Keynote Papers

Urban Habitat Constructions under Catastrophic Events: the COST C26 Action  
Mazzolani, F.M

Advances in Concrete Barriers that Resist Projectile Impact  
Dancygier, A.N.

Theme 1: Structures under Impact and Shock

Tsunami-induced Impact and Hydrodynamic Loading on Near-Shoreline Structures  
Palermo, D. ; Nistor, I. ; Cornett, A. ; Nouri, Y.

Slurry Infiltrated Fiber Concrete (SIFCON) Panels Subjected to Drop Weight Impact Loading  
Mindess, S. ; Xu, H. ; McGrath, P.

Impact Response of Steel Fiber Reinforced Lightweight Aggregate Concrete: Preliminary Results  
Bindiganavile, V. ; Zagaj, S. ; Banthia, N. ; Kramar, D.

The Flexural Response of High Strength FRC under Impact  
Zhang, L. ; Mindess, S.

Dynamic Mechanical Behaviour of Ultra-high Performance Fiber Reinforced Concrete under Repeated Impact in Different Impact Modes  
Wei, S. ; Jianzhong, L. ; Zhidan, R. ; Yunsheng, Z.

Aircraft Impact Analyses of the World Trade Center Towers  
Isobe, D. ; Sasaki, Z.

Impact Response of a Simply Supported Plain Concrete Slab  
Mikami, T. ; Sukontasukkul, P. ; Mindess, S. ; Banthia, N.

Response Analysis of RC Beams Subjected to Impact Loads  
Pujikake, K.

Validity of Small-Scale Explosion Tests to Examine the Evaluation of the Ground Shock Pressure Due to Underground Explosion  
Ichino, H. ; Ohno, T. ; Beppu, M. ; Hasue, K.

Numerical Simulation of Local Damage in Concrete Plates subjected to Hard Projectile Impacts  
Miwa, K. ; Beppu, M. ; Itoh, M. ; Katayama, M. ; Ohno, T.
Fundamental study on fragment behavior of concrete subjected to high speed loading
Haraki, D. ; Katsuki, S.

Development of impact response analysis method for RC beams mixed with PVA short-fibre
Kishi, N. ; Mikami, H. ; Kurihashi, Y.

Numerical Simulation on the Crashworthiness of Derailment Concrete Barrier using 3D FE Analysis
Fukazawa, J. ; Sonoda, Y. ; Sogabe, M.

An Analysis Study on the Dynamic Response of Rubber Fender Considered Environmental Temperature and Rate Effect
Shimozono, M. ; Sonoda, Y. ; Nishimoto, Y. ; Ito, S.

A Numerical Study on Impact Damage Assessment of PC Box Girder Bridge by Pounding Effect
Tamai, H. ; Sonoda, Y. ; Gotou, K. ; Kajita, Y.

Study on impact performance of PVA fiber reinforced super-lightweight mortar
Date, S. ; Hasegawa, K. ; Kasai, T.

Study on the performance evaluation of reinforced concrete beam under lateral impact
Masuya, H. ; Tachibana, S. ; Nakamura

The Analytical Method for Analysis of Interaction of Heterogeneous Mechanical System to Shock Impact Load
Dorosevas, V. ; Volkovas, V.

Structural assessment of the Tenza Bridge under extreme loads: the role of the material characterization at high strain-rate
Cadoni, E. ; Asprone, D. ; Prota, A.

Tests and analytical model of rockfall impacts on galleries
Schellenberg, K. ; Vogel, T.

Experimental Studies of Impact Strength of Prestressed Concrete Beams
Karim, R.

Failure Analysis of a Reinforced Concrete Beam Subjected to Rapid Loading using 3DRBSM
Yamamoto, Y. ; Miyata, Y. ; Kuroda, I. ; Furuya, N.

Failure Mechanism Change of Material under Different Loading Rate: Simulation of Molecular Dynamics with LJ Potential
Lim, Y.M. , Kim, K. ; Lim, J. ; Kim, J.

Analysis of Fiber Reinforced Concrete under static and impact loading
Cadoni, E. ; Dotta, M. ; Meda, A. ; Plizzari, G.A.

On Interaction of Strong and Weak Shock Waves with Flexible Plates
Allahverdi, N. ; Wang, X. ; Saadegh vaziri, M.A. ; Bukiet, B.

