<p>Paper No. 5: FERRYMEAD BRIDGE – FROM WIDENING AND SEISMIC UPGRADING TO REPLACEMENT, A CASUALTY OF THE CHRISTCHURCH EARTHQUAKE <i>Kirkcaldie D, Brabhaharan P, Cowan M, Wang C, Hayes G</i></p>	<p>Paper No. 10: PROBABILISTIC SEISMIC HAZARD MODELLING: A REVIEW IN LIGHT OF RECENT EVENTS <i>Stirling M</i></p>	<p>Paper No. 14: STRENGTH REDUCTION FACTORS FOR FOUNDATIONS AND EARTHQUAKE LOAD COMBINATIONS INCLUDING OVERSTRENGTH FACTORS <i>Palmer S</i></p>

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Friday 26 April 2013		
16:45 – 17:00		Break
17:00 – 17:30	MFC Auditorium	NZSEE Annual General Meeting Chairperson: Assoc Prof Stefano Pampanin, President NZSEE; with Win Clark, NZSEE Executive Officer
18:30 – 20:30	Renouf Foyer	Welcome Reception and Stand up Buffet Host: Assoc Prof Stefano Pampanin, President NZSEE

Saturday 27 April 2013		
Time	Venue	
8:30 – 9:20	MFC Auditorium Session 7	Keynote Address: Earthquake Engineering in the Modern World Session Chair: Assoc Prof Rajesh Dhakal, University of Canterbury Presenter: Professor Sudhir Jain , President Elect IAEE, Director IIT Gandhinagar, India
9:20 – 9:45	MFC Auditorium Session 8	Invited Presentation: It's Our Fault: Eight years of improved earthquake hazard and risk estimation in Wellington Session chair: Pathmanathan Brabhaharan, OPUS International Consultants Presenter: Russ Van Dissen , Earthquake Geologist, GNS Science
9:45 – 10:10	MFC Auditorium Session 9	Invited Presentation: Learning from the Canterbury Earthquakes to Strengthen National Building Performance Session chair: Robert Davey, OPUS International Consultants Presenter: Adrian Regnault , General Manager, Building System Performance, MBIE

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10:10 – 10:40	Renouf Foyer	Morning Tea		
10:40 – 12:25	Michael Fowler Centre Session 10	<p>10A: The 2010-2011 Canterbury earthquake sequence: near-surface and building responses to extreme ground motions</p> <p style="text-align: center;">MFC Auditorium</p> <p style="text-align: center;">Session Chair: Caroline Holden</p>	<p>10B: Structural performance techniques</p> <p style="text-align: center;">Renouf Foyer 1</p> <p style="text-align: center;">Session Chair: Clark Hyland</p>	<p>10C: Seismic assessments: National to property portfolios</p> <p style="text-align: center;">Lionharbour View Room</p> <p style="text-align: center;">Session Chair: Luke Allen</p>
10:40 – 10:55		<p>Paper No. 16: CHARACTERISTICS OF VERTICAL GROUND MOTIONS IN THE CANTERBURY EARTHQUAKES</p> <p><i>Lee R, Bradley B, Franklin M</i></p>	<p>Paper No. 23: DESIGN SPECTRA FOR SEISMIC ISOLATION SYSTEMS IN CHRISTCHURCH, NEW ZEALAND</p> <p><i>Whittaker D, Jones L</i></p>	<p>Paper No. 30: PERFORMANCED BASED DESIGN OF BUILDINGS TO ASSESS AND MINIMIZE DAMAGE AND DOWNTIME</p> <p><i>Wetzel N, Mayes R, Tam K, Weaver B, Brown A, Pietra D</i></p>
10:55 – 11:10		<p>Paper No. 17: EMPIRICAL ANALYSIS OF NEAR-FAULT FORWARD-DIRECTIVITY EFFECTS IN THE 2010-11 CANTERBURY EARTHQUAKES</p> <p><i>Joshi V, Bradley B</i></p>	<p>Paper No. 24: LOW DAMAGE DESIGN – A CASE STUDY</p> <p><i>Gardiner D, Galloway B, Bull D</i></p>	<p>Paper No. 31: MOVING TOWARDS DISPLACEMENT-BASED ASSESSMENT IN AUSTRALIA</p> <p><i>Goldsworthy, H</i></p>
11:10 – 11:25		<p>Paper No. 18: SEPARATING SOURCE, PATH AND SITE INFLUENCES ON GROUND MOTION DURING THE CANTERBURY EARTHQUAKE SEQUENCE, USING SPECTRAL INVERSIONS</p> <p><i>Kaiser A, Oth A, Benites R</i></p>	<p>Paper No. 25: SEISMIC VISCOUS DAMPERS: A COST-EFFECTIVE SOLUTION WITH ENHANCED PERFORMANCE FOR BOTH EXISTING AND NEW CONSTRUCTION</p> <p><i>Gilani A, Miyamoto K</i></p>	<p>Paper No. 32: TOWARDS DISPLACEMENT-BASED SEISMIC ASSESSMENT IN EUROPE</p> <p><i>Sullivan T, Calvi G</i></p>

