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Fluid Dynamics
Timothy Eymann, Air Force Research Laboratory
Karthik Duraisamy, University of Michigan

General Aviation
Nicholas Borer, NASA Langley Research Center
Anthony Linn

Ground Testing
Erin Hubbard, Jacobs / NASA Glenn Research Center
Chris Jorgens, The Boeing Company

ITAR
Scott Sherer, Air Force Research Laboratory
Rick Graves, Air Force Research Laboratory

Meshing, Visualization, and Computational Environments
Carolyn Woeber, Pointwise, Inc.
Nitin Bhagat, University of Dayton Research Institute

Modeling and Simulation Technologies
Peter Zaal, San José State University / NASA Ames Research Center
Christine Taylor, The MITRE Corporation

Multidisciplinary Design Optimization
Justin Gray, NASA Glenn Research Center
Jason Hicken, Rensselaer Polytechnic Institute

Plasmadynamics and Lasers
Albina Trofina, Texas A&M University

Theoretical Fluid Mechanics
Matthew J. Munson, U.S. Army Research Office

Thermophysics
Alexandre Martin, University of Kentucky
Charles Bersbach, Raytheon Missile Systems

Transformational Flight Systems
Simon Briceno, Jaunt Air Mobility
Siddhartha Krishnamurthy, NASA Langley Research Institute

Vertical/Short Take-Off and Landing (V/STOL) Aircraft Systems
Mark Caivert, U.S. Army Combat Capabilities Development Command, Aviation and Missile Center
Craig Hange, NASA Ames Research Center

Flow Visualization Showcase
Manan Vyas, NASA
Sidra I. Silton, CCDC Army Research Laboratory
The 2020 AIAA AVIATION Forum Executive Steering Committee welcomes you to AIAA’s first virtual forum. Aerospace teaches us to adapt and because of the coronavirus pandemic, we’ve worked hard to transform an in-person event to all-virtual in just a few weeks. We have a slate of top-notch speakers and technical presentations to start conversations that will last long after this forum concludes. Thank you for joining us in this new frontier. We believe you will feel inspired about the future of our industry during this week!
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## SESSIONS AT A GLANCE

### GROW
- Technical Career Development

### CONNECT
- Networking

### EXPLORE
- the HUB & Exposition

### DISCOVER
- High Level

### DEVELOPMENT
- Student & Young Professionals

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- Noelle’s Story
- Steven’s Story

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PLENARY & FORUM 360 SESSIONS

MONDAY, 15 JUNE
0800–0900 HRS
Monday Plenary

KEYNOTE: Walt Odisho. Vice President and General Manager, Manufacturing, Safety & Quality, 737 Program and Renton Site, Boeing Commercial Airplanes

MODERATOR: Patrick “Pat” Schirmer. Vice President, Engineering Strategy and Operations, The Boeing Company

0930–1100 HRS
Sustainable Product Lifecycle — Integration Everywhere

MODERATOR: Teresa “Teri” M. Finchamp. Director, Future Production System, Product Development, Boeing Commercial Airplanes

PANELISTS:
Eric Barnes, Northrop Grumman Fellow, Additive Manufacturing and Emerging Programs, Northrop Grumman
Karl Hutter, President and CEO, Click Bond
Parimal “PK” Kopardekar, Director, NASA Aeronautics Research Institute, NASA Ames Research Center
John Wiitala, Vice President, Technical Services, United Airlines

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PLENARY & FORUM 360 SESSIONS

TUESDAY, 16 JUNE

0800–0900 HRS

Tuesday Plenary
KEYNOTE: James Bridenstine, Administrator, NASA
MODERATOR: Graham Warwick, Executive Editor, Technology, Aviation Week

0930–1130 HRS

NASA Aeronautics Shaping the New Era of Aviation
MODERATOR: Richard Wahls, Strategic Technical Advisor, Advanced Air Vehicles Program, Aeronautics Research Mission Directorate, NASA
OPENING REMARKS: Robert Pearce, Associate Administrator, Aeronautics Research Mission Directorate, NASA
PANELISTS:
John Cavolowsky, Director, Transformative Aeronautics Concepts, Aeronautics Research Mission Directorate, NASA
James Kenyon, Director, Advanced Air Vehicles Program, Aeronautics Research Mission Directorate, NASA
Lee Noble, Acting Director, Integrated Aviation Systems Program, Aeronautics Research Mission Directorate, NASA
Akbar Sultan, Director, Airspace Operations and Safety Program, Aeronautics Research Mission Directorate, NASA

1430–1600 HRS

CFD2030 – Aerospace Grand Challenges for Revolutionary CFD Capabilities
MODERATOR: Juan Alonso, Vance D. and Arlene C. Coffman Professor, Aeronautics & Astronautics, Stanford University
PANELISTS:
John Cavolowsky, Director, Transformative Aeronautics Concepts, Aeronautics Research Mission Directorate, NASA
Reynaldo “Ray” Gomez III, Aerodynamics Discipline Lead, NASA Johnson Space Center
Micah Howard, Principal Member, Technical Staff, Sandia National Laboratories
Om Sharma, Senior Technical Fellow, Aerodynamics and Gas Turbines, Raytheon Technologies Corporation
Stephen Wells, Chief Project Engineer, The Boeing Company

