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December 2020 School of Graduate Studies Newsletter

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EMBRY-RIDDLE AERONAUTICAL UNIVERSITY COLLEGE OF AVIATION

SCHOOL OF GRADUATE STUDIES

NEWSLETTER



DECEMBER 2020

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ASSOCIATE DEAN'S MESSAGE



Dr. Steven Hampton



The summer term was a challenge for all our master's programs regarding course scheduling and classroom space. But we devised a plan, and everyone stuck to it with great success. Thank you for your cooperation with the rearrangements and in following the University's safety protocols of getting daily wellness checks, wearing protective masks, maintaining prudent physical distances, cleaning your work areas, washing your hands, and participating with surveillance testing. Great job everyone! I know you will continue modeling ERAU's exemplary safety culture.

Although the campus is open, until further notice the SGS office suite in the College of Aviation remains closed to students and visitors, and all faculty-student meetings are still being held virtually or by telephone. Don't forget current information and important safety announcements by the University can always be accessed at the [Embry-Riddle Coronavirus Updates website](#).

In August, we welcomed our incoming cohort of new Ph.D. students. Showing strong progress in our drive for greater diversity, we added five women and two men from various backgrounds. Congratulations to all of our new doctoral students! The Fall semester started well. Along with about 60 active students in our online Ph.D. program, we had over 120 Master students attending classes both in-person and online. We have been holding defenses online, but now that the Daytona Beach campus is open we are reverting to face-to-face defenses except when it is impossible for the candidate to attend in person. Administering the Ph.D. qualifying exams online has been quite successful with 10 students completing the QE this summer. Consequently, they will remain online. Everyone is welcome to attend the thesis and dissertation defenses online. However, seating in the defense venues is limited because of distancing requirements. Please contact [Susie Sprowl](#) to receive email notifications to attend the defenses online or to sign up to attend them in person. If you can't attend a defense, you can always sign into ERNIE and view the video recording in [Microsoft Stream](#) at your convenience.

In October, we had the Aviation Accreditation Board International (AABI) site visit for re-accreditation of the Ph.D. and MSA programs. As reported by [Dean Stolzer](#), it went well. It's a long and arduous process, so I want to express my deep appreciation to [Dr. Don Metscher](#), [Bee Bee Leong](#), [Dr. Dothang Truong](#), and [Jan Neal](#) for collecting the data needed and completing the AABI application forms. Some of the [student achievement data](#) are posted on the ERAU website, so check it out if you are interested. In November, I co-moderated the 5-year meeting of the Center of Excellence for Technical Training & Human Performance held virtually via Zoom. Current research projects, including student research posters and videos, and future research projects were presented. Contact me to learn more about upcoming research opportunities.

Our SGS students swept the top awards in the [2020 University Aviation Association \(UAA\) Conference Graduate Research Poster Contest!](#) First place: *Analyzing the Threats of Failure of Visual Awareness and Cognitive Bias During a Visual Approach for Commercial Operations* by [Shlok Misra](#) [MSA research advisor: [Michele Halleran](#)]. Second Place: *Gender Equality in the Aviation Industry* by [Jesse Guillen](#) (Ph.D. Cohort 11) and [Christian Jaedicke](#) (Ph.D. Cohort 10) [Dr. [Scott Winter](#)]. Third place: *Impact of the Pilot Shortage on Crew* by [Shereen Hashemi](#) (Ph.D. Cohort 11) and [Cody Sweatt](#) (Ph.D. Cohort 10) [Dr. [Scott Winter](#)]. It's fantastic to see student works winning awards for excellence. Congratulations everyone!

[Dr. Frank Ayers](#), who teaches DAV 712: Aviation Safety Management Systems, is now a regular columnist for [Plane & Pilot](#) magazine. Read his "Pro Tips for Private Pilots" column in the latest issue of Plane & Pilot in [Flipster](#) in the Hunt Library.

Our social media presence on [Twitter @ERAUCOASGS](#) and [Facebook @ERAUSGS](#) are additional ways we keep people informed about the accomplishments of our students and alumni. Currently, we have 89 followers on Twitter and 131 followers on Facebook. Please contact [Katie Esguerra](#) who manages both sites if you have something to contribute. We also have an active [ERAU PhD in Aviation Students & Alumni LinkedIn group](#). Many thanks to [Tara Samuels](#) (Cohort 10) and [Woo Jin Choi](#) (Cohort 9) for managing this site as it helps our doctoral students and alumni stay engaged with each other. Our SGS newsletters are now in [Scholarly Commons!](#) Go to [School of Graduate Studies Newsletters](#) to access them. Many thanks to [Chip Wolf](#), administrator of Scholarly Commons for the Hunt Library, for setting up this site for us.