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<p>11:25 – 11:40</p>		<p>Paper No. 19: ENGINEERING APPLICATION OF HIGH FREQUENCY GROUND MOTIONS IN CHRISTCHURCH <i>Van Houtte C, Ktenidou O, Larkin T, Holden C</i></p>	<p>Paper No. 26: INNOVATIVE RESIDENTIAL FLOORING SOLUTION FOR THE TC3 FOUNDATION CATEGORY <i>Cook D, Hambling J</i></p>	<p>Paper No. 33: A DISCUSSION ON THE DIFFERENCE BETWEEN NEW ZEALAND'S PHILOSOPHY FOR THE SEISMIC DESIGN OF NEW BUILDINGS AND SEISMIC ASSESSMENT OF EXISTING BUILDINGS, AND THE ISSUES THAT ARISE <i>Au E, Lomax W, Walker A, Banks G, Haverland G</i></p>
<p>11:40 – 11:55</p>		<p>Paper No. 20: FLING-STEP EFFECT ON THE SEISMIC BEHAVIOUR OF HIGH-RISE RC BUILDINGS DURING THE CHRISTCHURCH EARTHQUAKE <i>Hamidi Jamnani H, Karbassi A, Lestuzzi P</i></p>	<p>Paper No. 27: SLIDING SHEAR CAPACITIES OF THE ASYMMETRIC FRICTION CONNECTION <i>Khoo H, Yeung S, Zhou H, Clifton C, MacRae G</i></p>	<p>Paper No. 34: EARTHQUAKE RESILIENCE THROUGH EARLY INTEGRATED URBAN PLANNING AND PRACTICE <i>Brahaharan P</i></p>
<p>11:55 – 12:10</p>		<p>Paper No. 21: LESSONS FROM THE PERFORMANCE OF HOUSES IN THE CANTERBURY EARTHQUAKE SEQUENCE OF 2010-11 <i>Thomas G, Kim B, Beattie G, Shelton R, Sim D</i></p>	<p>Paper No. 28: SENSITIVITY OF POST-TENSIONED CONCRETE WALL RESPONSE TO MODELLING OF DAMPING <i>O'Hagan, J, Twigden K, Ma Q</i></p>	<p>Paper No. 35: ACTING ON THE SEISMIC ASSESSMENT OF A LARGE PORTFOLIO <i>Lindstrom D, Sharpe R</i></p>