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PLENARY & FORUM 360 SESSIONS

WEDNESDAY, 17 JUNE
0800–0900 HRS

Wednesday Plenary
KEYNOTE: Tom Vice, Chairman, President, and Chief Executive Officer, Aerion Corporation
MODERATOR: JD McFarlan III, Vice President, Functional Engineering, Lockheed Martin Aeronautics

0930–1100 HRS

Need for Speed
MODERATOR: JD McFarlan III, Vice President, Functional Engineering, Lockheed Martin Aeronautics

PANELISTS:
Peter Coen, Low Boom Flight Demonstration Mission Manager, Aeronautics Research Mission Directorate, NASA
Gene Holloway, Chief Sustainability Officer and Executive Vice President, Environment & Sustainability, Aerion Supersonic
Peter Iosifidis, Low Boom Flight Demonstrator (X-59) Program Manager, Lockheed Martin Corporation
Joel Kirk, Executive Leader, Advanced Systems Design and Technology, GE Aviation
Kevin Welsh, Executive Director, Office of Environment and Energy, FAA

1430–1600 HRS

Growing Today’s Workforce for Tomorrow’s Technology
MODERATOR: Irene Gregory, Senior Technologist, Advanced Control Theory and Application, NASA Langley Research Center

PANELISTS:
Jeanine Boyle, Vice President, Human Resources, Aurora Flight Sciences
P. Barry Butler, President, Embry-Riddle Aeronautical University
David Hamill, Director, Human Resources, and Lead, FAA Strategic Workforce Planning Initiative, FAA
Cindy Hasselbring, Senior Policy Advisor, STEM Education, Office of Science and Technology Policy, Executive Office of the President
Peter Kunz, Senior Chief Engineer, Unpiloted Systems and Chief Technologist, Boeing NeXt, The Boeing Company

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PLENARY & FORUM 360 SESSIONS

THURSDAY, 18 JUNE

0800–0900 HRS

Thursday Plenary

KEYNOTE: Grazia Vittadini, Chief Technology Officer, Airbus
MODERATOR: Amanda Simpson, Vice President, Research and Technology, Airbus Americas

0930–1100 HRS

View from the Inside: The Promise of Electric Propulsion Across the Aviation Spectrum

MODERATOR: Amanda Simpson, Vice President, Research and Technology, Airbus Americas

PANELISTS:
Steven Barrett, Director, MIT Laboratory for Aviation and the Environment, and Lead, MIT Electric Aircraft Initiative, Massachusetts Institute of Technology
Starr Ginn, Advanced Air Mobility National Campaign Lead, NASA
Ed Lovelace, Technical Fellow, High Power Electrical Systems, Aurora Flight Sciences
Greg McDougall, Founder and CEO, Harbour Air
Luciano Serra, Head, Systems Integrity, magniX

1430–1630 HRS

View from Technology: A National Blueprint for Advanced Aerial Mobility

MODERATOR: Ella Atkins, Professor, Aerospace Engineering, University of Michigan

OPENING REMARKS:
NAE Advancing Aerial Mobility Report Overview
Nick Lappos, Senior Technical Fellow, Advanced Technology, Sikorsky, A Lockheed Martin Company, and Chair, Committee on Enhancing Air Mobility, National Academy of Engineering

PANELISTS:
Nick Lappos, Senior Technical Fellow, Advanced Technology, Sikorsky, A Lockheed Martin Company, and Chair, Committee on Enhancing Air Mobility, National Academy of Engineering
Constantine “Costa” Samaras, Associate Professor, Civil and Environmental Engineering, Carnegie Mellon University
Paul McDuffee, Business Development Executive, Boeing HorizonX
Atherton Carty, Aeronautical Engineer, Lockheed Martin Advanced Development Programs
Peter Shannon, Founder, Managing Director, Radius Capital

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PLENARY & FORUM 360 SESSIONS

FRIDAY, 19 JUNE

0800–0900 HRS
COVID-19 And Civil Aviation Markets: A Bit Like Falling Off A Cliff, Only Without the Nice View
KEYNOTE: Richard Aboulafia, Vice President, Analysis, Teal Group Corporation
MODERATOR: Brian Yutko, Chief Technologist, Boeing NeXt, and Chief Strategy Officer, Aurora Flight Sciences

0930–1100 HRS
“Sometimes you will never know the value of something, until it becomes a memory.”
MODERATOR: Thomas Irvine, Consultant, TBI Aerospace Consulting LLC
PANELISTS:
- Brian Yutko, Chief Technologist, Boeing NeXt, and Chief Strategy Officer, Aurora Flight Sciences
- Ella Atkins, Professor, Aerospace Engineering, University of Michigan
- Christopher Hernandez, Vice President, Research, Technology, & Engineering, Northrop Grumman
- W. Allen “Al” Kilgore, Deputy Director, Aeronautics, NASA Langley Research Center
- JD McFarlan III, Vice President, Functional Engineering, Lockheed Martin Aeronautics
- Patrick “Pat” Schirmer, Vice President, Engineering Strategy and Operations, The Boeing Company
- Amanda Simpson, Vice President, Research and Technology, Airbus Americas
- Edgar “Ed” Waggoner, Director, Integrated Aviation Systems Program, Aeronautics Research Mission Directorate, NASA
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**SPECIAL SESSIONS**