You'll find this interactive newsletter full of good information, which everyone can appreciate. Take some time to read it and explore the links. Please let us know what you like or wish reported in future newsletters and keep sending us your good news. As always, keep on learning and staying safe!

Steven

PH.D. IN AVIATION

NEWS



Dothang Truong, Ph.D.

Program Coordinator

The 2020 Ph.D. in Aviation Residency was successful despite national and international restrictions limiting student travel. We offered it in a hybrid mode in which all sessions were simulcast live and recorded in MS Teams. Of the 26 students who attended this year, four were able to attend in person. Many thanks to **Jan Neal** for creating the Team site and sessions and to **Susie Sprowl**, **Katie Esguerra**, **Bee Bee Leong**, and MSA student assistant **Shivane Patron** for monitoring the on-campus sessions.

Please join me in welcoming Cohort 12 to the program and wishing them great success! We also want to recognize the 702 and 703 students who participated online, several from very different time zones. They were as committed, inquisitive, and engaging as ever. Thank you everyone!

The poster session is always rewarding. This time was no different even though it was broken into on-campus and online events. The event in the COA atrium received tremendous attention with the appearances of **President Butler**, **Dean Stolzer**, and faculty from other COA departments and colleges.

Our sincere gratitude to the poster committee, chaired by **Dr. Haydee Cuevas**, for evaluating every poster! Although it was a difficult task, they selected the top three. Congratulations to the winners for best poster! Their topics should become notable dissertations.

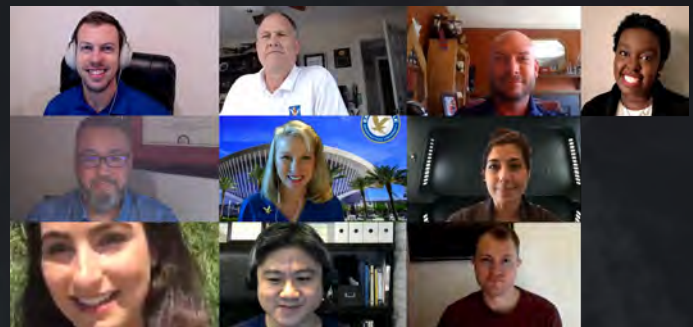
Poster winners (left to right):

- **Elizabeth Combs** (DAV 701)
- **Borvorn Kasemtanakul** (DAV 702)
- **Sarah Talley** (DAV 703)

Several online networking sessions were organized by **Tracy Lamb** and **Shereen Hashemi** to promote engagement and communication between cohorts. Students had a chance to ask questions from alumni and senior students, including **Matt Grunewald**, **Dr. Troy Techau**, **Dr. Stephanie Fussell**, and **Dr. Ed Odisho**. It's great to see alumni and students networking to help each other succeed. We had two guest speakers, **Dr. Greg Woo**, chief of the Aviation Systems Engineering Division at Volpe, and **Dr. Bruce Holmes**, chief technology officer at Skai. Their sessions were inspiring for our students in their journey to achieving a Ph.D. in Aviation degree.



DAV 701 cohort 12 (top left to right): **Geovany Lopez**, **Kathrine Bell**, **Kim Bracewell**, **Jamie Guined**, **Sean Crouse**, **Elizabeth Combs**, **Lissa Bern**



DAV 702 students (top left to right): **Nathan Phillips**, **Pat Dunagan**, **David Subowski**, **Mikka Carter**, **Jesse Guillen**, **Tracy Lamb**, **Shereen Hashemi**, **Jennifer Herr**, **Borvorn (Dee) Kasemtanakul**, **Jason Moll**



DAV 703 students (top left to right): **Andrew Koch**, **Trong Nguyen**, **Dez Silagyi**, **Adil Elmassari**, **Tara Samuels**, **Christian Jaedicke**, **David Lim**, **Sarah Talley**



More congratulations are in order! **USAF Col. Brian Musselman** (Cohort 9) became the president of the **Aerospace Human Factors Association (AsHFA)**. **Tracy Lamb** and **João Garcia** (both in Cohort 10) became **Fellows of the Royal Aeronautical Society (FRAeS)**. These are very distinguished accomplishments and we are proud for you all.



