The Embry-Riddle Aeronautical University (Prescott Campus) College of Security and Intelligence has created a three-session symposium to discuss the current and future status of unmanned aerial systems (UAS). Embry-Riddle’s Global Security and Intelligence Studies (GSIS) program features a unique blend of academic and professional studies designed to equip students with the knowledge and skills necessary to become future leaders in the intelligence, security and law enforcement communities. Friday’s GSIS symposium sessions are: UAS Today, UAS Tomorrow, and UAS Collaboration & Research Opportunities.

UAS Today will discuss the current state-of-the-art technology that promotes the proliferation and expansion of UAS, as well as the burgeoning counter-UAS industry that threatens to alter the course of UAS development.

UAS Tomorrow will examine potential legal, regulatory, and technological aspects that will likely influence the future of UAS. The first two panel sessions features experts from both the public and private sector who will present ideas and concepts about diverse aspects of UAS. The audience will then have an opportunity to engage in a rich discussion about where the industry stands today and where it is headed tomorrow.

In the final session, UAS Collaboration & Research Opportunities, presenters will share their research on different aspects of UAS and will provide an opportunity for members of the audience to ask questions and develop ideas that can lead to future collaboration and research.

I hope that you will enjoy the scope of the expertise gathered at this A³iR Con 2016 Symposium.

Ty Groh, Symposium Chair
Associate Professor, Global Security & Intelligence Studies
THURSDAY, JANUARY 14

10:00 a.m. -7:00 p.m.  Early Registration/Help Desk/Exhibitor Set up  San Marcos Ballroom Foyer

Noon -1:00 p.m.  Lunch for Early Arrivals (RSVP required)  San Marcos Ballroom A

1:30 p.m. -3:00 p.m.  Leadership Research  San Tan Ballroom
   Co-Chairs: Tim Holt, ERAU-WW; Linda Pittenger, ERAU-WW
   • “The Recipe for Hiring and Engaging Superior Performers: Ingredients for Success”
     Linda Pittenger, ERAU-WW (#1254)

3:00 p.m. -3:30 p.m.  Break  San Marcos Ballroom Foyer

3:30 p.m. -5:00 p.m.  Early Bird Research Roundtable and Discussion  San Tan Ballroom
   Chair: Jacqueline Luedtke, ERAU-PC
   Note: Discussants will be listed in the final conference proceedings.

5:00 p.m. -7:00 p.m.  Industry-sponsored Opening Reception (appetizers)  Pergola Patio / San Marcos Foyer
   Exhibitor and Sponsor Partners Posters/Visual Displays (ticketed and cash bar)
   Host: ERAU Corporate Relations, Lou Seno
   Chair: Merrie Heath, ERAU-PC

7:00 p.m.  Dinner on Your Own  Chandler Historic District

Key Legend:
San Marcos WiFi Password: SanMarcosGR1
ERAU-PC, Embry-Riddle Aeronautical University, Prescott
ERAU-DB, Embry-Riddle Aeronautical University, Daytona Beach
ERAU-WW, Embry-Riddle Aeronautical University – Worldwide
FRIDAY, JANUARY 15

7:00 a.m. - 8:00 a.m.  
Exhibitor Set up (option)  
San Marcos Ballroom Foyer

7:30 a.m. - 8:00 a.m.  
Volunteer and Staff Logistics Meeting  
Chair: Dawn Marcuse, ERAU-PC  
San Marcos Ballroom Foyer

8:00 a.m. - 9:00 a.m.  
Continental Breakfast  
San Marcos Ballroom Foyer

8:00 a.m. - 7:00 p.m.  
Registration and Help Desk  
San Marcos Ballroom Foyer

9:00 a.m. - 10:00 a.m.  
A³iR Con 2016 Opening Address/Welcome  
San Marcos Ballroom B  
Opening: Brent Bowen, A³iR Con Convener & Founder, ERAU-PC  
Welcome: Frank Ayers, Chancellor, ERAU-PC  
Moderator: Mary Niemczyk, Arizona State University  
Chair: Gen. Thomas Browning, A³iR Con Founding Chair  
- Keynote Address – Ryan Hartman, Insitu [9:10 a.m. - 9:30 a.m.]  
- Opening Honorary Introductions [9:30 a.m. - 10:00 a.m.]  
  Sy Liebergot, Apollo 13 EECOM; Nancy Graham, Former Director of ICAO’s Air  
  Navigation Bureau; Hon. Robert Sumwalt, National Transportation Safety Board  
  Member; James Malecha, Federal Aviation Administration; Hon. Earl Weener,  
  National Transportation Safety Board Member; Suzanne Kearns, University Aviation  
  Association President  
Program Chair: David Worrells, ERAU-WW, briefing on concurrent sessions

