

Morning Program

9:00 AM	<u>Keynote Speaker</u> <i>Dr. Kevin Bowcutt, AIAA Fellow and Senior Technical Fellow and Chief Scientist of Hypersonics, Boeing Research & Technology</i> <i>Status and Challenges of Hypersonic Transportation and Derived Applications</i>		
	California Ballroom Space Chaired by Mr. P. Chase Schulze	Doubletree Room Climate and Applied Aerodynamics Chaired by Mr. Robert Welge	Hutton Centre Room Analytics and Education Chaired by Dr. Lotfi El-Bayoumy
10:00 AM	<i>Moon Diaries: What is the Lunar Orbital Home in Moscow Like?</i> , Bob Barboza, Barboza Space Center	<i>Climate Change, The Energy Innovation and Carbon Dividend Act of 2019, H. R. 763</i> , James Martin, AIAA Orange County Section	<i>Analytics and Engineering, and what it means to You</i> , Joseph (Gene) Justin, University of Redlands
10:30 AM	<i>The Future Market Demand for Space Launch Vehicles</i> , Cherie L. Johnston, A.R. Space Systems and Kate Lucey, H.S. Dracones		<i>The Pendulum, the Pyramid, the Parthenon, and the Pound: The Pendulum and Standards of Measure in the Ancient World</i> , Roland A. Boucher
11:00 AM	<i>Adapting NASA GMAT Software for Lunar Mission Simulations</i> , Don V Black, PhD and Gage Gross	<i>Discrete Vortex Modeling of Inviscid Flow in Aerodynamic Flutter</i> , Emma C. Chao and William G. Culbreth, PhD, University of Nevada, Las Vegas	<i>Translating Industry Experience into the Classroom</i> , Bethany Orozco, EnCorps STEM Teachers Program
11:30 AM	<i>How did it Happen that the Apollo LMDE was made by STL-TRW?</i> , Gerard W. Elverum, Fellow AIAA	<i>Quasi-One Dimensional Flow Through a Nozzle, With a Shock (Master's Thesis)</i> , Isaiah Navarro , University of California, Irvine	<i>Engineering in High School – Working at Learning</i> , Nino Polizzi, Samueli Academy
12:00 PM	<u>Luncheon / AIAA OC Year-in-Review Presentaion / Networking</u> Buffet lunch served in the check-in area. / Enjoy your lunch in the Callifornia Ballroom and listen to the AIAA OC Year-in-Review presentation		

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Afternoon Program

1:30 PM	<p align="center"><u>Keynote Speaker</u></p> <p align="center"><i>Dr. Marty Bradley, AIAA Fellow and Technical Fellow, Advanced Concepts, Boeing Commercial Aircraft</i></p> <p align="center"><i>Electric Aircraft Opportunities & Challenges - A Boeing Perspective</i></p>		
	<p align="center">California Ballroom</p> <p align="center">The Apollo Program / Invited Special Session</p> <p align="center">Chaired by Mr. Charles H. Lowry</p>	<p align="center">Doubletree Room</p> <p align="center">Aircraft</p> <p align="center">Chaired by Dr. James Martin</p>	<p align="center">Hutton Centre Room</p> <p align="center">Manufacturing/Structures</p> <p align="center">Chaired by Dr. Joseph (Gene) Justin</p>
2:30 PM	<p align="center"><i>Celebrating 50 Years Since The Apollo Program</i></p> <p align="center"><i>Successfully Landed a Man on the Moon</i></p> <p><i>Presentations and Open Discussion hosted by:</i> Charles H. Lowry, NAA/Rockwell (Retired) Larry Korb, NAA/Rockwell (Retired), Author Ed Smith, Chief Engineer, Apollo program, NAA/Rockwell (Retired)</p>	<i>Taming Thermal Shock (Boeing H.S. Intern Project) , Jessica Yen, Diamond Bar High School and Christine Wang, Brea Olinda High School</i>	<i>Continuous Improvement and Smart Factory (Industry 4.0) , Carlos Chavez, Crean Innovations</i>
3:00 PM		<i>Commercial Airplanes Product Development, Advanced Concepts Overview , Eric Andrews, Boeing Commercial Airplanes Advanced Concepts</i>	<i>Metal Additive Manufacturing Simulation – Printing It Right the First Time , Hanson Chang, MSC Software Corporation</i>
3:30 PM		<i>Trajectory Planning for Autonomous Parafoils in Complex Terrain , Brian Le Floch, Systems Technology, Inc.</i>	<i>Effect of End Fixity Modeling on Vibration Behavior of Mechanical Systems , Lotfi El-Bayoumy, Moog/Retired</i>
4:00 PM		<i>System Identification of a Small UAS in Support of Handling Qualities Evaluations , Justin P. Miller, P. Chase Schulze, and David H. Klyde, Systems Technology, Inc.</i>	
4:30 PM		<i>Falling from 10,000 ft. - Investigating One of the Most Mysterious Airplane Accidents and the Story of the Sole Survivor , Teresa Konopka, Boeing Commercial Airplanes (Virtual)</i>	

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Poster Presentations

Taming Thermal Shock (Boeing H.S. Intern Project)
Jessica Yen, Diamond Bar High School



**Measuring the Change of
Solar Panel Efficiency against
Real-Time Altitude,
Temperature, Humidity and**

Team Name: Vertical Projectile

(Representing Sierra Vista Middle School)

Poster presentation by:

Samagra Pandey (Northwood High School)

Cordelia Tucker (Irvine High School)

Jason Cheung (Orange County School of the Arts)

Adult Educators in attendance:

Edward Rocha

Binay Pandey



Testing Rocket Motors Impulse

Elias Martinez, Eric Patt

Edsel Lara, Justin Pascua

Ciaran Carmack, Gabriel Lira

Alex Cisneros