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12:10 – 12:25		Paper No. 22: ANALYSIS OF THE SEISMIC RESPONSE OF THE CHRISTCHURCH WOMEN’S HOSPITAL <i>Kuang A, Sridhar A, Gutschmidt S, Gavin H</i>	Paper No. 29: EXPERIMENTAL AND ANALYTICAL STUDY OF REPLACEABLE BUCKLING-RESTRAINED FUSED-TYPE (BRF) MILD STEEL DISSIPATERS <i>Sarti F, Smith T, Palermo A, Pampanin S, Bonardi D, Carradine D</i>	Paper No. 36: CONSEQUENCE-BASED DECISION MAKING TOOLS TO SUPPORT NATURAL HAZARD RISK MITIGATION AND MANAGEMENT: EVIDENCES OF NEEDS FOLLOWING THE CANTERBURY (NZ) EARTHQUAKE SEQUENCE 2010-2011, AND INITIAL ACTIVITIES OF AN OPEN SOURCE SOFTWARE DEVELOPMENT CONSORTIUM <i>Giovinazzi S, Wenzul H, Powel D, Sung Lee J</i>
12:25 – 13:30	Renouf Foyer	Lunch		
13:30 – 17:30		<p>Either: A. Tours – with earthquake hazard risk and risk reduction focus. <i>Register for all tours at Registration –</i></p> <ol style="list-style-type: none"> 1. Waterfront Walking Tour 2. City views and earthquake risk reduction; 3. Cuba and Courtney Heritage; OR <p>B. The Wellington City Council Earthquake Resilience Expo - <i>Wellington Rocks</i> Wellington Town Hall; OR</p> <p>C. Free time</p>		
18:30 – 19:00	Te Papa	Pre-dinner Drinks		
19:00 – 23:00	Te Papa	<p>NZSEE 2013 Conference Dinner and Annual Award Presentations</p> <p>Host: Assoc Prof Stefano Pampanin, President NZSEE</p> <p><i>Dress: smart casual, suits optional</i></p>		

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Sunday 28 April 2013

Time	Venue			
8:30 – 9:20	MFC Auditorium Session 11	<p>Keynote Address: “Retrofit of Heritage Buildings” Session Chair: Win Clark, NZSEE EO Presenter: Prof. Ing. Claudio Modena, University of Padova, Italy</p>		
9:20 – 9:45	MFC Auditorium Session 12	<p>Invited Presentation: Conserving our Built Heritage and the ‘New Realities’ Session Chair: Win Clark, NZSEE EO Presenter: Mr Bruce Chapman, Chief Executive of the New Zealand Historic Places Trust</p>		
9:45 – 10:45	MFC Auditorium Session 13	<p>Forum: Heritage Buildings: What are the New Realities? Session Chair: Bruce Chapman, Chief Executive of the New Zealand Historic Places Trust Forum Panelists: Alistair Cattanach, Alistair Aburn, Andre Lovatt, Iona Pannett, Lewis Holden, Bruce Petry</p>		
10:45 – 11:15	Renouf Foyer	Morning Tea		
11:15 – 13:15	Michael Fowler Centre Session 14	<p>14A: From Heritage to Economics MFC Auditorium Session Chair: Win Clark</p>	<p>14B: Soils, Structures, and Interactions Renouf Foyer 1 Session Chair: Liam Wotherspoon</p>	<p>14C: Structures and Practices Lionharbour View Room Session Chair: Les Megget</p>
11:15 – 11:30		<p>Paper No. 37: HUDDART PARKER BUILDING - HERITAGE SEISMIC RETROFIT <i>Thornton A, Vance N</i></p>	<p>Paper No. 45: SOIL STRUCTURE INTERACTION STARTS WITH ENGINEERS <i>Oliver S, Hare J, Harwood N</i></p>	<p>Paper No. 53: USING HIGH-STRENGTH SELF-COMPACTING CONCRETE IN REINFORCED CONCRETE BEAM-COLUMN JOINTS <i>Soleymani Ashtiani M, Dhakal R, Scott A</i></p>

