13th international conference on

SHOCK & IMPACT LOADS ON STRUCTURES

13-15 December, 2019, Hotel Crowne Plaza Guangzhou Huadu, China

List of Papers in the Conference Programme Summary (27 Nov 2019)

Keynote Papers

001 - Prof C. G. Koh, National University of Singapore, Singapore
"Extreme wave impact on coastal and offshore structures"
C.G. Koh, Min Luo and Xiaoqing Tang

003 - Prof Em. N. Ishikawa, National Defense Academy, Japan
"Safety assessment method of steel open dam by two-step analyses against impulsive debris flow"
Nobutaka Ishikawa, Toshiyuki Horiguchi, Ryo Matsuzawa, Masuhiro Beppu and Yoshiharu Ishikawa

018 - Prof Masuhiro Beppu, National Defense Academy, Japan
"Local damage of RC slabs subjected to projectile impact"
Masuhiro Beppu, Shinnosuke Kataoka and Hiroyoshi Ichino

081 - Prof Thomas Kang, Seoul National University, S. Korea
"New models, experiments, and facilities for impact resistance of concrete structures".

082 - Prof Hong Hao, Curtin University, Australia
"Centre for infrastructural monitoring and protection performance of folded structure under blast and impact loads"
Hong Hao, Zhejian Li and Wensu Chen

108 - Prof Andrew Tyas, Sheffield University, United Kingdom
"Blast loading from high explosive detonation: what we know and don't know"

117 – Prof Qin Fang, Army Engineering University of PLA, China
"Damage and failure in concrete-like materials and structures under impact and blast loads—numerical approach"
Qin Fang and Xiangzhen Kong

118 - Prof Zhong-xian Li, Tianjin University, China
"Paper title to be advised"

Special Session 1

031 – Dong Ruan, Swinburne University of Technology, Australia
"Mechanical performance of graphene concrete under high loading rate"
Hongjian Du, Nathan Edwards and Dong Ruan

056 - Chun-Lin Liu, K&C Protective Technologies Pte. Ltd, Singapore
"Economic decision model for blast resistant protection measures of infrastructures"
Chunlin Liu

047 - Dulara Kalubadanage, University of Wollongong, Australia
"Capabilities of NFPBS' advanced blast simulator for investigating blast response of reinforced concrete structures"
Dulara Kalubadanage*, Edward C. J. Gan*, Alex Remennikov* and David Ritzel

060 - Siak Lim Tan, ALTO Construction & Engineering Services Pte Ltd, Singapore
"FRP strengthened unreinforced brick wall subjected to air blast loading"
Siak Lim Tan, Tat Seng Lok and Ngoc Son Vu

Special Session 2

015 - Dr Hyeon-Jong Hwang, Hunan University, China
"Effect of impact loading on bar splice length"
Hyeon-Jong Hwang and Li Zang

054 - Dr Hyeon-Jong Hwang, Hunan University, China
"Progressive collapse test of precast concrete moment frames with conventional wet-connections"
Fei-Fan Feng, Hyeon-Jong Hwang and Wei-Jian Yi

065 - Prof Thomas H.K. Kang, Seoul National University, S. Korea
"High-velocity impact resistance of unbonded post-tensioned concrete panels"
Seong Ryong Ahn and Thomas H.K. Kang

066 - Prof Thomas H.K. Kang, Seoul National University, S. Korea
"Seismic retrofit method to prevent collapse of masonry wall-infilled rc frames"
Han Suk Sung and Thomas H.-K. Kang

067 - Prof Thomas H.K. Kang, Seoul National University, S. Korea
"Machine learning assessment of wind speed and load affecting out-of-plane behaviour of building façade"
Dong Hyeok Lee and Thomas H.K. Kang

068 - Prof Thomas H.K. Kang, Seoul National University, S. Korea
"An analytical study on out-of-plane behaviour of post-tensioned transfer plate"
Byeonguk Ahn*, Jang-Keun Yoon** and Thomas Kang

