

10th Australasian Masonry Conference

(Program subject to change)



SUNDAY, 11 FEBRUARY 2018

18:00-21:00

10AMC Welcome Mortex Mixer Cocktail Reception

Sponsored by



ABODE Bistro Bar – Ground Floor

MONDAY, 12 FEBRUARY 2018

All conference sessions are held in the Blackwattle Rooms – Level R

08:00-09:00

Registration Open / Tea and Coffee

09:00-09:50

Conference Opening and Plenary Session (Chair: Mark Masia)

How to Build the Impossible in Brick

Cathy Inglis (Brickworks Building Products)

09:50-10:20

Morning Tea / Coffee

10:20-11:00

Plenary Session (Chair: Elizabeth McIntyre)

Tribeca Townhouse: Case Study in Twisted Brick

Jeremy Edmiston (SYSTEMarchitects)

11:00-11:40

Panel Discussion (Chair: Elizabeth McIntyre)

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11:40-12:40	Buffet Lunch Barkers Restaurant – Level R	
12:40-14:50	<p><u>Session 1A: Seismic Behaviour and Assessment 1</u> (Chair: Yuri Totoev)</p> <p>SEISMIC RISK ASSESSMENT OF NEW ZEALAND URM CHURCH INVENTORY S.R. Abeling, S. Vallis, T. Goded, S. Giovinazzi and J.M. Ingham</p> <p>PERFORMANCE BASED ASSESSMENT OF CULTURAL HERITAGE BUILDINGS IN CENTRAL EUROPE - CASE STUDIES FROM SLOVENIA V. Z. Bosiljkov</p> <p>MASONRY BUILDING DESIGN FOR EARTHQUAKE-AFFECTED REMOTE AREAS OF NEPAL J. K. Bothara, D. Dizhur and J. Ingham</p> <p>SEISMIC ASSESSMENT MODEL OF MASONRY INFILL WITH OPENINGS AND EXPERIMENTAL VERIFICATION T.C. Chiou, Y.H. Tu, Y.S. Tu, L.L. Chung and C.T. Huang</p> <p>DESIGN OF IN-PLANE UNREINFORCED MASONRY WALL TESTING PROGRAM AND PRELIMINARY FINITE ELEMENT ANALYSIS (FEA) M.K. Howlader, M.J. Masia, M.C. Griffith and J.W. Jordan</p> <p>MASONRY CLADDING DESIGN CONCEPTS FOR ENHANCED PERFORMANCE DURING EARTHQUAKES S. Dill and J. Hochwalt</p>	<p><u>Session 1B: Façades, Cavity and Veneer Walls</u> (Chair: Marcio Correa)</p> <p>MID-CENTURY MODERNIST INFLUENCES ON CONTEMPORARY DESIGN: NEW MASONRY BREEZE WALLS & FLOORING Presentation by: Sam Klopper, Klopper & Davis Architects</p> <p>HIT AND MISS BRICK SCREENS – THINK BRICK AUSTRALIA FACT SHEET Presentation by: Mohammed Amjed, Think Brick Australia</p> <p>STACK BONDED WALLS – THINK BRICK AUSTRALIA FACT SHEET Presentation by: Pabita Basnet & Andre Kisso, Think Brick Australia</p> <p>SHELF ANGLE DESIGN FOR ANCHORED MASONRY VENEER W. Mark McGinley</p> <p>A FIELD INVESTIGATION INTO LONG-TERM CORROSION OF METAL WALL TIES IN MASONRY VENEER CONSTRUCTION B. Jardim do Nascimento, I.A. Chaves, M.J. Masia and R.E. Melchers</p> <p>MECHANICAL CHARACTERIZATION OF WALL TIE CONNECTION IN CAVITY WALLS G. Skroumpelou, F. Messali, R. Esposito and J.G. Rots</p>
14:50-15:10	Afternoon Tea / Coffee	
15:10-17:40	Walking Tour to Dr Chau Chak Wing Building at University of Technology, Sydney <i>or free afternoon</i>	

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18:30-22:30	<p>Harbour Cruise Dinner aboard “Magic” departing from Darling Harbour Convention Jetty <i>Dress code: smart casual and non-slip shoes</i></p>
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TUESDAY, 13 FEBRUARY 2018