10:00 a.m. - 10:30 a.m.  
Break  
San Marcos Ballroom Foyer

10:30 a.m. - noon  
A³iR Con 2016 Lead-off Concurrent Sessions  
San Tan Ballroom  
GSIS Symposium: UAS Today  
Chair: Ty Groh, ERAU-PC; Co-Chair: Stewart Schreckengast, Purdue University  
Welcome: Philip Jones, Dean, College of Security & Intelligence, ERAU-PC  
Panelists: James Malecha, Federal Aviation Administration; Nancy Graham, Former  
  Director of ICAO’s Air Navigation Bureau (UAS Integration in Regulated  
  Airspace); PJ Springer, Air University; Greg Vert, CSI Cyber Expert/Link and  
  Information Security, ERAU-PC

Business & Corporate Aviation  
San Marcos Ballroom B  
Chair: Lou Seno, ERAU-Corporate Relations  
Panelists: Cameron (Cam) Gowans, Vice President of Sales, North America-West,  
  Embraer Executive Jets; Anthony Kioussis, President, Asset Insight, Inc.; Al Qualey,  
  President Emeritus & Senior Advisor, First Source Bank, South Bend, IN; Donald  
  Haloburdo, Director of Flight Operations, Jet Aviation, Teterboro, NJ; Shawn  
  Dinning, Managing Director/Co-Owner, Dallas Jet International
Noon - 2:00 p.m.  
Undergraduate Research Symposium & Lunch  
San Marcos Ballroom A/B
Moderator: Scott Burgess, ERAU-WW

Undergraduate Poster Competition  
San Marcos Ballroom A/B
Co-Chairs: Kelly George, ERAU-WW; Aaron Clevenger, ERAU-DB; Anne Boettcher, ERAU-PC

For a complete listing of poster titles and authors, see p. 11.
*Note: Posters will remain on display for the Graduate/Faculty/Industry Poster Session on January 15, 5:00-7:00 p.m.

Research & Industry Outreach (RIO)  
San Marcos Ballroom A/B
Chair: Linda Weiland, ERAU-WW

Closing remarks: Scott Burgess and David Worrells, ERAU-WW

1:00 p.m. - 2:00 p.m.  
Apollo EECOM: Journey of a Lifetime - Sy Liebergot  
La Ventana Ballroom

2:00 p.m. - 3:30 p.m.  
Concurrent Panel Sessions

GSIS Symposium: UAS Tomorrow  
San Tan Ballroom
Chair: Ty Groh, ERAU-PC
Panelists: Steven Pennington, United States Air Force, Director of Bases, Ranges and Airspace; Tom Foley, CSI, ERAU-PC; Radhakrishna Sampigethaya, College of Engineering, Software Engineering, ERAU-PC; Kurt Barnhart, Associate Dean of Research and Engagement, Kansas State University; Treggon Owens, Aerial MOB

Commercial Space Industry Snapshot  
Palo Verde
Chair: Sarah Nilsson, ERAU-PC
Panelists: Sonya McMullen, ERAU-WW; Nihad Daidzic, AAR Aerospace Consulting, Minnesota State University – Mankato
Presenters:
- “Small Catapult-Assisted Horizontal-Launch Reusable RBCC SSTO Spaceplane for Economical Short-Duration LEO Access” Nihad Daidzic, Minnesota State University-Mankato (#1209)
- “2015 Commercial Space Industry Snapshot as Seen Through the Eyes of the International Symposium for Personal and Commercial Spaceflight (ISPCS)” Sarah Nilsson, ERAU-PC (#1258)

Diversity & Its Impact on an Industry-wide Employment Shortage  
Palomino
Co-Chairs: Katherine Moran, ERAU-WW; Linda Weiland, ERAU-WW
Panelists: Suzanne Kearns, University Aviation Association President; Julius Keller, Ph.D. Student and Graduate Assistant-Purdue University; Jackie Luedtke, Associate Professor, College of Aviation, ERAU-PC; John Buyer, Director of Flight Training United Airlines
The Evolution and Future of the Aircraft Maintenance Industry  
La Ventana Ballroom

