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# FOREWORD

With great pleasure I would like to once again welcome all delegates to the annual AEES Conference in Gold Coast, Queensland.

In its 21<sup>st</sup> year, the conference continues to attract a high quality submission of papers covering a wide range of topics in seismology and earthquake engineering, representing the current research activities and research status in these areas in Australia. This year, we received 49 papers. All papers were reviewed in full by at least 2 independent reviewers, and their recommendations for improvements were passed back to authors for incorporation into the final versions. In keeping with the conference theme "Historical beginnings, current status, recent advances and future directions", we invited five keynote speakers to present at the conference. Dr. Will Twycross will introduce the life of his great uncle, Prof. John Milne, one of the fathers of seismology. Prof. Ikuo Towhata will talk about the great Japan earthquake in 2011. Associate Prof. Stefano Pampanin and Mr. David Brunson will share their observations of the Christchurch Earthquake in 2011 and the New Zealand experiences. Dr Aleksander Mendecki will discuss the seismic events in mines. Their papers are included in the proceedings.

Financial assistance has been provided this year to encourage students to attend the conference and present their work. Six PhD students applied for the assistance and we waived all their registration fees.

Compared to the last couple of years, 2012 has seen much less media attention on earthquakes and earthquake caused losses. Besides WCEE in September in Lisbon, Portugal, probably the most closely watched news item by the seismologists and earthquake engineers in 2012 is the criminal charge and conviction of the seven scientists in Italy for giving 'incomplete, imprecise and contradictory' information before the 2009 l'Aquila earthquake. This incident demonstrates that despite significant research advancement in earthquake engineering, many lessons are still learned from tragedies. AEES believes it is within its role to educate the general public of earthquake threats in Australia and to promote and encourage strong research effort to minimize earthquake damage. The annual AEES conference is a forum to reflect upon the up-to-date research findings in Australia and the region. I hope you enjoy the conference program and the papers, and have active and stimulating discussions and interactions with other conference delegates.

As always, the conference and its proceedings represent the culminated organisational effort of many people for many months. On behalf of the AEES Executive and conference organizing committee (Sharon Anderson, Russell Cuthbertson, Kevin McCue and Nelson Lam), I would like to thank sponsors, reviewers, keynote speakers, presenters and all the delegates. We are immensely blessed by the support of authors, AEES members and friends of this continuous series of successful conferences.

Hong Hao  
AEES President  
November 2012

# Conference Listing

Year	Place	Theme
1992	Sydney, NSW	Earthquake Resistant Design & Insurance in Australia
1993	Melbourne, VIC	Earthquake Engineering & Disaster Reduction
1994	Canberra, ACT	Survival of Lifelines in Earthquakes
1995	Melbourne, VIC	PCEE'95
1996	Adelaide, SA	The Australian Earthquake Loading Standard
1997	Brisbane, QLD	Earthquakes in Australian Cities – can we ignore the risks?
1998	Perth, WA	Meckering 30 years on – how would we cope today?
2000	Hobart, TAS	Dams, Fault Scarps & Earthquakes
2001	Canberra, ACT	Loading Codes in the Real World
2002	Adelaide, SA	Total Risk Management in the Privatised Era
2003	Melbourne, VIC	Earthquake Risk Management
2004	Mt Gambier, SA	Earthquake Engineering for the New Millenium – where to from here?
2005	Albury, NSW	Earthquake Engineering in Australia
2006	Canberra, ACT	Earthquake Engineering in Australia
2007	Wollongong, NSW	Earthquake Engineering in Australia
2008	Ballarat, VIC	Earthquake Engineering in Australia
2009	Newcastle, NSW	Newcastle Earthquake – 20 years on
2010	Perth, WA	Earthquake Engineering in Australia
2011	Barossa Valley, SA	Earthquake Engineering in Australia

## Past Presidents

Charles Bubb	Canberra	1990 – 1995
Prof Graham Hutchinson	Melbourne	1995 – 1998
Bill Boyce	Brisbane	1998 – 2001
Prof Mike Griffith	Adelaide	2001 – 2004
Prof John Wilson	Melbourne	2004 – 2008
Kevin McCue	Canberra	2008 - 2010

*Note: AEES was formerly established in December 1990 and affiliated with IEAust as a professional society and with IAEE. The inaugural executive was Charles Bubb President, Kevin McCue Secretary and David Rossiter Treasurer. Prior to 1990, Professor Stan Shaw and then Charles Bubb were Australia's delegates at IAEE conferences.*

# KEYNOTE SPEAKERS

## **David Brunson**

**Director, Kestrel Group Ltd, Wellington, New Zealand**  
The impact of the Canterbury earthquake sequence on the engineering profession in New Zealand

## **Aleksander Mendecki**

**Chairman & Head of Research, Institute of Mine Seismology, Tasmania**  
Size distribution of seismic events in mines

## **Stefano Pampanin**

**Associate Professor in Structural Design & Earthquake Engineering, Chair of Structural & Geotechnical Cluster, Dept of Civil & Natural Resources Engineering, University of Canterbury, Christchurch, New Zealand**  
Living in a new era in earthquake engineering: targeting damage-resisting solutions to meet societal expectations

## **Ikuo Towhata**

**Professor, University of Tokyo, Japan**  
Unsolved engineering problems after 2011 gigantic earthquake in Japan

## **William Twycross**

**OAM, Medical Practitioner, Mansfield, Victoria, Australia**  
John Milne, The Father of Seismology ...  
his early work on earthquake resistant building design

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