

MONDAY, APRIL 5, 2021

8:00 AM Keynote and Welcome Addresses

Enjoy welcome addresses and presentations by David Trent (Site Director for the Airbus Americas Engineering Center), Dan Dumbacher (Executive Director of AIAA), and Greg Hamilton (President of Aviation Week Network). Any last minute updates to scheduling or logistics will also be covered in this session.

Undergraduate Category	Masters Category
9:00 AM "Experimentally Studying the Effectiveness of Acoustics in Controlled Propulsion using Ultrasonic Transducers"; Sam Sanders; Mississippi State University	9:00 AM "Designing for Security: A Cursory Introduction for Cybersecurity in Aerospace Education"; Karl Roush; Georgia Institute of Technology
9:30 AM "Reducing the Computational Cost of Bicycle Wheel CFD using BEM"; Drew Vigne; University of Central Florida	9:30 AM "Simulation of Bulk Evaporation and Condensation using the Energy of Fluid Method"; Elijah Gasmen; University of Memphis
10:00 AM "Design Optimization of a Boundary Layer Ingestion Propulsion System for a LongRange, High-Altitude UA"; Christopher Kaminski; University of Central Florida	10:00 AM "Flight Test Point Optimization Program For a Self-Protection Application"; Oscar Klempay; Georgia Institute of Technology

10:30 AM Sponsor & Recruiter Hall

11:00 AM "Optimizing Max Camber Points Along Thin Triangular Airfoils for Higher Lift/Drag Ratios"; Andrew Henn, Kristian Stameski; Florida Institute of Technology	11:00 AM "Thermomechanical Simulation of Aerogel/RTV Based Cryogenic Propellant Tank"; Dalton Bowen; University of Memphis
11:30 AM "Comparison of 3D confocal Raman and high energy X-ray diffraction for the measurement of molten sand infiltration in turbine blade coatings"; Vanessa D'Esposito; University of Central Florida	11:30 AM "The Prediction of Noise from Turbulent Boundary Layers with Suction"; Achyuth Rajendran; University of Florida
12:00 PM "Spectral Imaging for Forest Fire Detection"; Audrey Thomson; Mississippi State University	12:00 PM "Low Gravity Natural Convection and Pool Boiling Predictions"; Ashley Milligan; University of Memphis

TUESDAY, APRIL 6, 2021

Undergraduate Category	Team Paper Category
1:00 PM "Development of a Stress Corrosion Cracking test approach for multi-mode measurements"; Prapoojith Arcot; University of Central Florida	12:30 PM "The application of LIDAR and IMU data to monitor an aerospace craft during its entry, descent, and landing on a planetary body's surface."; a team project by Vanderbilt University
1:30 PM "Formula One Car Downforce Analysis"; Jordan Smith; Mississippi State University	1:00 PM "Project Top Gun"; a team project by University of Alabama in Huntsville
	1:30 PM "Aerosols and Particulates Emitted by Speech and Breath"; a team project by University of Memphis

2:00 PM Sponsor & Recruiter Hall

3:00 PM "Analyzing the Impact of Venturi-Induced Wing Tip Suction on the Induced Drag and Wing Tip Vortex"; Clay Spaulding; Mississippi State University	3:00 PM "The Golden Egg: An Austere Field Light Attack Aircraft Solution"; a team project by University of Alabama in Huntsville
3:30 PM "Developing a Flapping Gear System for Butterfly-Inspired Motion"; Frederick Schulze; University of Alabama in Huntsville	3:30 PM "Project Prometheus: Design and Analysis of a Modular Aerostructure for a Small Launch Vehicle"; a team project by University of Alabama
	4:00 PM "3D Printed Stress Sensors for Non-Destructive Evaluation of Space Structures"; a team project by University of Central Florida

**Outstanding Branch Activity

WEDNESDAY, APRIL 7, 2021

12:30 PM Career Panel Q&A

Join us for a panel of 5 professionals working in or with experience in different sectors of the aerospace industry. We will discuss 5 main aspects of career opportunities, including Technical Expert, Business/Management in Aerospace, Academic Research/PhD, Civil Service (NASA), and Military Service (USAF).