Chair: Patti Clark, ERAU-WW
Panelists: Brigadier General (Ret.) Art Cameron III, Lockheed Martin, F-35 Site Director/Luke AFB; Bobby G. Martin, Honeywell Aerospace, Program Director for USAF Platforms-F22/F-35; David S. Worrells, ERAU-WW; Kent H. Anderson, ERAU-WW

Presenter:
• “Hindrances to SMS Implementation in Aviation Maintenance Organizations”
  Daniel Siao, Middle Tennessee State University (#1243)

Virtual Poster Presentations  
Chandler Theater

Moderator: Scott Burgess, ERAU-WW
Co-Chairs: Kelly George, ERAU-WW; Aaron Clevenger, ERAU-DB; Anne Boettcher, ERAU-PC

For a complete listing of poster titles and authors, see p. 12.

3:30 p.m. -3:45 p.m.  
Break  
San Marcos Ballroom Foyer

3:45 p.m. -5:00 p.m.  
Concurrent Sessions

GSIS Symposium: UAS Collaboration & Research Opportunities  
San Tan Ballroom

Chair: Ty Groh, ERAU-PC
Panelist: Bryce Dickey, ERAU-PC

Presenters:
• “Human-Computer-Interface for Geo-Fencing in Small Unmanned Aircraft Systems” David Thirtyacre, ERAU-WW (#1238)
• “Adaptation of Forward Military Airspace Management Systems for Civilian UAS Emergency Services Operations” John Griffith, ERAU-WW (#1236)
• “UAS Cyber-related Vulnerabilities and Their Mitigation” Greg Vert, ERAU-PC; Radhakrishna Sampigethay, ERAU-PC

Integration and Development of Virtual Reality/Simulation  
Chandler Theatre

Moderators: Katherine Moran, ERAU-WW; Scott Burgess, ERAU-WW
Panelists: Dan Machiarella, Dean, College of Aviation, ERAU-DB; Grant Patterson, Information Technology, ERAU-WW; Bob Ferris, VirTra Systems; Ray Bedard, Founder, True Course Simulations

Upset Recovery and Energy Management  
La Ventana Ballroom

Chair: Bill Korner, President & CEO, Flight Research, Inc.

Presenters:
• “Upset Recovery” Bill Korner, Flight Research, Inc.
• “Energy Management” Juan Merkt, ERAU-PC

Training and Education  
Palomino

Chair: Suzanne Kearns, University Aviation Association President

Presenters:
• “Factors Affecting the Effectiveness of Simulation on Flight Training” Jennah Perry & Jonathan Gallimore ERAU-PC (#1242)
• “Pilot Study: Secondary Aviation/Aerospace Education Organization Design Survey”  
  Susan Archer, ERAU-WW (#1233)
• “Degree Program Capstones: Applicability and Effectiveness” Kent Anderson,  
  ERAU-WW (#1223)
• “Aviation Management Education Study (AMES): Two Years in Review” Jason  
  Newcomer & Matthew Earnhardt, ERAU-WW (#1218)

4:45 p.m. -5:00 p.m.  
Graduate/Faculty/Industry Poster Set Up  
San Marcos Ballroom A/B

5:00 p.m. -7:00 p.m.  
Reception with appetizers (ticketed and cash bar)  
San Marcos Ballroom A/B
Undergraduate/Graduate/Faculty/ Industry Poster “Show and Tell”
Moderator: Scott Burgess, ERAU-WW
Graduate/Faculty/Industry Poster Competition
Co-Chairs: Katherine Moran, ERAU-WW; Scott Burgess, ERAU-WW
For a complete listing of poster titles and authors, please see program p. 13.