**WEDNESDAY, 17 JUNE**

**0930–1700 HRS**

**Transformational Flight Certification Symposium**

This symposium focuses on building type certification into the design of advanced aircraft. Attendees will learn about the FAA certification process and the role of ASTM, SAE, GAMA, and RTCA standards and guidelines in the certification process. The symposium will feature panelists from FAA certification and flight standards offices, and leaders of standards committees discussing their roadmaps. A panel of advanced aircraft manufacturers will speak about their experiences working through product development toward design certification.

**0930–1030 HRS**

**The Road from Dreams to Certification**

**SPEAKER:** Lowell Foster, Director of Global Innovation and Engineering, GAMA

Foster will provide a realistic and useful guide to aircraft designers who are turning their dreams into a marketable product. This includes questions that the applicant needs to answer to define special conditions and certification plans for design, and operational approaches not presently covered under certification standards.

**1030–1130 HRS**

**Certification for Electric and Advanced Aircraft: Lessons Learned and How-Tos**

**MODERATOR:** Wes Ryan, Unmanned and Pilotless Aircraft Technology Lead, Policy & Innovation Division, FAA

**PANELISTS:**
- Gary Horan, Propulsion Standards Staff, Electric/Hybrid-Electric Focal, Policy & Innovation Division, FAA
- David Jenson, Small Airplane Standards, Electric Propulsion Lead, Policy & Innovation Division, FAA
- Andy Supinie, Propulsion Standards Staff, Electric/Hybrid-Electric Focal Policy & Innovation Division, FAA

The FAA perspective on certification on novel and emerging aircraft technologies and operations. Learn how to work with the FAA and get your aircraft certified and into service.

**1130–1330 HRS**

**Manufacturers on Certification for Electric Aircraft**

**MODERATOR:** Lowell Foster, Director of Global Innovation and Engineering, GAMA

**PANELISTS:**
- Greg Bowles, Head of Government Affairs, Joby
- Patrick Darmstadt, Drive and Power Systems Engineer and Technologist at the Boeing Company
- Andrew Gibson, President, ES Aero
- Tom Gunnarson, Wisk
- Luciano Serra, Head of Systems Integrity, magniX
- Tine Tomazsic, Group CTO, Pipistrel Vertical Solutions

Manufacturers share their experiences introducing electric propulsion into operational aircraft, and the challenges they experienced with their civil aviation authorities around the world. They will also share their lessons, in which the civil aviation authorities have evolved their certification, and in some cases, regulatory framework, to address the new technologies. The manufacturers discuss the importance of building standards from which means-of-compliance can be established, and its effect on the manufacturing process.

**1400–1630 HRS**

**Automation Certification Path**

**MODERATOR:** Wes Ryan, Unmanned and Pilotless Aircraft Technology Lead at Federal Aviation Administration

**PANELISTS:**
- Ella Atkins, Professor, Aerospace Engineering Department, University of Michigan
- Anna Dietrich, Consultant, Policy for Innovative General Aviation
- Noel Duerksen, Consultant
- Borja Martos, President, Flight Level Engineering
- David Sizoo, Project Manager, FAA

New research and work is being poured into increasing automation onboard aircraft toward future autonomy. How will autonomy be certified? Emergency autonomous autoland was slated for certification by the FAA in 2019. ASTM working group 377 is working on the Three Pillars of Autonomy to set a standardization path leading to certifiable avionics. This panel will discuss these breakthroughs, what’s coming next, and how to work within these paths to lead a new design to certification.
NASA AERONAUTICS

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Join us at the 2020 AIAA AVIATION Forum as we recognize the very best in our industry—those individuals and teams who have taken aerospace technology to the next level, who have advanced the quality and depth of the aerospace profession, who have leveraged their aerospace knowledge for the benefit of society. Their achievements have inspired us to dream and to explore new frontiers.

**AEROSPACE DESIGN AND STRUCTURES**

*Technical Awards*

**2020 AIAA Multidisciplinary Design Optimization Award**

Raymond M. Kolonay, Air Force Research Laboratory (AFRL)

For visionary leadership in the MDO community and development of nonlinear unsteady aeroelastic optimization methods and collaborative/distributed architectures enabling large-scale multidisciplinary aircraft design.

**2020 AIAA Aerodynamics Award**

Mark D. Maughmer, Pennsylvania State University

For foundational developments in airfoil and wing design, advancement of novel airfoil configurations, and contributions to rotorcraft aeromechanics.

**2020 AIAA Fluid Dynamics Award**

Nadine Aubry, Tufts University

For outstanding contributions to the reduced order modeling of turbulent flows and to microfluidics.