Dynamic Compressive Characteristic of Reactive Powder Concrete under Various Loading Rates
Tai, Y.S.

**Theme 2 : Structures under Blast and Fire**

Blast Vulnerability Assessment: Challenges and Myths
Braimah, A. ; Contestabile, E.

Demystifying Blast Effects on Buildings
Malhotra, A. ; Carson, D. ; Stevens, T.

Blast Protection: Developing Design Strategies for Today’s Buildings
Hadden, D. ; Walton-Knight, M.

Blast Response of Underground Lined Cavities to Internal and External Explosions
Feldgun, V.R. ; Karniski, Y.S. ; Yankelevsky, D.Z.

Reinforced Concrete Tunnel Lining with Fireproof Performance for Large Cross-section Tunnels Excavated by TBM
Moriyama, M. ; Han, B.C. ; Lim, S.C. ; Kwon, Y.J. ; Rokugo, K.

Application of a Kalman filter to blast loaded structures
Mediavilla, J. ; van Doormaal ; Weerheijm, J.

Structural Response of Unstiffened Panels Under Close-in Blast Loading
Tylerstreet, M.D. ; Luyten, J.M. ; Mediavilla Varas, J.

Partial Loss of Fire Protection of Steel Members Protected with Intumescent Coatings
Raveglia, E. ; Fontana, M.

Damage Patterns of Ferrocement Jackets Exposed to Fire
Greepala, V. ; Nimityongskul, P.

Resistance of Glass Panels to Air Blast
Ataei, H. ; Anderson, J.C. ; Niazy, A.S.M.
Analysis of Structures in Fire using Adiabatic Surface Temperatures and Different Finite Element Types
Duthinh, D. ; McGrattan, K. ; Khaskia, A.

Voluntary Standard for Blast Protection

Blast Resistance of Precast, Prestressed Concrete Building Wall Panels
Naito, C. ; Fisher, J. ; Dinan, R.

Blast Testing and Analysis of Composite Steel Stud Wall Panels
Wesevich, J.W. ; Lowak, M.J. ; Hallissy, G. ; Calcetas, P. ; Hu, W. ; Bingham, B.L.

Air-Blast Analysis of Beam-Columns using Galerkin Formulations
Montalva, A. ; Marjanishvili, S. ; Ivorra, S.

Blast-Resistant Highway Bridges: Design and Detailing Guidelines
Williams, D. ; Holland, C. ; Bayrak, O. ; Williamson, E. ; Marchand, K. ; Ray, J. ; Walker, R.

Three Dimensional Response of a Steel Structure under Blast Loads
Hwang, Y.S. ; Anderson, J.C.

Using Upset-Threaded Rods to Limit the Demand on Removable
Weeks, J. ; McArthur, C. ; Lawver, D. ; Tennant, D.

Balanced Design Assessment Using Pressure-Impulse (PI) Diagrams
Percher, M. ; Marjanishvili, S.

On Modeling and Progressive Collapse of Highway Bridges Subjected to Blast Load
Feizi, B. ; Saadeghvaziri, M.A. ; Wang, X.S.

Blast loading of sandwich panels with thin-walled tube cores
Theobald, M.D. ; Nurick, G.N.

Protective Structure for Storage and Transportation of Explosive Materials
Elshafey, M. ; Abd El Halim, A.O. ; Contestabile, E.

Thermal and Mechanical Characterization of Fibre Reinforced Polymers, Concrete, Steel, and Insulation Materials for use in Numerical Fire Endurance Modelling
Chowdhury, E.U. ; Green, M.F. ; Bisby, L.A. ; Bénichou, N. ; Kodur, V.K.R.

Residual Mechanical Properties of High-Strength Concrete Incorporating PP-Fiber after Exposure to High Temperatures
Behnood, A. ; Khanzadi, M. ; Naderi, M.
Progressive Collapse and Vulnerability of a Framed Structure subject to a Blast Load
Zhang, L.; Liu, X.; Ma, T.W.; Park, S.H.; Chen, W.F.

The Parque Central East Tower, Caracas, Venezuela. Consequences of an Internal fire and Structural Repairs Performed.
Paparoni, M.; Salas, H.

