

SARAH A. BENTIL, PH.D.

JULY 2024

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**

POSTER PRESENTATIONS

1. **J. Amponsah** and **SA. Bentil** (2024). Predicting Aneurysm Rupture and Assessing the Impact on Stroke Development. In: *Iowa State University's 12th Annual Graduate and Professional Student Senate (GPSS) Conference*. Ames, IA USA.
2. **L. Zinnel** and **SA. Bentil** (2024). Automatic Detection of Brain Midline Shift Using Convolutional Neural Networks. In: *Iowa State University's 2nd Annual Health and Wellbeing Symposium*. Ames, IA USA.
3. **L. Zinnel** and **SA. Bentil** (2024). Detection of Brain Midline Shift using 2D and 3D Convolutional Neural Networks. In: *Iowa State University's Interdisciplinary Biological Sciences (IBS) Symposium*. Ames, IA USA.
4. **WJ. Jackson** and **SA. Bentil** (2024). Advanced Blast Simulator (ABS) for Blast-induced Traumatic Injury (tTBI) Research. In: *State of the Technology Meeting: Neurotrauma Diagnosis, Monitoring, and Assessment*. Washington, DC USA.
5. M. Co, K. Ding, Z. Osborn, C. Pack, **SA. Bentil**, and B. Walter (2023). 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) 2023 Annual Meeting*. Dallas, TX USA.
6. R. Ghosh, **SA. Bentil**, and JJ. Juárez (2023). Hydrodynamic Effects for Optical Trapping. In: *Center for Multiphase Flow Research and Education (CoMFRE) Annual Meeting*. Ames, IA USA.
7. **D. Resendiz** and **SA. Bentil** (2023). Manufacturing A Transparent Solution To Understanding Blast Trauma On The Ears. In: *Annual McNair Research Symposium*. Ames, IA USA.
8. **C. Carolan**, **A. Buchholz**, **WJ. Jackson**, **J. Marsh**, and **SA. Bentil** (2020). Impact of Shock Waves on Viability of Brain Cells. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
9. **I. Dalton**, **J. Marsh**, **WJ. Jackson**, and **SA. Bentil** (2020). Parametric Analysis of External Conditions Affecting Bubble Properties. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
10. **J. Holtzleiter**, **S. Hansen**, **C. Carolan**, and **SA. Bentil** (2020). The Influence of Brain Tissue Hydration on Airbrush Speckle Adhesion. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
11. **S. Hansen**, **J. Holtzleiter**, **C. Carolan**, and **SA. Bentil** (2020). Speckling Soft Materials Using an Airbrush Attachment for Digital Image Correlation Experiments. In: *Iowa State University Honors Poster Session for Undergraduate Students*. Ames, IA USA.
12. **AK. McCarty**, **L. Zhang**, **S. Hansen**, **WJ. Jackson**, and **SA. Bentil** (2019). Viscoelastic Response of Shock Wave Impacted Brain Tissue. In: *Summer Biomechanics, Bioengineering and Biotransport (SB3C) Conference*. Seven Springs, PA USA.
13. **J. Marsh** and **SA. Bentil** (2019). Simulating Brain Swelling as a Function of Constitutive Model. In: *11th Annual Neuroscience Research Day*. Ames, IA USA.

14. **L. Zhang**, M. Manzo, and **SA. Bentil** (2019). Analysis of a poly(ethylene glycol) diacrylate (PEGDA) optical sensor-based whispering gallery mode shift subjected to shock wave impact. In: *Summer Biomechanics, Bioengineering and Biotransport (SB3C) Conference*. Seven Springs, PA USA.
15. **A. Libbesmeier**, **LC. McPherrren**, and **SA. Bentil** (2019). Establishing A Single Camera Multi-angle Imaging Technique for Observing Tissue Impact Events. In: *Iowa State University Honors Poster Session for Undergraduate Students*. Ames, IA USA.
16. **LC. McPherrren**, **S. Hansen**, and **SA. Bentil** (2019). A 3D Printed Airbrush Nozzle Attachment for Investigating Shape Changes of Soft Biological Tissue. In: *Iowa State University Symposium on Undergraduate Research & Creative Expression (SoURCE)*. Ames, IA USA.
17. **LC. McPherrren**, **S. Hansen**, and **SA. Bentil** (2019). Effect of Airbrush Attachment Geometry on Speckle Pattern Characteristics for Application with Digital Image Correlation. In: *National Conference on Undergraduate Research (NCUR)*. Kennesaw, GA USA.
18. **WJ. Jackson** and **SA. Bentil** (2018). Quantifying the Brain's Deformation due to Shock Wave Impact. In: *8th Annual Traumatic Brain Injury Conference*. Washington, DC USA.
19. **D. Sirivolu** and **SA. Bentil** (2018). Dynamic Characterization of Soft Materials using an inverse-Finite Element Method. In: *Iowa State Research Day*. Ames, IA USA.
20. **TJ. Beavers** and **SA. Bentil** (2017). Controlled experimentation of blunt impact to simulated soft tissue materials. In: *Iowa State University Graduate and Professional Students' Research Conference*. Ames, IA USA.
21. **S. Hansen** and **SA. Bentil** (2017). Producing High-Contrast Images of Speckled Brain Tissue for Non-Contact Optical Measurements. In: *Iowa State University Honors Poster Session for Undergraduate Students*. Ames, IA USA.
22. **SA. Bentil**, T. Reed, JS. Allen III, and YL. Yan (2006). Modeling aspects of vocal fold oscillations with validation to clinical data. In: *152nd Meeting of The Acoustical Society of America*. Vol. 120. 5. Honolulu, HI USA, pp.3351.
23. **SA. Bentil** and YL. Yan (2005). Characterization of voice pathologies from acoustic signals using wavelet analysis. In: *149th Meeting of The Acoustical Society of America*. Vol. 117. 4. Vancouver, BC CANADA, pp.2544.
24. **SA. Bentil**, D. Mager, NM. Soldatov, and E. Kobrinsky (2004). Defining regions of interest in FRET microscopy via statistical analysis. In: *FASEB Meeting on Experimental Biology: Translating the Genome*. Vol. 18. 4. Washington, DC USA.