

SARAH A. BENTIL, PH.D.

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ADDRESS: Iowa State University of Science and Technology
Department of Mechanical Engineering
2106 H.M. Black Engineering Building
2529 Union Drive
Ames, IA 50011-2030
TEL: +1 515 294-8528
FAX: +1 515 294-3261
EMAIL: sbentil@iastate.edu
WEBSITE: <http://www.me.iastate.edu/sbentil/>

PUBLICATIONS

KEY: **Postdoctoral scholars** **Graduate students** **Undergraduate students**

CONFERENCE (PODIUM) PRESENTATIONS

1. L. Imtiaz Kaya, **SA. Bentil**, and JB. Michael (2024). Sheet thickness and hole opening measurement of sprays for blood backspatter. In: *34th Annual Conference on Liquid Atomization and Spray Systems, North and South America*. Ithaca, NY USA.
2. R. Ghosh, **SA. Bentil**, and JJ. Juárez (2024). Particle-wall hydrodynamic effects on optical trapping viscometry. In: *98th American Chemical Society (ACS) Colloids and Surface Science Symposium*. Seattle, WA USA.
3. **D. Resendiz**, R. Ghosh, JJ. Juárez, and **SA. Bentil** (2024). Determining the Phytigel Composition for use as a Brain Surrogate in Blast-induced Traumatic Brain Injury Research. In: *Society for Experimental Mechanics (SEM) Annual Conference*. Vancouver, WA USA.
4. **J. Amponsah**, **WJ. Jackson**, R. Szalkowski, and **SA. Bentil** (2024). High Strain Rate Response of Zorbium Foam Liners in Combat Helmets Subjected to Shock Waves. In: *Society for Experimental Mechanics (SEM) Annual Conference*. Vancouver, WA USA.
5. L. Imtiaz Kaya, **SA. Bentil**, and JB. Michael (2023). Flat Fan Spray Atomization of Non-Newtonian Fluids Relevant to Bloodspatter. In: *33rd Annual Conference on Liquid Atomization and Spray Systems, North and South America*. Albuquerque, NM USA.
6. R. Ghosh, **SA. Bentil**, and JJ. Juárez (2023). Hydrodynamic Wall Effect on Trapped Probes for Optical Rheological Measurements in Water. In: *Joint Midwest – Great Lakes Regional Meeting of the American Chemical Society (MWGLRM)*. Saint Louis, MO USA.
7. **D. Resendiz** and **SA. Bentil** (2023). Manufacturing A Transparent Solution To Understanding Blast Trauma On The Ears. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
8. **D. Resendiz** and **SA. Bentil** (2023). Manufacturing A Transparent Solution To Understanding Blast Trauma On The Ears. In: *National Conference on Undergraduate Research (NCUR)*. Eau Claire, WI USA.
9. A. Dietz, S. Wells-Rutherford, A. Shah, J. Seifert, B. Stemper, **WJ. Jackson**, **SA. Bentil**, and A. Bartsch (2022). Earplug Acceleration Measurement for Monitoring Impact and Blast Exposure. In: *2022 Military Health Systems Research Symposium (MHSRS)*. Kissimmee, FL USA.
10. H. Liu, S. Laflamme, and **SA. Bentil** (2022). Real-Time Evaluation of Additive Manufacturing Parts Using Laser Vibrometer Combined With Shock Tube. In: *49th Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE)*. Austin, TX USA.
11. M. Co, K. Ding, C. Pack, **SA. Bentil**, and B. Walter (2022). Modeling the Effects of Hydration on Viscoelastic Properties of Nucleus Pulposus Tissue in Shear and Compression using the Fractional Zener Model. In: *Orthopaedic Research Society (ORS) Philadelphia Spine Research Society (PSRS) 6th International Spine Research Symposium*. Skytop, PA USA.
12. **K. Ray**, **WJ. Jackson**, C. Williams, TC. Miller, and **SA. Bentil** (2022). Quantifying surface damage of inert solid rocket propellants exposed to shock waves. In: *National Conference on Undergraduate Research (NCUR)*. Virtual meeting due to COVID-19.