I want to thank our COA and SGS leadership, faculty, and staff for all they do in supporting the Ph.D. in Aviation program. This year has been a difficult time, but everyone worked harder than ever supporting our students to ensure they complete their academic objectives, produce quality dissertations, and earn their degree as planned. We wish every student a productive 2021 academic year!

DISSERTATION DEFENSES

Congratulations to **Kenneth A. Ward, Ph.D.**, (Graduate 41), for his successful defense on May 12, 2020 of *"Safety Systems, Culture, and Passengers' Willingness to Fly in Autonomous Air Taxis"* ([video stream](#)). [ERNIE login is required to access ERAU's Microsoft Stream site.] Pictured right from top left to right: **Dr. Dothang Truong**, **Dr. Scott Winter (Chair)**, **Dr. David Cross**, **Dr. John Robbins**, **Dr. Ryan Wallace**, **Dr. Ken Ward**, **Dr. Rian Mehta**.



Congratulations to **Jennifer M. Edwards, Ph.D.** (Graduate 42), for her successful defense on June 9, 2020 of *"Student Engagement in Aviation MOOCs Identifying Subgroups and their Differences"* ([video stream](#)). Pictured left from top left to right: **Dr. Mark Friend (Chair)**, **Dr. Jen Edwards**, **Dr. Frank Ayers**, **Dr. Felix DeBrito**, **Dr. Dothang Truong**, **Dr. Haydee Cuevas**, **Dr. Harry Tunnell**.



Congratulations to **Stephanie G. Fussell, Ph.D.** (Graduate 43), for her successful defense on June 23, 2020 of *"Determinants of Aviation Students; Intentions to Use Virtual Reality for Flight Training"* ([video stream](#)). Pictured right from top left to right: **Dr. Dothang Truong (Chair)**, **Dr. Bob Thomas**, **Dr. Chang-Geun Oh**, **Dr. Stef Fussell**, **Dr. David Cross**, **Dr. Carolina Anderson**.



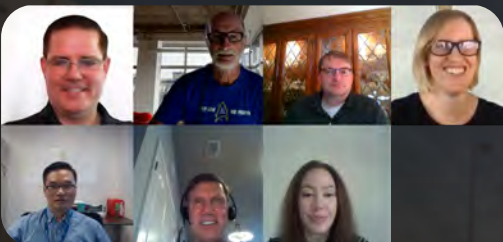
Congratulations to **David A. Carroll, Ph.D.** (Graduate 44), for his successful defense on October 1, 2020 of *"Examining Unstable Approach Predictors Using Flight Data Monitoring Information"* ([video stream](#)). Pictured left from the left: **Dr. Dothang Truong**, **Dr. David Carroll**, **Dr. David Esser (Chair)**, **Dr. Ryan Wallace**, **Dr. Haydee Cuevas**.



Congratulations to **Bradley S. Baugh, Ph.D.** (Graduate 45), for his successful defense on October 7, 2020 of *"Examining Unstable Approach Predictors Using Flight Data Monitoring Information"* ([video stream](#)). Pictured right from top left to right: **Dr. Brad Baugh**, **Dr. Robert Maxson**, **Dr. Kristy Kiernan**, **Dr. Dothang Truong**, **Dr. Bruce Conway (Chair)**, **Dr. David Cross**.



Congratulations to **James H. Hartman III, Ph.D.** (Graduate 46), for his successful defense on November 16, 2020 of *"An Exploratory Study of General Aviation Visual to Instrument Meteorological Condition Contextual Factors"* ([video stream](#)). Pictured left from top left to right: **Dr. Jim Hartman**, **Dr. Mike O'Toole**, **Dr. Kevin Gildea**, **Dr. Sarah Strazzo**, **Dr. Dothang Truong**, **Dr. Mark Friend (Chair)**, **Dr. Jennifer Thropp**.



Don Metscher, D.B.A.

Program Coordinator



Please join me in congratulating the Summer 2020 MSA graduates: [Garth Cumberbatch](#), [Adam Goldstein](#), [Priscilla McDonald](#), [Kwangsik Song](#), and [Anderson Velazquez Gonzalez](#), and in offering special congratulations to [Raul Contreas](#), [Hong Dae Kim](#), and [Sung Mo Yang](#) for graduating with distinction (4.0 GPA).

