

PROPULSION CENTER

“Keep our relationships more important than tasks or problems (or winning).” We wish all the graduates a successful and enjoyable future.





Spring 2024

PRC Graduate Recognition Program

Shirts/Tumblers/Group Photo/Welcome

Lunch

MASON DIXON
BAKERY ——— BISTRO

Highlights

Special Recognitions

Recognition of Graduates

Master's Students and Undergraduate Students



AIAA Scitech Meeting





Space Day in Montgomery





AIAA SCiTECH

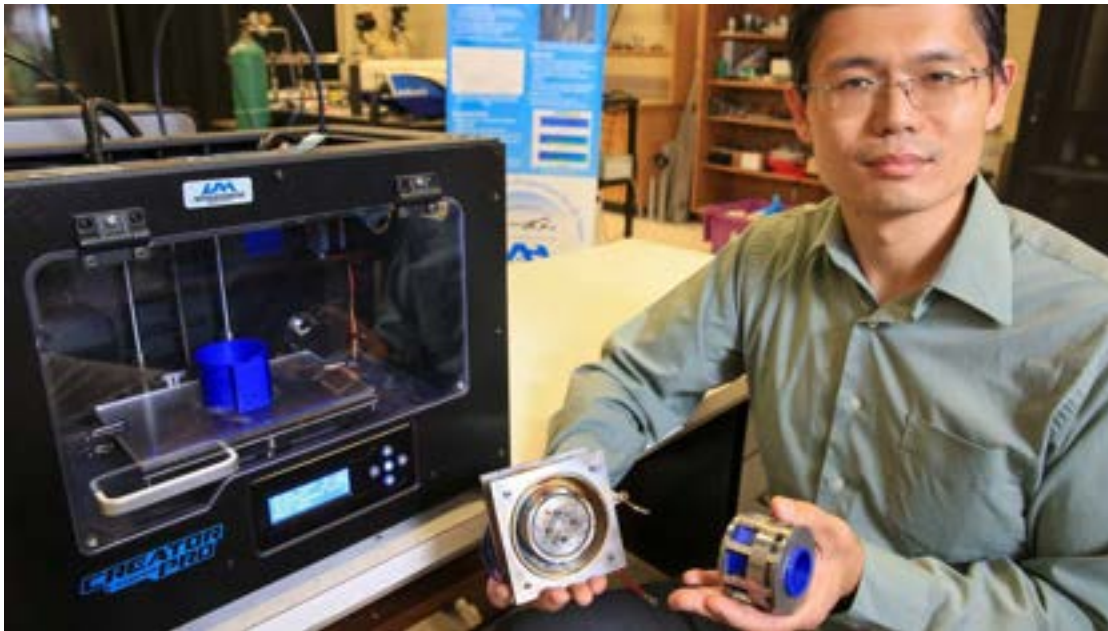


Dr. Phil Ligrani wins 2024, Worthington Medal, for innovations in pumping sciences



”The award, one of the most prestigious given by ASME, recognizes “innovative and unique pumping concepts and devices with micro-, millimeter- and macro-scale flow passage arrangements in consideration of the displacement of fluids subject to diverse physical phenomena.”

Dr. Gabe Xu wins \$75K McMahon-Pleiad Prize from the University of Alabama System in recognition of his research contributions



“The award recognizes contributions to teaching, research, or service in alignment with the UA System’s mission, values, and core principles.”

“The McMahon-Pleiad Prize is awarded annually to a faculty or staff member at one of the UA System’s entities: the University of Alabama, the University of Alabama at Birmingham (UAB), UAH, or the UAB Medicine enterprise.



Recognition of Achievements



Gabriele Cromartie is promoted to *Program & Proposal Coordinator* at The Propulsion Research Center



Gabriele Cromartie has been promoted to Program & Proposal Coordinator for the UAH Propulsion Research Center. As the number of contracts and research activities in our research center has grown, she has continued to grow and assume additional responsibilities vital to its administration and operation.



