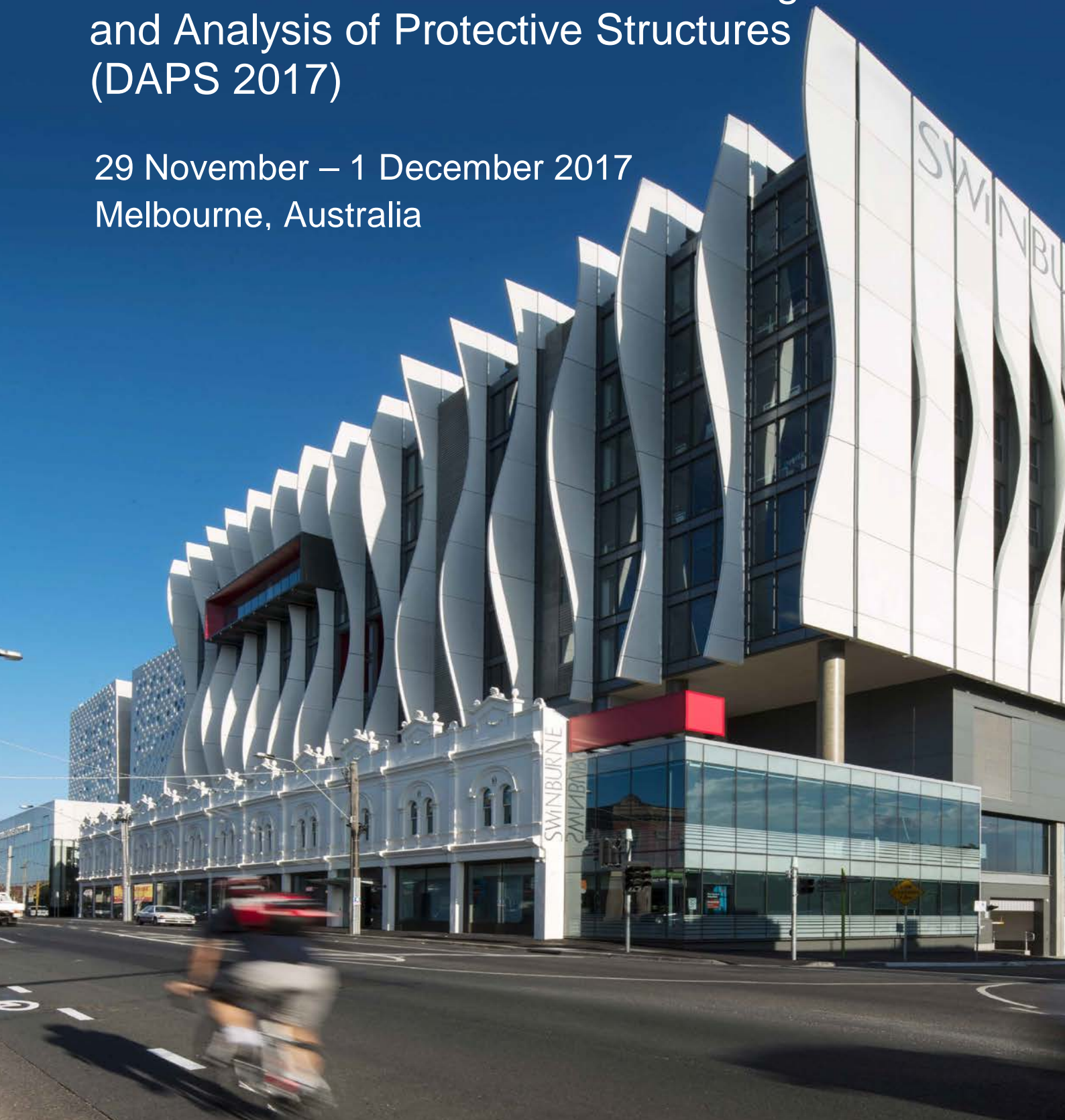


# PROGRAMME

6<sup>th</sup> International Conference on Design  
and Analysis of Protective Structures  
(DAPS 2017)

29 November – 1 December 2017  
Melbourne, Australia



Published by

Organising Committee

6<sup>th</sup> International Conference on Design and Analysis of Protective Structures (DAPS 2017)

29 November – 1 December 2017

Melbourne, Australia

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## Welcome message

It is our great pleasure and honour to host the 6<sup>th</sup> International Conference on Design and Analysis of Protective Structures (DAPS 2017) in Melbourne, Australia.

The idea of holding the International Conference on Design and Analysis of Protective Structures against Impact/Impulsive/Shock Loads was conceived in 2003 by the three founding institutes of the conference series, namely, National Defense Academy, Japan, Pennsylvania State University, USA, and Nanyang Technological University, Singapore.

The 1<sup>st</sup> conference was organized by the National Defense Academy, Japan, and held in Tokyo, Japan, on 15-19 December 2003 with the theme "State-of-the-art in Protective Technology for Structure Construction". The 2<sup>nd</sup> conference organized by the Defence Science and Technology Agency, Singapore, and Nanyang Technological University, Singapore, was held in Singapore on 13-15 November 2006 with the theme "Advances in Protective Technology". The 3<sup>rd</sup> conference was also in Singapore organized by the same institutions on 10-12 May 2010. The 4<sup>th</sup> conference was organized by Agency for Defense Development and the Korea Institute of Military Science and Technology, on 19-22 June 2012 in Jeju, Korea. The 5<sup>th</sup> conference was organised again in Singapore by the Nanyang Technological University, Singapore and the Defence Science and Technology Agency, Singapore, on 19-21 May 2015.