**2020 AIAA Ground Testing Award**

Mark R. Melanson, Lockheed Martin Aeronautics (retired)

For contributions to development/ground testing of the F-35, for decades of wind tunnel testing, and for sustained contributions to AIAA in multiple leadership roles.

**2020 AIAA James A. Van Allen Space Environments Award**

Louis J. Lanzerotti, New Jersey Institute of Technology

For significant contributions to our understanding of the space environment of the Van Allen radiation belts and leadership in establishing societal awareness of space weather.

**2020 AIAA Losey Atmospheric Sciences Award**

George C. Greene, Federal Aviation Administration (retired)

For outstanding contributions and leadership applied to fundamental understanding of aircraft wake turbulence.

**2020 AIAA Plasmadynamics and Lasers Award**

Mikhail N. Shneider, Princeton University

For seminal contributions to the theory and modeling of electric discharges and theoretical foundations of diagnostics based on coherent microwave and laser scattering.

**2020 AIAA Thermophysics Award**

Tom I-P. Shih, Purdue University

For significant contributions in the development and application of computational design tools for the thermal management of gas turbines to improve efficiency and service life.

**Best Papers**

**2020 Aerodynamic Measurement Technology Best Paper Award**

“Extending the Frequency Limits of ‘Postage-Stamp PIV’ to MHz Rates” (AIAA 2020-2018) by Steven J. Beresh, Russell Spillers, Melissa Soehnel, Seth Spitzer, Sandia National Laboratories

**2020 AIAA Applied Aerodynamics Best Paper Award**

“Examination of Pitch-Plunge Equivalence for Dynamic Stall over Swept Finite Wings” (AIAA 2020-1759) by Daniel J. Garmann and Miguel R. Visbal, Air Force Research Laboratory

**2019 AIAA Atmospheric and Space Environments Best Paper Award**


**2019 AIAA Aerodynamic Measurement Technology Best Paper Award**

“Oscillating Shock Impinging on a Flat Plate at Mach 6” (AIAA 2019-3077) by Gaetano M. D. Currao, Liam P. McQuellin, and Andrew J. Neely, UNSW Canberra, Australia; Fabian Zander and David R. Buttsworth, University of Southern Queensland, Australia; Jack J. McNamara, Ohio State University; and Ingo Jahn, University of Queensland, Australia

**2019 Fluid Dynamics Best Paper Award**

“Characterization of Laminar Separation Bubbles using Infrared Thermography” (AIAA 2019-2808) by Dallyn W. Wynyurchuk and Serhlyi Yarusevych, University of Waterloo

**2019 AIAA Ground Testing Best Paper Award**

“Free-Wave Based Nonlinear Aeroelastic Modeling of UAV Scale Cycloidal Rotor” (AIAA-2019-3245) by Atanu Halder and Mobie Benedicd, Texas A&M University

**2019 AIAA James A. Van Allen Space Environments Best Paper Award**

“Geometric Modeling for Unstructured Mesh Adaptation” (AIAA 2019-2946) by Michael A. Park, William Kleb, and William T. Jones, NASA Langley Research Center; Joshua A. Krakos and Todd Michal, The Boeing Company; Adrien Loseille, INRIA; Robert Haines, Massachusetts Institute of Technology; and John F. Dannenhoffer, Syracuse University

**2019 AIAA Fluid Dynamics Best Paper Award**

“Stall over Swept Finite Wings” (AIAA 2020-3245) by Miguel R. Visbal, OptiNav, Inc.

**2019 AIAA Applied Aerodynamics Best Paper Award**

“Examination of Pitch-Plunge Equivalence for Dynamic Stall over Swept Finite Wings” (AIAA 2020-1759) by Daniel J. Garmann and Miguel R. Visbal, Air Force Research Laboratory

**2019 AIAA Computational Fluid Dynamics Conference Best Paper Award**

“Oscillating Shock Impinging on a Flat Plate at Mach 6” (AIAA 2019-3077) by Gaetano M. D. Currao, Liam P. McQuellin, and Andrew J. Neely, UNSW Canberra, Australia; Fabian Zander and David R. Buttsworth, University of Southern Queensland, Australia; Jack J. McNamara, Ohio State University; and Ingo Jahn, University of Queensland, Australia

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**2019 AIAA Atmospheric and Space Environments Best Paper Award**

2019 AIAA Multidisciplinary Design Optimization Best Paper Award
“High-Fidelity Multidisciplinary Sensitivity Analysis Framework for Multipoint Rotorcraft Optimization” (AIAA 2019-1699) by Li Wang, NASA Langley Research Center; Boris Diskin, National Institute of Aerospace; Robert Biedron and Eric Nielsen, NASA Langley Research Center; and Valentin Sonneville and Olivier Bauchau, University of Maryland

2019 AIAA Plasmadynamics and Lasers Best Paper Award
“Dual-Pulse Laser Ignition Using Oxygen REMPI Preionization” (AIAA 2019-3117) by Carter Butte, Colorado State University; Ciprian Dumitrache, CentraleSupélec EM2C; and Azer P. Yalin, Colorado State University