Recognition of Achievements



AIAA presents the Conrad Dannenberg Educator of the Year Award to Dr. Robert Frederick



This award is presented in recognition of outstanding service to education and promotion of math and science within the community. It is named in recognition of Konrad Dannenberg, a German-American rocket pioneer who was an avid proponent of education, an active member of the AIAA, and an inspiration to the aerospace community.

Janet Reyes, UAH Instructional Designer
Tess Olten, UAH Instructional Designer
Dr. Frederick, PRC Director/Professor
and Dr. Matthew Hitt, SMDC, (UAH BS/MS/PhD)

Recognition of Graduates



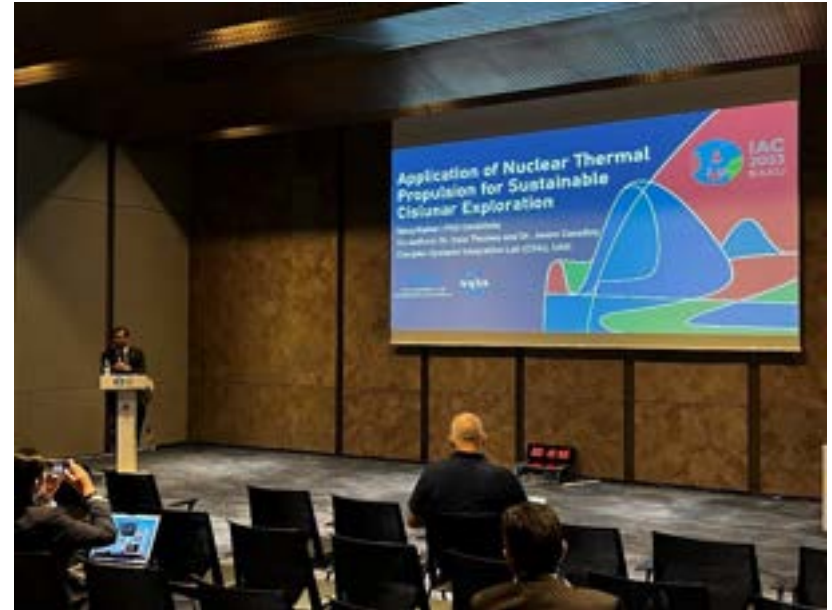


Dr. Saroj Kumar

Kanpur, India

Dr. Kumar plans to continue working as a Research Engineer for the PRC, supporting NASA's Space Nuclear Propulsion Program.

Committee Chair: Dr. Jason Cassibry
Advisor: Dr. Dale Thomas





Chase Herrin
Memphis, TN

Chase is planning to stay in Huntsville
and find work after he
graduates in August

Advisor: Dr. Philip Ligrani





Dian "Ruthie" Hill
Semmes, AL

Ruthie plans to continue working as research staff at the PRC for a little longer until another opportunity presents itself for a research engineer in propulsion systems at Cape Canaveral, FL.

Advisor: Dr. Gabe Xu





Master's Students



Lisa Lewis
Cincinnati, OH

Lisa is excited to start working here in Huntsville as a Systems Engineer for Jacobs Space Exploration Group (JSEG) supporting the Space Launch System.