DAPS 2017 offers opportunities for researchers and practitioners to exchange the latest development in this important area. We wish you a fruitful conference. Furthermore, Melbourne offers endless options in its diverse culture, leisure and entertainment. We trust you will have a memorable experience and a happy stay in Melbourne.

Co-Chairs:  
Guoxing Lu  
Jian Zhao  
Xiao-Ling Zhao

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## **DAPS 2017 Organising Committee**

### **CHAIRS:**

Guoxing Lu	Swinburne University of Technology
Jian Zhao	Monash University
Xiao-Ling Zhao	Monash University

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Qianbing Zhang	Monash University

### **SECRETARIAT:**

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Xing Li	Monash University
Haozhe Xing	Monash University
Jianjun Zhang	Swinburne University of Technology

## Scientific Committee

### CHAIR

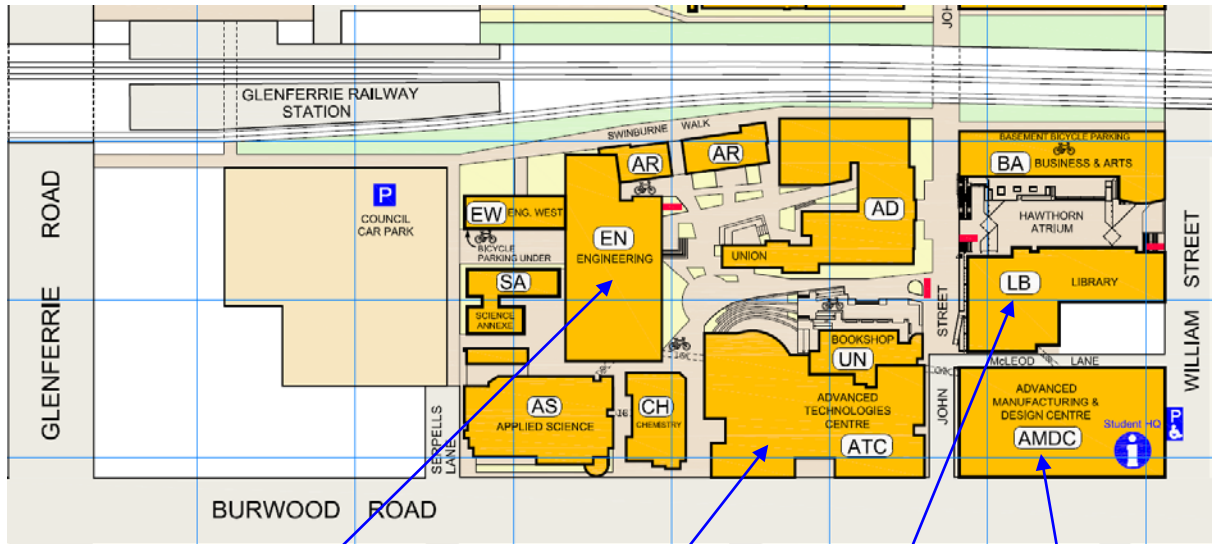
Frieder Seible                      Monash University, Australia

### MEMBERS:

Masuhiko Beppu                      National Defense Academy, Japan  
Qin Fang                                  PLA University of Science and Technology, China  
Narinder Gupta                      Indian Institute of Technology Delhi, India  
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Zhiye Zhao                                Nanyang Technological University, Singapore  
Yingxin Zhou                              Defence Science and Technology Agency, Singapore  
Feng Zhu                                 Embry-Riddle Aeronautical University, USA

## General information

### Conference venue floor plan



3 Parallel Sessions  
(EN101, EN102, EN103)

Registration & Reception  
(ATC 103)

Atrium

Plenary Lectures  
(AMDC 301)

Hawthorn Campus, Swinburne University of Technology  
(425 Burwood Rd, Hawthorn VIC 3122)

