

2019 Mach Conference
POSTER SESSION

Sponsored by: 

1. Numerical model for predicting the input fragment size distribution for granular flow of a highly comminuted material
Presenter: Amartya Bhattacharjee, Johns Hopkins University
2. Modelling Hypervelocity Impact on Asteroids
Presenter: Sakshi Braroo, Johns Hopkins University
3. Strain rate effects on the mechanical properties of glial cells
Presenter: Amy Dagro, Johns Hopkins University
4. An Experimentally verified Finite Element model of a miniaturized Kolsky bar
Presenter: Thomas Hannah, Penn State
5. Time-Resolved Characterization of Ballistic Testing
Presenter: Phillip Jannotti, US Army Research Laboratory
6. Dynamic Three-Point Bend of Hard Maple: The Next Phase of Multi-piece Fracture Reduction in Major League Baseball
Presenter: Madison Kierod, Drexel University
7. Nondestructive damage detection - Digital Image Correlation on a vibrating rod
Presenter: Nicholas Lorenzo, US Army Research Laboratory
8. Identifying Damage Initiation of Woven Fiberglass Composites Under Compression
Presenter: Isabella Mendoza, Drexel University
9. Failure Behavior of Unidirectional Carbon Fiber Composites under Combined Environmental-Mechanical Compressive Loading
Presenter: Daniel Pardo, Drexel University
10. Tailored Activation Stress in Mechanochemistry Based Sensing of Material Damage
Presenter: Logan Shannahan, US Army Research Laboratory
11. Hypervelocity Impact Facility at Johns Hopkins University
Presenter: Gary Simpson, Johns Hopkins University
12. Quasi-Continuum Modeling of Fracture in Networked Materials
Presenter: Ahmed Elbanna, University of Illinois, Urbana Champaign
13. Stochastic Finite Element Modeling of Carbon Nanotube Yarns Under Axial Tensile Force
Presenter: Akbar Pirmoz, Catholic University of America
14. Structural, Electronic, and Defect Formation Characterization of Polymeric Piezo Films
Presenter: Peker Milas, Morgan State University
15. Fracture Toughness of Silica Glass through Atomistic J-integral Approach
Presenter: Sanjib Chowdhury, University of Delaware
16. Dynamic Transverse Compressive Strength of UHMWPE Composites
Presenter: Jason Parker, Johns Hopkins University
17. Packing and Flow of Aspherical Frictional Grains
Presenter: K. Michael Salerno, US Army Research Laboratory
18. Uncovering exploitable insight from microstructures using machine learning algorithms
Presenter: Audrey Olivier, Johns Hopkins University
19. Deformation Driven Dynamic Precipitation in Mg-Al and Mg-Zn Alloys: a Comparative Study
Presenter: Suhas Eswarappa Prameela, Johns Hopkins University
20. A study on the improvement of mechanical properties of Magnesium Alloys through rolling confinement
Presenter: Pavitra Krishnan, UNCC
21. Strain Rate Dependence of a Stabilized, Nanocrystalline Cu Alloy
Presenter: Scott Turnage, US Army Research Laboratory
22. Improved mechanical properties of Mg-6wt.%Al alloy through differential speed rolling
Presenter: Honglin Zhang, North Carolina A&T University

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23. Equal Channel Angular Extrusion of Dilute Mg-Zn-Ca Alloys
Presenter: Jenna Krynicki, Johns Hopkins University
24. Experimental investigation of thermoresistive response of carbon nanotube yarns and their thermosetting monofilament composites
Presenter: Omar Rodriguez, Catholic University of America
25. Micromechanical 3-Dimensional Finite Element modeling of tensile failure of unidirectional composite
Presenter: Raja Ganesh, University of Delaware
26. Automated Macro-scale Damage Characterization of a Plain-weave S-2 Glass/epoxy Composite Laminates
Presenter: Enock Bonyi, Morgan State University
27. Effects of nano-inclusions on the thermomechanical behavior of PBX
Presenter: Babak Ravaji, Texas A&M University
28. Infrared measurement of hot spot formation in polymer bonded explosives subjected to dynamic loading
Presenter: Suraj Ravindran, Caltech
29. Influence of micro-inertia and rate sensitivity in laser-driven impact experiments
Presenter: Sayyad Basim Qamar, Texas A&M University
30. Pressure-Shear Plate Impact Experiments on Magnesium at High Pressures
Presenter: Suraj Ravindran, Caltech
31. Orientation Effects in the Dynamic Tensile Failure of a Rolled Mg-Al Alloy
Presenter: Brandon D. Rowell, New Mexico Tech
32. High Throughput Mesoscale Simulations of Deformation and Failure of Magnesium Polycrystals
Presenter: Angela Olinger, Texas A&M University
33. Role of Multi-Stage Hardening in Void-growth and Coalescence
Presenter: Padmeya Prashant Indurkar, National University of Singapore
34. Moving window MD formulation for predicting shock kinetic relations
Presenter: Vinamra Agrawal, Auburn University
35. UQ for continuum plain-weave composite plate model under projectile impact
Presenter: Anindya Bhaduri, Johns Hopkins University
36. Stochastic quantification of ceramic impact response using the Johnson-Holmquist II model
Presenter: Stavros Kasinos, Imperial College London
37. On micromechanics of sticky granular solids
Presenter: Sandeep Rajendra Kumar, University of Houston
38. Development of Analytical Models for fast selection of optimal parameters for EBSD data collection
Presenter: Noah Wade, Johns Hopkins University
39. Reaction Hot Pressing and Characterization of Dense Bulk Silicon-Doped Boron Carbides
Presenter: Michael Gagnepain, Rutgers University
40. Challenges associated with utilizing additive manufacturing for the processing of advanced armor ceramics
Presenter: Nicholas Ku, US Army Research Laboratory
41. Incorporation of TiB₂ into B₄C through sputter deposition and hot pressing
Presenter: Chawon Hwang, Rutgers University
42. Effect of Carbon Concentration on Thermoelectric Properties of Boron Carbide Composites
Presenter: Halim Joseph, Morgan State University
43. 3D Visualization of Unfired Al₂O₃ Dry-Pressed Bodies
Presenter: Ian Maher, Rutgers University

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44. Real-time observation of Impact Damage in Silicon Carbide
Presenter: Nesredin Kedir, Purdue University
45. Localized impact stress concentrations in soft armors due to micro-scale projectile edge geometries
Presenter: Nesredin Kedir, Purdue University
46. Coating metallic aluminum with aluminum metal-organic frameworks (Al-MOFs) for protection against corrosion in marine and related harsh environments
Presenter: Emmanuela Kodjo, Morgan State University
47. Effect of Silica and Rare Earth Silicate Additives on Densification and Microstructure in Boron Suboxide
Presenter: Kris Behler, US Army Research Laboratory
48. Conventional Hot-Pressing of Monosized diamond-Ceramic composites
Presenter: Jerry LaSalvia, US Army Research Laboratory
49. Analysis of Material S095 Using the Magneto-optic Kerr Effect
Presenter: Tyler Moody, Morgan State University