



SEISMOLOGY
RESEARCH
CENTRE



Pre-Conference Meeting

Thursday 24 November 2016

SeismOz – The Annual Meeting of Australian Seismologists

2.00pm – 5.00pm

Fritz Loewe Theatre

University of Melbourne

(ground floor, School of Earth Sciences, McCoy Building, 253-283 Elgin St, Carlton)

An annual forum where Australian seismologists report on networks changes, and significant projects or developments, and discuss everything from education to monitoring technology. Speakers typically include representatives from Geoscience Australia, the Seismology Research Centre, AuScope and other regional earthquake observatories.

If you would like to attend please email the organiser at webmaster@aees.org.au



AEES 2016 – Program, Day 1

Friday 25 November 2016

12.00 **Registration** (Foyer 1, Level 1, MCEC – Convention Centre, DFO end)

Register from 12nn.

1.00pm **Conference Opening** – Paul Somerville (Room 105)

Session One – Innovative Structures (*Chair: Associate Professor Helen Goldsworthy*)(Room 105)

1.10pm **Keynote - Gregory MacRae** – University of Canterbury, Christchurch, New Zealand
Some NZ Earthquake Lessons and Better Building Construction (Paper 390)

1.30pm **John Jing** – Harrison Grierson, Auckland, New Zealand
Seismic Damage-Resistant System for Multi-Storey Modular Light Steel Framed Buildings (Paper 345)

1.45pm **Minghao Li** – University of Canterbury, New Zealand
Ductility of dowelled and nailed CLT and LVL connections under monotonic and cyclic loading (Paper 323)

2.00pm **Tilak Pokharel**– University of Melbourne, Victoria, Australia
Improved Performance of Moment Resisting Connections To Concrete Filled Square Hollow Sections Using Double-Headed Anchored Blind Bolts (Paper 353)

2.15pm **Yusak Oktavianus** – University of Melbourne, Victoria, Australia
The Behaviour of Replaceable Buckling Restrained Fuses (RBRFs) in Composite Structures under Earthquake Events (Paper 363)

2.30pm **Geoscience poster mini presentations** (Room 105)

Statistic-based Numerical Study on the Influential Area of Basin Effects for Shallow Basins (Paper 324)

Chuanbin Zhu, Queensland University of Technology, Australia

Seismotectonic Model for the Australian Plate - Beyond Borders (Paper 325)

Vicki-Ann Dimas, Seismology Research Centre, Richmond, Victoria, Australia

The Bredbo NSW earthquake near Canberra, 31 January 2016 (Paper 327)

Kevin McCue, Australian Seismological Centre, Canberra, Australia

Estimation of TDOA Based on Cross Wavelet Analysis (Paper 329)

Linqi Huang, Curtin University, Western Australia

2015 Fraser Island Earthquake Sequence (Paper 356)

Elodie Borleis, Seismology Research Centre, Richmond, Victoria, Australia

Clustered seismicity in the Southwest Australia seismic Zone, 2015-2016 (Paper 389)

Vic Dent, Curtin University, Perth, Western Australia

A preliminary map of cluster locations in southwest Western Australia, 1990 – 2016 (Paper 391)

Vic Dent, Curtin University, Perth, Western Australia

3.05pm **Afternoon Tea & Poster Session** – Foyer 1, Level 1

Concurrent Session Two

Room 106 – Australian Seismic Hazard Map

Chair: Jonathan Griffin

3.30pm – 4.00pm

Development of the 2018 Australian National Seismic Hazard Assessment (NSHA) (Paper 340)

Jonathan Griffin, Geoscience Australia

4.00pm – 4.15pm

Incorporating fault sources into the Australian National Seismic Hazard Assessment (NSHA) 2018 (Paper 339)

Dan Clark, Geoscience Australia

4.15pm – 4.30pm

Towards a homogeneous earthquake catalogue for Australia (Paper 341)

Hadi Ghasemi, Geoscience Australia

4:30pm – 4:45pm

Earthquake Source Zones in Intraplate Australia without Binning (Paper 342)

Kevin McCue, Australian Seismological Centre

4.45pm – 5.00pm

A Proposed PSHA Source Zone for Australia (Paper 335)