8:00-9:00	Registration Open / Tea and Coffee	
8:40-9:20	<p>Plenary Session (Chair: Adrian Page) Securing of Unreinforced Masonry Parapets and Façades – From Fundamental Research to National Policy Jason Ingham (University of Auckland)</p>	
9:20-9:40	<p>Reinforced Masonry Under Compression Jake Ring (CMAA)</p>	
9:40-10:10	Morning Tea / Coffee	
10:10-12:20	<p><u>Session 2A: Seismic Behaviour and Assessment 2</u> (Chair: Vlatko Bosiljkov) CRITICAL REVIEW OF NUMERICAL MODELLING TECHNIQUES FOR SEISMIC RESPONSE OF COMPLEX URM BUILDINGS K. Ip, D. Dizhur, L. Sorrentino; M.J. Masia, M.C. Griffith and J.M. Ingham PEAK FLOOR ACCELERATIONS IN UNREINFORCED MASONRY BUILDINGS WITH FLEXIBLE DIAPHRAGMS H. Derakhshan, Y. Nakamura, H. Goldsworthy, K.Q. Walsh, J.M. Ingham and M.C. Griffith</p>	<p><u>Session 2B: Masonry Materials and Systems</u> (Chair: Mark McGinley) CALALSIL™ POLYMERIC SILICATES – A NOVEL GEOPOLYMER CONCRETE FOR A SUSTAINABLE FUTURE L.S. Burgess-Dean COMPARISON OF CURING SYSTEMS FOR ZERO SLUMP CONCRETE MASONRY A. Reyes, A. Incera and M. Murillo WATER LOSS INFLUENCE ON LAYING MORTAR COMPRESSIVE STRENGTH A. L. Temp, A. S. Milani, M. J. Oliveira, A. Lübeck and G. Mohamad</p>

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	<p>DAMAGE QUANTIFICATION IN PLASTERED UNREINFORCED MASONRY WALLS USING DIGITAL IMAGE CORRELATION M. Didier, G. Abbiati, F. Hefti, M. Broccardo and B. Stojadinovic</p> <p>INFLUENCE OF THE BEHAVIOUR OF CALCIUM SILICATE BRICK AND ELEMENT MASONRY ON THE LATERAL CAPACITY OF STRUCTURES R. Esposito, S. Jafari, G.J.P. Ravenshorst, H.R. Schipper and J.G. Rots</p> <p>USING THE MACRO-ELEMENT METHOD TO SEISMICALLY ASSESS COMPLEX URM BUILDINGS F. Gálvez, S. Abeling, K. Ip, S. Giovinazzi, D. Dizhur and J. Ingham</p> <p>BASIC STUDY FOR SAFE MASONRY CONSTRUCTIONS AGAINST EARTHQUAKES IN DEVELOPING COUNTRIES - COMPARATIVE STUDY ON CEMENT MORTAR FOR JOINTS T. Narafu, H. Sugiyama, H. Imai and A.Tasaka</p>	<p>NEW ECO-FRIENDLY MASONRY UNITS FOR BETTER THERMAL AND ACOUSTIC INSULATION A.A. Gheni, M.A. ElGawady and J.J. Myers</p> <p>EFFICIENCY RATIO OF HOLLOW CLAY BLOCK MASONRY R.P. Portella, G. Mohamad, F.S. Fonseca, A. Lübeck, R.P.B. Schmidt and L.E. Modler</p>
12:20-13:20	<p>Buffet Lunch</p> <p>Barkers Restaurant – Level R</p>	
13:20-15:10	<p><u>Session 3A: Energy Performance and Retrofitting and Strengthening 1</u> (Chair: John Chrysler)</p> <p>RESEARCH ON THE THERMAL PERFORMANCE OF AUSTRALIAN HOUSING AT THE UNIVERSITY OF NEWCASTLE D. Alterman, A. W. Page and B. Moghtaderi</p> <p>THE USE OF COMPUTATIONAL FLUID DYNAMICS SIMULATION TO COMPARE THE THERMAL PERFORMANCE OF HOUSING MODULES INCORPORATING HEAVY OR LIGHTWEIGHT WALLING SYSTEMS C. Zhang, D. Alterman, A.W. Page and B. Moghtaderi</p> <p>NUMERICAL SIMULATION OF THE EFFECT OF SLAB-EDGE INSULATION FOR SLAB-ON-GROUND MASONRY HOUSING Z. Liu, D. Alterman, A. Page, B. Moghtaderi and D. Chen</p>	<p><u>Session 3B: Dry Stack Masonry Systems</u> (Chair: Shelley Lissel)</p> <p>IN-PLANE TILT TESTS ON DRY STACK MASONRY WALLETTES N. Mojsilović and M. Petrović</p> <p>ENERGY DISSIPATION OF FRAMED SEMI INTERLOCKING MASONRY PANEL UNDER LARGE DISPLACEMENT M. A. Hossain, Y.Z. Totoev and M.J. Masia</p> <p>PSEUDO-STATIC TESTS OF MORTAR-LESS MASONRY JOINT WITH DIFFERENT INTERLOCKING SHAPES K. Lin, H.J. Liu and W. Hou</p> <p>NONLINEAR DYNAMIC RESPONSE OF DRY STACK SEMI-INTERLOCKING MASONRY WALL UNDER OUT-OF-PLANE LOAD H.J. Liu, K. Lin and D.X. Peng</p>

