



## D. Brian Landrum

Associate Professor

Department of Mechanical and  
Aerospace Engineering



Dr. Landrum is currently an associate professor of MAE and the Aerospace Engineering Program coordinator. His research interests include aerospace systems, unmanned aerial systems applications, aerodynamics, rocket and airbreathing propulsion, and aerospace history. During his 20 year tenure at UAHuntsville, he has been PI, co-PI or co-I on funded projects totaling more than \$3 million. He was a member of a National Research Council panel that published, "A Review of United States Air Force and Department of Defense Aerospace Propulsion Needs." His current research includes integration of sensors into unmanned aerial systems and studies of hypersonic maneuvering threats.

Dr. Landrum teaches course in aerodynamics and aerospace vehicle design. He also created and teaches the introductory Principles of Aeronautics and Astronautics course. He is faculty advisor for the UAHuntsville student teams participating in the American Institute of Aeronautics and Astronautics (AIAA) Design, Build and Fly aircraft competition. In addition to his research funding, he has received three UAHuntsville Instructional Mini-Grants related to teaching Aerospace Design and the interaction between Aerospace Technology and Society. He was the Principle Investigator for the North Alabama Engineering Academy Alliance, a US Department of Labor funded project to coordinate activities of high school engineering academies and provide STEM teacher training.

Dr. Landrum is an associate fellow of the (AIAA), and is on the AIAA Education Book series Advisory Board. In addition to being the UAHuntsville AIAA faculty advisor, he serves as the faculty advisor liaison to AIAA Region II. He is also a member of the Association of Unmanned Vehicles Systems International (AUVSI), the American helicopter Society (AHS), and the American Society of Engineering Education (ASEE).

### Contact Information:

University of Alabama in Huntsville  
301 Sparkman Drive, Huntsville, AL 35899

david.landrum@uah.edu

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### RELEVANT PUBLICATIONS:

1. Landrum, D. B., "Rubber Bands and Pennies: An Introductory Aircraft Design Experience", 51st AIAA Aerospace Sciences Meeting, Grapevine, TX, January 7-10, 2013.
2. Moylan, B., Landrum, D.B., and Russell, G., "Investigation of the Physical Phenomena Associated with Rain Impacts on Supersonic and Hypersonic Flight Vehicles," Proceedings of the 12th Hypervelocity Impact Symposium, Procedia Engineering, Elsevier, 2012.
3. Percy, T. and Landrum, D. B., "Investigation of National Policy Shifts to Impact Orbital Debris Environments," IAC-12.A6.6.3, 63rd International Astronautical Congress, Naples, Italy, Oct. 1-5, 2012.
4. Besnard, L., Shtessel, Y.B., and Landrum, D.B., "Quadrotor Vehicle Control via Sliding Mode Controller Driven by Sliding Mode Disturbance Observer," Journal of The Franklin Institute, vol. 349, issue 2, March 2012. ((2011), doi:10.1016/j.jfranklin,2011.06.031).
5. McElroy, T. and Landrum, D. B., Simulated High-Altitude Testing of a COTs Electric Motor," AIAA- 2012-1045, 50th AIAA Aerospace Sciences Meeting, Nashville, TN, January 9-12, 2012.AIAA 50th
6. Couchman, A. and Landrum, D. B., "Effectiveness of Wing-Warping Control of an Inflatable- Wing UAV", proceedings of the AIAA 62nd Southeastern Student Conference, Tuscaloosa, AL, April 4-5, 2011.
7. Piputsitee, T. and Landrum, D. B., "UAHuntsville Flight Simulation Development," Proceedings of the 2008 ASME Early Career Technical Conference, Miami, FL, October 3-4, 2008.
8. Landrum, D. B., Cerny, J., Warden, L., Meyer, A. and Bryson, R., "Affordable Flight Simulation in an Educational Environment," Proceedings of the American Helicopter Society Forum 63, Virginia Beach, VA, May 1-3, 2007.