Advisor: Dr. George Nelson



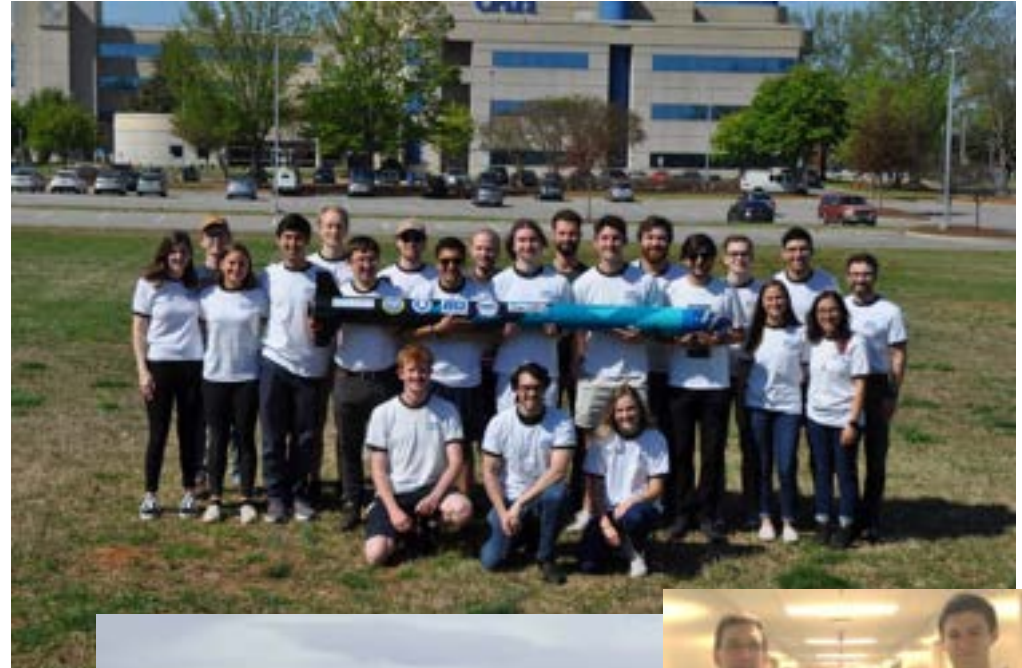
Master's Students



Michael Sorrell
Huntsville, AL

Michael started working for Northrop Grumman in Huntsville as an Aeronautical Integration and Test Engineer in January 2024.

