



David Lineberry

Research Engineer

UAHuntsville Propulsion Research
Center



Dr. David Lineberry is currently a Research Engineer for the UAHuntsville Propulsion Research Center. He is responsible for laboratory operations in the PRC research labs. In his duties as laboratory manager, he oversees all experimental programs which occur in the lab, provides safety reviews prior to experimental campaigns, and advises graduate student research activity. Dr. Lineberry designed the PRC High Pressure Spray Facility, helped to develop the PRC test stand liquid oxygen propellant delivery capability, and built the PRC High Flow Rate Cryogenic Test Rig. In addition, Dr. Lineberry has worked on and been PI for numerous research projects for the PRC, including research in Combustion Instability, Cryogenic Flow Behavior, Turbopump testing, liquid, solid, and hybrid rocket hot-fire testing, liquid rocket injector injection characteristics, and rocket based combined cycle cold flow testing.

Dr. Lineberry completed his Ph.D., titled "Characterization of a Cold Flow Non-Axisymmetric Supersonic Ejector," as well as his M.S., titled "Uncertainty Assessment of A Liquid Hydrogen Liquid Oxygen First Stage Engine" through the PRC. He has taught courses for the Mechanical and Aerospace Engineering Department, including Aerodynamics, Compressible Fluid Mechanics, Fluid Mechanics, and currently is teaching a Senior Design Course for Rocket Design-Build-Fly. He is a member of the AIAA Liquid Propulsion Technical Committee, and a member of the ASME Propulsion Committee. He completed the ASTM oxygen safety training courses.

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RELEVANT PUBLICATIONS:

1. Mulkey, H., and Lineberry, D., "Development of a Liquid Oxygen Facility for Rocket Engine Testing," ASTM G4 Symposium, STP20120003, September 2012.
2. M. S. Balasubramanyam, D. Lineberry, C.P. Chen and D.B. Landrum, "Experimental and Numerical Investigation of a Non-Axisymmetric Strut Based Ejector" *International Journal of Hypersonics*, Vol 1, No. 3, Sept, 2010.
3. H. Coleman and D. Lineberry, "Proper Estimation of Random Uncertainties," *AIAA Journal*, 2006, Vol. 44, No. 3.
4. D. Lineberry, and H. Coleman, "Uncertainty of the LE-7A Hot Firing Tests.", *Journal of Propulsion and Power*, November-December 2005.
5. Eberhart, C., Lineberry D., and Frederick, R., "A Mechanistic Assessment of Swirl Injection and Atomization by X-ray Radiographic and Optical Techniques," AIAA2012-3746, 48th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Atlanta, GA., July 2012.
6. Hitt, M, Lineberry, D., Ahuja, V., and Frederick, R., "Experimental Investigation of Cavitation Induced Feedline Instability from an Orifice," AIAA-2012-4029, 48th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Atlanta, GA, July 2012.
7. Eberhart, C., Lineberry D., and Frederick, R., "Near-field Film Thickness Measurements of an LPRE Swirl Injector Spray," AIAA2012-5928, 48th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Atlanta, GA., July 2012.
8. Hitt, M and Lineberry, D., "Preliminary Design Assessment of a Liquid Oxygen Component Test System at the UAHuntsville Propulsion Research Center," AIAA-2011-6112, 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, San Diego, California, July 31-Aug 3, 2011.
9. Eberhart, C., Lineberry D., and Frederick, R., " Near-field Film Thickness Measurements of an LPRE Swirl Injector Spray," AIAA-2011-5928, 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, San Diego, California, July 31-Aug 3, 2011.
10. B. Sweeney, D. Lineberry, and R. Frederick, "Scaling a Single Element Atmospheric Combustor," AIAA-2010-6893, 46th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Nashville, TN, July 25-28, 2010.