13. TC. Miller and **SA. Bentil** (2021). High Strain-Rate Testing of Solid Propellants. In: *Joint Army-Navy-NASA-Airforce (JANNAF) 47th Structures and Mechanical Behavior Subcommittee (SMBS) sessions*. Virtual meeting due to COVID-19.
14. **SA. Bentil** and **WJ. Jackson** (2021). Deformation of the unconfined brain following shock wave exposure. In: *2021 Military Health Systems Research Symposium (MHSRS)*. Kissimmee, FL USA (attended virtually due to COVID-19).
15. **K. Ray**, **WJ. Jackson**, C. Williams, TC. Miller, and **SA. Bentil** (2021). Quantifying surface damage of inert solid rocket propellants exposed to shock waves. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
16. **J. Marsh**, **WJ. Jackson**, and **SA. Bentil** (2020). Effect of Ion Concentration on Shock Tube-Induced Cavitation Behavior. In: *2020 Midwest Graduate Student Society for Experimental Mechanics (SEM) Symposium*. Ames, IA USA (attended virtually due to COVID-19).
17. **J. Marsh**, **WJ. Jackson**, and **SA. Bentil** (2020). Effect of Ion Concentration on Shock Tube-Induced Cavitation Behavior. In: *Society for Experimental Mechanics (SEM) Annual Conference*. **Selected for the “Michael Sutton International Student Paper Competition”**. Orlando, FL USA (attended virtually due to COVID-19).
18. **L. Zhang**, **WJ. Jackson**, and **SA. Bentil** (2020). Dynamic Mechanical Properties of Airfoil-shaped brain surrogate under Shock wave loading. In: *Summer Biomechanics, Bioengineering and Biotransport (SB3C) Conference*. Vail, CO USA (attended virtually due to COVID-19).
19. **O. Afuwape**, J. Boldrey, P. Rastogi, **SA. Bentil**, and D. Jiles (2020). The Influence of Grey and White Matter Volume on the Induced Electric Field of the Quadruple Butterfly Coil for Transcranial Magnetic Stimulation. In: *2020 Midwest Graduate Student Society for Experimental Mechanics (SEM) Symposium*. Ames, IA USA (attended virtually due to COVID-19).
20. **SA. Bentil** (2019). Stress Relaxation Response of Shock wave Impacted Brain Tissue. In: *16th Pan-American Congress of Applied Mechanics (PACAM)*. Ann Arbor, MI USA.
21. **AK. McCarty** and **SA. Bentil** (2019). Influence of Swelling on the Material Properties of Brain Tissue. In: *Society for Experimental Mechanics (SEM) Annual Conference*. Reno, NV USA.
22. **L. Zhang** and **SA. Bentil** (2019). A Silicone Elastomer as a Brain Surrogate for Blast-induced Traumatic Brain Injury Research. In: *Society for Experimental Mechanics (SEM) Annual Conference*. Reno, NV USA.
23. **L. Zhang**, **WJ. Jackson**, and **SA. Bentil** (2019). The Mechanical Behavior of an Airfoil-Shaped Brain Surrogate under Shock Wave Loading. In: *56th Annual Technical Conference of Society of Engineering Science (SES)*. Saint Louis, MO USA.
24. **M. Beck** and **SA. Bentil** (2019). Creating Repeatable Shock Wave Pressures Using a Customized Scoring Device for Diaphragms. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
25. **MCG. Abrantes** and **SA. Bentil** (2019). Comparison between FlexiForce Sensors and a Low-Cost Capacitive Force Sensor Exposed to a Shock Wave. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
26. **WJ. Jackson** and **SA. Bentil** (2019). Brain Deformation due to Shock Wave Exposure. In: *8th International Conference on Mechanics of Biomaterials and Tissues (ICMOBT)*. Waikoloa Beach, HI USA.
27. **TJ. Beavers** and **SA. Bentil** (2018). Controlled Blunt Impact Experiments on Soft Tissue Simulants. In: *14th Annual Injury Biomechanics Symposium*. Columbus, OH USA.
28. **AK. McCarty** and **SA. Bentil** (2018). Investigating the Progression of Alzheimer’s Disease using Digital Volume Correlation Algorithm and Strain as a Metric. In: *Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition (IMECE)*. Paper No. IMECE2018-87563. Pittsburgh, PA USA. doi: [10.1115/IMECE2018-87563](https://doi.org/10.1115/IMECE2018-87563). <https://doi.org/10.1115/IMECE2018-87563>.

29. M. Calhoun, **SA. Bentil**, JO. Winter, and RB. Dupaix (2017). Viscoelastic Modeling of Porcine Brain Tissue. In: *54th Annual Technical Conference of Society of Engineering Science (SES)*. Boston, MA USA.
30. **SA. Bentil**, KT Ramesh, and TD. Nguyen (2017). A Protocol to Calculate the Dynamic Properties of Soft Materials subjected to Shock waves. In: *54th Annual Technical Conference of Society of Engineering Science (SES)*. Boston, MA USA.
31. **G. Benson** and **SA. Bentil** (2017). Characterizing Soft Materials Using an Indentation Device. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression*. Ames, IA USA.
32. **S. Hansen** and **SA. Bentil** (2017). Producing High-Contrast Images of Speckled Brain Tissue for Non-Contact Optical Measurements. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
33. **SA. Bentil** and RB. Dupaix (2012). Factors that influence the mechanical response of degrading swine neural tissue at low strain rates. In: *8th Annual Dayton Engineering Sciences Symposium (DESS)*. Dayton, OH USA.
34. **SA. Bentil** and RB. Dupaix (2012). Factors that influence the mechanical response of degrading swine neural tissue at low strain rates. In: *49th Annual Technical Conference of Society of Engineering Science (SES)*. Atlanta, GA USA.
35. **SA. Bentil** and RB. Dupaix (2011). Unconfined compression tests of degrading swine neural tissue at low strain rates. In: *48th Annual Technical Conference of Society of Engineering Science (SES)*. Evanston, IL USA.
36. **SA. Bentil**, S. MacLean, and RB. Dupaix (2010). Viscoelastic properties of macaque neural tissue at low strain rates. In: *Proceedings of the ASME 2010 International Mechanical Engineering Congress and Exposition (IMECE)*. Vol. 2. Paper No. IMECE2010-39071. Vancouver, BC CANADA, pp.853–857. DOI: [10.1115/IMECE2010-39071](https://doi.org/10.1115/IMECE2010-39071). <https://doi.org/10.1115/IMECE2010-39071>.
37. **SA. Bentil** and YL. Yan (2005). Multispectral analysis of diplophonic voices using wavelets as a preprocessing tool. In: *Seventh IASTED International Conference on Signal and Image Processing*. Ed. by Marcellin, MW. Paper No. 479-113. Honolulu, HI USA, pp.18–22. <https://www.actapress.com/Abstract.aspx?paperId=21381>.
38. **SA. Bentil** and N. Chesler (2002). Methods to Measure Human Saphenous Vein Permeability. In: *Vermont Academy of Arts and Science Symposium (VAAS)*. Colchester, VT USA.