



International Symposium on Interaction of the Effects of Munitions with Structures

2001

Protective Design		
James Wesevich	US pentagon IGU Window Response Validation Study	
Lutz Krueger	Triaxial High Rate Mechanical Behavior of Granulated Brittle Materials Under Very High Confining Pressures	
Joyce Engebretsen	Upgrading Existing Window Systems for Explosion Effects	
Andrew Faeh	A Rigorous Approach for the Optimization of Weapons Effects Mitigation	
Frederick G. Hulton	Tests of Modern Protective Walls Against Explosive Attack	
Lee Ann Young	Development of a Glass Penetration Model to Facilitate Human Injury Predictions for Physical Security Assessments	
Audrey Kersul	Mail Room Wall Test	
Andre van Erkel	TMO-PML Developments of Blast Resistant Doors and Walls	
Jeffrey Thomsen	Residual Air Pressures and their Effects on Exterior Facing Rooms with Windows	
Joseph D. Baum	Recent Developments of a Coupled CFD / CSD Methodology	

NATO		
Robert Cameron	Development of a Model to Predict Effectiveness of Multiple Penetrators Against Hardened Targets	NATO
David Bogosian	Evaluation of Reinforced Concrete Wall Response Models Against Recent Test Data	NATO
David Jerome	High-Speed Penetration of Grout Targets by Ogive-Nosed High Strength Steel and LPS Tungsten Projectiles	NATO
Charles Needham	First Principles Calculations of the Combined Blast and Fragment Environment for a BLU-113	NATO
Luke Cropsey	Blast Wave Propagation Through Conventional and Redesigned Entry Control Points	NATO
Luke Cropsey	An Analysis of Blast and Debris Hazards Generated by Perimeter Countermobility Barriers	NATO
Edward Humphreys	Effectiveness of Deformable Blast Barriers	NATO
David Bogosian	Analytical and Experimental Studies to Predict Response of Humans to Blast-Induced Blunt Trauma	NATO
Eric J. Rinehart	Development of a Solid Fuel/Air Explosive to be used as an Alternative Weapon Fill	NATO

Blast		
Jean-Marc Sibeaud	Hydrocode Evaluation of Various Shaped Charge Designs for Concrete Penetration	
Peter D. Smith	An Assessment of Blast Impulse Reduction in City Streets with Non-Structural Building Facades	
Timothy A. Rose	Assessment of Glazing Damage Using Simple Pressure-Impulse Relations in CFD Blast Calculations	
Joseph D. Baum	Assessing the Terrorist Attack on the US Embassy in Nairobi, Kenya	
Chengqing Wu	Simulation of Surface Ground Motions Induced by Underground Blasting	
David R. Coltharp	Blast Response and Retrofit of Load-Bearing Masonry Walls	
Stephen J. Schraml	Near-Field Blast from End-Detonated Cylindrical Charges	
Hakan Hansson	Numerical Simulation of Airblast	
Chen Yeqing	The Close-in Physical Characteristics of TNT Charge Explosion	

Ladeburg		
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Dan Brubaker	Plans and Objectives for Detonation Tests at the Ladeburg Replica Hard Target Facility	NATO
Paul Buecking	Numerical Investigation of Eccentric Internal Room Detonations and Interaction with Concrete Walls	NATO
Dietmar Carl	Detonation in Concrete: Comparison of Experimental Stress-Time Histories with Results of Numerical Simulations	NATO
Norbert Gebbeken	Reliable Modeling of Explosive Loads on Reinforced Concrete Structures	NATO
Holger Sohn	Development of Penetration Weapons for Hard Target Defeat	NATO
Andreas Heckersbruch	Construction Options Available for Adapting Shelters to Changing Threats	NATO
Charles Needham	The Structure of a Mach Stem Resulting from the Detonation of a Hemispherical Charge at a Height of Burst	NATO
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Alan Ohrt	Influence of Equipment Components and Room Contents on Internal Airblast Environments	NATO
Hans-Dieter Witte	Acceleration Loading to Structure Walls and Equipment Components of Bunker Ladeburg From External Detonations	NATO