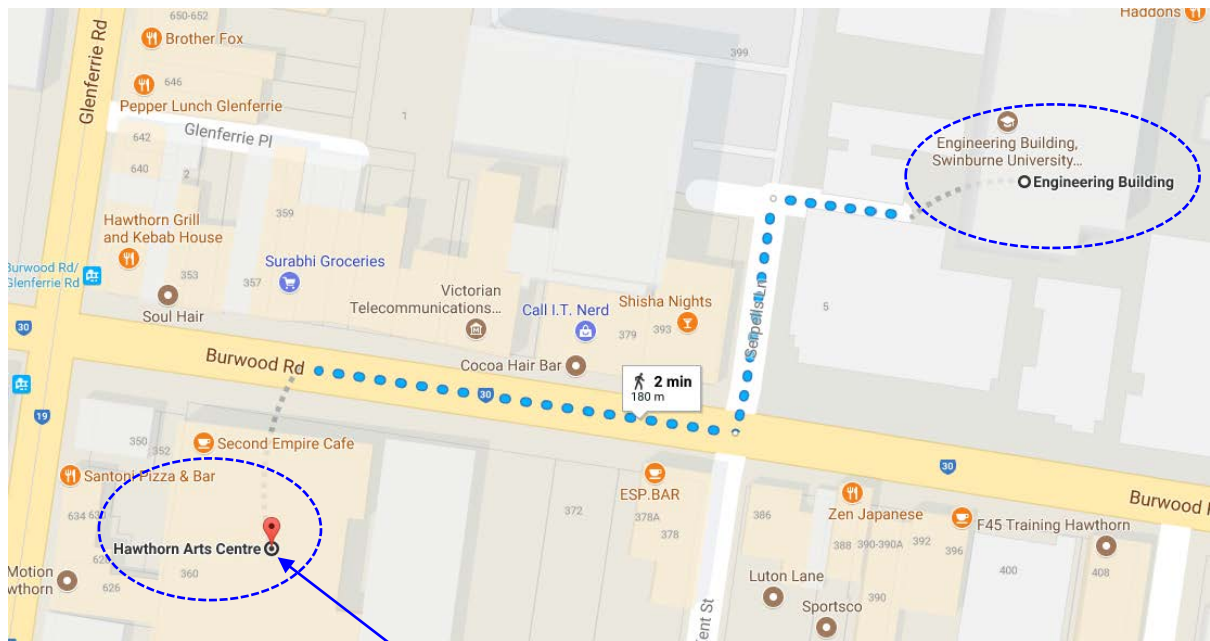
## Conference Banquet

Date: 30 November 2017

Time: Pre-dinner drinks:18:00 – 19:00

Conference Banquet:19:00– 22:00

Venue: Level 1 Foyer and Chandelier Room (Ground Floor) at Hawthorn Arts Centre



Conference Banquet  
(Hawthorn Arts Centre)

## DAPS 2017 Conference Secretariat

Email: [contact@daps2017.org](mailto:contact@daps2017.org)



## Overview for DAPS 2017

Date	Event	Time	Details	Chair	Venue
29 Nov	Registration	15:00-18:00	Registration	—	ATC103
	Cocktail reception	18:00-19:00	Cocktail reception	Prof Guoxing Lu Prof Jian Zhao Prof Xiao-Lin Zhao	
30 Nov (Day 1)	Opening ceremony	9:00-9:15	Prof Matthew Cuthbertson	Prof Guoxing Lu	AMDC301
			Prof Ted Krauthammer		
			Prof Emad Gad		
	Plenary Lecture 1	9:15-10:00	<b>Dr Stephen Cimpoeu</b> and D.V. Ritzel (Defence Science and Technology Group, Australia) “Blast physics and loading of structures in the near field”	Prof Kang Hai Tan	
	Tea/Coffee break	10:00-10:30	Tea/Coffee break	—	Atrium
	Plenary Lecture 2	10:30-11:15	<b>Prof Zhongxian Li</b> (Tianjin University, China) “An effective numerical model for progressive collapse analysis of RC structures under blast loading”	Prof Chengqing Wu	AMDC301
	Plenary Lecture 3	11:15-12:00	<b>Prof Brian Uy,</b> A. Remennikov, D. Ritzel and S. Parks (The University of Sydney, Australia) “Development of the Australian national facility for physical blast simulation (NFPBS)”	Prof Jian Zhao	AMDC301
	Lunch	12:00-13:00	Lunch	—	Atrium
	Parallel Sessions	13:00-15:30	See programme for Above-Ground Structures (I)	—	EN101
			See programme for Underground Structures (I)	—	EN102
See programme for Structural Materials (I)			—	EN103	
Tea/Coffee break	15:40-16:10	Tea/Coffee break	—	Atrium	
Parallel Sessions	16:10-17:50	See programme for Above-Ground Structures (II)	—	EN101	

6<sup>th</sup> International Conference on Design and Analysis of Protective Structures (DAPS 2017)

			See programme for Underground Structures (II)	—	EN102
			See programme for Structural Materials (II)	—	EN103
	Pre-dinner drinks	18:00-19:00	Pre-dinner drinks	—	Hawthorn Arts Centre
	Conference Banquet	19:00-22:00	Conference Banquet	—	Hawthorn Arts Centre
	Plenary Lecture 4	9:00-9:45	<b>Prof Michael Seica,</b> Jeffrey A. Packer and David Z. Yankelevsky (University of Toronto, Canada; Explora Security Ltd., UK; Technion Israel Institute of Technology, Israel) “Research advances on blast and impact effects on elements and materials”	Prof Yulong Li	AMDC301
	Plenary Lecture 5	9:45-10:30	<b>Prof Mark G Stewart</b> and Michael D. Netherton (The University of Newcastle, Australia) “Reliability-based load factors for explosive blast loading”	Prof Priyan Mendis	AMDC301
	Group photo	10:30-10:50	Group photo	—	AMDC301
	Tea/Coffee break	10:50-11:20	Tea/Coffee break	—	Atrium
<b>1 Dec (Day 2)</b>	Parallel Sessions	11:30-12:30	See programme for Above-Ground Structures (III)	—	EN101
			See programme for Underground Structures (III)	—	EN102
			See programme for Structural Materials (III)	—	EN103
	Lunch	12:30-13:30	Lunch	—	Atrium
	Parallel Sessions	13:30-15:30	See programme for Above-Ground Structures (IV)	—	EN101
			See programme for Underground Structures (IV)	—	EN102
			See programme for Structural Materials (IV)	—	EN103
	Tea/Coffee break	15:30-16:00	Tea/Coffee break	—	Atrium
	Parallel Sessions	16:00-18:00	See programme for Above-Ground Structures (V)	—	EN101
			See programme for Underground Structures (V)	—	EN102
See programme for Structural Materials (V)			—	EN103	
<b>End of Conference</b>					

