

Hartfield Mentorship in Motion: Greater Huntsville Section Dual Student Honors

On the evening of May 8, 2026, the Huntsville Botanical Garden became the setting for a remarkable celebration of aerospace excellence, student achievement, and transformational mentorship as the American Institute of Aeronautics and Astronautics (AIAA) Greater Huntsville Section (GHS) hosted its 72nd Annual Awards Banquet. Representing one of AIAA's most active regional communities, with reach across Alabama and Mississippi, the Greater Huntsville Section conferred its top undergraduate and graduate student honors on two exceptional Auburn University aerospace engineering students: Cade May and Griffin DiMaggio.

May, an undergraduate senior in aerospace engineering, received the Undergraduate Student of the Year Award, while DiMaggio, a doctoral student in aerospace engineering, received the Graduate Student of the Year Award. Both were recognized for “*Notable Technical Accomplishments, Active Engineering Research, STEM Outreach, and Outstanding Service to AIAA.*”

Yet the story of that evening extends beyond the well-deserved recognition of two outstanding students. It points to a deeper and more enduring source of excellence: the extraordinary mentorship of Professor Roy J. Hartfield, Jr., whose guidance and technical leadership have helped to shape both May and DiMaggio into rising aerospace leaders. Their achievements are their own, earned through discipline, talent, and sustained effort. But they also reflect the unmistakable signature of a mentor whose impact continues to multiply through exceptional students, researchers, and junior colleagues that he continues to inspire.



Cade May receiving the Undergraduate Student of the Year Award from Dr. Bob Tramel (GHS Section Chair) and Dr. Joe Majdalani (GHS Honors & Awards Director), May 8, 2026, Botanical Gardens, Huntsville, AL.

Cade May's recognition as Undergraduate Student of the Year crowned an undergraduate career defined by uncommon initiative, technical sophistication, and leadership. Originally from Birmingham, Alabama, May earned his Bachelor of Aerospace Engineering from Auburn University in May 2026 and will continue his studies at the Georgia Institute of Technology, where he will pursue a thesis-based Master of Science as a research assistant in the Aerospace Systems

Design Laboratory. At Auburn, his research centered on aerodynamic modeling and aircraft configuration analysis, including the validation of a panel method for computing dynamic stability derivatives near stall conditions. He also served as lead author of the AIAA paper with Hartfield, “Analysis of a Generic T-Tail Transport using a Surface-Vorticity Panel Method Flow Solver at Low Angles of Attack,” which he presented at the 2026 AIAA SciTech Forum.

May’s record further reflects the breadth expected of a modern aerospace engineer. As an engineering intern with General Dynamics Mission Systems, he contributed to composite radome structures for civil and defense applications, supported manufacturing process improvements, and performed aerodynamic software validation. Through Auburn’s Boeing IDEAS Program, he contributed to design tasks connected to NASA’s Space Launch System. As Program Manager for Auburn’s COSMIC Capstone Challenge team, he led a multidisciplinary group in the conceptual design of an autonomous lunar rover capable of constructing a landing pad using in-situ lunar regolith, helping the team secure second place nationally among more than 30 competing teams.

His honors tell the same story of excellence from another angle: NSF Graduate Research Fellowship Program Honorable Mention, top College of Engineering honors at the Auburn University Research Symposium, the 2026 Sigma Gamma Tau Undergraduate Award for the South Central Region, and selection as Graduation Marshal for the Samuel Ginn College of Engineering! May represents the kind of undergraduate scholar who does not simply complete assignments or participate in research; he advances projects, leads teams, contributes to the literature, and raises the standard for those around him.



Griffin DiMaggio receiving the Graduate Student of the Year Award from Dr. Bob Tramel (GHS Section Chair) and Dr. Joe Majdalani (GHS Honors & Awards Director), May 8, 2026, Botanical Gardens, Huntsville, AL.

Griffin DiMaggio’s selection as Graduate Student of the Year offers a complementary portrait of advanced scholarly achievement. A Ph.D. candidate in aerospace engineering at Auburn University, DiMaggio traces his early fascination with aviation to visits to the National Naval Aviation Museum. He earned his bachelor’s degree in aerospace engineering from Arizona State University, where his interests in propulsion, fluid dynamics, and scientific programming began to converge into the technical foundation that now supports his doctoral research. At Auburn, his work focuses on computational fluid dynamics and machine learning applications in areas that place him squarely at the intersection of physics-based modeling, numerical simulation, and emerging data-driven methods.



LTR: Dr. Dan Hastings, Griffin DiMaggio, Dr. Vivek Ahuja, and Dr. Roy Hartfield receiving the [Solid Rockets Best Paper Award](#) at SciTech '25, January 6, 2025, Orlando, FL.

DiMaggio's productivity has been exceptional. He has authored more than ten publications in AIAA conferences and journals, received two AIAA [Solid Rockets Best Paper Awards](#), and has had a third paper nominated. His research has extended beyond Auburn through a series of internships at NASA Langley Research Center, where his aerodynamic analyses contributed to a peer-reviewed journal article. He has also consulted with an emerging aerospace firm, providing analyses across successive projects that directly informed the development of an aircraft concept.



Griffin DiMaggio receiving the [Solid Rockets Best Paper Award](#) at SciTech '25, January 6, 2025, Orlando, FL.

Just as importantly, DiMaggio has become a mentor in his own right. At Auburn, he serves as a primary guide for students working with flow simulation tools, supporting both undergraduate and graduate researchers as they develop the skill, confidence, and technical judgment needed for advanced computational work. This may be one of the clearest indicators of Hartfield's influence: his mentees do not merely succeed individually; they learn to elevate others.