2019 Thermophysics Best Paper Award
“Modeling Heatshield Erosion due to Dust Particle Impacts for Martian Entries” (AIAA 2020-0254) by Grant Palmer, Eric Ching, Matthias Ihme, Dirk Allofs, Ali Guelhan, AMA, Inc. at NASA Ames Research Center

2019 AIAA David Weaver Thermophysics Best Student Paper Award
“Investigation of Galileo Probe Entry Heating with Coupled Radiation and Ablation” (AIAA 2019-3360) by Aaron J. Erb, Thomas K. West, and Christopher O. Johnston, NASA Langley Research Center

2020 AIAA Plasmadynamics and Lasers Best Student Paper Award
“Complementary Laser Diagnostics of Metastable N2(A3Σu+,v) Molecules in Nonequilibrium Plasmas and in High-Speed Flows” (AIAA 2020-1743) by Elijah Jans, Ilya Gulko, Xin Yang, Terry Miller, Igor V. Adamovich, Ohio State University

AIRCRAFT TECHNOLOGY, INTEGRATION, AND OPERATIONS

Technical Award
2020 AIAA Aircraft Design Award
Udo Juerss, MicroDrones GmbH
For being the “father of the modern quadcopter” and for working for more than 20 years designing, testing, and improving the premier aircraft of the aircraft design industry.

Best Paper
2020 AIAA Aircraft Design Best Paper Award
“Development of an Efficient Mach=0.80 Transonic Truss-Braced Wing Aircraft” (AIAA 2020-0011) by Neal Harrison, Michael Beyar, Eric Dickey, and Kirshna Hoffman, Boeing Research and Technology; and Gregory Gatlin and Sally Viking, NASA Langley Research Center

BUSINESS AND MANAGEMENT

Technical Award
2020 AIAA Hap Arnold Award for Excellence in Aeronautical Program Management Award
Jay E. Dryer, U.S. Department of Defense
For outstanding strategic technical leadership of NASA’s Advanced Air Vehicles and Fundamental Aeronautics Programs significantly advancing a wide range of aircraft – vertical flight through hypersonics

STUDENT PAPER COMPETITIONS

AIAA/CEAS Aeroacoustics
Applied Aerodynamics
Atmospheric and Space Environments
Multidisciplinary Design Optimization
Plasmadynamics and Lasers

All these papers can be found online at Aerospace Research Central (arc.aiaa.org). Thank you to the Technical Committees who took the time to judge these papers and recognize the ongoing advancement of our aerospace community.

DIVERSITY SCHOLAR RECIPIENTS

Anoop Kiran, University at Buffalo
Anusha Mody, Illinois Institute of Technology
Ashley Ochieng, Ohio State University
Celest Villagran, Texas A&M University - College Station
Christian Llanes, Embry-Riddle University - Daytona Beach
Donna Coyle, University of Washington Bothell
Humberto Caldelas, Massachusetts Institute of Technology
J Flores Govea, Clemson University
Kelly Ngo, Montgomery Community College, Rockville
Luis Pabon, Madrid California Institute of Technology
Mesfin Melaku, Eastern Michigan University
Nathan Pierce, University of Houston Clear Lake
Ricardo Cosme-Bell, Iowa State University
Tiffany Jewell, Metropolitan State University of Denver
MONDAY, 15 JUNE

1100–1200 HRS

**New Approaches to Aviation Cybersecurity**

**SPEAKER:** Steve Luczynski, CISO, T-Rex Solutions

Loss of the flying public’s trust in reliable, safe, and trustworthy air travel could impact national security. While the U.S. government and the aviation industry are working hard, individually and cooperatively, an untapped resource remains. By dispelling hacker myths and misconceptions, trust among these communities can increase their collective ability to contribute more effectively to bolstering the cybersecurity of air travel.

1730–1930 HRS

**Virtual Student Team Trivia**

*Sponsored by Lockheed Martin*

All students are invited to battle each other for bragging rights and the top prize. Network virtually by creating a team or let us create one for you! There will be aerospace questions, plus fun questions about geography, history, current events, music, movies, television, and more.

**How to participate:** Email michaell@aiaa.org with your team name and team roster, which includes all participants’ names and emails. Teams may consist of 2-4 players. If you want to play, but do not have a team, we will pair you with other individual players. Limited to the first 50 teams.

The game will be hosted online through Zoom. When we ask a question, you will go to a Zoom “Breakout Room” where your team will deliberate the answer for a couple of minutes. Then the rooms will close, and you will submit your answers from the main session.

Electronic gift cards will be awarded to the top team. Join us for the fun!

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**Navy Forum SBIR/STTR Transition**

*Prerecorded, available all week*

We’re joining the virtual AIAA AVIATION Forum to bring you the same opportunities to learn about our aviation-related small businesses that were slated to exhibit in Reno. Scroll down to the Tech Talk section to view their digital profile and a recorded Tech Talk — exactly as it would have been presented in the HUB. Have a question? We will help you Meet the Expert! behind the technology and turn your questions into solutions. Find out why we say we are virtually delivering Tomorrow’s Technology Today! Click here to join: [https://navyfst.com/](https://navyfst.com/)
TUESDAY, 16 JUNE

1100–1130 HRS
Multidisciplinary Design Optimization — Introduction to ESTECO
SPEAKER: Roel Van De Velde, Director AS&D, ESTECO
This video contains a brief introduction into MDO and ESTECO technology, which consists of modeFRONTIER, a desktop framework for process integration and automation, design of experiments, response surface modeling, and optimization; and VOLTA, a server-based framework for collaboration, distributed execution, and simulation process and data management.