## Programme for parallel sessions: Above-ground Structures

Date: Thursday, 30 Nov 2017  
 Time: 13:00-17:50  
 Venue: EN101

<b>Above-Ground Structures (I)</b>		
<b>Chairs: Prof Masuhiro Beppu and Dr Steeve Chung Kim Yuen</b>		
Time	Presenter	Title
13:00-13:20	J. Wilkes, <b>Ted Krauthammer</b> (University of Florida, USA)	Progressive Collapse Assessment with Energy Flow
13:20-13:40	<b>Masuhiro Beppu</b> , Makoto Nagata, Hiroyoshi Ichino (National Defense Academy, Japan)	Failure Behavior of RC Beams Subjected to Close-in Explosion
13:40-14:00	<b>Steeve Chung Kim Yuen</b> , Arthur Cholet (University of Cape Town, South Africa)	Response of Quadrangular Plates to Oblique Blast Loading
14:00-14:20	<b>Hezi Y. Grisaro</b> , David Benamou, Avraham N. Dancygier (Technion - Israel Institute of Technology, Israel; Fortification branch CEC IDF, Israel)	Field tests of RC T-walls – towards better understanding the effect of combined blast and fragments load on their residual mechanical properties
14:20-14:40	<b>Yingzhuo Gu</b> , Wei Li, Mohammad Nassirnia, Rui Wang, Lin-Hai Han, Xiao-Ling Zhao, Amin Heidarpour (Tsinghua University; Monash University; Taiyuan University of Technology)	Experimental Behavior of Ultra-High Strength Steel Hollow Tubular members under Lateral Impact
14:40-15:00	Shuaishuai Sun, <b>Donghong Ning</b> , Weihua Li (University of Wollongong, Australia)	Development of magnetorheological elastomers based tuned mass damper for building protection from seismic events
15:00-15:20	Anh Tuan Pham, Christian Brenneis, Christoph Roller, <b>Kang Hai Tan</b> (Nanyang Technological University, Singapore; Ernst-Mach-Institut, Germany)	Free-fall and blast-induced dynamic responses of reinforced concrete structures under progressive collapse
15:20-15:40	Choon-Keat Ang, Siew Fern Lim, <b>Jiunn Jie Lim</b> (Prostruct Consulting Pte Ltd, Singapore)	Design and Testing of a Crash Barrier System

<b>15:40-16:10</b>	<b>Tea/Coffee break (Atrium)</b>	
<b>Above-Ground Structures (II)</b>		
<b>Chairs: Prof Chi King Lee and Dr Ye Yuan</b>		
<b>16:10-16:30</b>	A. Khan, M. M. Rana, P. Del Linz, <b>Chi King Lee</b> , T.C. Fung (The University of New South Wales at The Australian Defence Force Academy, Australia; Nanyang Technological University, Singapore; University of New South Wales, Australia)	Effect of cased charges on plain steel and steel-concrete composite targets
<b>16:30-16:50</b>	<b>Ye Yuan</b> , P.J. Tan, Yibing Li (Tsinghua University, China; University College London, UK)	Analytical study on the damage modes of ductile plates to blast loadings
<b>16:50-17:10</b>	Shuaishuai Sun, <b>Wenfei Li</b> , Jian Yang, Weihua Li (University of Wollongong, Australia)	Building protection from seismic events using stiffness controllable MRE isolators
<b>17:10-17:30</b>	Brian Terranova, <b>Andrew Whittaker</b> , Len Schwer (University at Buffalo, US; Schwer Engineering & Consulting Services, US)	The effects of penetrator geometry on resistance of reinforced concrete panels to wind-borne missile impact
<b>17:30-17:50</b>	<b>Anh Tuan Pham</b> , Kang Hai Tan (Nanyang Technological University, Singapore)	Structural Behaviour of Horizontally Restrained Reinforced Concrete Frames under Sudden Column Removal Scenario Subjected to Distributed Loading
<b>End of Day 1</b>		

Date: Friday, 1 Dec 2017  
 Time: 11:30-18:20  
 Venue: EN101

<b>Above-Ground Structures (III)</b>		
<b>Chair: A/Prof Jun Yu</b>		
Time	Authors	Title
11:30-11:50	<b>Shengrui Lan</b> (Karagozian & Case, Inc., USA)	Fragment Loading Characterization and Its Effects on RC Structure
11:50-12:10	<b>Jun Yu</b> , Lizhong Luo (Hohai University, China)	Experimental investigation on structural behaviour of RC beam-slab assemblies against progressive collapse
12:10-12:30	Junbo Yan, Yan Liu, <b>Zixi Xu</b> , Fenglei Huang (Beijing Institute of Technology, China)	Improved SDOF Approach to Study Dynamic Response of Reinforced Concrete Columns Subjected to Blast Loading
12:30-13:30	<b>Lunch (Atrium)</b>	
<b>Above-Ground Structures (IV)</b>		
<b>Chairs: Prof Yoshimi Sonoda and A/Prof Qinghua Qin</b>		
13:30-13:50	Hiroki Tamai, <b>Yoshimi Sonoda</b> (Kyushu University, Japan)	A Study on Impact Resistant Capacity of RC Slab with Corroded Reinforcement and its retrofitting method
13:50-14:10	<b>Wei Zhang</b> , Qinghua Qin, Jianxun Zhang, Shangjun Chen, Tiejun Wang (Xi'an Jiaotong University, China)	Simplified dynamic model of metal sandwich structures with lattice cores subjected to impulsive
14:10-14:30	<b>Benjamin Schaufelberger</b> , Christoph Roller, Werner Riedel (Ernst-Mach-Institut, Germany)	Scaling Rules for the Analysis of Blast Loaded Concrete Structures – a Critical Literature Review
14:30-14:50	<b>Tianning Cui</b> , Qinghua Qin, T.J. Wang (Xi'an Jiaotong University, China)	Numerical study on ballistic resistance of amorphous alloy reinforced perforated armor to projectile impact
14:50-15:10	Ya-Juan Sun, <b>Bo Yang</b> , Shao-Bo Kang (Chongqing University, China)	Structural Behaviour of Composite Floors under Exterior Column Removal Scenarios