093 - Prof Woosuk Kim, Kumoh National Institute of Technology. S. Korea
Out-of-plane resistance assessment of reinforced concrete beam-column joints jacketed by ultra-high performance concrete under seismic load
Woosuk Kim, Seung-Ki Kim, Heon-Seok Lee and Hyung-Joo Lee

Technical Papers

005 - Dr Damith Mohotti, The University of Sydney, Sydney, Australia
"Stress wave propagation through an impedance graded multi-material system"
P.L.N. Fernando*, Damith Mohotti, Alex Remennikov, P.J. Hazell, H. Wang and Ali Amin

006 – Shreoshi S. Anika, Bangladesh University of Engineering & Technology, Bangladesh
"Impact energy response of recycled aggregate concrete using crumb rubber and polypropylene fiber"
F.M. Zahid Hossain, Md. Tanbirul Islam and Shreoshi S. Anika

008 - Dr Yonghui Wang, Harbin Institute of Technology, Harbin, China
"Dynamic crushing response of energy absorbing connector with PU foam and pleated plates"
Yonghui Wang, Jingyi Lu and Ximei Zhai

010 - Dr Thong M. Pham, Curtin University, Australia
"Roles of steel confinement in precast concrete segmental columns under impact and blast loads"
Thong M. Pham, Tin V. Do and Hong Hao

012 - Mr Xiaojing Wang, University of Technology, China
"Geometrical nonlinearity on the pushover and dynamic analysis of offshore wind turbine"
Piguang Wang, Xiaojing Wang, Mi Zhao, Xiuli Du and Yifu Chang

013 - Dr Jingde Li, Curtin University, Australia
"Numerical study of boiling liquid expanding vapour explosion inside a tunnel by using CFD"
Jingde Li and Hong Hao

014 - Prof Kazunori Fujikake, National Defense Academy, Japan
"The behaviour of concrete confined by spiral steel under impact loading"
Kazunori Fujikake and Sidney Mindess

017 - Ms Ekaterina A. Nekliudova, Krylov State Research Centre
"Evaluation of undex protection properties of muli-barrier systems"
Andrey I. Dulnev, Ekaterina A. Nekliudova and Vitaliy V. Chizhevsky

020 - Dr Xihong Zhang, Curtin University, Australia
"The response of concrete-filled-steel segmental column under blast loading"
Xihong Zhang, Hong Hao, Minghong Li, Zhouhong Zong and Jack Bruechert

021 - Prof Li Chen, Southeast University, China
"Mechanical behaviours and energy absorption under impact loads: a comparative study on coral sand and silica sand"
Li Chen, Xiao Yu, Qin Fang, Yadong Zhang and Junyu Fan

022 - Mr Martin Jensen Meyland, Technical University of Denmark, Denmark
"A novel full-view split Hopkinson pressure bar technique for flexural testing"
Martin J. Meyland, Rasmus N. W. Eriksen and Jens H. Nielsen

023 – Mr Wen-Wei Zhou, University of Science and Technology, China
"Investigation on impact resistance of steel casing composite pile based on toughness dissipation"
Wen-Wei Zhou, Xin Wei, Rong-Xiong Gao, Hong-Ping Zhu and Ibrahima Niang

024 – Prof Hong Guan, Griffith University (Beijing University of Technology, Beijing)
"Dynamic response of reinforced concrete flat plate substructure test"
Zhi Yang, Yi Li, Hong Guan and Lianwu Xu

025 - Mr Huawei Li, Curtin University, Australia
"Numerical study of dynamic behaviour of precast concrete beam-to-column joint subjected to impact loads"
Huawei Li, Wensu Chen and Hong Hao

026 – Dr Wensu Chen, Curtin University, Australia
"Impact behaviour of rc beams subjected to different drop weight geometry and impact interlayer"
Huawei Li, Wensu Chen and Hong Hao