Undergraduate Poster Display and Competition Results
Co-Chairs: Kelly George, ERAU-WW; Aaron Clevenger, ERAU-DB; Anne Boettcher,  
ERAU-PC
Graduate/Faculty Poster Display and Competition Results
Co-Chairs: Katherine Moran, ERAU-WW; Scott Burgess, ERAU-WW

7:00 p.m.  
Dinner on Your Own  
Chandler Historic District

SATURDAY, JANUARY 16

7:00 a.m. -8:00 a.m.  
Continental Breakfast  
San Marcos Ballroom Foyer & A

7:00 a.m. -5:00 p.m.  
Registration and Help Desk  
San Marcos Ballroom Foyer

8:00 a.m. -9:15 a.m.  
Concurrent Sessions
Leadership/Innovation/Aerospace Technology/Applications  
La Ventana Ballroom
Chair: Ed Knab, ERAU-WW
Panelists: Tim Holt, ERAU-WW; Kees Rietsema, ERAU-WW; Eric Anderson, Graduate  
Student, ERAU-PC
Presenters:
• “Perception of Safety Culture for Air Traffic Controllers in Korea” Seock J. Hong,  
  Kang-Seok Lee, University of North Texas (#1246)
• “In Pursuit of Aviation Professionalism: Assessing Aviation Professionalism”  
  Hussain Alhallaf, Florida Institute of Technology (#1234)
Unmanned Aerial Systems Certification  
San Tan Ballroom

Chair: Stewart Schreckengast, Purdue University
Panelists: James Malecha, Federal Aviation Administration; Nancy Graham, Former Director of ICAO's Air Navigation Bureau; Kurt Barnhart, Kansas State University; Jimmy Clem, President/CEO, Unmanned Aerial Consulting; Steven Pennington, USAF; Sarah Nilsson, ERAU-PC

Presenter:
• “A Survey of sUAS Operator’s FAA Regulation Knowledge” David Thirtyacre, ERAU-WW (#1211)

Aviation Management and Operations  
San Marcos Ballroom B

Chair: Hon. Robert Sumwalt, National Transportation Safety Board

Presenters:
• “Analysis of Factors Related to True Airspeed (TAS) Calculation Utilizing the Handicap Procedure for the 2015 Women’s Air Race Classic” Erica Diels and Claire Schindler, ERAU-PC (#1229)

• “Determining the Runway Point-of-No-Return for Landing Roll Go-Around in Transport Category Airplanes” Nihad Daidzic, Minnesota State University-Mankato (#1210)

• “Increasing General Aviation Safety through Data Analysis – GA ASIAS” Shawn Pruchinicki and Philip Smith, Ohio State University (#1248)

• “The Results of Non-Compliance with Checklist Use and Control Checks in the BED Runway Overrun Crash” Hon. Robert Sumwalt, National Transportation Safety Board (#1257)

9:15 a.m.-9:30 a.m.  
Break  
San Marcos Ballroom Foyer

9:30 a.m. -10:45 a.m.  
Concurrent Sessions

State of the Helicopter Industry  
San Tan Ballroom

Chair: Dawn Groh, ERAU-PC
Panelists: Robert Rappoport, Production Test Pilot and Instructor- MD Helicopters; David Small, Regional Aviation Manager- Air Methods Corp, Native Air AX; Scott Burgess, ERAU-WW; Terence Miyauchi, AZDPS; James Linehan, Phoenix Police Department

Human Factors: Human Error and Cockpit Automation  
San Marcos Ballroom B

Co-Chairs: Clint Balog, ERAU-WW; Erin Bowen, ERAU-PC
Panelist: Hon. Earl Weener, National Transportation Safety Board

Presenters:
• “Cognitive Processes and Challenges During Surprise on the Flight Deck” Shawn Pruchinicki, Ohio State University (#1251)

• “The Effect of a Midpoint Marking on Pilot Decision Making While Landing” Brian Dillman, Rachel Borsa, Lucero Duran & Julius Keller, Purdue University (#1240)

• “Accident-Precipitating Factors for Crashes in Turbine-Powered General Aviation Aircraft” Douglas Boyd, University of Texas Health Science Center at Houston & Alan Stolzer ERAU-DB (#1212)

• “Exploring Pilots’ Experiences of Integrating Technologically Advanced Aircraft Within General Aviation” Calvin Nobles ERAU-WW (#1208)
Consumer Perceptions in Aviation

La Ventana Ballroom

Co-Chairs: Scott Winter & Madison Hart, Florida Institute of Technology

Presenters:
- “Deconstructing Legacy- Is Low-Cost the Business Model of the Future?” 
  Astrid Zajdband, ERAU-WW (#1244)
- “Effect of Passenger Weight Under-Estimations on Regional Aircraft Performance for the Most Obese States in America” Douglas Boyd, University of Texas Health Science Center at Houston (#1220)
- “From Customer Service to Self Service: The Decline of Passenger Satisfaction” 
  Timothy Holt, ERAU-WW (#1241)
- “Impact Factors for the National Annual Airline Quality Rating and A³iR Con” 
  Brent Bowen, Vrushali Suvarna, Hunter Watson, ERAU-PC (#1260)