15:10-15:30	Lewei Tong, <b>Lichao Niu</b> , Shuang Jing, Xiao-Ling Zhao (Tongji University, China; Monash University, China)	Tests on Low Temperature Impact Toughness of High Strength Structural Steel
15:30-16:00	<b>Tea/Coffee break (Atrium)</b>	
<b>Above-Ground Structures (V)</b> <b>Chairs: A/Prof T.D. Ngo and Prof Bo Yang</b>		
16:00-16:20	G. Imbalzano, T.N. Nguyen, <b>S. Linforth</b> , P. Tran, A. Remennikov, T.D. Ngo (University of Melbourne, Australia; University of Wollongong, Australia)	Meta-modelling and optimisation of auxetic structures for blast protection
16:20-16:40	<b>Paolo Del Linz</b> , T.C. Fung, C. K. Lee (Nanyang Technological University, Singapore; The University of New South Wales at The Australian Defence Force Academy, Australia)	Modelling of the effect of cased charges on concrete walls
16:40-17:00	<b>Yan Yang</b> , Qinghua Qin, Jie Zheng, Tiejun Wang (Xi'an Jiaotong University, China)	Uniaxial dynamic crushing of sandwich plates with density-graded cellular core subjected to impulsive loading
17:00-17:20	Tao Jia, <b>Bo Yang</b> (Chongqing University, China)	Robustness of a composite floor system with reverse channel connections under an exterior column removal scenario
17:20-17:40	B. Du, <b>Zheng He</b> (Dalian University of Technology, China)	Seismic Fragility Analysis of Precast Concrete Frame Structures Using An Energy-based Storey Damage Index
17:40-18:00	<b>Ken Dale</b> (Geoscience Australia)	The Development of a Terrorism Loss Estimation Capability for the Australian Government
18:00-18:20	<b>Muhammad Sijawal</b> , Fangyi Wan, Yishui Wei, Mohammad Kassem, Naveed Ahmeed (Northwestern Polytechnical University, China)	Evaluation of the structural health of lap joint, bolted plate structure with active method
<b>End of Day 2</b>		

## Programme for parallel sessions: Underground Structures

Date: Thursday, 30 Nov 2017  
 Time: 13:00-17:50  
 Venue: EN102

<b>Underground Structures (I)</b>		
<b>Chairs: Prof Xiaowei Chen and Prof Wengui Li</b>		
Time	Authors	Title
13:00-13:20	<b>X.W. Chen</b> , Y.J. Deng, W.J. Song (Beijing Institute of Technology, China; Southwest University of Science and Technology, China; Peking University, China)	A Theoretical Model for the Penetration of Reinforced Concrete Targets by a Rigid Projectile
13:20-13:40	<b>Hezi Y. Grisaro</b> , Idan E. Edri (Technion-Israel Institute of Technology, Israel)	Numerical study of equivalency factors for bare explosive charges
13:40-14:00	<b>Ezio Cadoni</b> , Matteo Dotta, Daniele Forni, Carlo Albertini (University of Applied Sciences of Southern Switzerland, Switzerland; Dynalab-Impact Technologies, Italy)	Dynamic behaviour of UHPC in compression by means of 3D-Modified Hopkinson Bar
14:00-14:20	<b>Jian Cui</b> , Hong Hao, Yanchao Shi (Tianjin University, China; Curtin University, Australia)	Modification of dynamic concrete material model with consideration of hydrostatic pressure induced damage
14:20-14:40	<b>Wengui Li</b> , Zhiyu Luo, Chengqing Wu, Wenhui Duan, Surendra P. Shah (University of Technology Sydney, Australia; Monash University, Australia; Northwestern University, USA)	Impact behavior of nanoparticle reinforced recycled aggregate concrete
14:40-15:00	<b>Li-Fan Rong</b> , Jian-Chun Li, Hai-Bo Li, Qi Zhang (Institute of Rock and Soil Mechanics, Chinese Academy of Sciences, China; University of Chinese Academy of Science, China; Southeast University, China)	SHPB test study for the effect of rough joint on wave energy attenuation
15:00-15:20	<b>Qing-Jun Yu</b> , Chi-King Lee, Tat-Ching Fung (Nanyang Technological University, Singapore; University of New South Wales, Australia)	A practical algorithm (fast running tool) based on simplified numerical simulation for debris prediction of