1130–1230 HRS
AIAA Aerospace Virtual Recruitment Series: Northrop Grumman Student Event

At Northrop Grumman, Defining Possible is what they do every day. Join a live chat session with Northrop Grumman employees to learn how you can Define Possible!
AIAA Aerospace Virtual Recruitment Series take place every month with AIAA Corporate Members and is made exclusively available to AIAA student members and students attending AIAA forums.

1230–1300 HRS
Connecting and Innovating with the U.S. Department of Energy
SPEAKER: Conner Prochaska, Chief Commercialization Officer, Department of Energy, Office of Technology Transitions

1300–1400 HRS
Meet the Author, Daniel P. Raymer
Aircraft Design: A Conceptual Approach and RDSwin Student software

Join us for a Q&A with Daniel P. Raymer, Author of Aircraft Design: A Conceptual Approach. This book presents the entire process of aircraft conceptual design—from requirements definition to initial sizing, configuration layout, analysis, sizing, optimization, and trade studies. Widely used in industry and government aircraft design groups, it is also the design text at major universities around the world. A virtual encyclopedia of engineering, it is known for its completeness, easy-to-read style, and real-world approach to the process of design. The RDSwin Student software allows engineering students to take an aircraft design from first conceptual layout through functional analysis, leading to performance, range, weight, and cost results. By automating the “grunt work” of vehicle analysis, RDSwin Student makes time for the student to truly learn design.

1500–1600 HRS
Rising Leaders in Aerospace: Collaboration with the International Forum for Aviation Research (IFAR)

Sponsored by Lockheed Martin
Rising Leaders in Aerospace, in collaboration with the International Forum for Aviation Research Virtual Exchange series, invites you to hear from Greg Bowles, Head of Government Affairs at Joby Aviation. This session will provide you with an opportunity to develop experience and international networking. Access here: https://ifar.arc.nasa.gov/home

1730–1830 HRS
Technical Networking Sessions

TUESDAY, JUNE 16 & WEDNESDAY, JUNE 17

1730–1830 HRS
Tweet Up — Social Media During #AiaaAviation

Make your voice heard and connect with your peers online during #AiaaAviation Forum by using the hashtag. Join #AIAA staff for a Tweet Up on Zoom and mingle with your peers in a casual environment.

aiaa.org/virtualaviation
**WEDNESDAY, 17 JUNE**

**1100–1245 HRS**

**Rising Leaders in Aerospace: Speed Mentoring**

* Sponsored by Lockheed Martin

Students and young professionals are invited to participate in a virtual speed mentoring session that will take place on Zoom. It will be divided into 4 rounds of 20 minutes each. During each 20-minute round in Zoom, small groups of mentors will share their experiences and provide guidance for navigating your career. Participants will also have the opportunity to ask questions and request practical advice. At the end of each round, participants can stay in their breakout room for the next round of mentors. This session has a max capacity of 80 attendees.

**1300–1430 HRS**

**AIAA Aerospace Virtual Recruitment Series: Lockheed Martin Student Event**

* Lockheed Martin

Students and recent graduates will gain insight into Lockheed Martin’s workplace culture and learn about upcoming internship opportunities, current job openings, and exciting projects that are changing the way we think about aviation. In this chat session you will enter a text chat with one of Lockheed Martin’s teammates. You may also be invited to video or audio chat during this time. Preregistration with your resume is required.

**1330–1400 HRS**

**When NASA Gives the Lead to Universities**

What happens when NASA turns over the reins to universities for a research effort that’s at the system level? This is NASA’s University Leadership Initiative (ULI). Hear from members of the ULI team led by the University of Tennessee, Knoxville – Dr. Jim Croder (UTK), students Missy Karman (UTK), Phillip Rishel (Penn State), Anna ‘Liece’ Tessman (UTK) – and NASA’s John Cavolowsky. Jim’s team is working to demonstrate a viable aerodynamic wing-design concept that enables a 70% reduction in aircraft fuel/energy consumption relative to 2005 baseline for revolutionary aircraft configurations. Why did they apply? How is it working? What do the students think about their ULI experience? And your questions.

**1730–1830 HRS**

**Technical Networking Sessions**

Swing by the AIAA AVIATION Forum Technical Networking sessions on Tuesday, 16 June, and Wednesday, 17 June, at 1730-1830 hrs ET to meet up with your colleagues. Stroll through the technical “hallways” and bump into old colleagues, make new connections, and join the conversation.

**THURSDAY, 18 JUNE**

**1130–1200 HRS**

**X-59 Quiet Supersonic Technology X-plane Overview**

* Speaker: Michael Buonanno, Air Vehicle Lead, X-59

Join us for an introduction and status update on the development of NASA’s X-59 Quiet Supersonic Technology X-plane, currently being built in Palmdale, CA by Lockheed Martin’s Skunk Works®. The talk will include an overview of the mission, details of the design, and progress on the assembly and integration effort.

