

Presentation of Faculty-Student Research at the 2026 AIAA Science and Technology International Forum

The results of long-term study of the combustion of advanced bio-derived fuels in the lab-scale Hybrid Propellant Rocket Engine were presented at the top world aerospace conference - 2026 American Institute of Aeronautics and Astronautics (AIAA) Science and Technology International Forum and Exposition held in Orlando, FL on January 12-16, 2026. Professor Viatcheslav Naoumov, former mechanical/aerospace engineering student Hunter Collins (graduated from CCSU with a B.S. in December 2025), and sophomore mechanical/aerospace engineering student Aidan Bowser presented paper “Student-Faculty Research on the Combustion of Paraffin Wax Enriched with Aluminum Powder in the Lab-Scale Hybrid Propellant Rocket Motor”. The paper introduced the results of the study performed in spring and fall 2025 on the combustion of paraffin and paraffin/aluminum as advanced fuels for hybrid propellant rocket motors. The results of the research generated considerable interest among conference participants. Hunter Collins and Aidan Bowser visited numerous conference sections and had conversations with representatives from industry, R&D companies, and academia such as NASA, Vaya Space, GE Aerospace, RTX, Anduril, Letara Space, UAH Propulsion Research Laboratory, USU Rocket Propulsion Laboratory, JAXA, and many others. This experience represented a pivotal opportunity for CCSU students and faculty to expand their knowledge, forge industry connections, and showcase Central Connecticut State University on an international stage. By presenting cutting-edge research and engaging with global experts, the team brought back invaluable insights that will foster growth in the university’s engineering programs, and drive innovation that is preparing the next generation of industry leaders.



From left to right: Hunter Collins, Aidan Bowser, Dr. Viatcheslav Naoumov



From left to right:

Session Chair, Dr. Robert Frederick, Jr., Hunter Collins, Aidan Bowser, Viatcheslav Naoumov