

2022 Mach Conference
Poster Session

Posters #1-18 are eligible for the student/postdoc poster competition

- 1. Punch Crush and Punch Shear Experiments at Sub-millimeter Length Scale**
Presenter: Molla Ali, University of Delaware Center for Composite Materials
Co-Authors: B. Haque, D. O'Brien, J. Gillespie
- 2. Interaction-Based Damage Model for Heterogeneous Brittle Solids under Uniform High-Rate Loading**
Presenter: Sakshi Braroo, Johns Hopkins University
Co-Authors: KT Ramesh
- 3. High-throughput methods using laser-driven micro-flyers for interrogating spall failure**
Presenter: Christopher DiMarco, Johns Hopkins University
Co-Authors: G. MacKay, N. Davenport, S. Lezcano, D. Mallick, K.T. Ramesh
- 4. Modeling the ballistic performance of magnesium alloys**
Presenter: Caleb Foster, Texas A&M University
Co-Authors: Justin Wilkerson
- 5. Study of Dynamic Recrystallization in Mg Alloys Plates Processed by Single-Pass Differential Speed Rolling**
Presenter: Christopher Hale, North Carolina A&T State University
Co-Authors: Honglin Zhang
- 6. Increasing the S-2 glass fiber/epoxy interface strength through vapor deposited amino-silanes**
Presenter: Munetaka Kubota, University of Delaware
Co-Authors: S. Chowdhury, J. Deitzel, J. Gillespie, G. Palmese, D. O'Brien
- 7. From 2D to 3D: Resolving Flow Fields Around Sand Penetrators from Flash X-ray Imaging**
Presenter: Brett Kuwik, Johns Hopkins University
- 8. Accelerating EBSD-Based Characterization of Materials**
Presenter: Timothy Long, Johns Hopkins University
Co-Authors: W. Holbrook, T. Hufnagel, T. Mueller
- 9. Embedded Finite Element Models of Dyneema: Comparison with Experimental Behavior**
Presenter: Valerie Martin, Penn State University
Co-Authors: R. Kraft, S. Ellis

2022 Mach Conference
Poster Session

Posters #1-18 are eligible for the student/postdoc poster competition

- 10. Computational Approaches for Studying the Role of Voids in Nanoscale Intermetallic Precipitation**
Presenter: Vicente Munizaga, Johns Hopkins University
Co-Authors: M.L. Falk, P. Yi, T. Weihs
- 11. Physics and Chemistry-based Constitutive Framework for Photo-oxidatively Aged Semi-Crystalline Polymers**
Presenter: Aimane Najmeddine, Virginia Tech
Co-Authors: M. Shakiba, Z. Xu, G. Liu A. Esker
- 12. High pressure induced precipitation in Al7075 alloy**
Presenter: Abhinav Parakh, Stanford University
Co-Authors: A. Lee, S. Chaiton, M. Wang V. Prakapenka X.W. Gu
- 13. Microstructural influences on spall voids nucleation in magnesium**
Presenter: Hao Sheng, Johns Hopkins University
Co-Authors: T. Hufnagel
- 14. An Evaluation of Machining Learning Models for Two Phase Materials Reconstructions.**
Presenter: Noah Wade, Johns Hopkins University
Co-Authors: L. Graham-Brady
- 15. Multi-functional Zirconia-reinforced Metal-matrix Composite for Energy Dissipation and High Temperature Applications**
Presenter: Marwa Yacouti, Virginia Tech
Co-Authors: M. Shakiba
- 16. Dislocation Slip Reconstruction Based on Acoustic Emission Measurements**
Presenter: Junjie Yang, Johns Hopkins University
Co-Authors: Y. Gu, D. Magagnosc, T. Zaki, J. El-Awady
- 17. The effects of microstructure and orientation on the dynamic compressive response of hot-pressed boron carbide ceramics**
Presenter: Arezoo Zare, Johns Hopkins University
Co-Authors: Q. Yang, K. Christian, J. Du, R.A. Haber, M. Shaeffer
- 18. Study of dynamic recrystallization in Mg alloys plates processed by single-pass differential speed rolling**
Presenter: Honglin Zhang, North Carolina A&T State University

**2022 Mach Conference
Poster Session**

Posters #1-18 are eligible for the student/postdoc poster competition

19. Strength effects of microfracture on HE microstructures evaluated by FDEM direct numerical simulation

Presenter: Tyler Hagengruber, Los Alamos National Laboratory

Co-Authors: S. Boyce, K. Bennett, E. Rougier

20. Characterization of Energetic Materials during Impact with Reaction Imaging and Modeling

Presenter: Jeremiah Moore, Los Alamos National Laboratory

Co-Authors: M. Zecevic, R. Cheng, M. Cawkwell, V.W. Manner