10:45 a.m. - 11:00 a.m. Break
San Marcos Ballroom Foyer

11:00 a.m. - 12:15 p.m. Concurrent Sessions

Emergency Response

La Ventana Ballroom

Co-Chairs: MK Gorman, ERAU-WW; John Griffith, ERAU-WW

Panelists: Hon. Robert Sumwalt, National Transportation Safety Board; Jim Linehan, ERAU-PC; Heather Strouse, Capital Aviation Consulting; Deputy Chief Beth Hendel, Phoenix, Fire Department

Presenter:
- “Lesson from the Ashes: How the NTSB Feels Emergency Response Can Be Improved” Hon. Robert Sumwalt, National Transportation Safety Board

Innovations in Aviation Technologies

San Marcos Ballroom B

Co-Chairs: Vahid Motevalli, Tennessee Technical University; Bruce Conway, ERAU-WW

Presenters:
- “Relative Material Loss: A Methodology for Assessing Island Airport Steel Marine Bulkheads” Robert Ernsting, ERAU-WW; Constantine Koursaris, ERAU-WW (#1261)
- “Wingsuit Materials Research – The Effect of Currently Used Materials on Wingsuit Aerodynamics” Timothy Sestak, ERAU-PC (#1227)
- “Validating the Knowledge, Skills, and Abilities Composite Measure: An Aviation Industry Pilot Study Presentation” Aaron Glassman, Jason Newcomer, Matthew Earnhardt, ERAU-WW (#1217)
- “Class 1 EFB Deployment in a Fractional Ownership Pilot Population” Kyle Tekaucic & Shawn Pruchinicki, Ohio State University (#1249)

Critical Issues

San Tan Ballroom

Chair: Doug Drury, University of South Australia

Presenters:
- “Are We Facing a Pilot Shortage?” Timothy Clifton, ERAU-PC (#1255)
- “A Study on the Localization of Airport Self Bag Drop-off system in Korea” Kangseok Lee, Hanseo University (#1231)
- “Air Transport Pilot Supply and Demand: Current State and Effects of Recent Legislation” Michael McGee, ERAU-WW (#1219)
- “Cross-Sectional Assessment of Safety Culture Perceptions and Safety Behavior in Collegiate Aviation Programs in the United States” Micah Walala & Julius Keller Purdue University (#1213)
12:15 p.m.-1:00 p.m.  Light Lunch (RSVP at Registration Desk)  San Marcos Ballroom Foyer & A

1:00 p.m.-2:00 p.m.  Critical Issues  San Tan Ballroom
Co-Chairs: Jimmy Clem, CEO Unmanned Aerial Consulting; Dan Macchiarella, Dean, College of Aviation, ERAU-DB
Presenters:
- “System Safety Modeling of Alternative Geofencing Configurations for Small UAS”  
  James Luxhoj, Luxhoj Consulting and Research LLC (#1221)
- “Cyber Security and Privacy of Air Traffic Systems”  
  Radhakrishna Sampigethay, ERAU-PC (#1230)
- “Wireless, Inductive, Self-Charging Electric Unmanned Aerial Systems”  
  Jeffrey Austen, Rabie Belkacemi, Hicham Chaoui, Robert Craven, Satish Mahajan & Vahid Motevalli, Tennessee Technological University (#1253)
- “The Impact of Sleepiness and Sleep Constructs on Pilot Performance”  
  Peter Dittmer, Utah Sleep Center & Aviation Research Lab (#1256)

Roundtable Discussions and Research for the Future  La Ventana Ballroom
Chair: Mary Fink
Note: Presenters will be published in the final proceedings.

