Proceedings of the American Society for Composites 17th Technical Conference

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Low Velocity Impact and Vibration Response of Multi-Functional Sandwich Plates  
U. VAIDYA, S. PILLAY, C. ULVEN, G. JANOWSKI AND M. HOSUR

Analysis of Delamination in Composite Laminates under Impact Loading  
K. MINNAAR AND M. ZHOU

Ballistic Impact Resistance of Monolithic, Hybrid and Nano Composites of PC and PMMA  
J. W. SONG AND A. J. HSIEH

SESSION WB3: IMPACT—2

Load-Displacement Curves of Glass/Epoxy Laminates Subjected to Low-Velocity Impact  
D. LIU AND B. B. RAJU

Material and Low-Velocity Impact Characterizations of Textile Composite Plates.  
S. J. KIM AND K. H. JI

Tailoring of Wave Propagation Characteristics in Periodic Structures with Multilayer Unit Cells  
M. I. HUSSEIN, G. M. HULBERT AND R. A. SCOTT

Modeling of Ballistic Impact on Composite Laminates using a Meshless Method.  
Q. ZENG AND C. T. SUN

SESSION WA4: HEALTH MONITORING/NDE—1

Embedded MEMS Sensors for Structural Health Monitoring of Composite Materials  
M. UL HOQUE AND A. TAYEBI

Non-Destructive Evaluation of Armor Inserts.  
K. JUZENAS, A. DOMINAUSKAS, D. HEIDER AND J. W. GILLESPIE, JR.

A Smart Patch for Monitoring Crack Growth in Metallic Structures Underneath Bonded Composite Repair Patches  
J.-B. IHN AND F.-K. CHANG

Damage Detection of CFRP Composites Using the Anisotropy of the Electrical Conductivity  
J. B. PARK, T. OKABE, A. YOSHIMURA AND N. TAKEDA

Phased Transducer Arrays for Structural Diagnostics through Beamforming.  
S. SUNDARARAMAN AND D. E. ADAMS
Mechanics of Failure of Embedded Fiber Optic Sensor Composite Laminates Under Tension And Compression Loads
K. SHIVAKUMAR AND L. EMMANWORI

SESSION WB4: HEALTH MONITORING/NDE—2
Acousto-Ultrasonics: A Tool for Nondestructive Evaluation of Multi-layer Composites
V. F. GODÍNEZ-AZCUAGA, R. D. FINLAYSON AND R. K. MILLER
LambWave Evaluation and Localization of Ply Cracks in Composite Laminates
T. OKABE, N. TOYAMA AND N. TAKEDA
A Polymer-Metal Composite Surface Stress Sensor
J. THAYSEN, O. HANSEN AND A. MENON
Characteristics of Vibration Suppression for SMA/CF and SMA/GF Hybrid Composites
Y. AOKI AND G. BEN (O. BYON)

SESSION WA5: CARBON-CARBON COMPOSITES
Manufacture of Functionally Gradient Carbon-Carbon Composites.
A Combined Experimental-Numerical Investigation of Crack Growth in C-C Composites
J. HAN AND T. SIEGMUND
A Thermomechanical Crack Bridging Model
A. HATTIANGADI AND T. SIEGMUND
Friction and Wear Behavior of Carbon-Carbon Composites.

SESSION WB5: INFRASTRUCTURE
Experimental and Analytical Evaluation of Shear Stud Type Connectors for FRP Bridge Decks to Steel Stringers
J. RIGHMAN, K. BARTH AND J. DAVALOS
Stress-Strain Relationship of Compressed Elements from Polymer Concrete with Polybutadiene Matrix.
O. FIGOVSKY, Y. POTAPOV, Y. BORISOV AND D. BEILIN
Modeling of Debond Growth at FRP-Concrete Interface in Aggressive Environments
S. ROY, F.-W. SHIUE, S. PARK AND K. M. LIECHTI
The CFRP-Concrete Interface Subjected to Sodium -Sulfate and -Hydroxide Attack
D. M. BOYAJIAN, J. F. DAVALOS, I. RAY AND S. KODKANI

SESSION WA6: AUTOMOTIVE/APPLICATIONS—1
Effect of Impact Damage on the Specific Energy Absorption of Glass/Polyester Composites
M. RIEBEAUX AND N. A. WARRIOR

Dynamic Axial Crush of Automotive Rail-Sized Composite Tubes Part 1: Tubes with Woven Reinforcements (Carbon, Kevlar®, and Glass) and Non-Plug Crush Initiators.
A. L. BROWNE AND S. A. IOBST

Geometric and Loading Rate Effects on the Energy Absorption of Triaxially Braided Carbon Vinyl Ester Tubes
R. FERNIE, M. J. DUCKETT AND N. A. WARRIOR

Axial Crush Resistance of Aluminum-Composite Hybrid Tubes.
J. M. BABBAGE AND P. K. MALLICK

Analytical and Computational Models for Cord-Reinforced Composites
H. HASSIS, S. KOCAK AND R. M. PIDAPARTI

SESSION WB6: AUTOMOTIVE/APPLICATIONS—2
Development of Thermoplastic Matrix Composite Tubes for Automotive Applications
G. JANDALI, D. KANAWADE AND P. K. MALLICK

Crush Analysis of Structural Foams Inside a Hollow Steel Tube Under Low-Velocity Uni-axial Compressive Loading.
R. MANN, P. R. MÁNTENA AND C. MULLEN

Design of Integrated FRP Energy Absorber with Bolted Joint
H. HAMADA, K. SUGIMOTO, H. SAI TO AND R. INAI

Design and Performance of Composite Multifunctional Structure-Battery Materials
M. A. QIDWAI, J. P. THOMAS AND P. MATIC

Eco Friendly Sustainable Bio-Composites From Natural Fibers and Cellulosic Plastics for Automotive Applications
L. T. DRZAL, A. K. MOHANTY, A. WILBOWO AND M. MISRA