Kevin McCue, Australian Seismological Centre

5.00pm – 5.15pm

Revised AUS6-Model: Significant Changes & Approaches to the Seismotectonic Model (Paper 371)

Vicki-Ann Dimas, Seismology Research Centre

5.15pm – 5.30pm

Automatic determination of seismicity rates in Australia (Paper 370)

Russell Cuthbertson, Seismology Research Centre

5.30pm – 5.45pm

Generation of Synthetic Earthquake Accelerograms based on up-to-date Seismological Ground Motion Models (Paper 336)

Yuxiang Tang, The University of Melbourne

5.45pm – 6.00pm

Discussion

6.00pm – 8.00pm

Welcome Reception – Foyer 1, Level 1, MCEC

Room 105- Masonry Buildings

Chair: Professor Jason Ingham

3.30pm – 4.00pm **KEYNOTE**

Recent developments in the seismic assessment of masonry buildings (Paper 396)

Michael Griffith, The University of Adelaide, South Australia

4.00pm – 4.15pm

Controlling and predicting effects on masonry buildings of ground vibrations from blasting (Paper 328) **Bill Jordan, Bill Jordan & Associates**

4.15pm – 4.30pm

Characterisation of Heritage Masonry Construction in NSW - State Heritage Register (Paper AEES 394) **Milon Howlader, The University of Newcastle**

4.30pm – 4.45pm

Evaluation of Seismically Retrofitted Masonry Substation Buildings (Paper 354) **Noor Aina Misnon, The University of Auckland, New Zealand**

4.45pm – 5.00pm

Seismic Design of Tunnels in the Sydney Region: Selection of Earthquake: Parameters and Approach (Paper 347)

Beatriz Estrada, Pells Sullivan & Meynink

5.00pm – 5.15pm

A multidisciplinary evaluation of URM buildings successfully retrofitted prior to the 2010/11 Canterbury earthquake sequence (Paper 388) **Shannon Abeling, The University of Auckland and QuakeCoRE, New Zealand**

5.15pm – 6.00pm

Engineering mini poster presentations

Failure of structures: can you see it coming? (Paper 368)

Hinke Osinga, The University of Auckland, New Zealand

Non-seismic and seismic qualification and design of anchor channels with channel bolts (Paper 326) **Christoph Mahrenholz, Jordahl, Germany**

Numerical Study on the Effectiveness of Using Viscoelastic TMD to Mitigate Seismic Response of Above-Ground Pipelines (Paper 334) **Kaiming Bi, Curtin University, Perth, Western Australia**

Retrofitting RC Beam-Column Joint in Australia using Single Diagonal Haunch (Paper 378) **Alireza Zabihi, Swinburne University of Technology, Hawthorn, Victoria, Australia**

Replaceable reduced web link section for link-to-column connections in EBFs (Paper 367) **Daniel Abebe, Chosun University, Gwangju, Korea**

Seismic Performance of Buried Cables during the Canterbury Earthquake Sequence (Paper 372) **Sheng-Lin Lin, GNS Science, N.Z.**

Displacement Based Design of Bridge Abutments (Paper 337) **Rohit Tiwari, The University of Melbourne, Victoria, Australia**

AEEES 2016 – Program, Day 2

Saturday 26 November 2016

8.00am Registration (foyer 1, level 1)

Session Three – Recent Earthquakes (Room 106)

Chair: Paul Somerville

- 8.15am **Keynote – Kenji Satake** - Earthquake Research Institute, University of Tokyo, Japan
The Kumamoto, Japan, earthquake series of April 2016 (Paper 398)
- 8.35am **Gregory MacRae** – University of Canterbury, Christchurch, New Zealand
The Mw 7.8 Kaikoura Earthquake, New Zealand (an update, no paper available)
- 8.50am **Gary Gibson/Tamarah King** – Seismology Research Centre / University of Melbourne, Victoria, Australia
The Petermann Ranges Mw 6.1 Earthquake of 2016-05-20 1814 UTC and its Aftershocks (Paper 383)
- 9.15am **Dmitry Storchak** – ISC, United Kingdom
ISC Contribution to Global and Regional Seismic Hazard Assessment and Civil Engineering (Paper 387)
- 9.30am **Morning Tea & Poster Session – Foyer 1, Level 1**

Session Four – Hazard, Fragility & Damage (Room 105)