2:00 p.m. – 4:00 p.m.  WINGS Seminar: Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) - Overview of Regulations  San Marcos Ballroom B (overflow)
Co-Chairs: Sarah Nilsson, ERAU-PC; Brian Roggow, ERAU-PC
Presenters: Tina Buskirk, FAASTeam Program Manager, Scottsdale Flight Standards District Office; James Malecha, Federal Aviation Administration

4:00 p.m. – 6:00 p.m.  Preparation for A³iR Con Communiqué (RSVP at Registration Desk)  La Ventana Ballroom
Chair: Mary Fink

6:00 p.m.  Dinner on Your Own  Chandler Historic District

SUNDAY, JANUARY 17

9:00 a.m.-11:00 a.m.  Working Breakfast: Debriefing & Planning (RSVP at Registration Desk)  La Ventana Ballroom

11:00 a.m.-5:00 p.m.  On Your Own Cultural Excursions  Greater Phoenix Area

5:00 p.m.  Dinner on Your Own  Chandler Historic District

MONDAY, JANUARY 18

Departure Day  Pre-scheduled Shuttles Depart for Sky Harbor Airport (on your own)
Undergraduate Poster Competition – Live Session
Co-Chairs: Kelly George, ERAU-WW; Aaron Clevenger, ERAU-DB; Anne Boettcher, ERAU-PC

1. “Impacts of Limited Field of View on UAVs” Taylor Larson and Andrew Henderson, mentor: John Schaefer, Westminster College, Salt Lake City, UT.
3. “SHARP UAS - Supersonic High Atmosphere Remotely Piloted Unmanned Aerial System” Ryan Ashey and John Lewandowski, mentor: Michael Fabian, Embry-Riddle Aeronautical University, Prescott, AZ.
4. “Integration of Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS)” Wilson Ragle, mentor: John Robbins, Embry-Riddle Aeronautical University, Daytona Beach, FL.
5. “Oil for Terror: The Effectiveness of Western Intervention on ISIS’ Oil Smuggling Capabilities” Rae Heuer, mentor: Elisabeth Murray, Embry-Riddle Aeronautical University, Daytona Beach, FL.
7. “Autonomous Satellite Recovery Vehicle (Rocket-Deployed Quad-Rotor)” Devonte Grantham, Francisco Pastrana, and Shane Williams, mentors: Janet Marnane and Hong Liu, Embry-Riddle Aeronautical University, Daytona Beach, FL.
8. “Suborbital Spaceflight: A Student Team’s Plan to Send a Rocket to Space” Bryce Chanes, Catherine Ayotte, and Nicole Shriver, mentor: Julio Benavides, Embry-Riddle Aeronautical University, Prescott, AZ.
9. “Changes in Performance Parameters of Solid Rocket Motors as They Increase in Size” Julia Levitt, Richard Rekoatmodjo, Rebecca Tobin, Raeann VanSickle, Bryce Smoldon, Christopher Sample, Tyler Gulden, and Laura Pelletier, mentor: Brenda Haven, Embry-Riddle Aeronautical University, Prescott, AZ.
12. “Engineering of Weather Balloon” Sergei Bilardi and William Griffin, mentor: John Hughes, Embry-Riddle Aeronautical University, Daytona Beach, FL.
13. “The Analysis of Atmospheric Sensory Data Obtained from a Weather Balloon System” Erik Parker and Kari Slotten, mentor: John Hughes, Embry-Riddle Aeronautical University, Daytona Beach, FL.
14. A Tale of a Flash Flood: WRF Modeling of Hurricane Norbert Record Rainfall and Flooding in Arizona” Jennie Halverson and Dante Tabarracci, mentor: Dorothea Ivanova, Embry-Riddle Aeronautical University, Prescott, AZ.
15. “Anti-Ice: Thermally Heated or Hydrophobic Materials?” Abanob Mourkus, mentor: Jacqueline Luedtke, Embry-Riddle Aeronautical University, Prescott, AZ.
16. “A Comeback for the Combi Carrier” Lucas Mackey, mentor: Cindy Greenman, Embry-Riddle Aeronautical University, Prescott, AZ.
17. “Computational Modeling of Boundary Layer Control and Drag Reduction” Brian Cowley, Seab Akana, Lucas...
18. “Creating a Multi-Factor Index to Model Within the US Airline Industry” Michelle Bennett, Catie Willard, and Madeline Kuhn, mentors: Jacqueline Luedtke and Brent Bowen, Embry-Riddle Aeronautical University, Prescott, AZ.

19. A Concept Model for Assessing Frequent Flyer Survey Data” Catie Willard and Michelle Bennett, mentors: Erin Bowen and Brent Bowen, Embry-Riddle Aeronautical University, Prescott, AZ.

