Composites Manufacturing & Simulation Center

ANTHONY J. FAVALORO

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Tony received a Bachelor's of Science in Aerospace Engineering and a Bachelor's of Science in Mathematics in May 2013 from Mississippi State University. During his time at Mississippi State University, he participated in an internship at NASA Langley Research Center as part of a NASA Academy, participated in a student UAS team which participated in the AUVSI Student UAS competition with a custom built, carbon fiber composites 10 ft. wingspan aircraft, and assisted in composites research under Dr. Thomas E. Lacy, Jr. Tony was awarded an NSF Graduate Research Fellowship in 2013 and earned his Master's in Aeronautics and Astronautics Engineering in August 2015. He is currently pursuing his Ph.D. in Aeronautics and Astronautics Engineering under Dr. R. Byron Pipes focusing in the manufacturing process simulation of discontinuous fiber material systems specifically in the fields of additive manufacturing and molding. During his time under Dr. Pipes, he has spent time working and researching at both Oak Ridge National Labs and Dassault Systemes.

Research Interests

- Anisotropic Viscous Flow Modeling
- Additive Manufacturing Process Simulation
- Micromechanical Modeling

Presentations

Favaloro, A., B. Brenken, E. Barocio, N. M. DeNardo and R. B. Pipes. 2016. "Microstructural Modeling of Fiber Filled Polymers in Fused Filament Fabrication," presented at SAMPE conference, Long Beach, CA, May 23-26, 2016.

Brenken, B., A. Favaloro, E. Barocio, N. M. DeNardo and R. B. Pipes. 2016. "Development of a Model to Predict Temperature History and Crystallization Behavior of 3D Printed Parts Made From Fiber-Reinforced Thermoplastic Polymers," presented at SAMPE conference, Long Beach, CA, May 23-26, 2016.

DeNardo, N. M., E. Barocio, B. Brenken, A. Favaloro and R. B. Pipes. 2016. "Economics of Composite Tooling Made via Additive Manufacturing," presented at SAMPE conference, Long Beach, CA, May 23-26, 2016.

Brenken B., A. Favaloro, E. Barocio, N. M. DeNardo, V. Kunc and R. B. Pipes. 2016. "Fused Deposition Modeling of Fiber-Reinforced Thermoplastic Polymers: Past Progress and Future Needs," presented at American Society for Composites Thirty-First Technical Conference, Williamsburg, VA, September 19-21, 2016.

Research Figures

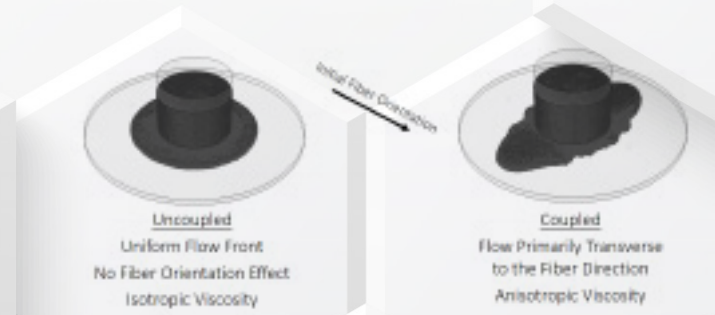

Figure 1: Anisotropic Viscous Flow Compression Molding of a Center Gated Disk

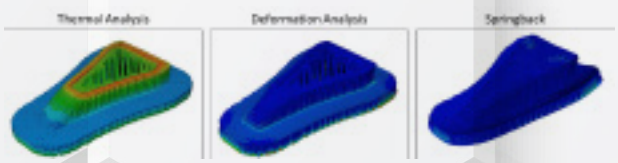

Figure 2: Additive Manufacturing Process Simulation Printing of a NACA Duvct Mold