



Upcoming Local Events

Look for announcements for Honors and Awards Banquet and Annual Technical Symposium in the Fall.

Upcoming National Events

Nov. 15-17, 2021

ASCEND

Las Vegas, NV/Online (Hybrid)

[Event Link](#)

Aug. 2-6, 2020 (new dates)

AVIATION Forum

Virtual Event

[Event Link](#)

Note from the Editor

Without a doubt, we've all had to make adjustments this past year! However, with every challenge brings new opportunities. We have had a few Speakers Series recently through Zoom that hopefully allows more participation. We still have supported the Congressional Visitors Day and Colorado Aerospace Day. While there has been remote participation opportunities, we also look forward to future in-person activities. Be on the look out for these activities when they are available.

In the near future, look forward to a new website and new newsletter distribution method. There are more Speakers Series in the works that includes networking opportunities.

We have welcomed a number of new volunteers supporting council activities. They never stopped! If you are interested in STEM, newsletter, website, young professionals, public policy, and more we encourage you to contact

We are also beginning our election cycle. Please see your e-mails for position descriptions for Chair, Vice-chair, Treasurer, Engagement and Outreach Director, and Communications Director. Nomination deadline is Mar. 31 and can be sent to communications@aiaa-rm.org. The election ballot will be available in April.

Adrian Nagle

RMS Newsletter Editor

Ball Aerospace

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Section Officers

Elected

Section Chairman	Stacey DeFore
Vice Chair	Alex Dukes
Secretary	Kathleen Pirazzi
Treasurer	Dr. Taylor Lilly
Membership Officer	Marshall Lee
Communications Officer	Sally Hanley
Education Officer	William Carter
Honors & Awards Officer	Carolyn Overmyer
Programs Officer	Chris Zeller
Public Policy Officer	Joe Rice
STEM K-12 Officer	Susan Janssen
Young Professional Officer	Tyler Walston

Committees

Fellow-At-Large	Gene Dionne
TC Liaison	John Reed
Website Editor	Duncan Hills/John Grace
Technical Symposium Chair	Chris Zeller
Newsletter Editor	Adrian Nagle

We Need You! If you are interested in increasing your participation in AIAA Rocky Mountain Section, we need your help with positions in any of the committees. If you have an interest, please contact: Kathleen Pirazzi – kpirazzi@acceleratingspace.com

ASCEND hosted a few Webinar Previewing the NASA Perseverance Mars Arrival: A panel of Mars Perseverance Managers and Engineers discussed the Mars Perseverance mission before the landing in early February. Tony Bruno (ULA) introduced the panel of Wanda Peters (NASA), Trudy Kortez (NASA), and Bob Balaram (NASA JPL) which was moderated by Wanda Sigur (Chair, NASEM Space Technology Industry-Government-University Roundtable). A great discussion review the technology goals, landing sequence, and program background prepared viewers with the ultimately successful landing of Perseverance. Continue to watch your AIAA e-mails for future opportunities!

Aerospace, AIAA, and the 2020 National Government Elections

Joe Rice, *Lockheed Martin Space*

“Getting to Mars is more about political science than rocket science”

- Member of Congress

What will it take to get back to the Moon and on to Mars?



Engineering is critical to this effort.

Teams of engineers must de-

sign, develop, build, test, and qualify technology and hardware. Just as important are the scores of other professions and skills that are needed to bring it all together and to make it happen. But, according to this Member of Congress, the hardest part of this effort is developing the political will to build public support, provide the funding, and make it a priority.

The Public Policy Committee (PPC) of AIAA RMS is trying to do their part and encourage others to do the same. In order to help our political leaders and the general public understand the importance of aerospace, science, and exploration, it is helpful if AIAA members understand the policy process. To that end, the AIAA RMS PPC held several virtual events around the 2020 elections to first discuss what was on the November ballot and then to discuss the election results. The PPC also shared information about AIAA’s Space Policy Platform Paper as well as AIAA’s upcoming 2021 Congressional Visits Day (CVD), where AIAA

members meet with Members of Congress to share what AIAA supports and why it is important.