Enrollments in the MSA program have been on target despite the worldwide Covid-19 pandemic. The total number for the Fall 2020 term was 102 students (41 domestic and 61 international). Please join me in congratulating our Fall 2020 graduates: [Jose Alvarez Rivera](#), [Yunqing Chen](#), [Nagy El-Sayed](#), [Lei Fan](#), [Henry Lax](#), [Samarkumar Naik](#), [Siddharth Rai](#), [Navneet Krishnan Rajan](#), [Varad Sawant](#), and [Niloufer Orooj Wasey](#). Special congratulations to the students who graduated with distinction: [Cora Rand](#), [Noelle Cudzilo](#), [Kevin Tai](#), and [Natthawat Wongrat](#).

Pandemic precautions have included several temporary changes in the MSA Program. The Center for Teaching and Learning Excellence offered a “Pivotal Pedagogy” course covering best practices for different modes of teaching depending on classroom size. This prompted us to offer three different instructional modes to help keep our MSA students safe. Face-to-face (F2F) instruction requires students and faculty to wear masks at all times and to clean/sanitize desks before and after class. Students are also separated by empty seats to maintain safe distances. Naturally, this reduces the number of students that can meet F2F, which in turn limits classroom availability. Smaller classrooms require a hybrid approach. Students are divided into two small groups who meet on alternative days and additional lessons are taught online using Zoom. A few courses are also being offered entirely online using Zoom and the class sessions are recorded so students can view them later as needed. Our student advisement is also being done three different ways, via phone, email, and Zoom meetings. Faculty and graduate assistants are providing students assistance using Zoom and email. The safety of our students, faculty, and staff is paramount! We are all adapting well to these changes, but we are looking forward to the end of the pandemic and returning to our normal ways of doing things.

A new course—*MSA 573: Agent-Based Modeling*—will be added to both the Operations specialization and the Management specialization in the Fall term once it has been formally approved. Stay tuned to the Fall 2021 catalog for further information.

Agent-based modeling (ABM) is a class of models that simulate the behavior of a collection of autonomous decision-making entities called agents. By modeling the interaction of these agents within an environment at the microlevel, ABM can explore and investigate the aggregated complex and dynamic behaviors at the system level. Advanced ABM models can incorporate learning and evolving behaviors using machine learning and evolutionary algorithms. ABM has become a powerful modeling technique in the last few years, including applications in manufacturing and service industries, from business models to transportation models.

[Dr. Dahai Liu](#), who will be teaching MSA 573, reports for the past three years the [Center for Advanced Transportation Mobility \(CATM\)](#) research team has used ABM models to investigate the strategies and policies in transportation systems, including emergency evacuation and planning. Also, ABM has been used in a number MSA student research theses and graduate capstone projects. Examples include modeling the exit configuration for the Student Union on the Daytona Campus, effects of influenza vaccine for preventing virus spreading in public, and aircraft evacuation under emergency landings. With its benefits in handling a high level of complexity, great flexibility ability of experimentation for dangerous or impossible situations, it is believed that ABM will gain more popularity in modeling and simulation.

Congratulations to [Sang-A Lee](#), our MSA student assistant, on receiving a Dean’s scholarship! She gave two presentations at the Institute of Industrial Systems Engineers (IISE) Annual Conference & Expo 2020. The title of the first presentation was *Effect of Electronic Flight Bag (EFB) on Pilot Workload* and the title of the second was *Effect of Group on Efficiency of Airport Evacuation under Emergency*.



Sang-A Lee

“Presenting at the IISE conference was a great experience because I was able to learn about new ideas and innovative techniques in the industry. Due to the pandemic, the conference was held virtually, but the presentations were effective by implementing all procedures online. I would like to express my gratitude to [Dr. Liu](#) and the SGS department for giving me the opportunity to participate in the conference.”

MSOSM NEWS



Mark Friend, Ed.D.

Program Coordinator

In only our 2nd year, the MSOSM program is doing well. Currently, we have 15 students and we expect enrollments to grow to 20 students in the Spring term. I'm very pleased that our students are hard-working achievers as evidenced by their certifications and internships.

Congratulations to [Mike Shekari](#) on becoming a Safety Professional of the [America Society of Safety Professionals \(ASSP\)](#)! Check out his article "[Safety Management Systems Standards and Guidelines: A Comparative Analysis \(September 2020\)](#)" published in *Professional Safety*, ASSP's peer-reviewed monthly journal. He also completed an internship with Northrop Grumman Corporation in Melbourne, Florida this summer.