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<p>11:30 – 11:45</p>		<p>Paper No. 38: FORMER MAGISTRATES' COURT BUILDING – STRENGTHENING AND PERFORMANCE <i>Brown A, Hill J, Newall J, Kerrigan C, Mitchell M</i></p>	<p>Paper No. 46: SFSI IN SHALLOW FOUNDATION EARTHQUAKE RESPONSE <i>Storie L, Pender M</i></p>	<p>Paper No. 54: SEISMIC ASSESSMENT AND STRENGTHENING OF THE AUCKLAND INTERNATIONAL AIRPORT CONTROL <i>Kunkel E</i></p>
<p>11:45 – 12:00</p>		<p>Paper No. 39: 15 STOUT STREET SEISMIC ASSESSMENT INCORPORATING IN-SITU STRUCTURAL STEEL BEAM/COLUMN TESTING <i>Holden T</i></p>	<p>Paper No. 47: ROCKING CONTROLLED DESIGN OF SHALLOW FOUNDATIONS <i>Pender M, Algie T, Storie, L, Salimath R</i></p>	<p>Paper No. 55: DYNAMIC FRICTION CO-EFFICIENT OF ASYMMETRICAL FRICTION CONNECTIONS (AFC) <i>Herve R, Rodgers G, Chase G, Chanchi J, MacRae G</i></p>
<p>12:00 – 12:15</p>		<p>Paper No. 40: SEISMIC ASSESSMENT AND IMPROVEMENT OF NAPIER'S ART DECO BUILDINGS <i>Walsh K, Ingham J</i></p>	<p>Paper No. 48: DYNAMIC BEHAVIOUR OF FULLY PRECAST ROCKING BRIDGE <i>Mazza R, Palermo A, Gutschmidt S</i></p>	<p>Paper No. 56: EXPERIMENTAL VERIFICATION OF SLIP-FRICTION CONNECTORS INTENDED FOR IMPLEMENTATION IN ROCKING TIMBER SHEAR WALLS <i>Loo W, Kun C, Quenneville P, Chow N</i></p>
<p>12:15 – 12:30</p>		<p>Paper No. 41: WHAT DUCTILITY VALUE SHOULD BE USED WHEN ASSESSING UNREINFORCED MASONRY BUILDINGS? <i>Allen C, Masia M, Derakhshan H, Dizhur D, Ingham J, Griffith M</i></p>	<p>Paper No. 49: SPATIALLY-DISTRIBUTED GROUND MOTION INTENSITY MAPS: APPLICATION FOR SITE-SPECIFIC LIQUEFACTION EVALUATIONS IN CHRISTCHURCH <i>Bradley B, Hughes M</i></p>	<p>Paper No. 57: PREVENTING SEISMIC DAMAGE TO FLOORS IN POST-TENSIONED TIMBER FRAME BUILDINGS <i>Moroder D, Buchanan A, Pampanin S</i></p>

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12:30 – 12:45		Paper No. 42: CURRENT ADVANCES IN FRP ANCHORAGE TESTING <i>Arnold S</i>	Paper No. 50: EFFECT OF SOIL TYPE ON BUILDING SEISMIC DEMAND <i>Loye A, Evans S, Dhakal R, Lin SL</i>	Paper No. 58: ASSESSMENT OF COLLAPSE CAPACITY OF RC BUILDINGS BASED ON FIBER-ELEMENT MODELLING <i>Ebrahimi Koopaee M, Dhakal R, Bradley B, MacRae G</i>
12:45 – 13:00		Paper No. 43: POTENTIAL BENEFITS OF STRENGTHENING EARTHQUAKE-PRONE BUILDINGS <i>Cousins J</i>	Paper No. 51: EVALUATION OF NUMERICAL POUNDING MODELS WITH EXPERIMENTAL VALIDATION <i>Khatiwada S, Chouw N, Butterworth J</i>	Paper No. 59: THE SEISMIC DESIGN OF PRESSURE EQUIPMENT AND ITS SUPPORTS – IPENZ PRACTICE NOTE 19 <i>Lindup G</i>
13:00 – 13:15		Paper No. 44: CONSEQUENCES OF THE CANTERBURY EARTHQUAKE SEQUENCE FOR INSURANCE LOSS MODELLING <i>Drayton M, Verdon C</i>	Paper No. 52: IMPLEMENTATION OF LOW DAMAGE CONSTRUCTION: WHAT ARE THE CHALLENGES? <i>Uma S, Dhakal R, MacRae G</i>	Paper No. 60: A RECOVERY BOILER RECOVERED <i>Reid J, Dyer P</i>
13:15 – 14:15	Renouf Foyer	Lunch		
14:15 – 14:40	MFC Auditorium Session 15	Invited Presentation: SCIRT – A Disaster Rebuild Model for Infrastructure Session Chair: Assoc Prof Stefano Pampanin, President NZSEE Presenters: Rod Cameron , FIEAust CPEng(Aust) MIPENZ, SCIRT Value Manager and Peter Kinley , SCIRT Asset Investigation Data Manager		
14:40 – 15:00	MFC Auditorium Session 16	Conference Awards and Conference Closure Session Chair: Peter Wood, NZSEE 2013 Conference Convenor		

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