Team Paper Category	Regional Design Teams Category & Outstanding Branch Activities
2:00 PM "SSBBR-X: Candidate Engine for Concorde"; a team project by University of Tennessee	
2:30 PM "Multi-Disciplinary Analysis and Design Optimization of a 3D Model Airplane"; a team project by Florida International University	2:30 PM "Affordable Earth Return On-Demand Reentry Vehicle Design"; a design project by Florida Institute of Technology
3:00 PM "Proposal for austere light attack aircraft - Project Aardvark"; a team project by University of Alabama in Huntsville	3:00 PM "University of Memphis Rocket Testing Team"; a design project by University of Memphis

3:30 PM Sponsor & Recruiter Hall

4:00 PM "Space-Weather Monitoring, 12U CubeSat Design"; a team project by Embry-Riddle Aeronautical University	4:00 PM "UF AIAA Mentorship Program"; Jose Aguilar, Alena Golda; University of Florida **
	4:15 PM "NC State Student Branch of AIAA's Outstanding Student Branch Activity"; Carissa Hardy, Brian Alonso; North Carolina State University **
4:30 PM "Dynamics of a 9-DOF Heterogeneous Robotic Platform for Spacecraft Motion Emulation"; a team project by University of Central Florida	4:30 PM "Meet the Geeks - ERAU Branch Activity"; Sarah Ketchersid; Embry-Riddle Aeronautical University **
	4:45 PM "UGA Community Outreach Project - Space Race: A Voyage to the Moon Board Game"; Trevor Houghton; University of Georgia **
5:00 PM "Kestrel Aeronautics: KA-Ranger"; a team project by University of Alabama in Huntsville	

THURSDAY, APRIL 8, 2021

Freshman/Sophomore Open Topic Category
8:30 AM "Slotted, Natural-Laminar-Flow Airfoil: A Revolutionary Technology for Fuel Efficiency"; Sreya Kumpatla; University of Tennessee
9:00 AM "Applications of Architecture for Future Martian Habitats"; David Delgado; University of Florida
9:30 AM "Survey of Autonomous Systems in Space"; Gabriella Peburn; University of Florida

10:00 AM Sponsor & Recruiter Hall

11:00 AM "Trust the Process: An Investigation into Astrophotography"; Neil Adake; University of Florida
11:30 AM "Effect of Varying Reynolds Number On The Aerodynamic Design of Lifting Surfaces"; Seshan Jayapregasham; Embry-Riddle Aeronautical University

**Outstanding Branch Activity

FRIDAY, APRIL 9, 2021

12:00 PM Awards Presentation
Mark Whorton, Chief Technology Officer of The Georgia Tech Research Institute, will emcee our awards presentation.
There will also be a special presentation during this time from Robert Lightfoot, Vice President of Strategy and Business Development for Lockheed Martin Space.



CONTRIBUTORS

Thanks are offered to those companies, groups, universities and individuals whose financial assistance, equipment, and/or services made this conference possible.

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ACKNOWLEDGEMENTS

The AIAA Region II Sections are now in their sixty-sixth year of participation in sponsoring the Southeastern Regional Student Conference. Special thanks to all of the volunteers on the Region II Student Conference Committee, the faculty advisors, the on-site judges, and the technical paper judges.



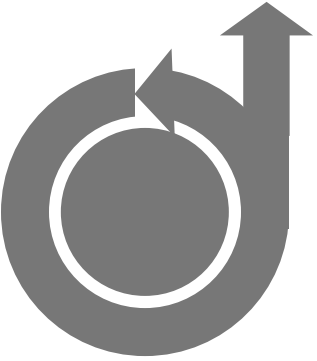
Thanks to the AIAA Foundation and Lockheed Martin for their generous financial support of all of the AIAA Regional Student Conferences. The AIAA Foundation provides award funding for the technical paper presentations in the undergraduate, masters, and team categories.



The host for the 2021 Southeastern Regional Student Conference is the Student Branch from the University of Alabama.

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72nd ANNUAL SOUTHEASTERN
REGIONAL STUDENT CONFERENCE
APRIL 5-9, 2021

VIRTUAL CONFERENCE
Tuscaloosa, Alabama

CORPORATE HOST:
Lockheed Martin

HOST:
Student Branch
American Institute of Aeronautics and Astronautics
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University of Central Florida
University of Florida
University of Georgia
University of Memphis
University of North Carolina - Charlotte
University of Tennessee - Chattanooga
University of Tennessee
University of Tennessee Space Institute
Vanderbilt University

Sunday Night

Welcome Social

Join the Networking and Social channel in Teams to kick off the first night of the virtual conference. Enjoy this time for casual conversations with other attendees and join in on some live distributed trivia games to put your engineering knowledge to the test. This event will take place from **4:00 PM until 6:00 PM**. This is also a great opportunity to make sure your setup with Microsoft Teams is working and to get used to the interface if it is new to you. That will help get Monday off to a smooth start.



Wednesday Afternoon

Career Panel Q&A

Join us for an opportunity to ask questions to professionals who work in the private and public sectors of the Aerospace Industry. The Q&A panel will be held from 12:30 PM until 2:00 PM.

Sponsor & Recruiter Sessions

Each day of the conference will have a break inserted to allow time to chat live with sponsors and recruiters. Stop by to find out information or ask any questions of the representatives there. You can also post questions at other times as well although you may not get an immediate response. This is always one of the great benefits of our conference and this year we are excited to offer this in a virtual format.