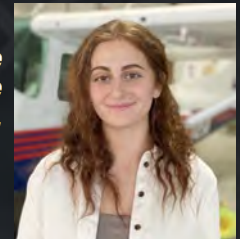


Mike Shekari

“My primary project for the Environmental, Safety, Health, and Medical group was to establish a job hazard analysis program for the site. I started the project by developing program instructions, training materials, and hazard analysis worksheets. Once the program framework was developed, I beta-tested the program with a few complex jobs around the facility and in a new laboratory that was about to enter service. During the internship, I also participated as a member of the health and safety inspection team, reviewed several health and safety compliance programs, and assisted with industrial hygiene sampling.”

[Rebecca Demian](#) also interned at [Northrop Grumman](#) over the summer.

“I worked from home as a reliability engineering intern. I learned various ways to calculate and improve the reliability and maintainability of aircraft components. I also had the opportunity to analyze system failures and participate in supplier meetings and discussions. After the internship, I was offered a part-time position during the school year as well as an intern position for next summer. I also obtained a secret security clearance to fulfill the requirements of the position and organization. I truly feel as though I gained an invaluable experience that will benefit me greatly in the future.”



Rebecca Demian

[Kaylee Weaver](#) completed internships at [Momentive Performance Materials](#) and at [Tesla, Inc.](#)



Kaylee Weaver

“While working as an Environmental Health and Safety (EHS) intern at Momentive, I gained a lot of valuable, hands-on safety experience in the chemical manufacturing industry. I was able to coordinate site safety training and programs, while developing policies and procedures in the midst of a global pandemic. I worked directly with management, engineering, and quality to implement best safety, ergonomic, and manufacturing practices. Serving as the site EHS representative, I coordinated with safety professionals across the Americas to share best practices and lessons learned and to develop processes to reduce occupational hazards and injuries. The time I spent at Momentive was really valuable to my future endeavors in the safety industry.”

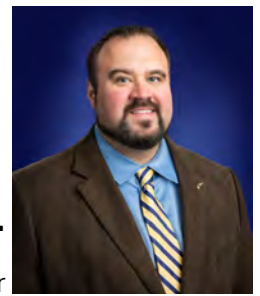
Working at Tesla as an Environmental Health and Safety intern allowed me to utilize my previous internship experience and academic knowledge to support safety initiatives for the sales, service, and delivery team on a global scale. I was able to travel to different locations to conduct audits and inspections, while supporting safety program development across the North Americas. The most valuable experience at Tesla, has been the ability to directly contribute to projects and to bring new perspective and ideas to the table. I've been able to develop and continuously improve safety policies, training, and procedures on a global scale. My experience at Tesla has been a key to my future contributions and successes in the safety industry.

MSUS NEWS



John Robbins, Ph.D.

Program Coordinator



The Master of Science in Unmanned Systems (MSUS) was the first collegiate program to receive comprehensive certification for unmanned flight instruction under the Trusted Operator Program (TOP) from the Association of Unmanned Vehicle Systems International (AUVSI). You can read about it in this [ERAU News Brief \(Pinholster, 2018, November 2\)](#).

We were excited to debut our first course offerings in the residential MSUS program in the Fall 2020 term! I am pleased to report that our enrollments are strong going into Spring 2021 term and the challenges we overcame in the Fall due to the Covid-19 pandemic further solidified our confidence in the quality, strength, and integrity of our student population. The MSUS program's rapid progress is a testament that students in both the MSUS and MSA Unmanned Aircraft Systems (UAS) specialization are excited to be innovators in this new era of aviation.

I am continuing to work on opportunities that allow students to participate in UAS related research or flight activities throughout the year. One such opportunity is our [Turtle Tech Project](#). Embry-Riddle in cooperation with Northrup Grumman and the Brevard Zoo are looking for clues to develop a better understanding of sea turtle behavior. Brevard county beaches are one of the most populated nesting sites for multiple species of sea turtles, which creates a number of benefits for the research team. Close proximity to this environment allows us to create and test UAS platforms that will help us better understand sea turtle behavior as they transition from the near to Off-shore environment. The Turtle Tech Project is a collaborative effort within ERAU to include faculty from the College of Aviation (COA) and College of Engineering (COE).



Photo: NOAA Fisheries

Further project details are outlined in this Aircraft Owners and Pilots Association press release: [Saving Turtles also Salvages Senior Year - ERAU Students Join Conservation Effort \(Huffman, 2020, September 28\)](#).

We are happy for the program to be embarking on another year and excited about all of the new innovations in the field of unmanned and autonomous aviation systems!