Advisor: Dr. Phil Ligrani

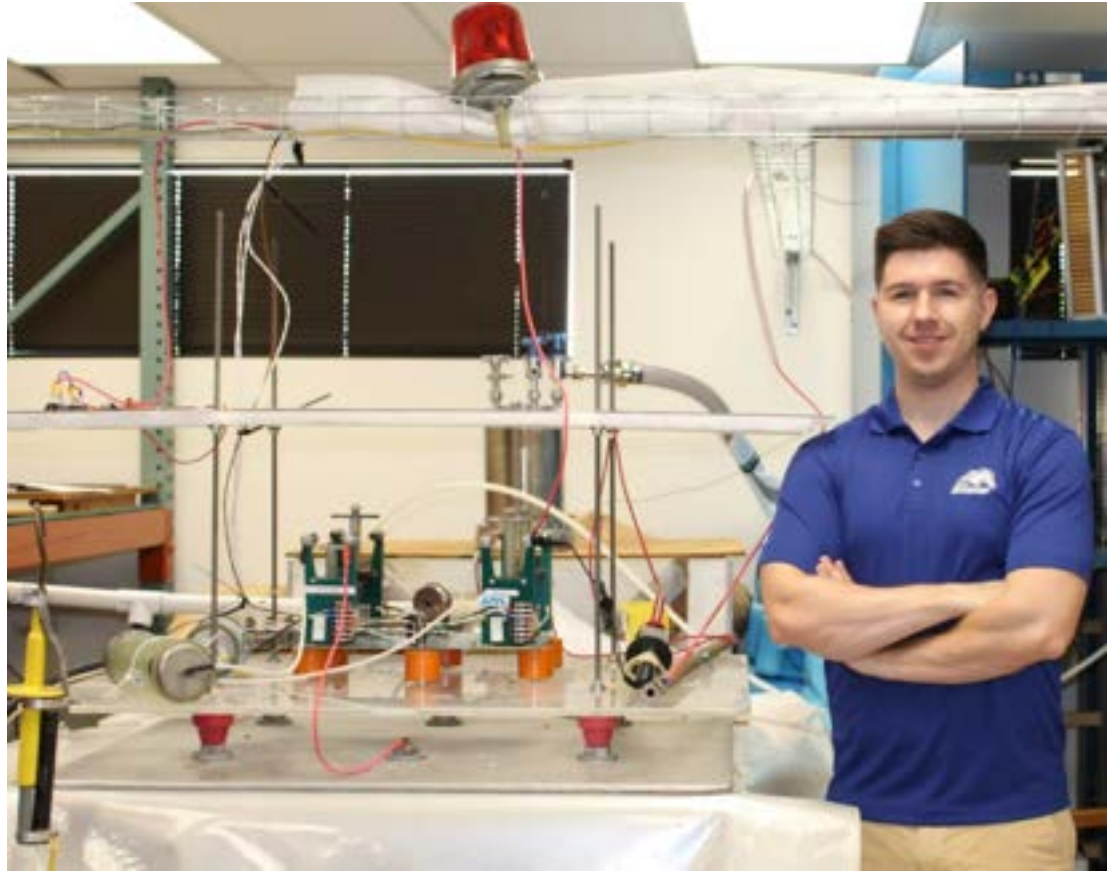




Logan Towers
Johnston, IA

Logan is planning to continue working for Raytheon and possibly pursue a Ph.D.

Advisor: Dr. Jason Cassibry





Bachelors' Degree Graduates



Cameron Bentley
Huntley, IL

Cameron has accepted a full-time Model-Based Systems Engineer position at Summit TRC and will continue his education part-time for an M.S.E. in Industrial and Systems Engineering.

Advisor: Dr. Dale Thomas



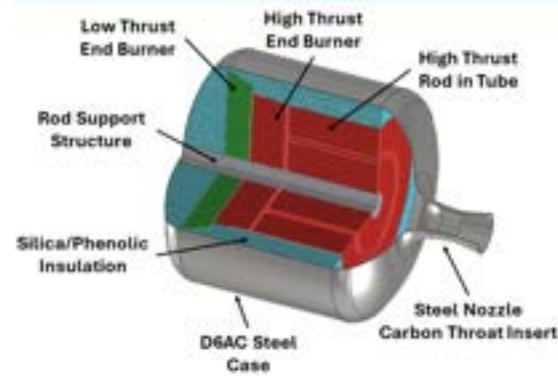


Anthony Michael Ciccarelli *Huntsville, AL*

Michael Anthony is working for SpaceX in Los Angeles this Summer, and he will return to UAH this Fall to finish his Master's in Aerospace Systems.

Advisor: Dr. Phillip Ligrani

Team 10 - Report Figure 1 [Ciccarelli]



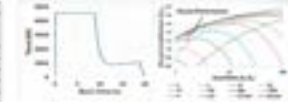

Main Features:

- D6AC steel case
- Steel nozzle.
- Carbon throat insert
- Tapered end burners.
- Rod in Tube core grain
- Silica/Phenolic Insulation

Key Dimensions

- Nozzle Expansion Ratio: 1.76
- Initial Throat Diameter: 2.9 in
- Overall Grain Diameter: 21.8 in
- Overall Grain Length: 15.3 in
- Rod & Tube Diameter / Length: 17.0 in. / 9.25 in.
- High-Thrust End Burner Avg. Diameter / Length: 17.8 in. / 3.5 in.
- Low-Thrust End Burner Avg. Diameter / Length: 20.8 in. / 2.5 in.

Design	Motor										Propellant			
	Case ID	Case Dia	Case Len	Case Wt	Case Vol	Case Dens	Case Mod	Case Mod	Case Mod	Case Mod	Case Mod	Case Mod	Case Mod	Case Mod
Design 1	001	21.8	15.3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Design 2	002	21.8	15.3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Design 3	003	21.8	15.3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Design 4	004	21.8	15.3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Design 5	005	21.8	15.3	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000



Bachelors' Degree Graduates



Andy Hoang

Helena, AL

Andy is planning to attend New Mexico State University to get my Master of Science degree in Aerospace Engineering and work on FLEET (Femtosecond Laser Electronic Excitation Tagging) measurements for different hypersonic flow problems in a Mach 5 shock tunnel facility.