		real-size Earth-Covered-Magazine (ECM) under internal detonation
<b>15:20-15:40</b>	<b>Michael E. Giltrud</b> , Joseph D. Baum, Orlando A. Soto, Fumiya Togashi, Rainald Löhner (Applied Simulations Inc., US; George Mason University, US)	Numerical Modelling of Explosively Loaded Concrete Structure Using a Coupled CFD-CSD Methodology
<b>15:40-16:10</b>	<b>Tea/Coffee break (Atrium)</b>	
<b>Underground Structures (II)</b> <b>Chairs: Prof Hongyuan Zhou and Dr Joseph D. Baum</b>		
<b>16:10-16:30</b>	<b>Hongyuan Zhou</b> , Xiaojuan Wang (Beijing University of Technology, China; Tianjin Key Laboratory of Civil Structure Protection and Reinforcement, China)	Ground Shock Measurement with Cellular Solid
<b>16:30-16:50</b>	<b>Joseph D. Baum</b> , Orlando A. Soto, Fumiya Togashi, Rainald Löhner, Michael E. Giltrud, Jacqueline Bell (Applied Simulations Inc., US; George Mason University, US; Defenses Threat Reduction Agency, US)	Investigation of Stationary and Moving Cased Charge Detonations in Stone Lined Pipes
<b>16:50-17:10</b>	Jianbo Zhu, <b>Yashi Li</b> , Mingzhong Gao, Ru Zhang (Tianjin University, China; Sichuan University, China)	Decoupled explosion in an underground opening and dynamic responses of surrounding rock masses and structures and induced ground motions: a FEM-DEM numerical study
<b>17:10-17:30</b>	<b>Wen Wang</b> , Heng Wang, Huamin Li, Zhumeng Liu (Henan Polytechnic University, China)	Strength and Failure Characteristics of Natural and Water-saturated Coal Specimens under Static and dynamic Loads
<b>17:30-17:50</b>	<b>Mingzhong Gao</b> , Sheng Zhang, Jie Li, Hailiang Chen, Tong Lu (Sichuan University, China; Henan Polytechnic University, China)	Dynamic failure mechanism of coal and gas outbursts and response mechanism of support structure
<b>End of Day 1</b>		



Date: Friday, 1 Dec 2017  
 Time: 11:30-17:30  
 Venue: EN102

<b>Underground Structures (III)</b> <b>Chair: Prof Yifei Hao</b>		
Time	Authors	Title
<b>11:30-11:50</b>	N. Chikhradze, E. Mataradze, <b>Ted Krauthammer</b> (G. Tsulukidze Mining Institute, Georgia; University of Florida, US)	Hybrid system for attenuation of shock wave and fire in tunnels
<b>11:50-12:10</b>	M. Z. N. Khan, <b>Yifei Hao</b> , Hong Hao, F. U. A. Shaikh (Curtin University, Australia; National University of Sciences & Technology, Pakistan; Tianjin University, China)	Impact response of plain and fiber reinforced ambient-cured high-strength geopolymer composites
<b>12:10-12:30</b>	Gary W.X. Goh, <b>Mingshu Tong</b> , William Toh (Defence Science and Technology Agency, Singapore; National University of Singapore, Singapore)	Numerical simulations and experimental tests of blast effects on buried pipelines
<b>12:30-13:30</b>	<b>Lunch (Atrium)</b>	
<b>Underground Structures (IV)</b> <b>Chairs: Dr Shengrui Lan</b>		
<b>13:30-13:50</b>	Svatopluk Dobruský, Daniele Forni, <b>Ezio Cadoni</b> (R&D LafargeHolcim, France; University of Applied Sciences of Southern Switzerland, Switzerland)	Mechanical Characterization of UHPC at High Strain Rate
<b>13:50-14:10</b>	<b>Minghe Ju</b> , Qianbing Zhang, Xiaofeng Li, Jian Zhao (Monash University, Australia; Chinese Academy of Sciences, China)	Prediction of Crack Trajectory in Rock Mass for Underground Structures Protection: DEM Simulation
<b>14:10-14:30</b>	<b>Xiaofeng Li</b> , H.B. Li, K. Liu, M.H. Ju (Chinese Academy of Sciences, China; Monash University, Australia)	Dynamic behaviours of rocks: the grain scale fracturing characteristics on strength and fragmentation

<p><b>14:30-14:50</b></p>	<p><b>Lixiang Xie</b>, Wenbo Lu, Qianbing Zhang, Gaohui Wang, Jincai Gu, Shengqi Yang (China University of Mining and Technology, China; Wuhan University, China; Monash University, Australia)</p>	<p>Excavation method of reducing blasting vibration in complicated geological conditions</p>
<p><b>14:50-15:10</b></p>	<p><b>Kai Liu</b>, Qian-bing Zhang, Xiao-feng Li, Peng-fei Liu, Jian Zhao (Monash University, Australia; Chinese Academy of Sciences, China; Chongqing University, China)</p>	<p>Dynamic increase factors of rock strength</p>
<p><b>15:10-15:30</b></p>	<p><b>Xing Li</b>, Qianbing Zhang, Jian Zhao (Monash University, Australia)</p>	<p>A numerical study of spalling under different dynamic loads using a particle-based numerical manifold method (PNMM)</p>
<p><b>15:30-16:00</b></p>	<p><b>Tea/Coffee break (Atrium)</b></p>	
<p><b>End of Day 2</b></p>		