Please contact me at robbinjsj@erau.edu if you are interested in the MSUS program or in exploring unique opportunities in the UAS field that may include volunteering or service learning,



Albatross Long Range Surveillance Platform

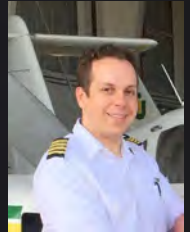


Dr. John Robbins with volunteer Robert Moore in Daytona Beach, Florida. Mr. Moore graduated with a B.S. in Unmanned Aircraft Systems Science (UASS) from the COA this Fall 2020 term. In Spring 2021, he starts work on an M.S. in Unmanned and Autonomous Systems Engineering (UASE) degree from the COE.

ALUMNI NEWS



Dr. Jonathan Velazquez shared his recently-published research describing his success with the flipped classroom technique during the AABI Winter meeting in San Juan, Puerto Rico held in February. Also, his dissertation "*Behavioral Traps in Flight Crew-Related 14 CFR Part 121 Airline Accidents*" was referenced in an aviation podcast by the 2008 [National Certificated Flight Instructor of the Year](#) winner, Max Trescott. In [podcast episode 154](#), the author discusses a Class B airspace violation by a pilot who ignored Air Traffic Control instructions and relates the incident to the FAA's five hazardous attitudes (anti-authority, impulsivity, invulnerability, macho, resignation). He also talks about a sixth hazardous attitude, loss of face, that has been proposed by some researchers. From 40:50 minutes forward, Trescott discusses Dr. Velazquez's literature review and he also provides a link to his dissertation on his website. Check it out!



Dr. Velazquez
(Graduate 12)



João Garcia
(Cohort 10)

João Garcia, Director of the Department of Flight Standards for Brazil's National Civil Aviation Agency (ANAC) invited Ph.D. in Aviation alumnus Dr. Ed Odisho to present the results of his dissertation research to the ANAC meeting in July. Dr. Odisho's study, "*Predicting Pilot Misperception of Runway Excursion Risk Through Application of Machine Learning Algorithms of Recorded Flight Data*" addressed two areas of aviation safety: (a) pilot aeronautical decision making (ADM) lapses regarding unstable approaches during landing, and (b) prediction of Unstable Approach Risk Misperception (UARM). He applied data mining techniques and machine learning models to actual flight recorder data to assess and predict the risk of runway excursions based on unstable approaches. The best model (decision tree) was able to predict the probability of the UARM target variable at 98% accuracy. New pilot alerting technologies based on this research could reduce the likelihood of UARM and help prevent runway excursion accidents, ultimately, saves lives.

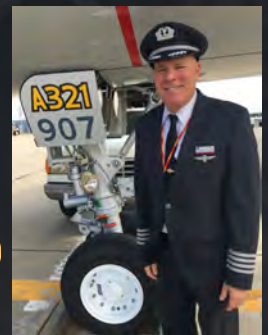
The presentation coincided with the 13th anniversary of one of the deadliest runway excursion accidents ever and which remains the deadliest accident in Brazilian aviation. An Airbus A320, TAM Airlines Flight 3054, crashed after overrunning the runway at the São Paulo-Congonhas Airport, resulting in the loss of 187 passengers and crew and 12 people on the ground.

Dr. Odisho said,

“The anniversary of TAM Airlines Flight 3054 accident serves as a reminder of how important research is to aviation safety as well as the need for continued work to reduce runway excursions globally.”

Brazilian aviation authorities have since significantly remodeled their safety oversight system and are currently among the global leaders in aviation safety management. Mr. Garcia explained,

“Runway excursions remain a global concern. Studies like this help us find ways to improve aviation safety even further. Dr. Odisho's presentation was very well received by our agency's managers and safety inspectors. Plus, presentations by such accomplished Ph.D. in Aviation alumni strengthen the longstanding relationship between ANAC and ERAU.”



Dr. Edwin Odisho
(Graduate 38)



Dr. Rich Cole
(Graduate 35)

The article presented by Dr. Rich Cole (co-authored with Drs. Steven Hampton and Navin Mathur), was deemed the outstanding paper by the reviewers on the Integrated Communications Navigation and Surveillance (ICNS) 2020 staff. It was based on Dr. Cole's dissertation—*Risk Mitigation for Low Latitude Ground-Based Augmentation System (GBAS) Precision Operations*. His study investigated the potential correlation of scintillation to time, azimuth, satellites in view, and satellite elevation as these variables pertain to operational safety (use of the system). It included analysis of GBAS approach operations based on system performance, ionospheric activity, and satellite geometry to establish safe levels of service, Category (CAT) I or higher, during periods of increased ionospheric activity. The goal of the research was to determine the impact of scintillation, if any, on the ability of GBAS to support low latitude precision approach operations.