**1230–1400 HRS**

**Rising Leaders in Aerospace: Embracing Generational Gaps in the Workplace**

* Sponsored by Lockheed Martin

In a relatively established industry, it is important for a young/new employee to know how to integrate into the workforce. In this panel discussion, we will explore how to develop the skills needed to integrate with a multigenerational workforce and how to embrace generational gaps once in the workforce.

**Speakers:**

- Ben Linder, Director of Engineering, 777 and 777X Programs
- Gavin Ananda, Systems Engineer/Aerospace Engineer, Airborne Detect & Avoid, Zipline
- Carolyn Overmyer, Systems Engineering Director, Lockheed Martin Space

**1400–1430 HRS**

**Interview with Aerospace America: Minimizing COVID-19 Risks When We Fly**

Join us for a Q&A with Mike Delaney, Vice President, Digital Transformation, Boeing Commercial Airplanes, and Leader, Confident Travel Initiative, to learn more about lessening risks when we are in the air.
Where today meets tomorrow.

The Xcelerator portfolio of software and services, which provides the industry’s most comprehensive digital twin is why Siemens is trusted by aerospace manufacturers and government agencies to enable the next generation design, manufacturing and maintenance innovation through increased automation and digitalization.

www.siemens.com/software/aerospace
EXHIBITORS

Aerospace Research Central (ARC)

ARC Support
☎ 703-264-7500
✉ arcsupport@aiaa.org
arc.aiaa.org

Access the world’s best resource for aerospace technical information. Explore over 300 books, almost 200k technical articles, 8 active journals, the latest industry standards, and so much more!

Click Bond, Inc

Joe Nielander
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www.clickbond.com

Proudly serving the aerospace industry since 1987, Click Bond supports global leaders in the design and manufacture of high-performance platforms and systems. Over thirty years, we’ve expanded our reach, bringing our capabilities and the benefits of adhesive bonded fastening to bear on the technical challenges of the marine, energy, and other industrial sectors.

Department of Energy - Office of Technology Transitions

Aaron Michael
☎ 240-848-0105
✉ aaron.michael@hq.doe.gov
www.energy.gov/technologytransitions/office-technology-transitions

LIVE VIRTUAL EVENT:
⏰ Tuesday 16 | 1230–1300 hrs | Connecting and Innovating with the U.S. Department of Energy

ESTECO

Sally Duquesnel
☎ 248-885-9507
✉ duquesnel@esteco.com
www.esteco.com

ESTECO is an independent software provider, highly specialized in numerical optimization and simulation data management with a sound scientific foundation and a flexible approach to customer needs. Our technology brings modularity, ease of use, standardization, and innovation to the engineering design process. ESTECO’s smart engineering suite brings enterprise-wide solutions for design optimization, simulation and process data management (SPDM), and process integration and automation.

LIVE VIRTUAL EVENT:
⏰ Tuesday 16 | 1100–1130 hrs | Multidisciplinary Design Optimization — Introduction to ESTECO

Exhibitors LIVE!

Available Monday–Friday, 1200–1400 hrs

We invite you to connect virtually with exhibitors
› Join Live Virtual Meetings
› Learn about Innovative Products & Services
› Get the Latest Company News
› Make New Connections
› See Who is Hiring
› Send Emails
› Request Meetings

Exhibitors LIVE! hours are when most exhibitors will be hosting their own live events and readily available to answer emails. Check with each exhibitor for additional times that they are available and hosting events during the forum.

Exhibitors List
Browse the exhibitor list and click on a name to visit an online booth.

Video Gallery
Learn about innovative products that are solving real-world problems in aviation.

Product Gallery
Start important business conversations with exhibitors by researching their products and services.

Attendee Briefcase
Log in and introduce yourself to exhibitors via email or request a virtual meeting.
IC2 (Interdisciplinary Consulting Corp)
David Mills
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e-mail: sales@thinkic2.com
www.thinkIC2.com

IC2 (Interdisciplinary Consulting Corporation) brings over 20 years of experience to provide innovative precision instrumentation solutions to the global test and measurement community. With a team of in-house sensor developers, IC2 uses industry-proven development techniques to maximize performance and leverage application-specific transduction methods.

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MathWorks
Chris Andreotes
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mathworks.com

The MATLAB and Simulink product families are fundamental applied math and computational tools adopted by more than 5000 universities and colleges. MathWorks products help prepare students for careers in industry, where the tools are widely used for data analysis, mathematical modeling, and algorithm development in collaborative research and new product development.

NASA
Karen Rugg
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nasa.org/aeronautics

NASA Aero explores technologies to reduce aircraft noise and fuel use, get you gate-to-gate safely and on time, and transform aviation into a new economic engine at all altitudes. COVID-19 has dealt a particularly damaging blow to aviation, but we’re here — working with industry and government partners to regain public confidence, accelerating new technology development through stable R&D investments, and achieving rapid adoption of those new technologies. NASA’s with You When You Fly.