Helmut Grumann	Measured and Computed Overpressure and Impulse Loading by Eccentric Spherical and Oblique Cylindrical Detonations in a Bunker Room with Components	
Robert Oneto	A Comparison of Predicted and Measured Responses of Blast Doors Subjected to Combined Airblast and Fragment Loadings	

Test		
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Charles Joachim	Comparisons of Measured Results and Calculated Data From Recent Internal Detonation Experiments in a Model Tunnel System	
Leslie Kennedy	The Physical Modeling of Ground Shock Loading on Underground Services Due to the Detonation of Buried Ordnance	
Brian Peterson	A Small-Scale Experimental Study of the Penetrability of Explosively Damaged Reinforced Concrete Slabs	
James Gran	Laboratory-Scale Tests of Blast Doors with Combined Fragment and Blast Loading	
Mark Groethe	Measurements of Stress Near Penetrator Impacts into Virgin Concrete and Damaged Concrete: DIVINE ALBATROSS	
Mark Groethe	Development of a Flatpack Stress Measurement System for Combined Fragment and Airblast Loading using PVDF	
Rune Lausund	Laboratory-Scale Explosive Cratering Tests In Salem-Limestone	
Erik Svinsas	Laboratory-Scale Explosive Cratering Tests In Salem-Limestone	

Protective Design		
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Peng Shi	Numerical Analysis For Simulation Equipment of Blast Wave	
Kenneth B. Morrill	Full-Scale Testing of Reinforced Concrete Column Retrofits to Resist Blast Loads	
James O Daniel	Use of Finite Element Simulations to Improve the Design of a Window Retrofit	
C.S. Park	Impact and Penetration Shield Concept Assessment	
Mike Gough	Preliminary Design Procedures for the Design of Blast Resistant Steel-Concrete-Steel Structures	
Arno Klomfass	Attenuation of Underwater Blast Waves in Ducts by Air-Filled Wall Panels	
Martin Sauer	Modeling of Penetration Events Using FE/MLSPH Adaptive Coupling	

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Kurt Bucher	Effectiveness Analysis of Active and Passive Radar Protection Measures	
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Alain Darrigade	Shaped Charge Jet Penetration into Concrete: Numerical Results and Analytical Comparisons	
Henrik Sjol	Analysis of Existing Empirical Formulas for Predicting Penetration into Concrete	
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Ruichao Liu	Study of Model Tests on Penetration into Rubble Concrete	
Olivier Meuric	Numerical Prediction of Penetration into Reinforced Concrete using a Combined Grid Based on Meshless Lagrangian Approach	
Alain Rouquand	A Combined Numerical and Experimental Approach to Determine the Effectiveness of an Anti-Runway Munition	
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Structures		
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Photios Papados	Studies on Wave Propagation Attributes in Isotropic and Anisotropic Plate Structures Due to Fragment Impact Loads	
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Tat Seng Lok	Membrane Action in SFRC Structures Subjected to Explosive Loading	
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Test		
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Jaap Weerheijm	Development of a New Test Setup for Dynamic Tensile Tests on Concrete at High Loading Rates	
Sundararajan Santosh	Response of Concrete Filled Steel Sandwich Blast Doors Against Hard Impact	
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M. Lowak	Window Response Comparison of Open-Air and Shock Tube Testing	

Charles Oswald	Shock Tube Testing on Masonry Walls Strengthened with Kevlar	
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NATO		
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Bruce Phillips	Effect of Explosive Type on Structure-Medium-Interaction Experiments	
Bruce Phillips	Results From 1/8th Scale Structure-Medium-Interaction Experiments	
Lisa Nikodym	Response of Buried Slabs Subjected to External Detonations in Soil	
David Watts	Embedded Measurement Techniques for Combined Effects from an Internal Detonation	

Structures		
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Alain Rouquand	A Simplified Analytical Method to Predict the Behavior of Reinforced Concrete Plates Under Blast Loads	
Don A. Bland	Penetration and Cratering Effects 5.0: Fast and Easy 3-D Scenario Modeling	
Harald Schuler	Simulation of Dual Stage Warheads Impact on Concrete	