EQUALITY MATTERS



Dr. Haydee Cuevas

Part of ERAU's strategic plan is to stimulate a more inclusive culture by diversifying the student population on a global scale and enhancing student experience and communication across campuses. To facilitate such transformation, the mission of the EQQUAAL project, led by Dr. Haydee Cuevas, is to create safe and inclusive work environments open to all individuals by restructuring organizational and operational systems in the aviation industry. Hearing personal experiences can lead to a greater understanding of [gender bias](#) and [racial bias](#), so she asked two students and a graduate from the Ph.D. in Aviation program to share their stories of handling such challenges while following their professional dreams.

“ At an early age, I realized few pilots were female, and very few, if any, were minority women. During my time attending university and working in the aviation industry, little has changed. I recall many experiences of being singled out—whether good or bad—because it seemed others focused on how I differed from those around me instead of what we all share in common. Despite gender or racial biases, I've never let them steer where I want to go or what I want to achieve. Instead, I've leveraged these experiences to overcome obstacles and build resilience while embracing my uniqueness. I've always looked at the advantages of seeking out the answers, questioning the rationale to answers received even when they disagree with my expectations, and not accepting “no” as an answer. This drives the foundation of perseverance and qualification regardless of gender or race. It may not always be the most advantageous approach. However, it does set the tone and shows I'm engaged and ready to contribute. At the end of the day, . . .



Lissa Bern
(Cohort 12)

everyone wants to be treated equally and with respect so that we are all able to say we collectively have accomplished the task at hand. ”



Mikkea Carter
(Cohort 11)

“ As a black female in a male-dominated field, I have always been hyper-aware of my physical appearance in the workplace and given keen attention to my attire, accessories, and hair to avoid being perceived as anything less than professional. Ironically, the day I was wearing muddy work boots, dusty dress pants, and a safety vest and glasses turned out to be a defining moment for me regarding workplace boundaries. While discussing a project with a male colleague before visiting a construction site, another male worker passed by and exclaimed to me, “Why, don't you look so cute!” After my initial shock of hearing that backhanded compliment, I remarked to my colleague, “It's hard to be taken seriously when being called 'cute' in the middle of the workday.” He couldn't understand why I was offended until I asked him how he would feel being interrupted doing his job with a critique of his physical appearance. That day I learned a valuable lesson about boundaries and establishing what is acceptable for me despite what others may think is acceptable. ”

“ It was my second week at the Federal Aviation Administration. I had been hired on to the FAA Safety Team as the human factors member of the general aviation magazine (see “[Just a Bit Biased](#)” in FAA Safety Briefing, 2020, July/August). It wasn't where I ultimately wanted to go, but for the moment, I was ecstatic and so darned proud to be there. I was approached by a gentleman in the hall. He proceeded to ask me where the conference room was, could I make a reservation for his meeting, and what I would need to set it up for him? “What?” I asked, not understanding. “What?” He responded, equally confused. The realization struck me about a full minute before it did him. He thought I was the administrative assistant for our branch. After all, I was a black female. Flustered and finally realizing his mistake, he abruptly apologized and hurried away. He may or may not have learned a valuable lesson that day, but I certainly did. Force them to look at you and force them to see what lies beyond the assumptions of gender and race. I am a researcher and scientist. I am an operational and technical asset and subject matter expert in human factors. I have worked very hard to achieve these goals. And yes, I am a black female. ”



Dr. Sabrina Woods
(Graduate 36)

EQUALITY MATTERS

Dr. Barry Hyde (MSA '07) has overcome major obstacles ever since his life took a 180-degree turn on June 1, 1998 when the Piper Twin Comanche he was a passenger in crashed 37 minutes after takeoff. Remarkably, he survived, but he lost his sight, taste, and smell, and suffered a traumatic brain injury and 14 broken bones. His determination to recover during a long hospitalization and rehabilitation enabled him to continue pursuing his lifelong focus on aviation, but no longer as a pilot.

In 2000, he became the first blind Advanced Ground Instructor and Instrument Ground Instructor certified by the FAA. In 2004, he earned a Bachelor of Arts degree in History from the University of North Carolina. In 2007, he earned a Master of Science in Aeronautics (MSA) degree with distinction (4.0 GPA) from Embry-Riddle Aeronautical University, and in so doing, became the first blind graduate in ERAU's 82-year history. In 2017, he earned a Doctorate in Business Administration with a specialization in Aeronautical Safety from the online program at Northcentral University.