027 - Mr Chi Lu, Kyushu University, Japan
"Impact response analysis of rc slab with polyurea resin by SPH method"
Chi Lu and Yoshimi Sonoda

030 – Prof Zhongxian Liu, Tianjin Chengjian University, China
"The IBEM solution to the seismic dynamic amplification effect of a near-fault alluvial valley"
Ying Liu, Lei Huang and Zhongxian Liu

033 – Dr Xiaoqing Zhou, Shenzhen University, China
"Simplified stochastic generation of 2D concrete aggregates and dynamic meso-scale modelling"
Xiao-Qing Zhou, Jun-Jie Yan and Li-Cheng Xie

034 - A/Prof Steeve Yuen, University of Cape Town, South Africa
"Blast mitigation capabilities of V-shaped sandwich panels filled with tubular cores"
Steeve Chung Kim Yuen, Adrian Lucas and Aurelie Mone

035 - Dr Wengui Li, University of Technology Sydney, Australia
"Rate-dependent behaviour of fly ash-slag geopolymer concrete with recycled aggregate"
Zhuo Tang and Wengui Li

036 - Ms Vivian Fam, Prostruct Consulting Pte Ltd, Singapore
“Simulating masonry wall retrofitted using a new quick application glass fibre reinforced polymer system”
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039 - Mr Sicheng Zhou, Nanjing Tech University, Nanjing, China
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Sicheng Zhou, C. Demartino and Yan Xiao

040 - Mr Yusuke Kurihashi, Muroran Institute of Technology, Japan
“Impact loading tests of steel fiber reinforced PFC beam strengthened with PET FRP sheet”
Yusuke Kurihashi, Katsuya Kono, Eiki Yasuda and Masato Komuro

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“Numerical investigation on dynamic response of reinforced concrete pier columns retrofitted with FRP wraps under vehicle collision”
Tao Liu, Lin Chen, Jinjun Xu and Chaoyang Zhou

042 - Dr Weifang Xiao, University of the Bundeswehr Munich, Germany
“Numerical investigation on air blast TNT equivalence factors of high explosive material PETN”
Weifang Xiao, Matthias Andrae and Norbert Gebbeken

046 – A/Prof Toshiyuki Horiguchi, National Defense Academy, Japan
“Experimental study on reduction of impulsive debris flow load by energy dissipator in front of steel open type sabo dam”
Yoshiharu Komatsu, Toshiyuki Horiguchi, Satoshi Katsuki and Nobutaka Ishikawa

048 – Lu Qiu, Tongji University, China
“Progressive collapse resistance of rc T-shaped beam-cable subassemblages”
Feng Lin, Lu Qiu and Kaicheng Wu

049 - Ms Zireen Z. Abdul Majeed, The University of Melbourne, Australia
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Zireen Z.Abdul Majeed, Nelson T.K. Lam, Scott J. Menegon and Emad Gad

050 - Dr Arnold C Y Yong, University of Melbourne, Australia
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Arnold C.Y. Yong, Jude S. Perera, Nelson T.K. Lam, Scott J. Menegon and Emad Gad

051 - Mr Zhen Liao, The Army Engineering University of PLA, China
“Analysis of propagation law and time-history function of blast wave in tunnel engineering”
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052 - Mr Atoui Oussama, Vrije Universiteit, Belgium
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Atoui Oussama, Maazoun Azer, Belkassem Bachir, Jonet Arnaud, Pyl Lincy and Lecompte David

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Bo Zhong, Ze-Jiang Zhang, Ya-Qiang Jiang, Xiaosheng Liu and Jiaqing Zhang

057 - Mr Guanqiao Li, Jianzhu University, China
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Guanqiao Li, Guochang Li and Zhijian Yang

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Lian-Zheng Pei, Chang Qi, Alex Remennikov and Shu Yang

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