Emma Signor: a triple aerospace engineering honoree: Outstanding regional, section, and institutional recognitions

Emma Signor receiving the Greater Huntsville Section (GHS) Undergraduate Student of the Year award. From Left to right: Dr. Joe Majdalani, GHS Honors & Awards Director, Emma Signor, and Dr. Andrew Keys, Section Vice Chair.

Emma Signor, a Leidos/Dynetics engineer in Huntsville, had an exemplary senior year, both inside and outside of the classroom. Signor served as an active member of the payload team for the Auburn University Rocketry Association (AURA), held the position of Secretary for the Auburn chapter of the American Institute of Aeronautics and Astronautics (AIAA). As a 2023-2024 Undergraduate Research Fellow, Signor worked with her mentors, Dr. Majdalani and Cody Shelton, on studying thermoacoustics as a member of the Advanced Propulsion Research Lab (APRL). Furthermore, Signor was involved in various outreach endeavors with the Cupola Engineering Ambassadors as well as the Society of Women Engineers. On April 19, she received the Mark A. Spencer Creative Mentorship Award. However, her recognitions did not end with the Spencer Award!
Emma entered the Southeastern Regional Student Conference of the AIAA in the highly contested undergraduate student category. Of the record number of student presentations this year, Emma ranked No. 1. She thus managed to bring home the prestigious Stan Powell prize, which is given to the top winner in eight Southern states, out of 34 competitors.

“I am so grateful and honored to have received this prestigious award. I remember when Dr. Majdalani called me to inform me of the good news, I was pleasantly surprised and absolutely over the moon to know that all my hard work and dedication over the past four years were being recognized. None of my achievements would have been possible without Dr. Majdalani’s willingness to mentor me, push me to be the best version of myself, and guide me to become the well-rounded person and engineer that I am today.”

Emma Signor, recipient of the 1st Place Award in the highly contested competition of the Undergraduate Division of the 75th AIAA Southeastern Regional Student Conference, Center for Space Education, Kennedy Space Center Visitor Complex, Cape Canaveral, FL, April 5, 2024.
As an Undergraduate Research Fellow working in Dr. Majdalani’s Advanced Propulsion Research Lab, Emma sought to extend research conducted by DOD SMART Scholar Cody Shelton. She published a “Feature” article as the lead author in the premier Physics of Fluids journal. Her work, “Characterization of the acoustic pressure waveforms in Rijke tubes with spatially varying heat sources and temperature distributions,” was published in March 2024. Related articles were presented at both the 2024 AIAA SciTech Conference in Orlando, FL, as well as the 2024 AIAA Region II Conference in Cape Canaveral, FL. It was at the AIAA Region II Conference that Emma won the Stan Powell Prize, namely, for her superb oral presentation.

“From my time in undergraduate research, I have learned that persistence is key. Without persistence, I would not have been able to remain resilient in the face of adversity, achieve significant discoveries, and continuously learn and improve.”

Emma is presently pursuing a summer internship at Leidos/Dynetics in Huntsville, AL. She plans on returning to Auburn in the fall to complete her M.S. in Aerospace Engineering. Following graduate school, she is eager to enter the industry, ready to contribute to the innovation and development of new propulsion methods and technologies either for the fields of defense or space exploration.