## Programme for parallel sessions: Structural Materials

Date: Thursday, 30 Nov 2017  
 Time: 13:00-17:50  
 Venue: EN103

<b>Structural Materials (I)</b> <b>Chairs: A/Prof Alex and Prof Xianqian Wu</b>		
Time	Authors	Title
<b>13:00-13:20</b>	<b>Alex Remennikov</b> , Jim Youssef (University of Wollongong, Australia)	Explosive Breaching of Concrete Panels Subjected to Contact Charge Detonations: Experimental and Analytical Validation
<b>13:20-13:40</b>	Tao Li and <b>Yulong Li</b> (Northwestern Polytechnical University, China)	Dynamic fracture behavior of C/SiC composites: microstructure and mechanism
<b>13:40-14:00</b>	<b>Xianqian Wu</b> , Qiuyun Yin, Chenguang Huang (Institute of Mechanics, Chinese Academy of Sciences, China)	Dynamic behavior of sandwich panel with shear thickening fluid filled lattice truss core
<b>14:00-14:20</b>	P.L.N. Fernando, <b>D. Mohotti</b> , A. Remennikov, B. Uy (The University of Sydney, Australia; University of Wollongong, Australia)	Continuous impedance-graded metallic composite system for shock mitigation
<b>14:20-14:40</b>	Christoph Grunwald, <b>Torsten R. Lässig</b> , Harm van der Werff, Ulrich Heisserer, Long Nguyen, Werner Riedel (Ernst-Mach-Institut, Germany; DSM Dyneema, Netherlands; Defence Science and Technology Group, Australia)	Numerical Sensitivity Study of Ballistic Impact on UHMWPE Composites
<b>14:40-15:00</b>	<b>Fei Qiu</b> , Kun Bu, Guoliang Tian, Xiandong Zhang, Y.N. Zhai (Northwestern Polytechnical University, China; Cheng Du Aerospace Superalloy Technology CO.LTD, China)	Numerical simulation and experimental of casting residual stress for single crystal turbine blade
<b>15:00-15:20</b>	<b>F. N. Habib</b> , P. Iovenitti, S. H. Masood, and M. Nikzad (Swinburne University of Technology, Australia)	Effect of cell topology on the in-plane compressive response and energy absorption of honeycomb structures

15:20-15:40	<p><b>Ruoyu Wang</b>, Luming Shen, E.A. Flores-Johnson, Qingming Li, Gwénaëlle Proust (The University of Sydney, Australia; Centro de Investigación Científica de Yucatán, México; The University of Manchester, UK)</p>	<p>Characterisation of Mechanical Properties of Two Polymer Foams under Quasi-static and Impact Loading</p>
15:40-16:10	<p><b>Tea/Coffee break (Atrium)</b></p>	
<p><b>Structural Materials (II)</b> <b>Chairs: Prof Yoshimi Sonoda and Dr Wensu Chen</b></p>		
16:10-16:30	<p><b>Ted Krauthammer</b>, R. French, E. Maher, M. Smith, M. Stone, J. Kim, B.W. Foust, G.W. McMahon, R. Lewis, Y. Sohn (University of Florida, USA; Canadian Army, Canada; Defence Research and Development Canada, Canada; University of West Virginia, US; US Army Engineer Research and Development Center, US; Defense Threat Reduction Agency, US)</p>	<p>Assessing Direct Shear in Normal Strength and Ultra High Performance Concrete</p>
16:30-16:50	<p><b>Yoshimi Sonoda</b>, Masaki Koshiishi, Kazunao Ide (Kyushu University, Japan; Shimizu Corporation, Japan; Shimizu Mitsui Kagaku-sanshi Corporation, Japan)</p>	<p>Impact Response Analysis of RC cantilever beam with polyurea resin by SPH method</p>
16:50-17:10	<p>Zhejian Li, <b>Wensu Chen</b>, Hong Hao (Curtin University, Australia)</p>	<p>Blast resistant performance of multi-layer square dome shape kirigami folded structure</p>
17:10-17:30	<p><b>Zixi Xu</b>, Yan Liu, Junbo Yan, Fenglei Huang (Beijing Institute of Technology, China)</p>	<p>Experimental study on the behavior and deformation of thin aluminium panels subjected to large-scale explosions</p>
17:30-17:50	<p>Mark G. Stewart, Brianna Dorough, <b>Michael D. Netherton</b> (The University of Newcastle, Australia; Ward Civil &amp; Environmental Engineering, Australia)</p>	<p>Probabilistic Assessment of Ballistic Penetration of Steel Plates for Small Calibre Military Ammunition</p>
<p><b>End of Day 1</b></p>		

Date: Friday, 1 Dec 2017

Time: 11:30-16:40

Venue: EN103

<b>Structural Materials (III)</b> <b>Chairs: Dr Huon Bornstein</b>		
Time	Authors	Title
11:30-11:50	Sam Di Placido, <b>Huon Bornstein</b> , Shannon Ryan, Adrian C. Orifici, Adrian P. Mouritz (RMIT University, Australia; Defence Science and Technology Group, Australia)	Effect of Stand-off on the Blast Mitigation Using Water-Filled Containers
11:50-12:10	Xiangwei Liang, <b>Chengqing Wu</b> (University of Technology Sydney, Australia)	Study on responses of UHPCs under combined effects of impact and high temperature
12:10-12:30	<b>Young-Soo Yoon</b> , Jin-Young Lee, Ki-Don Kim, Doo-Yeol Yoo (Korea University, South Korea; Hanyang University, South Korea)	Dynamic Response of UHPFRCC Beams under Simulated Blast Loading
12:30-13:30	<b>Lunch (Atrium)</b>	
<b>Structural Materials (IV)</b> <b>Chairs: Dr P Tran and Prof Tao Suo</b>		
13:30-13:50	<b>A. Ghazlan</b> , T. Ngo, P. Tran (University of Melbourne, Australia)	A computational framework for simulating the behaviour of nacre-mimetic composites under quasi-static and blast loads
13:50-14:10	<b>Qinghua Qin</b> , Shiyu Liu, Jianxun Zhang, Tiejun Wang (Xi'an Jiaotong University, China)	Large deflections of metal foam-filled corrugated sandwich beams
14:10-14:30	<b>T. N. Nguyen</b> , J. R. Black, P. Tran, T. D. Ngo (University of Melbourne, Australia)	Mesoscale modelling of lightweight cellular concrete using X-Ray Computed Tomography (XCT)
14:30-14:50	Chang Qi, <b>A. Remennikov</b> , L.Z. Pei, S. Yang, T. Ngo (Dalian University of Technology, China; University of Wollongong, Australia; The University of Melbourne, Australia)	Experimental and Numerical Studies of Metallic Sandwich Panels with Auxetic Cores under Blast Loading