Spoiler Alert! We need YOU to get involved in Congressional Visits Day (CVD)! This year’s event will be virtual instead of occurring in person in Washington, DC. Please learn more about CVD and consider joining us! Don’t worry if you’ve never spoken to an elected official! And yes, you are qualified and are able to speak with Members of Congress as an individual and an AIAA member! Check out the AIAA CVD webpage for more information and to register: <https://www.aiaa.org/advocacy/congressional-visits-day>

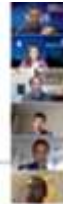
About 100 AIAA members participated in several virtual “Government 101” sessions held in October and November.

The PPC will conduct more of these kinds of events in the future. Make sure to keep an eye on your AIAA emails and sign up for our future events! Between now and March, the PPC will be focusing on preparing for AIAA Congressional Visits Day (CVD) to be held March 15 – 19. Attending a training is not a commitment to participate in CVD, so come and learn what it is all about! You can decide if you want to participate in CVD after the training.

After CVD is completed, the PPC will hold more events about the public policy and political process. If you



STATEWIDE BALLOT MEASURES Amending the Constitution



Amendment B	Repeal Gallagher Amendment	Repeals several constitutional provisions regarding property taxes, commonly referred to as the Gallagher Amendment.
Amendment C	Conduct of Charitable Gaming	Makes changes to constitutional provisions regarding bingo-affle licenses for nonprofit organizations in Colorado.
Proposition EE	Taxes on Nicotine Products	Increases taxes on tobacco products, places a new tax on nicotine vaping products, and uses the increase in revenue for K-12 education and pre-school funding.

have subjects you'd like to learn about or ideas for sessions, please contact any member of the AIAA RMS PPC. We hope you join us for additional PPC sessions ahead, and we hope you join AIAA and other aerospace advocates in helping us get back to the Moon and on to Mars! With both the rocket science... and the political science!

John Bendle, *Lockheed Martin Space*
 Tim Cichan, *Lockheed Martin Space*
 Enrico Fabiano, *Scientific Simulations LLC*
 Christine Pumford, *Ball Aerospace*
 Joe Rice, *Lockheed Martin Space*

AIAA RMS Public Policy Committee



EVENTS

- 51 Different sets of rules for Electors
- So much of the system is tradition
- Competing Electors has and could happen

Pre-election "winning" phase

- Name transition chair(s) and key staff
- Develop relationships with the OSA, FBI, OPM, OGE, current administration, and Congress
- Set goals and develop project plan for transition

Post-election "transition" phase

- Appointing key White House and agency staff
- Deploy teams to agencies for policy/structure review
- Finalizing policy agenda/schedule
- Naming cabinet

Post-inauguration "handover" phase

- New admin must fill about 4,500 political positions
- Over 1,200 positions require Senate confirmation
- Official transition organization must also wind down



AIAA 2020 Middle School Student Essay Contest

Dr. Lynnane George, Advisor, and Lisa Adele, Secretary, UCCS AIAA Student Club

Congratulations to **Lucas Anderson** of Colorado Springs who won **FIRST** place at the national level for his essay about the future of space technology. Here is the reprint of the article from Aerospace America.

As mentioned in the AIAA Aerospace America article, the 2021 theme is about lunar science. See the next page for the flyer to enter the RMS contest. Please share this information with middle school students, educators and parents.

If you are interested in judging the essays, please email Sue Janssen at susan.g.janssen@gmail.com.



Christaina Anderson



Lucas Anderson

How Far do You See In 50 Years?

SSTC 2020 Middle School Essay Contest

The AIAA Space Systems Technical Committee's (SSTC) Annual Middle School Essay Contest continues to improve its commitment to directly inspire students and local sections. Each year, additional sections start parallel contests to feed into selection of national winners awarded by the SSTC.