Advisor: Dr. Phillip Ligrani



Bachelors' Degree Graduates



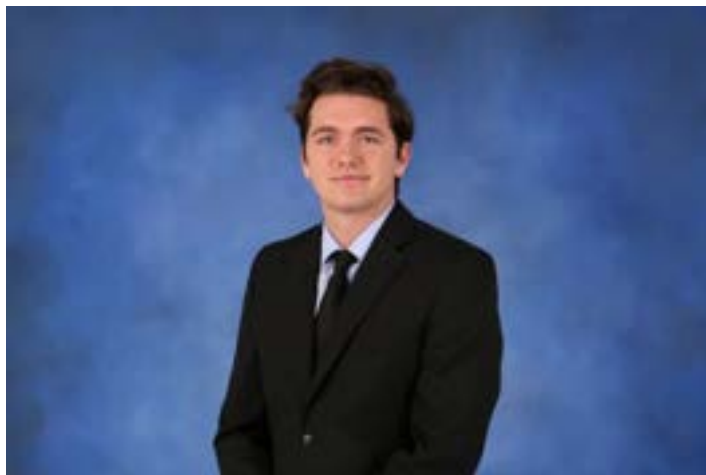
Sean Hunter

Bachelor of Science degree in Mechanical
Engineering

Advisor: Dr. Dale Thomas



Bachelors' Degree Graduates



Ryan O'Neill *Charleston, SC*

**Ryan plans to develop himself and
become the best
systems engineer he can be.**

Advisor: Dr. Dale Thomas



Bachelors' Degree Graduates



Cassandra "Cassie" **Phoenix** *Linwood, NC*

Cassie is looking for a job using the skills she learned in the PRC.

Advisor: Dr. Gabe Xu



Bachelors' Degree Graduates



Ian Rowatt
Bakersfield, CA

Ian plans to work in aviation coming out of college and use the skills developed researching in my future career.

Advisor: Dr. Dale Thomas



Bachelors' Degree Graduates



Jared Sauer
Savannah, Georgia

Jared will work at Stellar Exploration, developing chemical propulsion systems for small spacecraft bound for Earth orbit, the Moon, and interplanetary space.

Advisor: Dr. Gabe Xu





Bachelors' Degree Graduates



Anthony Scheiwe *Ooltewah, TN*

Anthony has accepted a civil engineering position in Huntsville, Alabama

Advisor: Gabriele Cromartie

SLI Launch Team

Joel Barnes, Max Blackwell, Justin T Bump , Seth L Bunt , David Carlsson, Marcus OCarroll, Anthony Michael Ciccarelli , Allyssa A Gendreau, Autumn M Jenkins , Timothy L Johnson, Sean Joyce, Ian P Kramer, J.T. Matthews, Austin C Morse, Andrew S Nelson, Tyler Orth, Bryce G Redman, Annabelle Roberts-Naul, Jacobie A Robertson, Jared A Sauer Connor M Slade, and Tom Teper





Upcoming Events



- Women in Defense Roaring 20's Spring Soiree – Scholarship Awards, Weeden House Museum , Huntsville, Alabama, May 5, 2024
- UAH Commencement, Von Braun Center, May 6, 2024
- Nuclear and Emerging Technologies for Space (NETS 2024), Santa Fe, NM, May 6–10, 2024,
- May 15-16, 2024 - Rocket Test Group Meeting at Blue Origin, Huntsville, Alabama, May 6–10, 2024,
- NASA Jamboree Event, Jamboree Event, May 16, 2024
- Annual Lab Inspection, May 21, 2024
- NASA in the Park: Saturday, June 22, from 10 AM to 2 PM.
- Guest Speaker, Dr. Diane Coallard, "Research on Solid Propellants and Energetic Materials, August, 2024.
- Women in Defense National Conference, September 24, 2024

Gluten Free Rocket Science

Discovering Your Professional Passion in the Midst of Adversity

Dr. Ashley Ramirez
 Founder, Mason-Dixon Bakery/Bistro

The Giant Leaps Starts Here

Dr. John Blevins
 SLS Chief Engineer
 NASA MSFC

Facing Unexpected Challenges

Ambrosia Patterson
 FBI Change and Transition Program
 Manager





Thank You!