Standing behind this dual student recognition is **Professor Roy J. Hartfield, Jr.**, a senior faculty member in Auburn Aerospace Engineering whose name has become synonymous with research excellence, inspired teaching, and deeply consequential mentorship. A Professor of Aerospace Engineering in the Samuel Ginn College of Engineering and a consultant for Siemens, Hartfield earned his Ph.D. in Mechanical and Aerospace Engineering from the University of Virginia. His technical interests span aerospace systems optimization, propulsion, and experimental and analytical aerodynamics. He co-founded Research in Flight, which developed Flightstream, a surface-vorticity solver now used worldwide as part of Siemens' aerospace design ecosystem.

Hartfield is not only an exceptional mentor and teacher; he is also a remarkable researcher whose technical accomplishments have reshaped the practical use of aerodynamic analysis. In 2023, he received the prestigious AIAA Aerodynamics Award for his meritorious achievements in applied aerodynamics, particularly for the development of fast and practical predictive approaches for aerodynamic analysis at the conceptual and preliminary design stages. His work on Flightstream modernized classical vortex-based potential methods through an unstructured surface-mesh solver that delivers speed, interactivity, and practical usefulness to engineers working under real design constraints.



Professor Roy Hartfield receiving the prestigious [Aerodynamics Award](#) at Aviation '23, June 12, 2023, San Diego, CA.

The impact of Flightstream has been extraordinary. The tool has reached thousands of users across more than 25 countries and has been adopted by major universities, government organizations, and aerospace companies, including leading institutions and firms such as Lockheed Martin, Airbus, Rolls-Royce, NASA, General Dynamics, JetZero, and Anduril Industries. Its applications span conceptual aircraft design, aeroacoustics, and solid rocket motor internal ballistics. It is precisely this blend of theory, computation, speed, and engineering relevance that makes Hartfield's research so powerful, and his mentorship so effective. He teaches from the innermost heart of the field.

Beyond Flightstream, Hartfield's contributions include multidisciplinary design optimization, evolutionary algorithms for missile systems, gas turbines, and scramjets, more than 180 publications, U.S. patents, and major short-course instruction for NASA, the Department of Defense, and universities. He has also advanced non-intrusive optical diagnostic tools, including laser-induced iodine fluorescence techniques in support of highly compressible flow and scramjet research.

But the most compelling measure of Hartfield's career may not be found only in software licenses, technical papers, patents, or awards. It is found in people. His mentorship has become a defining feature of his professional identity. In 2023, Hartfield and his student William "Bill" Collins received Auburn's highly-competitive Mark A. Spencer Creative Mentorship Award, a distinction recognizing exceptional faculty-student mentorship. His record also includes the 2024 Konrad Dannenberg Educator of the Year Award from the AIAA Greater Huntsville Section, honoring decades of commitment to mentoring students in propulsion, aerodynamics, and aerospace design.



Hartfield and Bill Collins receiving the Mark A. Spencer Creative Mentorship Award at the Auburn Awards Spring Ceremony, April 14, 2023, Auburn, AL. Here pictured with Samia Spencer.

What makes Hartfield's mentorship especially powerful is its reach. He mentors undergraduates such as Cade May and Bill Collins, helping them step early into serious research, conference authorship, national competition, and graduate-level ambition. He mentors doctoral students such as Griffin DiMaggio and Vivek Ahuja, helping them become productive scholars, technical leaders, and mentors to others. He also mentors junior faculty members, guiding them through the often-daunting terrain of proposal writing, research development, pedagogy, and funding opportunities. In doing so, he strengthens not only individual careers but the institutional culture around him.

The 2026 AIAA Greater Huntsville Section awards therefore stand as more than a pair of student recognitions. They reflect a sustained ecosystem of excellence. Cade May's rise demonstrates the transformative potential of early research engagement, high expectations, and carefully guided opportunities. Griffin DiMaggio's record demonstrates what can happen when advanced doctoral research is supported within a culture that values rigor, teamwork, and peer mentorship. Together, their achievements showcase the effectiveness of a faculty mentor who sees talent not as a quality to be admired from a distance, but as a virtue to be cultivated with patience, passion, and devotion.



Hartfield receiving the Konrad Dannenberg Educator Award at the 70th GHS Annual Awards, May 18, 2024, Huntsville, AL. Here featured with Dr. Joe Majdalani, Jackie Dannenberg, and Dr. Andrew Keys (Section Vice Chair).

At the Huntsville Botanical Garden, the Greater Huntsville Section honored two remarkable students. At the same time, it showcased the larger Auburn story behind them: a story of aerospace engineering faculty excellence, student ambition, and mentorship that goes above and beyond the conventional boundaries of advising. For Cade May, the award marks the beginning of an exciting new chapter at Georgia Tech. For Griffin DiMaggio, it recognizes a doctoral career already rich in scholarship, service, and technical impact. For Professor Roy Hartfield, the evening offered yet another living testament to a career that has fused world-class research with a rare and generous commitment to the success of others.

In aerospace engineering, excellence is rarely accidental. It must be taught, modeled, challenged, refined, and believed into being. Through Cade May and Griffin DiMaggio, the AIAA Greater Huntsville Section recognized two brilliant examples of that process in motion. Through Professor Roy Hartfield, it saw the mentor whose steady hand, technical brilliance, and enduring faith in his students continue to help launch the next generation of aerospace leaders.