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	<p>OPTIMIZATION OF THE SEISMIC PERFORMANCE OF CONTEMPORARY MASONRY CHIMNEY SYSTEMS V. Bosiljkov, D. Antolinc, G. Steinecker and S. Plaskan</p> <p>PULL-OUT TESTING OF NEAR SURFACE MOUNTED STEEL WIRE ROPE IN UNREINFORCED MASONRY N. A. Misnon, D. Dizhur, M. Giaretton and J. M. Ingham</p>	<p>THE OUT-OF-PLANE CAPACITY OF SEMI-INTERLOCKING INFILL PANELS: EXPERIMENTAL INVESTIGATION O. Zarrin, Y.Z. Totoev and M.J. Masia</p>
15:10-15:40	Afternoon Tea / Coffee	
15:40-17:30	<p><u>Session 4A: Seismic Behaviour and Assessment 3</u> (Chair: Dmytro Dizhur)</p> <p>UNSHAKEN: RETAINING ARCHITECTURAL QUALITIES OF HISTORIC URM CHURCHES AND CHURCH PRECINCTS WITHIN THE NEW ZEALAND SEISMIC RETROFIT PROCESS S. Vallis, S. Giovinazzi, S. Abeling and J. Ingham</p> <p>OUT-OF-PLANE RESPONSE OF AN INNOVATIVE MASONRY INFILL WITH SLIDING JOINTS SUBJECTED TO DYNAMIC TESTS ON SHAKING TABLE P. Morandi, R.R. Milanesi, C.F. Manzini and G. Magenes</p> <p>COMPARISON BETWEEN PREDICTED URM WALL OUT-OF-PLANE DISPLACEMENT-BASED PERFORMANCE AND IN SITU PROOF TEST RESULTS K.Q. Walsh, D.Y. Dizhur, I. Giongo, H. Derakhshan and J.M. Ingham</p> <p>AN IMPROVED MACROELEMENT MODEL FOR THE NONLINEAR ANALYSIS OF MASONRY BUILDINGS S. Bracchi, A. Galasco, A. Penna and G. Magenes</p> <p>FULL-SCALE OUT-OF-PLANE SHAKING TABLE TESTS OF URM WALLS IN TWO-WAY BENDING F. Graziotti, U. Tomassetti, L. Grottoli, A. Penna and G. Magenes</p>	<p><u>Session 4B: Reinforced Masonry</u> (Chair: Fernando Fonseca)</p> <p>OUT OF PLANE BEHAVIOUR OF CONCRETE BLOCK MASONRY WALL WITH DIFFERENT BASE SUPPORT CONDITIONS A.C. Isfeld, M. Hagel, A.L. Müller and N.G. Shrive</p> <p>EFFECTS OF HORIZONTAL REINFORCEMENT DISTRIBUTION ON IN-PLANE PERFORMANCE AND POST-PEAK BEHAVIOUR OF MASONRY SHEAR WALLS O. Stathis, O. Fischer and S.L. Lissel</p> <p>A FINITE ELEMENT INVESTIGATION ON STRUCTURAL PERFORMANCE OF FULLY GROUTED REINFORCED MASONRY BUILDING S. Noor-E-Khuda and M. Dhanasekar</p> <p>EXPERIMENTAL STUDIES ON THE EFFECT OF GROUT CONFINEMENT TO THE REINFORCING BARS IN MASONRY WALLS UNDER CONCENTRIC COMPRESSION M. Song and M. Dhanasekar</p> <p>ANALYSIS OF THE INFLUENCE OF HORIZONTAL REINFORCEMENT AND EFFECTIVE HEIGHT ON THE PEAK STRENGTH OF MASONRY SHEAR WALLS S. Rizaee and N.G. Shrive</p>
17:30-18:30	Free time	