20. “A Qualitative Analysis of the Current Air Traffic Control Safety Climate” Emilio L. Navarrete, mentors: Jonathan M. Gallimore and Jenna Perry, Embry-Riddle Aeronautical University, Prescott, AZ.


22. “The Effects of Pilot Shortage on the Industry” Timothy Clifton, mentor: Jacqueline Luedtke, Embry-Riddle Aeronautical University, Prescott, AZ.


24. “Investigation of Contra-Rotating Propulsion on Human-Powered Aircraft" Mark Van Bergen, Kevin Horn, Michael Chastain, Ryan Burns, and Chris Jacobs, mentor: Gary Yale, Embry-Riddle Aeronautical University, Prescott, AZ.

25. “Eagle Aero Sport - Embry-Riddle Student-Built Aircraft” Jeffrey Harjehausen, Isaac Hein, Samuel Wolf, Christopher Mitchell, Kyle Wimmer, Geoffrey Winship, Michael Norville, Ryan Bishop, Erin Mann, and John Wright, mentor: Brian Davis, Embry-Riddle Aeronautical University, Prescott, AZ.

26. “Team Eagle Wingsuit Research Results” Benjamin Salisbury, Glen Borland, Brian Cowley, Jason Lathbury, Joseph Gomez, Chris Reed, and Matthew Demi Vis, mentor: Timothy Sestak, Embry-Riddle Aeronautical University – Prescott, AZ.

27. “Ultralight Turbine-less Jet Engine” Tre Buchanan, Isaac Anderson, and Stephen Woodard, mentors: Brenda Haven and Shigeo Hayashibara, Embry-Riddle Aeronautical University, Prescott, AZ.


Poster Competition – Virtual Session
Co-Chairs: Kelly George, ERAU-WW; Aaron Clevenger, ERAU-DB; Anne Boettcher, ERAU-WW


1. “Role of Aerodynamic Surface in Lift Adjustment of a Hybrid Buoyant Aircraft” Anwar ul Haque Mr, International Islamic University – Malaysia
2. “Quadcopter Swarm Arena” Joshua Teramae, Shane Stebler, Logan Turco, Michael Nisip, Sigfried Hache, and Zakaria Daud, ERAU-DB
3. “Opinions Aviation Consumers Have on Problematic Airport Security Situations” Jacob Mickevicius, Kasey Friedenreich, Rian Mehta, Adam Hruszczyk, and Stephen Rice, Florida Institute of Technology
4. “Consumer Willingness to Fly Onboard Aircraft with Armed Pilots” Kasey Friedenreich, Jacob Mickevicius, Rian Mehta, Sherisse Pierre, and Stephen Rice, Florida Institute of Technology
5. “The Effects Advertising has on Passenger Opinions Towards Advancements in Aviation Technology” Kasey Friedenreich, Jacob Mickevicius, Rian Mehta, Morgan Eudy, and Stephen Rice, Florida Institute of Technology
6. “We Have the Technology: Creating Effective Pilots by Coupling Simulation with Ground School” Jonathan Gallimore and Jennah Perry, ERAU-PC
7. “Analysis of Causal Human Factors of In-flight Loss of Control for Commercial Fixed-wing Aircraft” Seline Ng’eno, Florida Institute of Technology
8. “Fatal Accident Risk Analysis of General Aviation Operations” Thomas Glista, Florida Institute of Technology
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Guide to Maximizing Session Success

**Presenters:** Most sessions are 90 minutes long and have four presenters. Presentations should be approximately 15 minutes long. Question & Answer time will be held at the end of the last presentation in each session. Presentation materials will be collected electronically on-site (white papers, etc.) and will be published in Scholarly Commons post-conference. Presentations may also be emailed to praircon@erau.edu.

**Session Chairs:** Please welcome presenters and attendees to your session, introduce presenters and serve as timekeeper, to ensure equal presentation time. When there are three minutes remaining in a presentation, please raise your hand until acknowledged by the presenter. When time is up, please stand and be ready to introduce the next presenter. Allow the presenter to make final comments, not to exceed 1-2 minutes, and announce time is up. Following the last presentation, please ask if there are discussants who want to lead off the Q&A. Please note the highlights of the session for our joint post-conference communication. Chairs are invited to submit a summary of their session for the proceedings. This summary can be written by the session chair or co-authored with presenters/discussants.

**Discussants:** Engage participants by leading off with questions as time allows. Share your expertise.
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