

Brandon Perry

Curriculum Vitae

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Education

Central Community College, August 2007-May 2008
Major: Mechanical Engineering GPA: 3.9/4.0

Bachelor of Science

University of Nebraska-Lincoln, August 2008-December 2012
Major: Biological Systems Engineering GPA: 3.5/4.0
Minor: Biomedical Engineering

Doctor of Philosophy

University of Virginia, January 2013-Present
Major: Mechanical and Aerospace Engineering GPA: 3.5/4.0

Work Experience

Undergraduate Laboratory Assistant, January 2011-December 2012

Traumatic Brain Injury Laboratory, Lincoln, NE

- Responsible for lab maintenance including handling and storage of sensors, cleanliness of testing locations within the lab, and inventory of testing equipment
- Design test fixtures using SolidWorks
- Fabrication of test fixtures
- Set up and operate high-speed video cameras and data acquisition systems
- Characterization of materials exposed to shock-waves
- Optimization of methods involving ballistics gel synthesis and molding
- Post-process data analysis

Graduate Research Assistant, January 2013-Present

Center for Applied Biomechanics, Charlottesville, VA

- Biomechanical research and project management: design test fixtures using SolidWorks, coordination with researchers and support staff, set up sensors and test fixtures, data collection and analysis, and report generation
- Operate in a Biosafety Level-II laboratory that involves multiscale cadaveric material experiments and finite element analysis to determine and characterize modes of injury under high rate loading
- Prepare and handle cadaveric specimens including fixation of sensors, proper placement of specimens in test fixtures, and dissection of specimens post-process
- Set up and operate high-speed video cameras, digital image correlation, and data acquisition systems

- Analyze CT images for proper sensor placement
- Filter and analyze post-process data
- Investigate injury in post-process x-rays

Academic and Professional Honors

- Second place honors in the University of Virginia Engineering Research Symposium (UVERS) poster competition (2018)
- Member of the University of Virginia Center for Applied Biomechanics Biological Protocol Committee (October 2016-Present)
- Session chair for the American Institute of Aeronautics and Astronautics (AIAA) Region I Student Conference (2017)
- Recipient of a funded research opportunity in the Traumatic Brain Injury Laboratory, Lincoln, NE (2012)
- Invitee of the University of Nebraska-Medical Center's Scholar Day (2009)
- Rotary Scholar (2007)

Refereed and Conference Publications

1. Perry B, Heltzel S, Salzar R (2017) The Use of Dermestidae in Documenting Underbody Blast Injuries to the Foot-Ankle-Leg Complex. Proceedings of the International Mechanical Engineering Congress and Exposition, Tampa, Florida.
2. Bailey A, Perry B, Salzar R (2017) Response and Injury of the Human Leg for Axial Impact Durations Applicable to Automotive Intrusion and Underbody Blast Environments. International Journal of Crashworthiness.
3. Ganpule S, Salzar R, Perry B, and Chandra N (2016) Role of Helmets in Blast Mitigation: Insights from Experiments on PMHS Surrogate. International Journal of Experimental and Computational Biomechanics, 4(1): 13–31.
4. Perry BJ, Henderson KA, Spratley EM, Zhang J, Merkle AC, Salzar RS (2016) Effects of Seated Soldier Posture on Pelvic Force Transmissibility. Proceedings of the Summer Biomechanics, Bioengineering, and Biotransport Conference, Washington, D.C.
5. Forman J, Perry, B, Henderson K, Gjolaj JP, Heltzel S, Lessley D, Riley P, Salzar R, Walilko T (2014) Blunt Impacts to the Back: Biomechanical Response for Model Development. MHSRS Supplement to the Journal of Trauma.
6. Forman J, Perry B, Alai A, Freilich A, Salzar, R, Walilko T (2014) Injury Tolerance of the Wrist and Distal Forearm to Impact Loading onto Outstretched Hands. Journal of Trauma and Acute Care Surgery, 77(3 Suppl 2): 176-183.
7. Perry B, Gabler L, Bailey A, Henderson K, Brozoski F, Salzar R (2014) Lower Leg Characterization and Injury Mitigation. Proceedings of the International Research Council on the Biomechanics of Impact, Berlin, Germany.
8. Perry B, Henderson K, Bailey A, Gabler L, Salzar R (2014) Mitigation of Underbody Blast Injuries to the Lower Extremity by Optimization of Combat Boot Properties. Proceedings of the Injury Biomechanics Symposium, Ohio State University.
9. Perry B, Bailey A, Gabler L, Henderson K, Brozoski F, Salzar R (2014) Optimization of Combat Boot Properties to Mitigate Underbody Blast Injuries to the Lower Extremity. Proceedings of the Personal Armor Systems Symposium, Cambridge, UK.