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18:30-22:30	Conference Dinner (MC: Elizabeth McIntyre) Blackwattle Rooms – Level R
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WEDNESDAY, 14 FEBRUARY 2018			
8:00-9:00	Registration Open / Tea and Coffee		
8:40-9:20	Plenary Session (Chair: Michael Griffith) Developments in the Design of Concrete Segmental Pavements Simon Beecham (University of South Australia)		
9:20-9:50	Morning Tea / Coffee		
9:50-12:00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><u>Paving Presentations</u> (Chair: Simon Beecham)</p> <p>PLACES WOMEN MAKE – PAVING THE WAY PRESENTATION AND PANEL DISCUSSION Jane Jose, author of ‘Places Women Make’ & Bridget Smyth, City of Sydney</p> <p>A CASE FOR DEVELOPMENT OF A DESIGN GUIDE FOR HEAVILY-LOADED CONCRETE BLOCK CONTAINER PAVEMENTS Anthony Davis, Davis Naismith & McGovern Pty Ltd</p> <p>A CASE STUDY ON INDUSTRIAL CONCRETE BLOCK PAVING IN NORTH QUEENSLAND Jet Foley, Adbri Masonry</p> <p>INDUSTRIAL CBP HARDSTAND CASE STUDY: BUS DEPOT AT LEPPINGTON NSW</p> </td> <td style="width: 50%; vertical-align: top;"> <p><u>Session 5B: Retrofitting and Strengthening 2</u> (Chair: Francesco Graziotti)</p> <p>NUMERICAL AND EXPERIMENTAL STUDY ON UNREINFORCED MASONRY BUILDINGS WITH VARIOUS OPENING CONFIGURATIONS STRENGTHENED WITH STEEL BANDS T. Choudhury and H.B. Kaushik</p> <p>IN-SITU EARTHQUAKE TESTING AND SECURING OF DOMESTIC URM CHIMNEYS D. Dizhur, M. Giaretton, H. Derakhshan, J. Ingham and M. Griffith</p> <p>DYNAMIC TESTING OF MASONRY SHEAR WALLS STRENGTHENED WITH CORE-FILL RETROFITS A. Papadopoulou , O. Fischer and S.L. Lissel</p> <p>ENVIRONMENTAL EFFECT ON REINFORCED MASONRY WALLS STRENGTHENED WITH NSM AND CEMENTITIOUS ADHESIVE</p> </td> </tr> </table>	<p><u>Paving Presentations</u> (Chair: Simon Beecham)</p> <p>PLACES WOMEN MAKE – PAVING THE WAY PRESENTATION AND PANEL DISCUSSION Jane Jose, author of ‘Places Women Make’ & Bridget Smyth, City of Sydney</p> <p>A CASE FOR DEVELOPMENT OF A DESIGN GUIDE FOR HEAVILY-LOADED CONCRETE BLOCK CONTAINER PAVEMENTS Anthony Davis, Davis Naismith & McGovern Pty Ltd</p> <p>A CASE STUDY ON INDUSTRIAL CONCRETE BLOCK PAVING IN NORTH QUEENSLAND Jet Foley, Adbri Masonry</p> <p>INDUSTRIAL CBP HARDSTAND CASE STUDY: BUS DEPOT AT LEPPINGTON NSW</p>	<p><u>Session 5B: Retrofitting and Strengthening 2</u> (Chair: Francesco Graziotti)</p> <p>NUMERICAL AND EXPERIMENTAL STUDY ON UNREINFORCED MASONRY BUILDINGS WITH VARIOUS OPENING CONFIGURATIONS STRENGTHENED WITH STEEL BANDS T. Choudhury and H.B. Kaushik</p> <p>IN-SITU EARTHQUAKE TESTING AND SECURING OF DOMESTIC URM CHIMNEYS D. Dizhur, M. Giaretton, H. Derakhshan, J. Ingham and M. Griffith</p> <p>DYNAMIC TESTING OF MASONRY SHEAR WALLS STRENGTHENED WITH CORE-FILL RETROFITS A. Papadopoulou , O. Fischer and S.L. Lissel</p> <p>ENVIRONMENTAL EFFECT ON REINFORCED MASONRY WALLS STRENGTHENED WITH NSM AND CEMENTITIOUS ADHESIVE</p>
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	<p>Michael Koungas, Austral Masonry</p> <p>PRESENTATION ON CMAA'S APPROVED INSTALLER PROGRAM Inleel William, Concrete Masonry Association of Australia</p>	<p>Z. Al-Jaberi, J.J. Myers and M. ElGawady</p> <p>MITIGATING IMPACT FAILURE OF MASONRY BOUNDARY WALLS USING AUXETIC COMPOSITES M. Asad, M. Dhanasekar, T. Zahra and D. Thambiratnam</p> <p>EXPERIMENTAL AND ANALYTICAL STUDY OF SEISMIC LOW-COST RETROFITTED MASONRY BUILDING S. Ahmad, R. A. Khan, S. Shamim and M. Asad</p>
12:00-13:00	<p>Buffet Lunch</p> <p>Barkers Restaurant – Level R</p>	
13:00-14:50	<p><u>Paving Workshop</u></p> <p>CMAA'S ENGINEERING PAVEMENT DESIGN SOFTWARE – DESIGNPAVE Chaired by: Simon Beecham, University of South Australia</p>	<p><u>Session 6B: Analysis, Design and Design Codes</u></p> <p>(Chair: Nebojsa Mojsilovic)</p> <p>COMMON SENSE APPROACH TO MASONRY QUALITY ASSURANCE J. Chrysler, K. Siggard and P. Samblanet</p> <p>STRUCTURAL BRICK MASONRY IN THE WESTERN UNITED STATES J. Chrysler, J. G. Tawresey and P. J. Samblanet</p> <p>DETERMINATION OF MODEL PARTIAL FACTOR FOR MASONRY UNREINFORCED SHEAR WALLS BASED ON ANNEX D OF EN-1990 H. Salehi and W. Jäger</p> <p>ANALYSIS OF THE VERTICAL LOAD DISTRIBUTION BETWEEN THE STRUCTURAL MASONRY WALLS IN A SMALL SCALE MODEL M.R.S. Correa, W.J. Silva and J.S. Camacho</p> <p>AS3700 MASONRY STRUCTURES CODE - A 2018 UPDATE A.W. Page</p>
14:50-15:20	<p>Afternoon Tea / Coffee</p>	