Barry and Lincoln at the ERAU flight line. Photo by Jensen Larson Photography. Used with permission.



Barry and Jet, his 2nd guide dog, at work at FAA headquarters.

Section 504 of the Rehabilitation Act of 1973 guarantees equal access, affording students with certain disabilities specific accommodations. On Barry's first day of classes on ERAU's Daytona Beach campus, a person walked him and Lincoln the Aviator, his first guide dog, to class in the College of Aviation. From then on, Lincoln navigated him to class each day with the simple command of "Lincoln, let's go to class." That was the easy part because like everything else after the accident, Barry's learning process was arduous. It involved recording his instructors' lectures on a portable audio cassette player, then going home and listening to them again while recording

study notes on another tape player. To access course materials, he used a computer screen reader called Job Access With Speech (JAWS). His professors would email him Internet links to various online materials and JAWS would read them aloud to him. To learn from textbooks, someone from ERAU's Disability Support Services would remove the covers, separate the pages, scan them one-by-one to create PDF files, and then email them to him so that he could use JAWS to read them aloud to him. Considering how long it would take him to listen to course materials, Disability Services and his instructors granted him 10 days to submit weekly assignments instead of seven. Yet, not everyone is as understanding or helpful, and he experiences discrimination, usually in the form of social snubs and thoughtlessness.



Barry and Bravo, his 3rd guide dog.

It can cost up to \$50,000 to breed, raise, train, and place a guide dog free of charge to those in need. Lincoln came from the nonprofit [Southeastern Guide Dogs](#). Barry spent 26 days there training with him. Jet came from [Guide Dog Foundation](#), also a nonprofit. They trained him at Barry's home. Bravo came from Southeastern Guide Dogs, and they trained together on site for two weeks. You can learn more about these extraordinary dogs in Dr. Hyde's autobiography, "Seeing New Horizons-A Blind Aviator's Journey After Tragedy," that will be published on December 14, 2020 by [Page Publishing](#).

“People often ignore me when I say “Hello” or ask for simple assistance. Invariably, when I go to a public restroom with my guide dog, the only accessible stall is usually occupied by a person with no physical disability. And, oddly enough, people yell at me as if I have hearing trouble. I've found smiling and patience are the best if not the only ways to respond. Unfortunately, stereotyping leads some people to think blind people are dumb or not as effective as sighted workers or that they received their job by luck, not because of their education, training, and qualifications. I've found the best way to change such misconceptions is to achieve my professional goals and do my job well, showing people that talent has no boundaries and workplace diversity includes people with disabilities.”

Since 2010, Dr. Hyde has been employed as an Aviation Safety Analyst at FAA headquarters in Washington, DC. He supports the Airman Testing Standards Branch by writing questions and answers for review by the ATP and CFI Airman Certification Standards Examination Boards. He also answers questions from aviators around the world interested in changes to the Airman Certification Standards.

SCHOLARLY ACTIVITY



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- Agha, R. D., Dattel, A. R., & Thropp, J. E. (2020, March 2–4). *Evaluating scenarios that can startle and surprise pilots* [Paper presentation]. 32nd National Training Aircraft Symposium (NTAS), Daytona Beach, FL, United States.
- Aguiar, M. D., Cuevas, H. M., & Piccone, M. S. (2020, March 2–4). *Application of a skill taxonomy in aviation* [Paper presentation]. 32nd National Training Aircraft Symposium (NTAS), Daytona Beach, FL, United States.
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- Dattel, A. R., Henry, A., Song, K., Zhang, T., & Babin, A. K. (2020, March 2–4). *Improving air traffic identification by conducting refresher training of analog and digital clocks* [Paper presentation]. 32nd National Training Aircraft Symposium (NTAS), Daytona Beach, FL, United States.
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- Fussell, S. G., & Truong, D. (2020). Preliminary results of a study investigating aviation student's intentions to use virtual reality for flight training. *International Journal of Aviation, Aeronautics, and Aerospace*, 7(3), 1–24. <https://commons.erau.edu/ijaaa/vol7/iss3/2>
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Happy Holidays!

*As 2020 comes to an end, all of us
in the School of Graduate Studies
wish you and your loved ones
a joyful holiday season
and a very bright
new year!*



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