The 2020 essay topic was "How advanced can you envision space technology and exploration through the next 50 years? What do we need to do NOW to achieve that?" Seventh and eighth grade students were asked to participate. This year 15 sections submitted official entries to the contest, including Antelope Valley, Cape Canaveral, Connecticut, Greater Huntsville, Hampton Roads, Houston, Long Island, Los Angeles-Las Vegas, Mid-Atlantic, Palm Beach, Rocky Mountain, San Francisco, Southwest Texas, St. Louis, and Vandenberg. For each grade, there were first-, second-, third-place winners, which included \$125, \$75, and \$50 awards for the students, respectively. The six students also received a one year student membership with AIAA.

The first-place winner for 8th grade is Lucas Anderson from Colorado Spring, CO (Rocky Mountain Section). The second-place winner for 8th grade is Alexander Goetz from Fenton, MO (St. Louis Section). The third-place winner for 8th grade is William Mayville Jr. from Palm Beach Gardens, FL (Palm Beach Section). Emily Huynh from the San Francisco Section received an Honorable Mention for her essay.

The first place winner for 7th grade is Christaina Anderson from Santa Maria, CA (Vandenberg Section). The second-place winner for 7th grade is Noah Stoumbaugh from Yorktown, VA (Hampton Roads Section). The third place winner for 7th grade is Ksenia Apalkova from San Jose, CA (San Francisco Section). Ashley Wilson from the Long Island Section received an Honorable Mention for her essay.

All 2020 winning essays can be found on the Aerospace America website (aerospaceamerica.aiaa.org/bulletin/September-2020-aiaa-bulletin). The topic for 2021 is "Describe science experiments you can conduct on the lunar surface that is unique to our moon." If you, your school or section are interested in participating in the 2021 contest, please contact Anthony Shao (ant.shao@gmail.com), Erica Rodgers (erica.rodgers@nasa.gov), or your local section for more details.

UCCS Student Branch Update

Lynanne George, UCCS Faculty Advisor

The University of Colorado, Colorado Springs AIAA student branch had an eventful fall term. Led by President Natalie Dilts, the club held as many events as possible, allowing students to network and socialize with others in the field and learn more about aerospace careers. The branch hosted several distinguished speakers, volunteered in the community, and organized to compete in a NASA design competition. Rounding out the leadership team were Vice President Emily Gregory, Events Coordinator Rebekah Shepherd, Treasurer Devin Briscoe, Social Media Coordinator Ali Alderweesh, Secretary Lisa Edele, and Graduate Student Advisor Dan Benishek.



UCCS Branch President Natalie Dilts (with Astronaut Mark Lee)

Before the semester even began, the branch welcomed incoming students as part of freshman orientation week. The event was dubbed “A Stellar Event” and AIAA also invited other engineering clubs on campus to participate. It included a scavenger hunt where the freshmen, upon successful completion of some engineering challenges, received a 3D printed mini catapult designed and built in the Mechanical and Aerospace Engineering machine shop.

The AIAA student branch fall kickoff meeting was held on Friday Sept 18 as a virtual meeting. The guest speaker was Nate Ylitalo, who holds a BS in Mechanical and Aerospace Engineering as well as a MS in Space Operations from UCCS. He is currently training as a flight controller at NASA Johnson Space Flight Center. Nate provided his perspective on what it was like to navigate on the path from a student at UCCS to a NASA flight controller. Students had many questions for Nate and were both intrigued and moti-

vated by his talk.

The October branch meeting was a double feature, with Kyle Sanders speaking on the “Cognitive Science of Pilot Training (Crew Resource Management)” and the US Air Force Academy demonstrating their hybrid rocket. Kyle has an extensive background in aerospace and aviation and over 1500 flying hours (386 in combat) with FAA commercial, single, and multi-

engine instrument ratings. He is also a decorated aircraft commander in the C-130 E/H Hercules. Kyle is also Vice President of the new US Drone Soccer League. Clubs member had the opportunity to meet Kyle in person and others joined the meeting virtually. In addition, the Academy’s Department of Astronautics faculty and cadets provided a virtual live firing of their hybrid rocket and gave an overview of solid rocket motor grain geometry and design.