<b>14:50-15:10</b>	<b>S. Sinaie</b> , T. Ngo (University of Melbourne, Australia)	Evaluation of the material point method for the simulation of energy absorption systems under dynamic loading
<b>15:10-15:30</b>	Xingxing Liang, Rui Feng , <b>Zhongqi Wang</b> , Pengyi Li (Beijing Institute of Technology, China)	Numerical study on the characteristic of load generated by the gas explosion under constraint condition
<b>15:30-16:00</b>	<b>Tea/Coffee break (Atrium)</b>	
<b>Structural Materials (IV)</b> <b>Chair: Prof Xiaoqing Zhang</b>		
<b>16:00-16:20</b>	<b>Heran Wang</b> , Xiaoqing Zhang, Shuchang Long, Xiaohu Yao (South China University of Technology, China; Beijing Institute of Technology, China)	Damage characterization and residual strength of composite laminates under low-energy impact
<b>16:20-16:40</b>	<b>S. Linforth</b> , T.N. Nguyen, G. Imbalzano, P. Tran, T.D. Ngo (University of Melbourne, Australia)	Optimisation of a foam-filled auxetic unit cell under impact and blast loading
<b>16:40-17:00</b>	<b>Wei Yu</b> , Qi Dong (China Academy of Engineering Physics, China)	Design and experimental study of fiber composite containment vessels
<b>17:00-17:20</b>	<b>Nathan J. Edwards</b> , Stephen J. Cimpoeu, Dong Ruan, Guoxing Lu (Swinburne University of Technology, Australia)	Adiabatic Shear Bands in 2024-T351 Aluminium
<b>17:20-17:40</b>	<b>Qi Dong</b> (China Academy of Engineering Physics, China)	Dynamic behaviours of shells subjected to internal pressure pulses
<b>End of Day 2</b>		

## List of posters

List of posters			
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30 Nov and 1 Dec	Guoliang Tian, Kun Bu, Fei Qiu, Xiandong Zhang (Northwestern Polytechnical University, China)	Study on a Prediction Method of Structural Related Shrinkage of Investment Casting	EN 101 EN102 EN103
	Minjae Kim, Soonho Kim, Doo-yeol Yoo (Hanyang University, South Korea)	Comparison of flexural performances of ultra-high-performance concretes reinforced with single and hybrid steel fibers	
	Soonho Kim, Minjae Kim, Doo-Yeol Yoo (Hanyang University, South Korea)	Effects of fiber type and content on flexural behavior of ultra-high-performance fiber-reinforced concrete	
	Yuanyuan Ding, Fenghua Zhou (Ningbo University, China)	Study on Dependence of Porous Materials' Dynamic Behavior on Mesostructure Configurations	
	Jin Young Lee, Eui Kyun Choi, Tian Feng Yuan, Young Soo Yoon (Korea University, South Korea)	Effect of Steel Fiber Contents on Impact Resistance of SFRC Slabs	
	Yong-Gang Wang, Zhao-Xiu Jiang, Zheng-Zhang, Li-Ming Yang, Feng-Hua Zhou (Ningbo University, China)	An Analysis of Strain Uniformity in Split Hopkinson Tension Bar Test Specimens by Using Ultra-high-speed DIC	
	Dawid Pacek (Military Institute of Armament Technology, Poland)	Protective Structures for Body Armours	
	Zengqiang Wang, H. Guo, Weiguo Guo, Israr ul Haq, T. Wang (Northwestern Polytechnical University, China)	Anti-penetration characteristics of a nickel-based super alloy GH4169 under high-velocity impaction	

Jun Liu, Liming Yang, Yonggang Wang, Huanran Wang (Ningbo University, China)	Coupling mechanism in metal powder impact compaction	
Y.X. Zheng, W.L. Goh, B.Y. Luo, Z. Zeng, J.M. Yuan (Ningbo University, China; Nanyang Technological University, Singapore)	Metal-confined SiC armour against oblique perforation of tungsten alloy long rod	
Jie Li, Ming-Yang Wang, Hou-Xu Huang, Qi-Hu Qian (PLA University of Science and Technology, China; PLA University of Science and Technology, China; Nanjing University of Science and Technology, China)	Calculation of the irreversible deformation regions under the large-scale underground explosion	
Syng Man Rhee, Lynn Huh, Hyo Chang Kim (Agency for Defence Development, Republic of Korea)	Estimation of Debris Dispersion Range and Avoidance Zone According to Missile Intercept Altitude	
Ashesh Pohkrel, Seungwon Kim, Yongjae Kim, Cheolwoo Park (Kangwon National University, South Korea)	Enhancement of Conventional Concrete Beam against the Impact Load by the Application of SIFCON Based HPFRCC	
Weiguo Guo, Hui Guo, Penghui Li (Northwestern Polytechnical University, China)	Experimental Investigation of the Impact Resistance of Polyurea, Including Pressure and Temperature Effects	