Northrop Grumman
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www.northropgrumman.com

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in autonomous systems, cyber, C4ISR, space, strike, and logistics and modernization to customers worldwide. Please visit news.northropgrumman.com and follow us on Twitter, @NGCNews, for more information.

LIVE VIRTUAL EVENT:

Wednesday 17 | 1130–1230 hrs | AIAA Aerospace Virtual Recruitment Series: Northrop Grumman Student Event
GENERAL INFORMATION

CONFERENCE PROCEEDINGS
Proceedings for the forum will be available online. The cost is included in the registration fee where indicated. Online proceedings are available now. Please follow the instructions below to access the proceedings:

Procedures:
1. To view proceedings visit arc.aiaa.org > ARC > Meeting Papers.
   a. Log in with the link at the top right of the page.
   b. To browse, click on the Meeting Papers link at the top of the page and select the appropriate conference from the list.
   c. To search for individual papers, use the Quick Search toolbar at the top:
      i. Use the Search textbox to find papers by author, title or keyword
      ii. To search by paper number - click the Anywhere drop down, select Find by Paper, select the conference year, and enter the paper number
2. All manuscript files submitted by 28 May are currently in arc.aia.org
3. Direct any questions concerning access to proceedings and/or ARC to arcsupport@aiaa.org.

Manuscript Corrections:
1. The manuscript in the proceedings is the version of record and may not be edited. All changes will be available through the Crossmark feature. View corrections by clicking the Crossmark icon, located on every article’s page and PDF. Please visit https://arc.aiaa.org/page/crossmark for more information.
2. Corrections will be available online approximately 15 business days after the last day of the conference.
3. For concerns regarding the presentations file (e.g., uploaded MP4 file), please contact arcsupport@aiaa.org after 8 June 2020.

CERITIFICATE OF ATTENDANCE
The Certificates of Attendance will be sent to all registered attendees at the end of the event. AIAA offers this service to better serve the needs of the professional community. Claims of hours or applicability toward professional education requirements are the responsibility of the participant.

EMPLOYMENT OPPORTUNITIES
AIAA members can post and browse resumes, browse job listings, and access other online employment resources by visiting the AIAA Career Center at careercenter.aiaa.org.

MEMBERSHIP
AIAA is a great resource for networking with other aerospace professionals, continuing your education, staying up to date on the latest news, and furthering your career. Aerospace is a field where Membership Matters. Regardless of what aerospace area you are involved with, being an active member of AIAA can accelerate and strengthen your professional life. Don’t miss any of the benefits that come with being a part of the largest professional association built by and for aerospace practitioners, aia.org/member

CONTINUE THE CONVERSATION ON ENGAGE
AIAA Engage allows you to connect with a community of nearly 30,000 of your AIAA colleagues online. Visit the 2020 AIAA AVIATION Forum community to connect with other forum attendees, discuss the sessions, share your experiences, and ask follow-up questions. Visit aiaa.org/Engageaviation to continue the conversation.

NONDISCRIMINATORY PRACTICES
AIAA accepts registrations irrespective of race, creed, sex, color, physical handicap, and national or ethnic origin.

PHOTO/VIDEO NOTICE AND POLICY
Participation in an AIAA event constitutes consent to the use and distribution by AIAA and its employees, agents, and assignees of the attendee’s image and/or voice for purposes related to the mission of AIAA, including but not limited to, publicity, marketing, other electronic forms of media, and promotion of AIAA and its various programs and events. Photographs and/or screen shots of presentations, slides, or materials from this or any AIAA event—whether expressly copyrighted or not—are for personal use only and may not be published, reproduced, or distributed. Do not photograph any such images that are labeled as confidential and/or proprietary.

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Video or digital recording during any portion of this event is prohibited without prior written permission of AIAA.

Please contact AIAA’s Communications Manager, Michele McDonald (michelem@aiaa.org), with requests or questions.

“NO PAPER, NO PODIUM” AND “NO PODIUM, NO PAPER” POLICY
If a written paper and its presentation with audio is not submitted by the stated deadlines, authors will not be permitted to present the paper at the forum. Also, if an author is not available to participate in the assigned Q&A hosted virtually, their submission will be withdrawn from the proceedings. It is the responsibility of those authors whose papers and presentations are accepted to ensure that a representative participates. These policies are intended to improve the quality of the program for all participants, and to ensure that the published proceedings accurately reflect the presentations made at the forum.

JOURNAL PUBLICATION
Authors of appropriate papers are encouraged to submit them for possible publication in one of the Institute’s archival journals: AIAA Journal; Journal of Aerospace Information Systems; Journal of Air Transportation; Journal of Aircraft; Journal of Guidance, Control, and Dynamics; Journal of Propulsion and Power; Journal of Spacecraft and Rockets; or Journal of Thermophysics and Heat Transfer. You may now submit your paper online at http://mc.manuscriptcentral.com/aiaa.
THANK YOU

for attending AIAA’s first-ever fully virtual forum. Registrants will continue to have access to the virtual forum at aiaa.org/virtualaviation through September 2020.