Chair: Elisa Lumantarna

- 10.00am **Keynote - Paul Somerville**, AECOM and Risk Frontiers, Sydney, NSW, Australia
Design Ground Motion Time Histories using the Conditional Mean Spectrum (Paper 365)
- 10.23am **James Daniell** – Geophysical Institute/Center for Disaster Management and Risk Reduction Technology, Karlsruhe Institute of Technology, Karlsruhe, Germany
The historical socioeconomic cost of earthquakes vs. other natural disasters types globally - an argument for greater funding for research and prevention (Paper 343)
- 10.45am **Natalie O'Brien** – Bonacci Group
Comparison of Earthquake Loads and Wind Loads for Low and Mid Rise Concrete Buildings with Respect to Ductility Requirements and Reinforced Concrete Detailing (Paper 355)
- 11.00am **Muriel Naguit** – Australian National University
Earthquake Scenario-based Assessment for Empirical Seismic Fragility Functions: A Case Study of the Mw7.1 Bohol Philippines Earthquake (Paper 358)
- 11.15am **Adam Pascale** – Seismology Research Centre, Richmond, Victoria, Australia
Structural Monitoring Policy: What Australia Could Learn From the Philippines (Paper 384)
- 11.30am **Tim Mote** – ARUP
Simplified Probabilistic Aftershock Hazard Analysis (AEEES Paper 364)
- 11.45am **Nelson Lam** – The University of Melbourne
Seismic Hazard Modelling for Malaysia (Paper 386)
- 12.00pm **Lunch** – Foyer 1, Level 1
- 7.30pm **Conference Dinner – Premiership Club Dining Room, MCG**
(Buses depart Pensione Hotel by 7.10pm – Please assemble outside the Hotel by 7pm. The hotel is located at 16 Spencer Street, Melbourne – See registration desk for map. No charge. Buses will depart MCG at 10.30pm and return delegates to the Pensione Hotel)

AEES 2016 – Program, Day 3

Sunday 27 November 2016

8.00am **AEES Annual General Meeting** (Members only) (Room 105)

Session Five – Australian Ground Motion Hazard Map (Room 105)

Chair: Professor John Wilson

9.00am **Keynote - Mark Leonard – Geoscience Australia**
Seismic source models for building code seismic hazard maps (Paper 385)

9.20am **Trevor Allen – Geoscience Australia**
Inclusion of 3rd party models and the expert elicitation process (Paper 397)

9.35am Discussion

10.40am **Morning Tea & Poster Session** (Foyer 1, level 1)

Session Six – Concrete Structures (Room 105)

Chair: Peter McBean

11.10am **Hing-Ho Tsang – Swinburne University of Technology, Hawthorn, Victoria, Australia**
Framework for Seismic Vulnerability Assessment of Reinforced Concrete Buildings in Australia (Paper 377)

11.25am **Ryan Hault – The University of Melbourne, Victoria, Australia**
Displacement Capacity of Lightly Reinforced Rectangular Concrete Walls (Paper 362)

11.40am **Anita Amirsardari – The University of Melbourne, Victoria, Australia**
Modelling non-ductile reinforced concrete columns (Paper 393)

11.55am **Elisa Lumantarna – The University of Melbourne, Victoria, Australia**
Seismic Vulnerability Assessment of Asymmetrical Reinforced Concrete Buildings in Australia (Paper 379)

12.10pm **Alireza Mehdipanah – The University of Melbourne, Victoria, Australia**
Analytical Simulation of Limited Ductile RC Beam Columns (Paper 331)

12.25pm **Hamdolah Behnam - The Hong Kong University of Science and Technology**
Behaviour of RC spandrel beam in exterior wide beam-column connections (Paper 348)

12.40pm **Scott Menegon – Swinburne University of Technology, Hawthorn, Victoria, Australia**
Plastic Hinge Development in Limited Ductile Rectangular Reinforced Concrete Walls (Paper 373)

12.55pm **Mehair Yacoubian, The University of Melbourne, Victoria, Australia**
Seismic performance of high-rise buildings featuring a transfer plate taking into account displacement-controlled behaviour (Paper 357)

1.10pm **CONFERENCE CLOSING** – Paul Somerville (Room 105)
Best Student Paper Award

1.25pm **CONFERENCE CLOSES**