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15:20-17:00	<p><u>Paving Workshop (continued)</u></p> <p>CMAA'S ENGINEERING PAVEMENT DESIGN SOFTWARE – DESIGNPAVE Chaired by: Simon Beecham, University of South Australia</p>	<p><u>Session 7B: Retrofitting and Strengthening 3</u></p> <p>(Chair: Dariusz Alterman)</p> <p>SHOCK TABLE TEST ON MASONRY BUILDINGS STRENGTHENED USING WELDED WIRE MESH AND MICRO CONCRETE S. B. Kadam, Y. Singh and B. Li</p> <p>FLEXURAL TESTS OF CLAY BLOCK MASONRY PRISMS REINFORCED WITH CARBON FIBER (CFRP) G.F. Medeiros; R. Bordignon, G. Mohamad, A.B.S. Santos Neto, J.F. Machado, V.M. Tombezi</p> <p>BOND SLIP BEHAVIOUR OF DEEP MOUNTED CARBON FIBRE REINFORCED POLYMER STRIPS CONFINED WITH A DUCTILE ADHESIVE IN CLAY BRICK MASONRY Ö. S. Türkmen, S.N.M. Wijte, J.M. Ingham and A.T. Vermeltfoort</p> <p>HERITAGE HOTEL CASE STUDY: SEISMIC RETROFIT OF AN UNREINFORCED MASONRY BUILDING PRIOR TO THE CANTERBURY EARTHQUAKES N. A. Misnon, S. Abeling, J.Hare, R. Jafarzadeh, J. M. Ingham and D. Dizhur</p> <p>THE CHALLENGES OF DEVELOPING A BOND MODEL FOR FRP TO MASONRY JOINTS—A CLOSER LOOK AT EXISTING TEST RESULTS AND LIMITATIONS OF EXPERIMENTAL DESIGN J. Vaculik, P. Visintin and M.C. Griffith</p>
10AMC Close (Mark Masia and Elizabeth McIntyre)		