UCCS Branch October Meeting – Kyle Sanders and USAFA Hybrid Rocket Demo

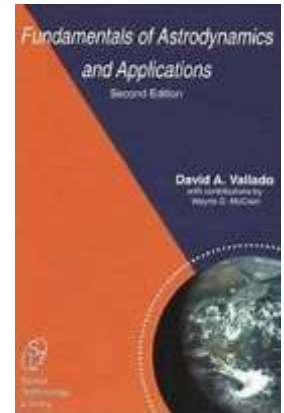
November brought two highlights for the branch – the monthly club meeting featuring author David Vallado on 11 Nov, and a virtual tour of Reaction Engines on 12 Nov. Dave is the author of the book Fundamentals of Astrodynamics and Applications, a must-read for aerospace engineers. He talked about his background and writing the textbook. He also spoke on the ever-growing problem with space debris and discussed advanced conjunction analysis methods. We also learned that Dave has completed all of Colorado’s 14ers...twice! The meeting gave students an opportunity to get their textbooks signed by the author. The UCCS stu-



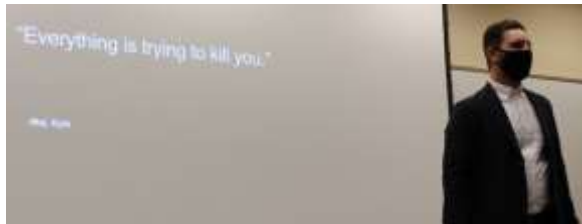
NASA Flight Controller Nathaniel Ylitalo

dent branch also arranged for a personalized virtual tour of Reaction Engines' facilities and heard about their space and hypersonic engines and test facilities from company leadership and employees.

Student branch members also formed two 15-person student groups for the 2021 NASA Revolutionary Aerospace Systems Concept Academic Linkage (RASC-AL) competition. One team, headed by undergraduate AIAA member Catriona Clark, is designing a Mars Ascent Vehicle in support of a human Mars mission in the 2030s. The second team, head-



November - Author Dave Vallado and Reaction Engines Virtual Tour



UCCS Branch October Meeting – Kyle Sanders and USAFA Hybrid Rocket Demo

ed by undergraduate AIAA member Ashton Craig, is designing a Human Mission to Ceres in the 2040s. They are leading two 15-person teams of undergraduate and graduate students that span three Universities – UCCS, Webster University, and the University of New South Wales. Students organized into areas such as propulsion, structures, management and risk, bioastronautics, astrodynamics, and technical communication. It has been amazing to see club

members take the lead on these projects, giving them hands-on experience with technical design, project management, teamwork, and leadership. Both of these motivated and enthusiastic interdisciplinary and international teams are directly involved in designing future NASA missions! We welcome outside reviewers. Please contact lgeorge2@uccs.edu for more information.

There were not many opportunities for outreach this term due to COVID restrictions, but club members did volunteer at the Cool Science Festival on Oct 10. Students helped at the event, held at the Space Foundation Discovery Center in Colorado Springs, by assisting with the logistics of the virtual festival. They also presented in-person interactive workshops, "Alka Seltzer Rockets," "Polyacrylic Acid – Magic Snow," and "Polymers" to over 50 kids.

After Mid-November, UCCS transitioned again to remote learning, so all in-person events and tours were cancelled, but the club kept up with spring planning activities. As the branch kicks off 2021, students are looking forward to another successful semester! Please see the branch's Facebook (<https://www.facebook.com/AIAA.UCCS/>) and Instagram pages (https://www.instagram.com/aiaa_uccs/) for past and upcoming events. Contact student branch president Natalie Dilts at ndilts@uccs.edu for more information.



NASA RASC-AL Competition Team