Numerical Simulation of the Post Failure Motion of Square Steel Plates subjected to Uniform Blast Loading
Balden, V.H.; Bonorchis, D.; Nurick, G.N.

An investigation of the performance of structural components subjected to full-scale blast tests in Woomera, Australia
Gupta, A.; Mendis, P.; Ngo, T.; Lumantarna, R.

Design Strategies for Protecting Built Infrastructure against Fire Hazard
Kodur, V.K.R.

Application of Frictional Passive Dampers in the "Blast Protective Panels"
Monir, H.S.

Effect of Thermal Properties of Structural Materials on the Fire Resistance of Concrete-Filled Steel Tube Column under Constant Axial Loads
Park, S.H.; Chung, K.S.; Choi, S.M.

Theme 3: Structures under Seismic Loads and Vibrations

Experimental Study on the Aseismic Performance of Dampers with Concrete Ductile Columns
Yan, W.B.; Li, Z.B.; Ma, H.; Zhou, X.Y.

Numerical and Experimental Investigation on Free Vibration Characteristics of Steel Space Frames
Samuel Knight, G.M.; Cinitha, A.

Effects of Lateral Load Patterns Associated to Higher Modes on Non-linear Static Analysis (Pushover) of Special MRF
Abyaneh, R.R.; Shayanfar, M.A.

Earthquake Responses of Medium-rise Steel Frames Retrofitted by Light Prefabricated Walls with No Space Installation under Elcentro Record
Kabir, M.Z.; Forooshan, A.A.
Case Study: Vulnerability Assessment of the Sample Building by GSREB
Boroujeni, A.R.K. ; Chashmi, S.M.

Numerical study of seismic Retrofit of Reinforced Concrete Bridge Columns Using Partially Stiffened Steel Jackets
Nori shirazi, M.R. ; Abedi, K. ; Afshin, H.

Seismic Retrofitting of Woodframed Buildings Using Three-Dimensional Rigid Body-Spring Method
Kawakami, H. ; Tingatinga, E.A. ; Chang, H.Y.

Effects of Curvature Radius on Nonlinear Seismic Response of Curved Highway Viaducts Equipped with Unseating Prevention Cable Restrainers
Mendez Galindo, C. , Hayashikawa, T. ; Ruiz Julian, D. ; Fujii, T.

Structural Performance of Corroded RC Column under Seismic Load
Oyado, M. ; Saito, Y. ; Yasoijima, A. ; Kanakubo, T. ; Yamamoto, Y.

Development of a Geomaterial That Has Mitigating Effects against Vibrations and Suitable Characteristics for Use in Planting Basement
Sako, N. ; Kawamura, M. ; Shimomura, Y.

Seismic Performance of Hybrid System with Corrugated Steel Shear Panel and RC Frame
Kono, S. ; Ichioka, Y. ; Ohta, Y. ; Watanabe, F.

Non-linear lateral response of one-freedom grade simple systems in front of accelerograms registered in Mexico City
Avila, J.A.

Progressive Collapse Analyses of a Seismically Designed RC Building in Taiwan
Tsai, M.H. ; Lu, J.K. ; Lin, B.H.

Seismic Performance of Steel Moment Connections with Widened Beam Flanges
Chen, C.C. ; Lin, C.C. ; Lee, C.M.

Seismic Behavior of Perforated Steel Shear Walls
Behnamfar, F. , Farsani, A.M.

A Study on Seismic Retrofit of a Bridge Using Bi-directional Energy-Dissipating Sacrificial Devices
Kim, S.H. ; Mha, H.S. ; Cho, K.I. ; Won, J.H. ; Jang, M.S.

Effect of PVC stay-in-place forms on improving performance of reinforced concrete walls under fire, extreme flexural and seismic loading
Gupta, R.
( Sólo Abstract)
Cooperation between Restoration and Retrofitting of monument enshrines Imamzadeh Ja’far after Darb-e-Astaneh earthquake
Vosoughifar, H.R.

Presenting Restoration and Retrofitting Process for Monument Damaged of Doroud Earthquake (Jame’ Mosque Case Study)
Vosoughifar, H.R.

Theme 4 : Structural Performance and Strengthening

Effect of High Temperatures on FRP-Confined Concrete
Al-Salloum, Y.A.

Dynamic compressive toughness of FRC
Zhang, L. ; Mindess, S.

Study on Healing Effectiveness of Cracks Rehabilitation in Reinforced Concrete using Electrodeposition Method
Zhengwu, J. ; Zhenping, S. ; Peiming, W. ; Feng, X.

Flexural Performance of UHPFRC
Barnett, S.J. ; Millard, S.G. ; Soutsos, M.N. ; Schleyer, G.K. ; Tyas, A.

Strengthening of RC Beams Subjected to Sustained Elevated Temperature
Suresh, N. ; Rahman, S.S.U. ; Manjunath; K.S.

Retrofitting of Steel Buildings Using Buttress Connections
Yahyai, M. , Asad Sajadi, S.R.

Protection of airport facilities through radio frequency transparent fences: the SAS project
Asprone, D. ; Prota, A. ; Parretti, R. ; Nanni, A.

Structural Integrity and Robustness Assessment of Historical Buildings under Exceptional Situations
Mazzolani, F.M. ; Mandara, A. ; Faggiano, B.

Size Effect on Flexural and Shear Behavior of PVA-ECC
Kanakubo, T. ; Shimizu, K. ; Kanda, T.

Retrofitting of a Reinforced Concrete Frame Using Ductile Interlocking Blocks
Sanada, Y. ; Yamauchi, N. ; Takahashi, E. ; Nakano, Y.

Structural Performance of Corroded RC Column under Uniaxial Compression Load
Saito, Y. ; Michiaki, O. ; Kanakubo, T. ; Yamamoto, Y.
Surface effects on tensile performance of strain-hardening fiber-reinforced cement-based composites (SHCC)
Rokugo, K. ; Asano, Y. ; Kato, H. ; Izuka, T.

Moment-Axial Tension Interaction of Double-Span Beams in Column-Removed Steel Moment Frames
Lee, C.H. ; Kim, S.W. ; Lee, K.

Shear Strengthening of Exterior Beam-Column Joints using FRP Sheets
Alsayed, S.H. ; Al-Salloum, Y.A. ; Almusallam; T.H.

Water Penetration of Fiber Reinforced Concrete After Subjected to Compression Loading
Sukontasukkul, P. ; Suthithamma, S.

FLEX Analysis and Scaled Testing for Prediction of Progressive Collapse

Case Study of a Tested Progressive Collapse Mitigation Design
Marjanishvili, S. ; Malits, F.S. ; Stone, H.F. ; Chan, J.H.

Retrofit of semi-rigid Khorjinee connections with vertical plates
Heydari, B. ; Deylami, A.

Recommendations for Dynamic Amplification for Disproportionate Collapse Analysis of Tall Buildings
Harris, J.

Performance Enhancements of Structural Systems Retrofitted with Fiber Reinforced Polymer Composite Systems
Milligan, P. ; Fyfe, E. ; Orton, S.L.

A New Fast Running Tool for Progressive Collapse Assessment
Vaughan, D. ; Salari, R. ; Xie, M. ; Ettouney, M.

Measuring Deflections Through Strains Under Static and Dynamic Loads
Mufti, A.A. ; Jaeger, L.G. ; Klowak, C. ; Kyriakopoulos, N.

Numerical assessment of the performance of protecting wall composed of geo-grid reinforcement against rockfall

Analytical Investigation of Collapse Resistance in Steel Moment Frames
Kim, T. ; Kim, T. ; Kim, J. ; Park, J.H.
Behaviour of Masonry Block Walls Strengthened with GFRP Sheets
Almusallam, T.H.

Performance of Confined Masonry Walls under Cyclic Testing
Mahdi, T. ; Aghabaiki, H.

Applications of GPR for Structural Health Monitoring and Advanced Screening
Ekes, C. ; Wong, T.
(Sólo Abstract)

Estimating the Shear Strength of Reinforced Concrete Columns Using the Mohr-Coulomb Failure Criterion
Hanai, H. ; Pujol, S. ; Sozen, M.A. ; Ichinose, T.

Use of Complex, Multi-physics, Non-linear Models in Assessing Structural Performance of Critical Infrastructure under a Multitude of Extreme Loads
Simos, N. ; Matéu, E.